

Please ensure these Instructions are read thoroughly
before attempting to use

Jointly supplied by



Enhancing Outcomes for Patients and Their Caregivers™

Sapphire Series
Bariatric Low Air Loss/Alternating Air Mattress



User Instruction Manual

Table of Contents Page

Symbol Definitions.....	3
General Warnings and Precautions	4
Device Information	5
Unpacking and Setup.....	6
Operating Instructions	7
Keypad Quick Reference	9
Mattress Cleaning Instructions	10
Blower Unit Cleaning Instructions	11
Safety Tips	12
Trouble Shooting Guide.....	17
Frequently Ordered Parts	18
Return/Exchange Goods Policy	19
Warranty Provisions.....	19

Technical Description of the Equipment:

The two principle components of the I SAPPHIRE SERIES® 1100 & 1100EC Mattress System are a specialized air inflatable bladder (Air Mattress) and an electrically powered, Air Blower/Control Unit.

Symbol Definitions

Manual Definitions

Throughout this manual different type faces and icons are used to aid user readability and understanding of the content. Below are some examples.

- Standard Text Used for regular information.
- **Bold Face Text** Emphasizes a word or phrase.
- **NOTE:** or **NOTICE** Sets apart special information or important instruction clarification.
- **Bold and underlined** Refers to special instances or where problems can occur.

This symbol highlights a **WARNING** or **CAUTION**



- A **WARNING** identifies situations or actions that may affect patient or user safety. Disregarding a warning could result in patient or user injury.
- A **CAUTION** points out special procedures or precautions that personnel must follow to avoid equipment damage.

This symbol highlights an **ELECTRICAL SHOCK HAZARD WARNING**



Symbols Found on Blower Unit

NOTE: Details about the control panel functions are located directly after the operation instructions on page 7.



This symbol marks the location and specification of the fuse.

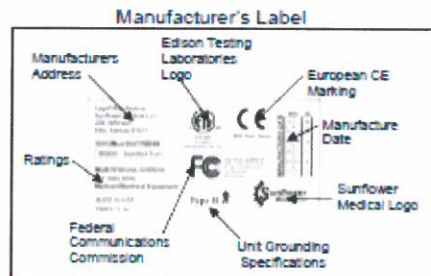
Replace fuse as marked



This symbol signifies that the device is properly protected from electrical shock.



This symbol marks the location of the leakage test point screw.



The hazards and warnings are indicated on the shipping container by this label.

Power Cord Label



Operating reliability can only be achieved when the equipment is connected to an equivalent receptacle marked hospital grade.



General Warnings and Precautions

WARNINGS

WARNING: DO NOT use this device if the power cord is cut, frayed or loosely connected to the device.

WARNING: (110V unit) Electrically Powered Mechanism. Electrical Hazard may occur if device is plugged into inadequate electrical outlet. To avoid electrical shock hazard, make sure unit is plugged into a grounded A/C 110V outlet.

WARNING: (220V unit) Electrically Powered Mechanism. Electrical Hazard may occur if device is plugged into inadequate electrical outlet. To avoid electrical shock hazard, make sure unit is plugged into a grounded A/C 220V outlet.

WARNING: DO NOT remove cover. Refer servicing to qualified service personnel. Disconnect power supply before servicing or cleaning.

WARNING: Be sure to secure mattress to the bed frame with the straps provided. Failure to do so could result in personal injury or equipment damage.

CAUTIONS

CAUTION: Overheating may cause equipment damage or failure. Monitor the unit to ensure that it functions in the proper operating temperature.

CAUTION: Keep out of direct sunlight.

CAUTION: DO NOT store in temperatures below 40° or greater than 95° Fahrenheit (5° – 35° Celsius).

CAUTION: DO NOT expose to moisture or areas of extreme humidity.

CAUTION: Ensure that strap placement does not interfere with the operation of the bed functions.

CAUTION: Medical Electrical Equipment needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this manual. Portable and mobile RF communications equipment can affect Medical Electrical Equipment. The use of Accessories, transducers, and cables other than those specified by the manufacturer, may result in increased emissions or decreased immunity of the equipment or system. The equipment or system should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, the equipment or system should be observed to verify normal operation in the configuration in which it will be used.

CAUTION: DO NOT use around an open flame.

Device Information

PURPOSE OF THE DEVICE

The purpose of the SAPPHIRE SERIES® 1100EC Mattress System is to provide therapeutic benefit to patients at risk or suffering from pressure ulcers.

The active component that has contact with the patient is a specialized, multi-cell air mattress sized to fit a standard medical bed frame. The air mattress serves to replace the original mattress and is equipped with 4 air hoses with connectors that mate with the Air Blower/Control Unit. The Control Unit is a self contained, totally enclosed module that hangs by retractable hooks on the bed frame at the foot of the bed or sits on the floor under the bed.

It is provided with a detachable hospital grade electrical cord and a control panel that has selector switches and indicator lights. The switches and indicators are protected under a flexible membrane to keep out liquid spills and enhance clean-up and sanitation. Inside the Control Unit is a variable output blower, a valve motor and air valves that allow the air mattress to operate in static mode or provide alternating pressure variations within the mattress. There is also a printed circuit board, which provides the electrical controls.

Specifications

Standard Features

Blower Unit Weight 11 lbs (4.98 kg)

Blower Unit Height 10.5" (26.67 cm)

Blower Unit Width 16" (40.64 cm)

Blower Unit Depth 6" (15.24 cm)

Therapeutic Features

Low Air Loss Yes

Fowler Positioning Yes

Alternation Therapy Yes

Electrical Characteristics 110V

Control Unit

220V

Control Unit

Rated Voltage 110 Volts 220 Volts

Rated Frequency 60Hz 50Hz

Rated Input Power 120 Volts 230 Volts

Fuse Rating T300mA 250V

T5A 250V T2.5A 250V

Power Failure Alarm Yes Yes

Patient Characteristics

(for standard size)

Max. Patient Height 78"

(198.12 cm)

Max Patient Width 26"

(66.04 cm)

Unpacking and Setup

Description of the Device:

The SAPPHIRE SERIES® 1100EC Mattress Replacement System consists of a control unit, power cord, a Low Air Loss Mattress and a waterproof, vapor permeable, easy-to-clean cover.

UNPACKING / PARTS BREAKDOWN:

Parts

- Air Blower/Control Unit
- Power Cord (Hospital Grade)
- True Low Air Loss Mattress Replacement
- Mattress Cover

Tools Required: NONE

Unpacking instructions:

Remove the products from the packing material and examine for shipping damage. If damage is detected in shipping, contact the freight company and file a damage complaint immediately.

Environmental Conditions:

CAUTION: Keep out of direct sunlight.

DO NOT expose to temperatures greater than 95 degrees or below 40 degrees Fahrenheit.

DO NOT expose to moisture or areas of extreme humidity.

Portable and mobile RF communications equipment can affect Medical Electrical Equipment. The use of Accessories, transducers, and cables other than those specified by the manufacturer, may result in increased emissions or decreased immunity of the equipment or system.

The equipment or system should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, the equipment or system should be observed to verify normal operation in the configuration in which it will be used.

NOTE: Some cellular telephones and similar devices transmit signals while they are ON, even when not being used.

Directions for Mattress Placement:





Replace the existing bed mattress with True Low Air Loss Mattress. Secure Air Mattress to the bed frame with straps provided.

Warning or Safety Instructions relating to setup:

WARNING: (110V unit ONLY) Ensure the power cord is plugged into a properly grounded A/C 110V outlet.

WARNING: (220V unit ONLY) Ensure the power cord is plugged into a properly grounded A/C 220V outlet.

Operating Instructions

- 1) Remove standard mattress from the bed.
- 2) Replace standard mattress with the SAPPHIRE SERIES® 1100 or 1100EC mattress. (Be sure air tubing is at the foot end of the bed.)
- 3) Strap air support mattress to bed frame on all four sides.
- 4) Place control unit on the footboard of the bed using the two retractable hooks located on the back of the unit. (If no footboard is available, put blower on the floor away from traffic.) To avoid blocking the air intake, **DO NOT** place control unit on its back.
- 5) Attach the air tubing to the blower unit, being sure it snaps in tight. (Be sure air tubing is not kinked and is unobstructed.)
- 6) **NOTE: (110V unit ONLY)** Plug unit into grounded 110V A/C outlet.
- 7) **NOTE: (220V unit ONLY)** Plug unit into grounded 220V A/C outlet.
- 8) Turn master power switch, located on the side of the unit, on.
- 9) Press the Autofirm button for quick inflation. 
- 10) Place the patient on the bed **after** inflation to insure the air cells do not become twisted or kinked.
- 11) To get the control unit out of Autofirm mode, press Autofirm button again.
- 12) **Static Mode** 
 - a. Press the Mode button until the Static option light comes on.
 - b. Set the desired comfort level with the Soft/Firm buttons
- 13) **Alternating Mode** 
 - a. Press the Mode button until the Alternate option light comes on.
 - b. Set the desired cycle time with Cycle Time buttons (3-20 minutes)
 - c. Set the desired comfort level with the Soft/Firm buttons.
- 14) **Fowler Mode** 
 - a. When elevating the head section of the mattress, press the Fowler button to increase airflow for seat inflation.

15) Auto Fowler attachment (Optional)

- a. When elevating the head section of the mattress, Fowler mode will automatically turn on.



Auto Fowler attachment



This is where the Auto Fowler attachment connects to the control unit.

16) Lock-out Feature

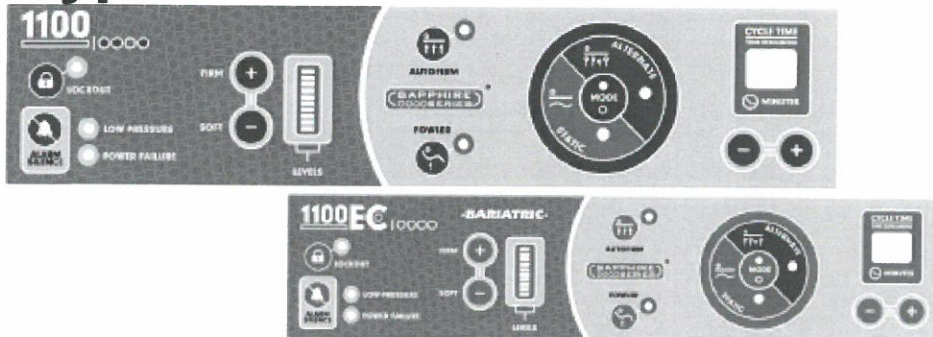
- a. After 3 minutes, if there are no changes to the blower settings, the lockout feature will activate.
- b. Press and hold the Lock-out button for 3 seconds to disengage the lock-out feature.

17) For quick deflation or for CPR use:

- a. Turn power off
- b. Twist CPR plug on the mattress to open.
- c. Remove the hoses from the control unit.

Notice: The mattress is equipped with a 2-inch foam pad in the mattress base for patient support and transport.

Keypad Quick Reference



Lockout –
Locks all functions automatically after 3 mins. To disable, press and hold lockout button for 3 sec.



Alarm Silence –
Mutes the audible alarm. (Visual light will not turn off until failure is resolved.)



Firm –
Increases airflow for a firmer setting.



Soft –
Decreases airflow for a softer setting.



Autofirm –
Quickly inflates mattress to maximum firmness.



Fowler –
Used when head section of bed is elevated. Increases airflow to the mattress.



Cycle Time –
Increases or decrease the time of cycle between 3 to 20 minutes.



Mode –
Press the MODE button to switch between Alternate and Static modes.

Refer to this page as needed for quick reference to the control panel functions. Provides individual button illustration and function description.

Mattress Cleaning Instructions

WARNING and CAUTION:

A. It is recommended that gloves and protective clothing be worn at all times during cleaning and disinfecting

B. Hypercarbonate and phenol based solutions **should not** be used.

During Operation:

For normal soil, wipe down cover and interior sacs with a standard cleaning disinfectant and wipe off excess moisture with a towel.

Laundering Mattress:

1. Disconnect the power from the Control Unit and deflate the interior sacs.

2. Disassemble cover, interior sacs, connecting hoses, and base. Place them in different laundering baskets.

3. The interior sacs must be hand cleaned only. **DO NOT** place in sterilization room or chamber. Use a spray disinfectant to wipe down interior sacs. Air-dry sacs. **DO NOT expose to heat.**

4. Spray disinfectants and wipe down foam cover.

5. Place cover and base **ONLY** in washing machine.

6. Use standard hospital disinfectant/detergent.

7. Set washing cycles as recommended below: **Regular Cycle**

a) Pre-soak with disinfectant/detergent with diluted bleach in cold water (10 minutes.)

b) Main wash for 15 minutes (Time depending on soil level).

c) Rinse Cycle: 5 minutes minimum.

d) Spin/Drain Cycle: 5 minutes minimum.

e) Air-dry or place in dryer at very low or no heat.

8. After the cover, interior sacs, and base are dry, store them in a sterilized bag and seal for next use.

NOTICE: DO NOT use water temperatures greater than 150°F (65°C).

Blower Unit Cleaning Instructions

WARNING and CAUTION:

A. Hand clean only. **DO NOT** place in sterilization room or chamber.

B. It is recommended that gloves and protective clothing be worn at all times during cleaning and disinfecting

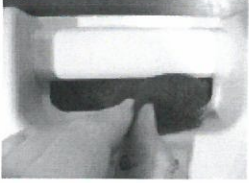
C. Hypercarbonate and phenol based solutions **should not** be used.

D. Make sure unit is turned "off" and unplugged before cleaning.

For normal soil, wipe down with a standard cleaning spray and wipe off excess moisture with a towel. Spray with a disinfectant and let it stand for a few minutes before wiping down. Check corners and creases for soil build-up. Look to see if any external parts are damaged or need replacing such as: hooks, foot pads and filter. Replacement parts can be issued. Contact your representative for servicing.

NOTE: To keep your equipment working efficiently and effectively for an extended time period, it is essential to make sure the equipment is cleaned regularly and well maintained.

Maintenance:



The filter is easily removed and reinserted through the gap in the back case.

Air Filter

The foam air filter on the back of the Control Unit must be cleaned weekly with soap and warm water. Replacement of the foam filter is recommended every 6 months.

Power Cord

The power cord should be checked for damage each time the Control Unit is used. The cord should always be kept away from free moving parts. If the power cord is damaged it will need to be replaced.

Storage:

Deflate mattress until all air is exhausted completely. With the cover on, roll the mattress starting at the foot section. Secure with straps and keep mattress in a clean dry area away from heat or flames. Store unit and mattress in a temperature range between 40° and 95°. DO NOT expose to moisture or areas of extreme humidity.

Disposition:

Once the unit has reached the end of its useable life, contact your representative for service, disposition or replacement.

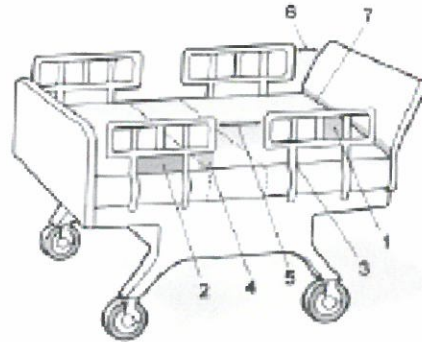
The filter is easily removed and reinserted through the gap in the back case.

Safety Tips



WARNING: Bed rail entrapment is a serious health risk that can result in serious injury or even death. Sunflower Medical L.L.C. recommends the use of bed rails if they are available. Failure to use bed rails in raised position could lead to accidental patient falls. Air mattresses have soft edges that may collapse when patients roll to that edge. When using an Air Therapy system the caregiver is responsible for seeing that the mattress properly fits the bed frame. It is also the caregiver's ultimate decision whether or not to use bed rails with the patient.

- Zone 1: Within the Rail
- Zone 2: Under the Rail, Between the Rail Supports or Next to a Single Rail Support
- Zone 3: Between the Rail and the Mattress
- Zone 4: Under the Rail, at the Ends of the Rail
- Zone 5: Between Split Bed Rails
- Zone 6: Between the End of the Rail and the Side Edge of the Head or Foot Board
- Zone 7: Between the Head or Foot Board and the Mattress End



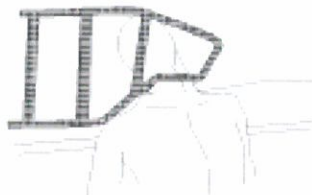
Zone One



Zone Two



Zone Three



Zone Four



Zone Five



Zone Six



Zone Seven

Trouble Shooting Guide

WARNING: Only authorized personnel should engage in the troubleshooting process. Troubleshooting by unauthorized persons could result in personal injury or equipment damage.

WARNING: DO NOT remove cover. Risk of electrical shock.

If mattress is not inflating:

- Make certain none of the hoses are punctured, kinked or disconnected.
- Check for proper connections from the hoses to the Control Unit. Make sure they are secure.
- Check or clean intake filter.
- Be sure CPR valve on the mattress is closed.

If there is power loss:

- Check the ON/OFF switch.
- Check to be sure that unit is plugged in correctly.
- Unplug the Control Unit and check fuses located near the main ON/OFF switch. Replace as necessary.

NOTICE: If the troubleshooting process does not solve the problem please contact

1st Call Mobility Ltd

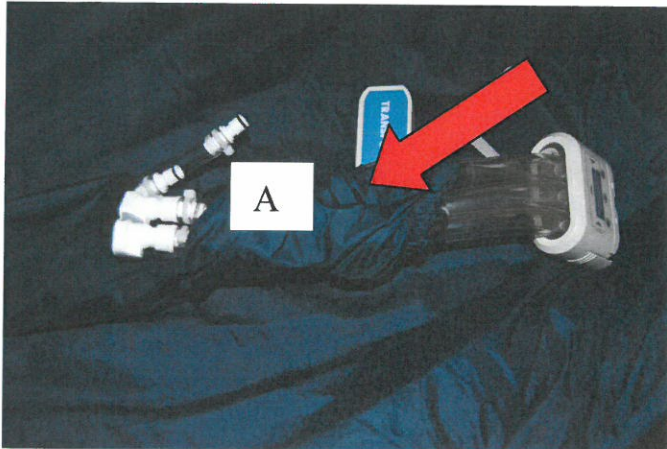
Baros House, Elizabeth Way Harlow, Essex. CM19 5AR

Tel: 01279 425648 Fax: 01279 425653

E-mail: info@1stcallmobility.co.uk / Website: www.1stcallmobility.co.uk

Sapphire Mattress

Instructions relating to the inflation of extension arms

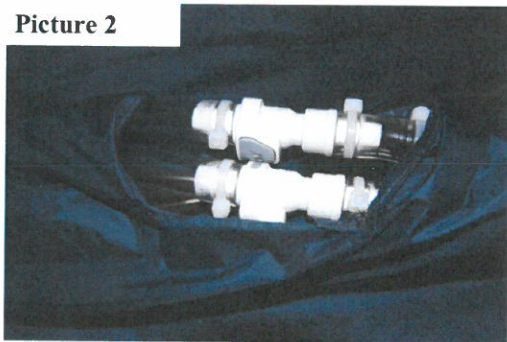


Within the sleeve (A) that contains the hose tubes are 2 additional tubes that operate the width expandable air cells as indicated in picture 1

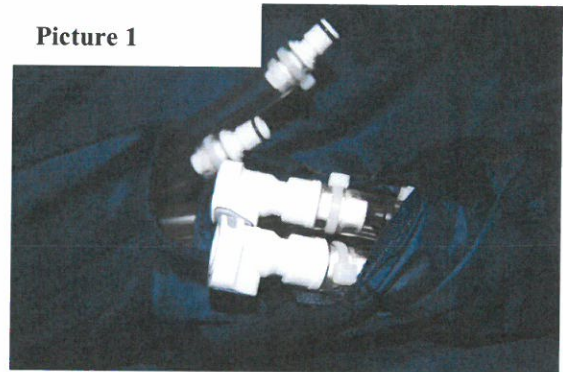
To inflate one or either side you will need to connect these tubes as indicated in picture 2

To deflate extension arm/s-depress the grey button (B) and pull apart

Picture 2



Picture 1



B

