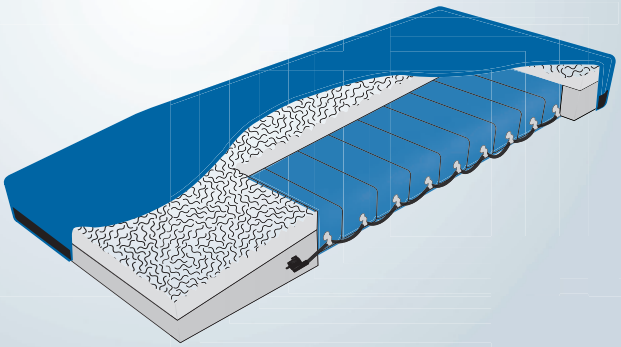
# AtmosAir
# Mattress Replacement System

## User Guide
## Instructions for Use

ARJOHUNTLEIGH
GETINGE GROUP

AtmosAir with SAT 4000 Series
AtmosAir with SAT 9000 Series
AtmosAir with SAT APod 25 Series
AtmosAir with SAT T-Series
AtmosAir with SAT V-Series
AtmosAir with SAT M-Series



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...with people in mind

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### Important Information For Users

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- Use this product only in accordance with these instructions and applicable product labeling.
- Assembly, operations, extensions, re-adjustments, modifications, technical maintenance or repairs must be performed by qualified personnel authorized by ArjoHuntleigh. Contact ArjoHuntleigh for information regarding maintenance and repair.
- If applicable, ensure the electrical installation of the room complies with the appropriate national / local electrical wiring standards.

**Specific indications, contraindications, warnings, precautions and safety information exist for ArjoHuntleigh's therapeutic support systems. It is important for users to read and familiarize themselves with these instructions and to consult the treating physician prior to patient placement and product use. Individual patient conditions may vary.**

### Notice

This product has been configured from the manufacturer to meet specific voltage requirements. Refer to the product information label for specific voltage.

# Table Of Contents

# Introduction

It is recommended that all sections of this User Guide be read prior to product use. Carefully review the **Contraindications**, **Safety Information** and **Risks and Precautions** sections prior to placing a patient on any AtmosAir™ with SAT™ Mattress Replacement System (MRS).

Caregivers should review this information with the patient and the patient's family and / or legal guardian. Save this User Guide in an easily accessible location for quick reference.

This User Guide is comprised of the following *AtmosAir* MRS models / series:

- *AtmosAir* with *SAT* 4000 Series (non powered, indicates pump not available)
- *AtmosAir* with *SAT* 9000 Series (non powered)
- *AtmosAir* with *SAT* 9000A Series (powered with alternating pressure)
- *AtmosAir* with *SAT* 9000AR Series (powered with alternating pressure and rotation)
- *AtmosAir* with *SAT APod 25* Series (non powered)
- *AtmosAir* with *SAT APod 25* A Series (powered with alternating pressure)
- *AtmosAir* with *SAT APod 25* AR Series (powered with alternating pressure and rotation)
- *AtmosAir* with *SAT* T-Series (non powered)
- *AtmosAir* with *SAT* T-Series A (powered with alternating pressure)
- *AtmosAir* with *SAT* T-Series AR (powered with alternating pressure and rotation)
- *AtmosAir* with *SAT* V-Series (non powered)
- *AtmosAir* with *SAT* M-Series (non powered)

The *AtmosAir* MRS comes in a wide variety of lengths and widths to support various customer requirements. Contact an ArjoHuntleigh representative for additional product information.

## Indications

- for prevention or treatment of skin breakdown

## Contraindications

- unstable vertebral fracture
- cervical and skeletal traction

## Risks and Precautions

**Transfer –** Standard precautions should be taken during patient transfer.

**Rotation / Alternating Pressure (for A and AR models) –** Prior to engaging rotation or alternating pressure, ensure that bed frame has side rails and that all side rails are fully engaged in full upright and locked position. Ensure pump hoses are properly connected to appropriate side of mattress for the desired function (see **Pump Installation**). **WARNING:** Incorrect connection of pump hoses can increase risk of potential patient falls.

**Side Rails and Restraints – WARNING:** Use or non-use of restraints, including side rails, can be critical to patient safety. Serious or fatal injury can result from the use (potential entrapment) or non-use (potential patient falls) of side rails or other restraints. **See related Safety Information.**

**Patient Migration –** Specialty surfaces have different shear and support characteristics than conventional surfaces and may increase the risk of patient movement, sinking and / or migration into hazardous positions of entrapment and / or inadvertent bed exit. **Monitor patients frequently to guard against patient entrapment.**

**Oxygen Use – DANGER:** Risk of explosion if the *AtmosAir* Pump is used in the presence of flammable anesthetics. Use of this product's pump in an oxygen-enriched environment may produce potential of fire hazard. This equipment is not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide. Unplug and do not use pump when using oxygen-administering equipment other than the nasal mask or half-bed-length tent type.

**Shock Hazard –** Electrical shock hazard; do not remove pump case covers. Refer to qualified service personnel.

## Safety Information

**Patient Entrance / Exit –** Caregiver should always aid patient in exiting the bed. Make sure a capable patient knows how to get out of bed safely (and, if necessary, how to release the side rails) in case of fire or other emergency.

**Turning - CAUTION**: Prior to engaging turn feature, ensure that bed frame has side rails and that all side rails are in their full up and locked position.

**Brakes –** Caster brakes should always be locked once the bed is in position. Verify wheels are locked before any patient transfer to or from the bed.

**Bed Height –** To minimize risk of falls or injury, the bed should always be in the lowest practical position when the patient is unattended.

**Bed Frame –** Always use a standard healthcare bed frame with this mattress, with any safeguards or protocols that may be appropriate. Bed frame and side rails (if used) must be properly sized relative to the mattress to help minimize any gaps that might entrap a patient's head or body. It is recommended that bed and side rails (if used) comply with all applicable regulations and protocols.

**Head of Bed Elevation –** Keep head of bed as low as possible to help prevent patient migration.

**Side Rails / Patient Restraints** - Whether and how to use side rails or restraints is a decision that should be based on each patient's needs and should be made by the patient and the patient's family, physician and caregivers, with facility protocols in mind. Caregivers should assess risks and benefits of side rail / restraint use (including entrapment and patient falls from bed) in conjunction with individual patient needs, and should discuss use or non-use with patient and / or family. Consider not only the clinical and other needs of the patient but also the risks of fatal or serious injury from falling out of bed and from patient entrapment in or around the side rails, restraints or other accessories. In the US, for a description of entrapment hazards, vulnerable patient profile and guidance to further reduce entrapment risks, refer to FDA's Hospital Bed System Dimensional and Assessment Guidance To Reduce Entrapment. Outside the US, consult the local Competent Authority or Government Agency for Medical Device Safety for specific local guidance. Consult a caregiver and carefully consider the use of bolsters, positioning aids or floor pads, especially with confused, restless or agitated patients. It is recommended that side rails (if used) be locked in the full upright position when the patient is unattended. Make sure a capable patient knows how to get out of bed safely (and, if necessary, how to release the side rails) in case of fire or other emergency. Monitor patients frequently to guard against patient entrapment.

**CAUTION: When selecting a standard mattress, ensure the distance between top of side rails (if used) and top of mattress (without compression) is at least 8.66 in (220 mm) to help prevent inadvertent bed exit or falls. Consider individual patient size, position (relative to the top of the side rail) and patient condition in assessing fall risk.**

**I.V. and Drainage Tubes –** I.V. and drainage tubes should always have slack for alternating pressure or rotation and other patient movements.

**Skin Care –** Monitor skin conditions regularly and consider adjunct or alternative therapies for high acuity patients. Give extra attention to any possible pressure points and locations where moisture or incontinence may occur or collect. Early intervention may be essential to preventing skin breakdown.

**Fluids –** Avoid spilling fluids on pump controls. If spills do occur, clean fluid from pump wearing rubber gloves or while unit is unplugged to avoid any possibility of shock. Once fluid is removed, check operation of components in area of spill.

**Fluids remaining on controls can cause corrosion, which may cause components to fail or operate erratically, possibly producing potential hazards for patient and staff.**

**Avoid Fire Hazards –** To minimize risk of fire, connect the bed's power cord directly into a wall-mounted outlet. Do not use extension cords or multiple outlet strips. In the US, review and follow FDA's Safety Tips for Preventing Hospital Bed Fires.

**No Smoking in Bed –** Smoking in bed can be dangerous. To avoid the risk of fire, smoking in bed should never be allowed.

**Power Cord –** Position power cord to avoid a tripping hazard and / or damage to the cord. Ensure power cord is kept free from all pinch points and moving parts and is not trapped under casters. Improper handling of the power cord can cause damage to the cord, which may possibly produce risk of fire or electric shock.

**General Protocols –** Follow all applicable safety rules and institution protocols concerning patient and caregiver safety.

**Disposal –** At the end of useful life, dispose of waste according to local requirements or contact the manufacturer for advice.

# Preparation for Use

**For information concerning the bed frame refer to the manufacturers' User Guide.**

1. Open shipping container(s).

***Do not use sharp instruments to open boxes. Damage to mattress could result.***

2. Remove *AtmosAir* with *SAT* MRS from plastic protective cover.

**The mattress cover may appear wrinkled when unpacked. To remove wrinkles, allow mattress up to 24 hours to accommodate; see Troubleshooting for more information. Wrinkles will not affect inflation or function, so mattress may be used immediately if needed.**

3. Check mattress surface for tears or cracking; do not use if tears or cracks are present.
4. If re-installing mattress onto a new frame or for a new patient, check mattress surface for staining and soiling; clean and / or disinfect as required (see **Care and Cleaning**).
5. Level bed and lock brakes.
6. Remove existing mattress from bed frame.

# Mattress Installation

## *AtmosAir* with *SAT* 4000, 9000 (all models), *AtmosAir* with *SAT*, *APod 25* (all models), *AtmosAir* with *SAT* T-Series* and *AtmosAir* with *SAT* V-Series (all models)

1. Position mattress on bed frame with logo facing up and product information tags at foot end of bed.

**Magnets are integrated on the *AtmosAir* T-Series bottom cover to help keep the mattress in place during foot section extension / retraction.**

2. Ensure there are no gaps between mattress and bed frame or side rails.

***Always use a standard healthcare bed frame with safeguards or protocols that may be appropriate. Frame and side rails must be properly sized relative to the mattress to help minimize any gaps that might entrap a patient's head or body.***

* T-Series is compatible for use with the Hill-Rom Total Care™ bed frame.

## *AtmosAir* with *SAT* V-Series*

### V-Series mattress on VersaCare™ Frame

1. Position mattress on bed frame with logo facing up and product information tags at foot end of bed.
2. Slide locking bar located in pocket on underside of head-end of mattress to one side, as shown at right (Figure 1).

*V-Series is compatible for use with the Hill-Rom VersaCare™ frame.

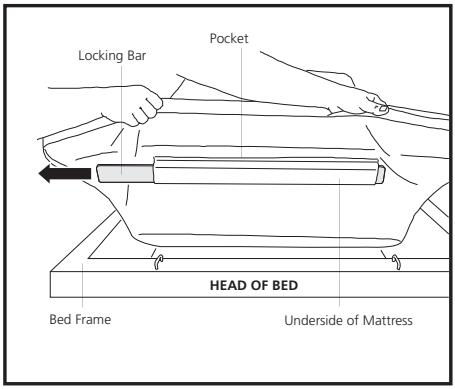



**Figure 1**

3. Slip end of locking bar into slot on head-end of bed frame, as shown below (Figures 2 and 3).
4. Slip other end of locking bar into other slot on head-end of bed frame, as shown below (Figure 4).

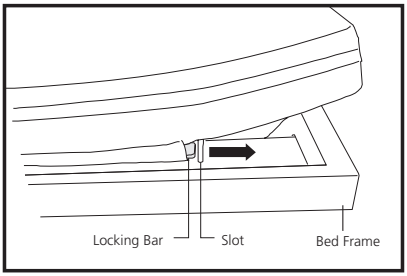



**Figure 2**

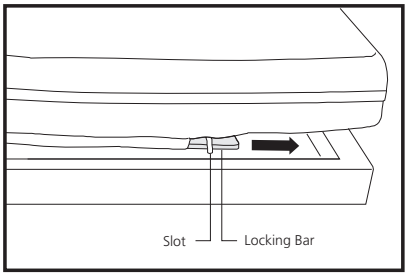



**Figure 3**

5. Repeat steps 2 through 4 to secure foot-end of mattress.

**Foot-end locking bar may need to be flexed slightly to slip into foot-end slots.**

**Magnets are integrated on the *AtmosAir* V-Series bottom cover to help keep the mattress in place during foot section extension / retraction.**

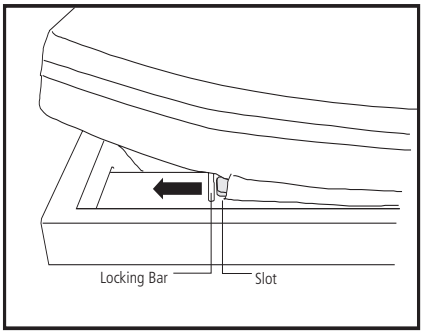



**Figure 4**

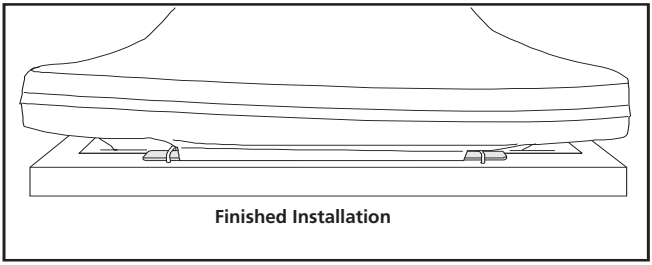



**Figure 5**

## *AtmosAir* with *SAT* M-Series*

**M-Series mattress installation on Multicare frame**

1. Position mattress on bed frame with logo facing up and product information tags at foot end of bed.
2. Use the two buckled straps located on both sides of the mattress and fasten around knee bar to secure the *AtmosAir* with *SAT* M-Series MRS to the bed frame (Figure 6).
3. Ensure there are no gaps between mattress and bed frame or side rails.

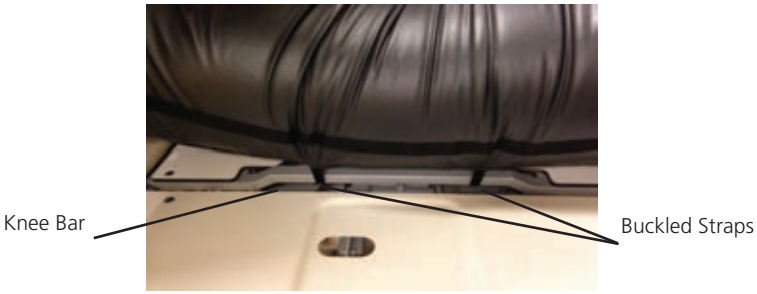



**Figure 6**

***CAUTION – When using the cardiac chair function, patient must be monitored to ensure against unintended migration (sliding to the foot-end and / or unintentional bed exit).***

***Always use a standard healthcare bed frame with safeguards or protocols that may be appropriate. Frame and side rails must be properly sized relative to the mattress to help minimize any gaps that might entrap a patient's head or body.***

* M-Series is compatible for use with the Linet Multicare bed frame.

# *AtmosAir* Pump Installation

Pump installation steps for A and AR models:

1. Place pump on a solid stationary surface or suspend on end of bed frame with built-in hanger.
2. Attach pump hoses to mattress, as shown at right (Figure 7):

   **A Models (alternating pressure):**

   - Attach **blue** hoses to the mattress connectors on the **patient left side** (marked **with BLUE** tag) of the mattress for **alternating pressure**.

   **AR Models (alternating pressure / rotation):**

   - Attach **blue** hoses to the mattress connectors on the **patient left side** (marked with **BLUE tag**) of the mattress for **alternating pressure**.
   - Attach **red** hoses to the mattress connectors on the **patient right side** (marked with **RED tag**) of the mattress for **rotation**.

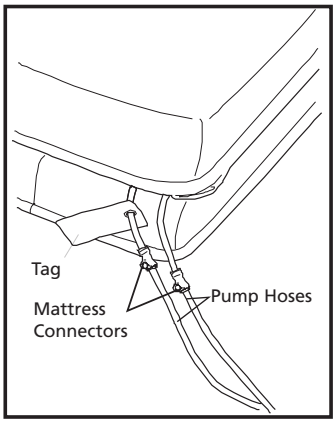



**Figure 7**

3. Ensure air hoses are not kinked and will not be pinched by any articulated bed mechanisms.
4. Plug pump unit into a properly-grounded wall outlet.
5. Verify power to this outlet is not controlled by a wall switch.

# Patient Placement and Nursing Care

It is recommended that all sections of this User Guide be read prior to product use. Carefully review the **Contraindications**, **Safety Information** and **Risks and Precautions** sections prior to placing a patient on any *AtmosAir* MRS.

1. Transfer patient following all applicable safety rules and institution protocols.
2. Center patient side-to-side and head-to-foot on *AtmosAir* MRS surface.
3. Ensure all sections of the mattress fully support the patient.

## Alternating Pressure / Rotation Adjustment

The *AtmosAir* with *SAT* 9000, *APod 25* and T-Series models provide alternating pressure and / or rotation. The level of alternating pressure or rotation can be adjusted for patient comfort.

***Prior to engaging alternating pressure or rotation, ensure that bed frame has side rails and that all side rails are fully engaged in full upright and locked position.***

***Ensure pump hoses are properly connected to appropriate side of mattress for the desired function (see Pump Installation).***

- Rotate the control knob on the pump clockwise to increase the intensity of alternating pressure relief or the level of rotation.
- Rotate the control knob on the pump counter-clockwise to reduce the intensity of alternating pressure relief or the level of rotation.

**The *AtmosAir* MRS DOES NOT provide a Nurse Hold function.**

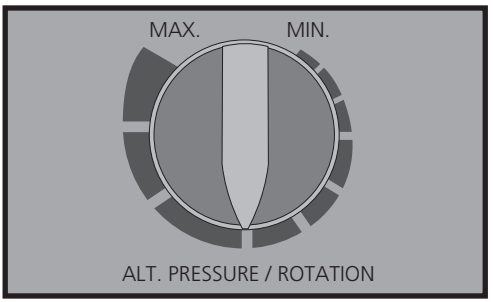



**Figure 8**

## CPR

1. Level bed.
2. Disconnect hoses from pump to level mattress (for A and AR models), as shown at right (Figure 9).
3. Lower or remove side rail on caregiver's side if necessary.
4. Begin CPR.
5. After CPR is performed:
   - Reconnect pump hoses to mattress (for A and AR models).
   - Raise or install side rail as necessary.
   - Reconfigure bed and accessories as in initial placement.

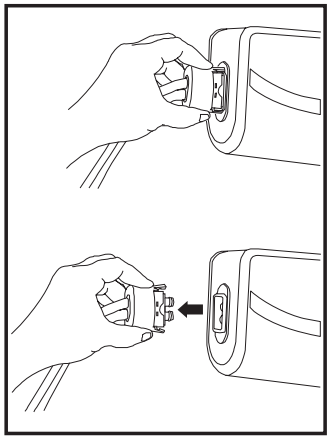


**Figure 9**

## Skin Care

- Remove excess moisture and keep skin dry and clean.
- Check patient's skin regularly, particularly in areas where incontinence and drainage occur.
- Ensure linens under patient are not wrinkled.

## Incontinence / Drainage

- Use moisture-impermeable underpads for incontinent patients.
- Wipe surface clean and replace bed linens as required (see **Care and Cleaning**).

## General Operation

Avoid contact of sharp instruments with the *AtmosAir* MRS. Punctures, cuts and tears may prevent proper inflation and air pressure maintenance.

**Figure 10**

# Care and Cleaning

The following processes is recommended, but should be adapted to comply with local institution protocols. If you are uncertain, you should seek advice from your local Infection Control Specialist.

The *AtmosAir* MRS should be routinely decontaminated between patients and at regular intervals while in use.

***If a powered AtmosAir MRS, ensure power cord is unplugged from wall outlet before performing care and cleaning.***

***Do not use Phenol-based solutions or abrasive componds or pads on the cover during decontamination process as these will damage the surface coating. Do not boil or autoclave the cover. Avoid immersing electrical parts in water during the cleaning process. Do not spray cleaning solution directly onto the pump.***

## Cover Cleaning Options

### Sewn *AtmosAir* MRS (Top cover can not be removed from base)

1. If a powered MRS, unplug pump before cleaning.
2. Remove or push bed linens to center of mattress.

***The sewn AtmosAir MRS cover is cleaned by wipe down methods only. Do not launder as damage to the base may occur.***

3. Wipe and rinse any soiling from the mattress surface and base. Use 1000 ppm chlorine or 70% alcohol.
4. Dry surface with towel.
5. Ensure bed linens are refitted and not wrinkled under patient.
6. Clean pump and tubes (if needed) by wiping with a damp cloth.

### RF Welded *AtmosAir* MRS (Detachable top cover)

1. If a powered MRS, unplug pump before cleaning.
2. Push bed linens to center of mattress to wipe down, remove to launder top cover or wipedown as described below.

***The RF Welded AtmosAir MRS has a detachable top cover that can be laundered. However the base is cleaned by wipe down methods only. Do not launder base as damage may occur.***

3. Wipe and rinse any soiling from the mattress surface and base. Use 1000 ppm chlorine or 70% alcohol.
4. After wipe down, dry surface with towel.
5. Ensure bed linens are refitted and not wrinkled under patient.
6. Clean pump and tubes (if needed) by wiping with a damp cloth.

Laundering Detachable Top Cover

1. Unzip the top cover from the base for laundering. Do not launder base as damage may occur.
2. Recommended wash temperature for top cover is 60° C (140° F) for 15 minutes.
3. Maximum wash temperature is 95° C (203° F) for 15 minutes.
4. Tumble dry at 60° C (140° F) or air dry.
5. Maximum drying temperature 80° C (176° F).

## Cleaning *AtmosAir* Pump and Tubes (A and AR models)

1. Ensure pump is unplugged.
2. Wipe surface of pump and tubes with coarse cloth using an approved disinfectant germicide mixed to manufacturer's instructions. **Do not flood any part of the pump with cleaning solution.**

***Avoid spilling fluids on pump controls. If spills do occur, clean fluid from pump wearing rubber gloves or while unit is unplugged to avoid any possibility of shock. Once fluid is removed, check operation of components in area of spill. Fluids remaining on controls can cause corrosion, which may cause components to fail or operate erratically, possibly producing potential hazards for patient and staff.***

3. Wipe off excess solution.
4. Disinfect pump and tubes with a chlorine solution (mixed according to the instructions in the **Care and Cleaning** section). Using a clean cloth, wring out excess solution until cloth is damp. Wipe pump surface and tubes with damp cloth.
5. Allow to air dry.

# Preventive Maintenance Schedule

Preventive maintenance for the *AtmosAir* MRS consists of regular cleaning (see **Care and Cleaning**) and an overall system check-out to be performed at the intervals described below.

**All components must be cleaned, disinfected and inspected after each patient's use and before use by a new patient.** Always use standard precautions, treating all used equipment as contaminated. Institutions should follow local protocols for cleaning and disinfection.

## Daily Cleaning

The cover should be wiped daily with a mild soap and water solution.

## Weekly Cleaning

The pump and hoses of A and AR models should be cleaned weekly.

## Inspection / System Check-Out

Check each of the following before placing the *AtmosAir* MRS with a new patient:

1. Check mattress surface for tears or cracking; do not use if tears or cracks are present.
2. Ensure mattress is free of stains and is not overly faded.

**For A and AR models:**

1. Ensure air inlet hoses and connectors on mattress and pump are clean and undamaged.
2. Ensure pump and power cord are clean and undamaged.
3. Ensure pump hanger brackets are secure and operate correctly.
4. Ensure power switch and comfort control knob both operate correctly.
5. Attach pump to the red **rotation** hoses and power on to ensure that the mattress surface tilts and there are no air leaks.
6. Attach pump to the blue **alternating pressure** hoses and power on to ensure there are no air leaks.

# Troubleshooting

Do not attempt troubleshooting outside this guide or where the solution recommends to contact ArjoHuntleigh. Any unauthorized service, modification, alteration or misuse may lead to serious injury and / or product damage and will void all applicable warranties.

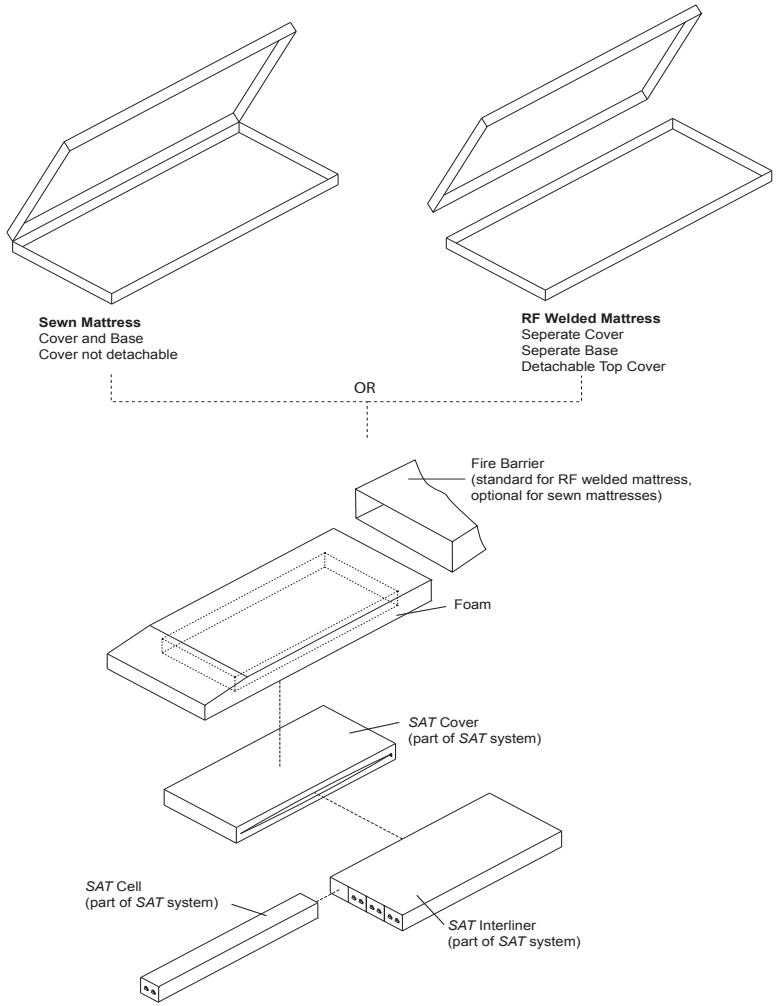
| SYMPTOM | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| Green lamp on pump does not light when power switch is set to the ON position. | Power cord may be unplugged. | Plug in power cord. |
| | Wall outlet may be controlled by a wall switch. | Plug power cord into different wall outlet. |
| | Circuit breaker for wall switch may be tripped or blown. | Reset circuit breaker or replace fuse. |
| | Power cord or power switch may be damaged. | Contact ArjoHuntleigh for assistance. |
| Mattress inflates only to one side when in rotation mode. | Tubing not connected properly. | Ensure red hoses are connected to hoses marked with red tag for rotation. |
| | Tubing kinked. | Check tubing inside mattress for kinks. |
| | Tubing disconnected. | Check tubing inside mattress for possible disconnect. |
| | Hole in rotation bladder. | Check deflated rotation bladder for holes. |
| Mattress too firm upon arrival. | Difference in altitude not sufficient to open valves. | Apply weight to mattress to open valves. |
| Mattress cover too wrinkled upon removal from shipping container. | Internal components have not accommodated to environment. This does not affect inflation or function. | Let mattress accommodate for 24 hours. If problem continues, contact ArjoHuntleigh for assistance. |
| Mattress is not firm. | Tubing not connected properly. | Check tubing inside mattress for loose connectors. |
| | Tubing kinked. | Check tubing inside mattress for possible kinks. |
| | Tubing disconnected. | Check tubing inside mattress for possible disconnect. |
| | Holes in or damaged to *SAT* system. | Check *SAT* system for holes or damage, or contact ArjoHuntleigh for assistance. |

# Parts Diagram - *AtmosAir* with *SAT* 4000

All hoses were removed to improve diagram readability.

The fire barrier (standard on all RF welded mattresses, optional for some sewn mattresses) is a sleeve that fits over the foam and *SAT* assemblies.

**The *SAT* Cover, *SAT* Cells, *SAT* Interliner and rotation bladders (for A and AR models) are all part of the integrated *SAT* System and cannot be ordered separately. See Replacement Parts for a complete list of *SAT* Systems.**

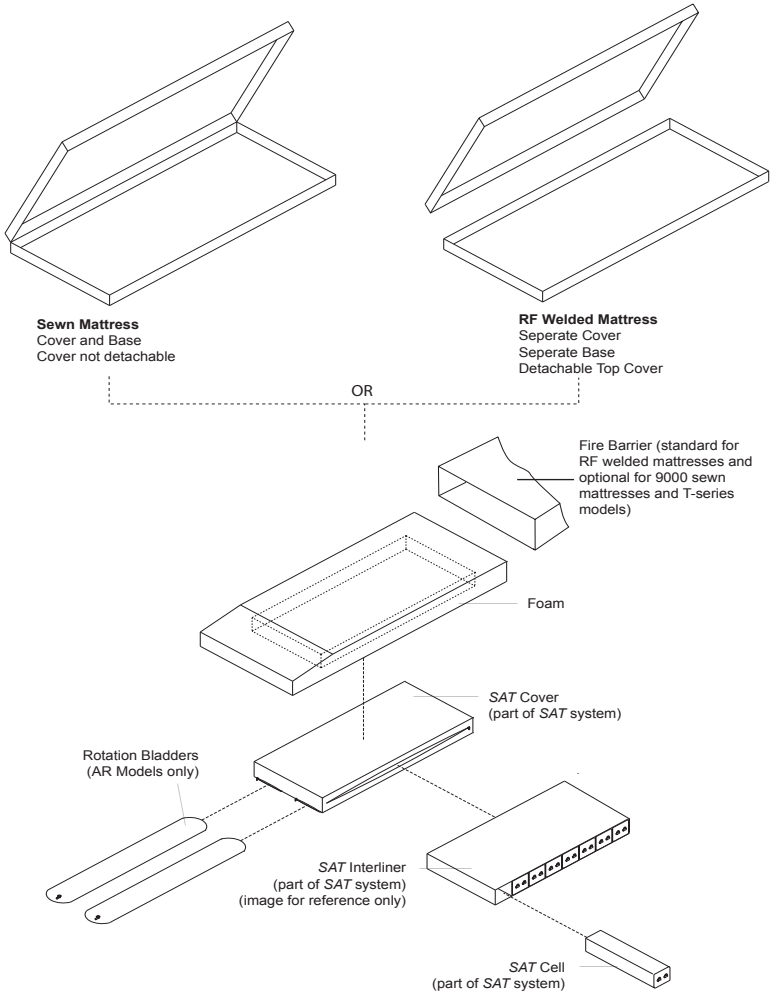


# Parts Diagram - *AtmosAir* with *SAT* 9000 and T-Series

All hoses were removed to improve diagram readability.

The fire barrier (standard on all RF welded mattresses, optional for some sewn mattresses) is a sleeve that fits over the foam and *SAT* assemblies.

**The *SAT* Cover, *SAT* Cells, *SAT* Interliner and rotation bladders (for A and AR models) are all part of the integrated *SAT* System and cannot be ordered separately. See Replacement Parts for a complete list of *SAT* Systems.**

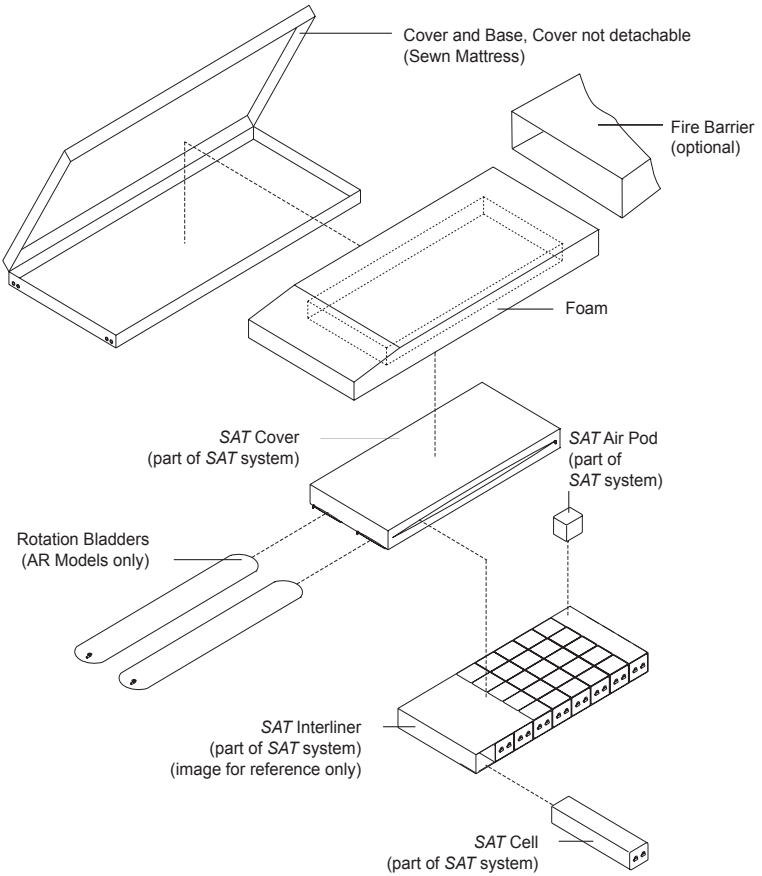


# Parts Diagram - *AtmosAir* with *SAT APod 25* Series

All hoses were removed to improve diagram readability.

The optional Fire Barrier is a sleeve that fits over the foam and *SAT* assemblies.

**The *SAT* Cover, *SAT* Cells, *SAT* Interliner, *SAT Air Pods* and rotation bladders (for A and AR models) are all part of the integrated *SAT* System and cannot be ordered separately. See Replacement Parts for a complete list of *SAT* Systems.**

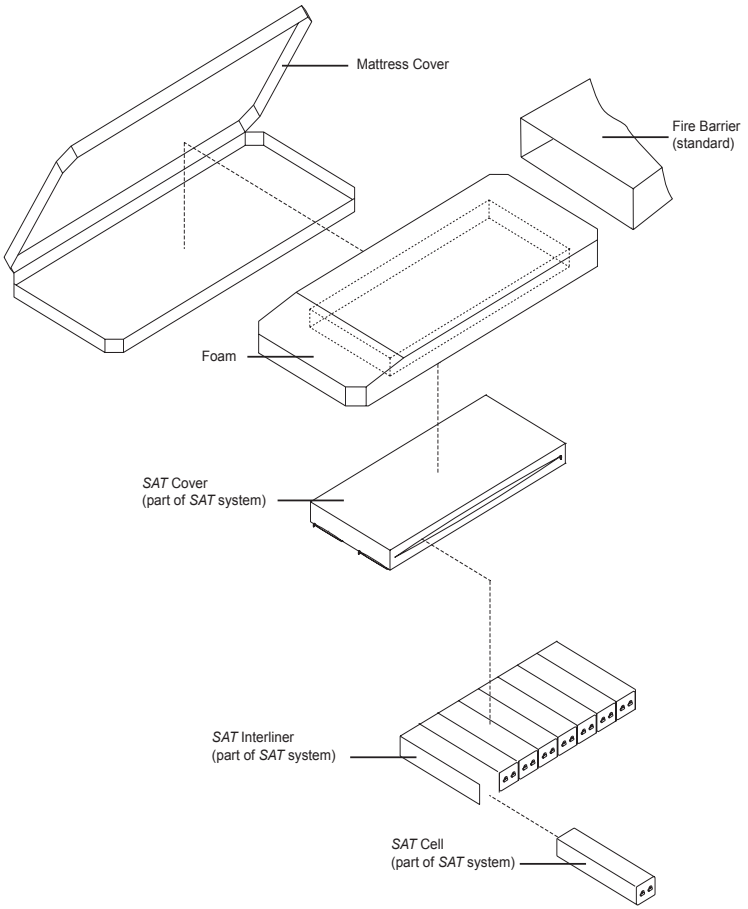


# Parts Diagram - *AtmosAir* with *SAT* M-Series and V-Series

All hoses were removed to improve diagram readability.

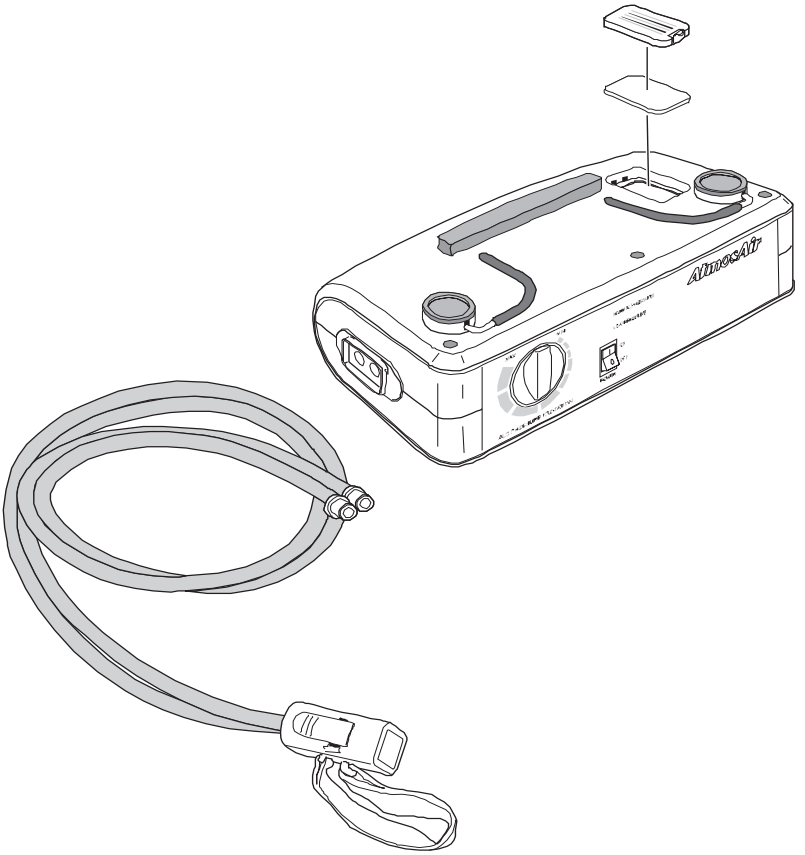
The fire barrier is a sleeve that fits over the foam and *SAT* assemblies.

**The *SAT* Cover, *SAT* Cells, *SAT* Interliner are all part of the integrated *SAT* System and cannot be ordered separately. See Replacement Parts for a complete list of *SAT* Systems.**



# Parts Diagram - *AtmosAir* Pump (A and AR models)

**See Replacement Parts for a complete list of parts that may be ordered for the *AtmosAir* Pump, as well as entire pump systems.**



# Replacement Parts

Do not attempt troubleshooting, maintenance or parts replacement outside this manual or where the solution recommends contacting ArjoHuntleigh. Any unauthorized service, modification, alteration or misuse may lead to serious injury and / or product damage and will void all applicable warranties.

Replaceable *AtmosAir* components are listed below. For more information such as pricing or additional spare parts that are not on this list, please contact your local ArjoHuntleigh representative. In the US call ArjoHuntleigh at 1-800-343-0974 for additional assistance.

## ***ATMOSAIR*** **MATTRESS COMPONENTS**

***AtmosAir*** **Foam Shells**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| 4000 / 9000 Foam Shell | KA4/9FS(SIZE) |
| *APod 25* Foam Shell | 25PFS(SIZE) |
| T-Series Foam Shell | KA9FSTC |
| V-Series Foam Shell | KVFS3584 |
| M-Series Foam Shell | 416119 |

***AtmosAir*** **with *SAT* System**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| 4000 *SAT* System (Fits mattresses 32-38 in wide, 75-84 in length) | KA4SAT |
| 9000 *SAT* System (Fits mattresses 32-38 in wide, 75-84 in length), | KA9SAT |
| 9000A *SAT* System (Fits mattresses 32-38 in wide, 75-84 in length), | KA9ASAT |
| 9000AR *SAT* System (Fits mattresses 32-38 in wide, 75-84 in length), | KA9ARSAT |
| *APod 25 SAT* (Fits mattresses 32-38 in wide, 75-84 in length) | 25PSAT |
| *APod 25*A *SAT* (Fits mattresses 32-38 in wide, 75-84 in length) | 25PASAT |
| *APod 25*AR *SAT* (Fits mattresses 32-38 in wide, 75-84 in length) | 25PARSAT |
| V-Series *SAT* System (Fits mattresses 32-38 in wide, 75-84 in length) | KVSAT |
| M-Series *SAT* System (Fits mattresses 36 in wide, 75-84 in length) | 416116 |
| T-Series *SAT* System (Fits mattresses 36 in wide, 75-84 in length) | KA9-T-SAT |
| T-Series *SAT* System A (Fits mattresses 36 in wide, 75-84 in length) | KA9A-T-SAT |
| T-Series *SAT* System AR (Fits mattresses 36 in wide, 75-84 in length) | KA9AR-T-SAT |

***AtmosAir*** **Fire Barrier Lining**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| *AtmosAir* Fire Barrier Lining **(Standard on *AtmosAir* V-Series and M-Series, optional on 4000, 9000 (all models), *APOD 25* (all models) and T-Series (all models)** | KA4/9-FBL |

RF Welded *AtmosAir* Fire Barrier Lining **(Standard on all *AtmosAir* RF Welded mattresses (all models),** ***AtmosAir*****-FBL**

***AtmosAir*** **Side Bolster (Optional on 4000, 9000 and *APod 25* models including A and AR versions)**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| *AtmosAir* Raised Side Bolster | 407012 |

Integrated side bolster built into foam shell to keep patients centered, must be ordered with foam shell or mattress at point of purchase.

## *ATMOSAIR* MATTRESS COVERS

### *AtmosAir* Model 4000 Mattress

| PART TYPE | CATALOG NUMBER |
|---|---|
| Complete Cover, Soflux™ Top, Non-Skid Bottom | KA4CSONB(SIZE) |
| Complete Cover, *Soflux* Top, Vinyl Gray Bottom | KA4CSOVG(SIZE) |
| Complete Cover, Reliant IS²™ Top, Non-Skid Bottom | KA4C(SIZE) |
| Complete Cover, *Reliant IS²* Top, Vinyl Gray Bottom | KA4CREVG(SIZE) |
| Complete Cover, *Reliant IS²,* RF Welded Top, Non-Skid PU Bottom, No Handles | A4CRFPN(WWWLL)TXS |
| Complete Cover, *Reliant IS²,* RF Welded Top, Non-Skid PU Bottom, With Handles | A4CRFPU(WWWLL)TXS |
| Top Cover, *Reliant IS²,* RF Welded | A4CRFXX(WWWLL)TXS |
| Base Cover, PU Non-skid Bottom, No Handles | A4CXXPN(WWWLL)XXS |
| Base Cover, PU Non-skid Bottom, With Handles | A4CXXPU(WWWLL)XXS |

### *AtmosAir* Model 9000 Mattress

| PART TYPE | CATALOG NUMBER |
|---|---|
| Complete Cover, *Soflux* Top, Non-Skid Bottom | KA9CSONB(SIZE) |
| Complete Cover, *Soflux* Top, Vinyl Gray Bottom | KA9CSOVG(SIZE) |
| Complete Cover, *Reliant IS²* Top, Non-Skid Bottom | KA9CRENB(SIZE) |
| Complete Cover, *Reliant IS²* Top, Vinyl Gray Bottom | KA9CREVG(SIZE) |
| Complete Cover, *Reliant IS²,* RF Welded Top, Non-Skid PU Bottom, No Handles | A9CRFPN(WWWLL)TXS |
| Complete Cover, *Reliant IS²,* RF Welded Top, Non-Skid PU Bottom, With Handles | A9CRFPU(WWWLL)TXS |
| Top Cover, *Reliant IS²,* RF Welded | A9CRFXX(WWWLL)TXS |
| Base Cover, PU Non-skid Bottom, No Handles | A9CXXPN(WWWLL)XXS |
| Base Cover, PU Non-skid Bottom, With Handles | A9CXXPU(WWWLL)XXS |

### *AtmosAir* Model 9000A Mattress with Alternating Pressure

| PART TYPE | CATALOG NUMBER |
|---|---|
| Complete Cover, *Soflux* Top, Non-Skid Bottom | KA9CASONB(SIZE) |
| Complete Cover, *Soflux* Top, Vinyl Gray Bottom | KA9CASOVG(SIZE) |
| Complete Cover, *Reliant IS²* Top, Non-Skid Bottom | KA9CARENB(SIZE) |
| Complete Cover, *Reliant IS²* Top, Vinyl Gray Bottom | KA9CAREVG(SIZE) |

### *AtmosAir* Model 9000A Mattress with Alternating Pressure and Rotation

| PART TYPE | CATALOG NUMBER |
|---|---|
| Complete Cover, *Soflux* Top, Non-Skid Bottom | KA9CARSONB(SIZE) |
| Complete Cover, *Soflux* Top, Vinyl Gray Bottom | KA9CARSOVG(SIZE) |
| Complete Cover, *Reliant IS²* Top, Non-Skid Bottom | KA9CARRENB(SIZE) |
| Complete Cover, *Reliant IS²* Top, Vinyl Gray Bottom | KA9CARREVG(SIZE) |

### *AtmosAir* Model *APod 25* Mattress

| PART TYPE | CATALOG NUMBER |
|---|---|
| Complete Cover, *Soflux* Top, Non-Skid Bottom | 25PCSONB(SIZE) |
| Complete Cover, *Soflux* Top, Vinyl Gray Bottom | 25PCSOVG(SIZE) |
| Complete Cover, *Reliant IS²* Top, Non-Skid Bottom | 25PCRENB(SIZE) |
| Complete Cover, *Reliant IS²* Top, Vinyl Gray Bottom | 25PCREVG(SIZE) |

### *AtmosAir* Model *APod 25* A Mattress with Alternating Pressure

| PART TYPE | CATALOG NUMBER |
|---|---|
| Complete Cover, *Soflux* Top, Non-Skid Bottom | 25PCAPSONB(SIZE) |
| Complete Cover, *Soflux* Top, Vinyl Gray Bottom | 25PCAPSOVG(SIZE) |
| Complete Cover, *Reliant IS²* Top, Non-Skid Bottom | 25PCAPRENB(SIZE) |
| Complete Cover, *Reliant IS²* Top, Vinyl Gray Bottom | 25PCAPREVG(SIZE) |

***AtmosAir* Model *APod 25* AR Mattress with Alternating Pressure and Rotation**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| Complete Cover, *Soflux* Top, Non-Skid Bottom | 25PCARPSONB(SIZE) |
| Complete Cover, *Soflux* Top, Vinyl Gray Bottom | 25PCAEPSOVG(SIZE) |
| Complete Cover, *Reliant IS*$^2$ Top, Non-Skid Bottom | 25PCARPRENB(SIZE) |
| Complete Cover, *Reliant IS*$^2$ Top, Vinyl Gray Bottom | 25PCARPREVG(SIZE) |

***AtmosAir* - T-Series**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| T-Series Mattress - Complete Cover, *Soflux* top and Non-Skid base | KA9CSONBT |
| T-Series Mattress - Complete Cover, *Reliant IS*$^2$ top and Non-Skid base | KA9CRENBT |
| T-Series A Mattress with Alternating Pressure - Complete Cover, *Soflux* top and Non-Skid base | KA9CASONBT |
| T-Series A Mattress with Alternating Pressure - Complete Cover, *Reliant IS*$^2$ top and Non-Skid base | KA9CARENBT |

***AtmosAir* - V-Series**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| V-Series Mattress - Complete Cover, *Soflux* top and Vinyl Gray base | KVCSOVG3584 |
| V-Series Mattress - Complete Cover, *Reliant IS*$^2$ top and Vinyl Gray base | KVCREVG3584 |

***AtmosAir* - M-Series**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| M-Series Mattress - Complete Cover, *Soflux* top and Non-Skid base | 416113 |

## *ATMOSAIR* PUMPS

***AtmosAir* Standard Pumps (A and AR Models only)**

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| *AtmosAir* EZ Care Pump only, Current Version | KA9PUMP |
| *AtmosAir* Harness / Tubing / Connectors (no pump) | KA9PUMPASMBLY |
| *AtmosAir* EZ Care Pump Filter | KA9EZPMPFILTER |
| *AtmosAir* EZ Care Pump Filter Cap | KA9EZPMPFILCAP |
| *AtmosAir* Elite Pump Filter, compatible with older pump version | KA9PUMPFILTER |
| *AtmosAir* Elite Pump Filter Cap, compatible with older pump version | KA9PUMPFILCAP |

## *ATMOSAIR* LITERATURE

| **PART TYPE** | **CATALOG NUMBER** |
|---|---|
| ***AtmosAir* MRS User Guide** | **407384-AH** |

# Specifications

Specifications subject to change without notice.

## Mattresses

**Maximum Recommended Patient Weight* ..... 500 lb (227 kg)**
**Weight (based on 35 in x 80 in x 7 in MRS, other sizes will vary)**
*AtmosAir* with *SAT* 4000 MRS.....30 lb (14 kg)
*AtmosAir* with *SAT* 9000 MRS.....33 lb (15 kg)
*AtmosAir* with *SAT* 9000A and 9000AR MRS.....40 lb (18 kg)
*AtmosAir* with *SAT APod 25* MRS.....33 lb (15 kg)
*AtmosAir* with *SAT APod 25*A and *APod 25*AR .....40 lb (18 kg)
*AtmosAir* with *SAT* T-Series MRS .....33 lb (15 kg)
*AtmosAir* with *SAT* T-Series A and AR MRS.....40 lb (15 kg)
*AtmosAir* with *SAT* V-Series MRS.....33 lb (15 kg)
*AtmosAir* M-Series MRS .....40 lb (18 kg)

**Dimensions (varies depending on model)****
Minimum Length .....75 in (190.5 cm)
Maximum Length.....84 in (213 cm)
Minimum Width .....32 in (81.5 cm)
Maximum Width.....38 in (96.5 cm)
Height .....7 in (17.5 cm)

## Pump (UL Listed)

**Weight**.....5 lb (2.5 kg)
**Dimensions**..... 10.25 in (26 cm) L x 4.5 in (11.5 cm) W x 3.75 in (9.5 cm) H
**Electrical:**
Volts ..... 110 VAC
Frequency ..... 60 Hz
Max Amps ..... 0.075 Amps
Power Cord .....12 ft
Output..... 7 liters per minute
Cycle Time.....5 minutes

* Patient weight capacity may vary depending on frame use. Please consult frame manufacturer.

** Additional sizes are available. Contact ArjoHuntleigh for more information.

# Electromagnetic Compatibility

This section pertains only to A and AR models.

Although this equipment conforms with the intent of the directive 89/336/EEC in relation to electromagnetic compatibility (EMC), all electrical equipment may produce interference. If interference is suspected, move equipment away from sensitive devices or contact the manufacturer.

Portable and mobile RF communications equipment can effect medical electrical equipment.

Radios, cell phones and similar devices may affect this equipment and should be kept at least 6.5 ft (2 m) away from the equipment.

Medical electrical equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information in the following tables.

The following tables document compliance levels and guidance from the IEC 60601-1-2; 2007 Standard, for the electromagnetic environment in which the *AtmosAir* MRS should be used in a clinical environment.

| **Guidance and manufacturer's declaration - electromagnetic emissions** | | |
|---|---|---|
| The *AtmosAir* MRS is intended for use in the electromagnetic environment specified below. The customer or user of the *AtmosAir* MRS should assure that it is used in such an environment. | | |
| Emission test | Compliance | Electromagnetic environment |
| RF emissions<br>CISPR 11 | Group 1 | The *AtmosAir* MRS 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<br>CISPR 11 | Class B | |
| Harmonic emissions<br>IEC 61000-3-2 | Class B | |
| Voltage fluctuations / flicker emissions<br>IEC 61000-3-3 | yes | |

**Guidance and manufacturer's declaration - electromagnetic immunity**

The *AtmosAir* MRS is intended for use in the electromagnetic environment specified below. The customer or user of the *AtmosAir* MRS should assure that it is used in such an environment.

| Immunity Test | IEC 60601 Test Level | Compliance Level | Electromagnetic Environment Guidance |
|---|---|---|---|
| Electrostatic discharge (ESD)<br>IEC 61000-4-2 | ±6 kV Contact<br>±8 kV Air | ±6 kV Contact<br>±8 kV Air | In accordance with IEC 60601-1-2:2007, floors are covered with synthetic material, the relative humidity should be at least 30% |
| Electrical fast transient / burst<br>IEC 61000-4-4 | ±1 kV | ±1kV | |
| Surge<br>IEC 61000-4-5 | 1 kV line(s) to Line(s)<br>2 kV line(s) to Earth | 1 kV line(s) to Line(s)<br>2 kV line(s) to Earth | |
| Voltage dips, short interruptions and voltage variations on power supply input lines<br>IEC 61000-4-11 | 5% half cycle<br>40% for 5 cycle<br>70% for 25 cycle<br>5% for 5 seconds | 5% half cycle<br>40% 5 cycles<br>70% 25 cycles<br>5% for 5 seconds | |
| Power frequency<br>(50Hz/60Hz) magnetic field<br>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: U, is the a.c. mains voltage prior to application of the test level.

**Recommended separation distances between portable and mobile RF communications equipment and the *AtmosAir* MRS**

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

| Rated maximum output power of transmitter<br>W | Separation distance according to frequency of transmitter<br>meters | | |
|---|---|---|---|
| | 150 kHz to 80 MHz<br>not applicable | 80 MHz to 800 MHz<br>$d=[\frac{3.5}{E1}]\sqrt{P}$ | 800 MHz to 2.5 GHz<br>$d=[\frac{7}{E1}]\sqrt{P}$ |
| 0.01 | N/A | 0.12 | 0.23 |
| 0.1 | N/A | 0.37 | 0.74 |
| 1 | N/A | 1.2 | 2.3 |
| 10 | N/A | 3.7 | 7.4 |
| 100 | N/A | 12 | 23 |

For transmitters rated at a maximum output power not listed above, the recommended separate 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 surfaces, objects and people.

**Guidance and manufacturer's declaration - electromagnetic immunity**

The *AtmosAir* MRS is intended for use in an electromagnetic environment specified below. The customer or user of the *AtmosAir* MRS should assure that it is used in such an environment.

| Immunity Test | IEC 60601 Test Level | Compliance Level | Electromagnetic Environment Guidance |
|---|---|---|---|
| | | | Portable and mobile RF communications equipment should be used no closer to any part of the *AtmosAir* MRS, including cables, than the recommended separation distance calculated from the equation application to the frequency of the transmitter. |
| Conducted RF<br>IEC 61000-4-6 | 3Vrms<br>150K - 80 MHz | 3 Vrms<br>150K - 80 MHz | Recommended Separation Distance<br>Battery Operated Device |
| Radiated RF<br>IEC 61000-4-3 | 3 Vrms<br>80 MHz - 2.5 GHz | 3 Vrms<br>80 MHz - 2.5 GHz | $d=[\frac{3.5}{E1}]\sqrt{P}$ 80 MHz to 800 MHz<br>$d=[\frac{7}{E1}]\sqrt{P}$ 800 MHz to 2.5 GHz<br>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and is the recommended separation distance in metres (m).<br>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey (see note a) should be less than the compliance level in each frequency range (see note b).<br>Interference may occur in the vicinity of equipment marked with the following symbol:  |

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 asses 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 *AtmosAir* MRS is used exceeds the applicable RF compliance level above, the *AtmosAir* MRS should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the *AtmosAir* MRS.

b) Over the frequency range 150kHz, field strengths should be less than [V1] V/m.

# Symbols Used

E236716 UL60601-1
CAN/CSA C22.2 NO.601.1

Important Operational Information

Foot End

Warning of possible hazard to system, patient or staff

Consult User Guide

Power

Manufacturer

Safe Working Load

Wash at 60°C, 95°C Max for 15 minutes

Do Not Iron

Use Solution diluted to 1000ppm of available chlorine

**IPXO** Protection from ingress of fluids

Type BF Applied Part

Possible electrical shock hazard

Attention - See User Guide

On

Off

Conforms with the Medical Device Directive (93/42/EEC) and has been subject to the conformity procedures laid down in the council directive

Wipe down Only

Tumble Dry at 60°C, 80°C Max

Do not use Phenol-based cleaning solutions

***AtmosAir*** **products listed in this User Guide may or may not be applicable to CE markings. To verify applicable CE marking for a particular model / series, refer to that product's mattress tags.**

# Customer Contact Information

For questions regarding this product, supplies, maintenance or additional information about ArjoHuntleigh products and service, please contact ArjoHuntleigh or an ArjoHuntleigh authorized representative, call 1-800-343-0974 or visit www.ArjoHuntleigh.com.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ArjoHuntleigh focuses on patient handling and hygiene, disinfection, DVT prevention, medical beds, therapeutic surfaces and diagnostics.

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CE