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# USER MANUAL

## Synergy® Air Elite Low Airloss Alternating Therapy System From Hill-Rom





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Manufactured for Hill-Rom by: Caremed Supply, Inc.

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To order additional copies of this manual (139122), refer to the back cover for contact information. For countries not listed on the back cover, contact your distributor.

**NOTE:**

The back cover is a comprehensive list of Technical Support contact information for Hill-Rom. The product discussed in this manual may not be available in all of the countries listed.

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## Document Symbols

This manual contains different typefaces and symbols designed to improve readability and increase understanding of its content:

- Standard text—used for regular data.
- **Boldface text**—emphasizes a word or phrase.
- **NOTE:**—sets apart special data or important instruction clarification.
- **WARNING** or **CAUTION**



- A **WARNING** identifies situations or actions that may have an effect on patient or user safety. To ignore a warning could cause patient or user injury.
  - A **CAUTION** identifies special procedures or precautions that persons must obey to help prevent equipment damage.
- **CAUGHT HAZARD WARNING**



- **CHEMICAL HAZARD WARNING**



- **ELECTRICAL SHOCK HAZARD WARNING**



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## Intended Use

### ⚠ WARNING:

Contraindication: The Synergy® Air Elite Low Airloss Alternating Therapy System surface is **not** for use with patients who have an unstabilized spinal cord injury. Patient injury could occur.

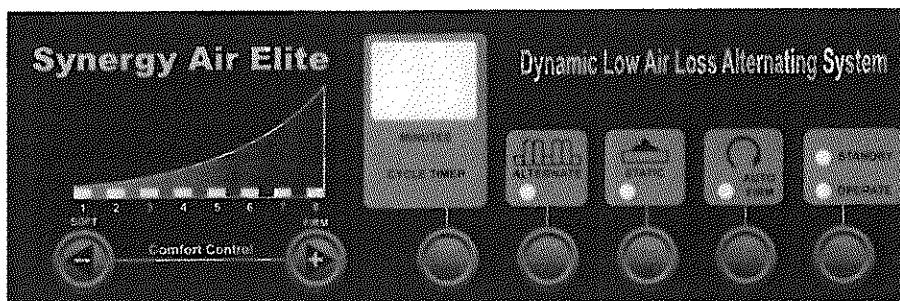
### ⚠ WARNING:

The Synergy® Air Elite Low Airloss Alternating Therapy System surface is **not** for pediatric applications. Patient injury could occur.

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## Features

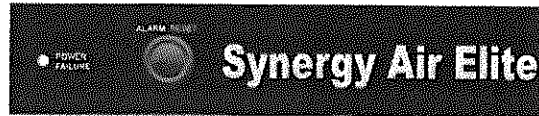
### Controls



- **Comfort Control Soft/Firm**—Press the **Soft** or **Firm** control to adjust the **Comfort Control** setting shown on the eight increment scale.
- **Cycle Timer**—Press the **Cycle Timer** control to adjust the Alternating Therapy cycle time in 5-minute increments between 5 minutes and 95 minutes.
- **Alternate**—Press the **Alternate** control to start Alternating Therapy.
- **Static**—Press the **Static** control to stop the **Alternating** therapy and supply low airloss therapy only.
- **Auto Firm**—Press the **Auto Firm** control to quickly inflate the air cells and supply uniform firmness to help the caregiver do routine procedures.
- **Standby/Operate**—Press the **Standby/Operate** control to start or stop the control unit.



- **Power Failure**—For additional safety, the **Power Failure** alarm and indicator come on when the power to the control unit fails or the main **Power** switch is turned off.
- **Alarm Reset**—Press to turn the **Power Failure** alarm off.



## Specifications

Feature	Dimension
Control unit length	16.5" (42 cm)
Control unit width	6.7" (17 cm)
Control unit height	10.6" (27 cm)
Control unit weight	13.2 lb (6.0 kg)
Control unit phase time	5 minutes to 95 minutes
Control unit maximum flow rate	1200 lpm
Control unit rated voltage	110 V to 120 V
Control unit maximum current	5 A
Control unit rated frequency	60 Hz
Control unit protection type	Class II, Type BF
Control unit mode of operation	Continuous
Control unit safety standard	Conformity European (CE) and Underwriters Laboratories Inc.® (UL)
Mattress width	36" (91 cm), 39" (99 cm), or 48" (122 cm)
Mattress length	79.9" (203 cm)
Mattress height	9.4" (24 cm)
Mattress weight	33.1 lb (15.0 kg)
Air cell material	Navy blue, nylon-woven fabric with polyurethane back
Coverlet type	Fully-quilted zipper cover with a removable, 2", convoluted foam base
Coverlet material	Navy blue, woven fabric with polyurethane coat finish

Feature	Dimension
Base material	Woven polyester fabric with polyvinyl chloride (PVC) back
<b>Maximum patient weight</b>	
36" mattress	300 lb (136 kg)—static and alternating therapy modes
39" mattress	850 lb (386 kg)—static mode 500 lb (227 kg)—alternating therapy mode
48" mattress	850 lb (386 kg)—static mode 700 lb (318 kg)—alternating therapy mode

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## Safety Tips

To help prevent the risk of hospital bed fires, make sure facility personnel follow the safety tips in the *FDA Public Health Notification: Safety Tips for Preventing Hospital Bed Fires. (US only)*

### WARNING:

Evaluate patients for entrapment risk according to facility protocol, and monitor patients appropriately.

### WARNING:

Evaluate patients for entrapment risk according to facility protocol, and monitor patients appropriately. Ensure that all siderails are fully latched when in the raised position. Failure to do either of these could result in serious injury or death.

### NOTE:

Siderails are intended to be a reminder to the patient of the unit's edges, not a patient-restraining device. When appropriate, Hill-Rom recommends that medical personnel determine the proper methods necessary to ensure a patient remains safely in bed.



**SHOCK HAZARD:**

The potential for electrical shock exists with electrical equipment. Failure to follow facility protocols may result in death or serious personal injury.



**WARNING:**

Contraindication: The Synergy® Air Elite Low Airloss Alternating Therapy System surface is **not** for use with patients who have an unstabilized spinal cord injury. Patient injury could occur.



**WARNING:**

The Synergy® Air Elite Low Airloss Alternating Therapy System surface is **not** for pediatric applications. Patient injury could occur.



**WARNING:**

Before you plug the control unit into an applicable power source, carefully read the instructions. Failure to do so could cause patient injury, personal injury, or equipment damage.



**WARNING:**

Do not use the unit in the presence of any flammable gases such as anesthetic agents. Patient injury, personal injury, or equipment damage could occur.



**WARNING:**

Keep the control unit and mattress away from flammable liquids. Failure to do so could cause patient injury, personal injury, or equipment damage.



**WARNING:**

Keep the mattress away from sharp objects. Failure to do so could cause patient injury or equipment damage.



**WARNING:**

Do not put any heating device close to the mattress. Patient injury, personal injury, or equipment damage could occur.

**⚠ WARNING:**

Use the unit under the order of a physician **only**. Failure to do so could cause patient injury or equipment damage.

**⚠ WARNING:**

When you use the unit, it may be necessary to change the patient's position from time to time. Failure to do so could cause patient injury or equipment damage.

**⚠ WARNING:**

Only Hill-Rom-authorized persons should service the Synergy® Air Elite Low Airloss Alternating Therapy System. Service by unauthorized persons could cause personal injury or equipment damage.

**⚠ CAUTION:**

Do not drop the control unit. Equipment damage could occur.

**⚠ CAUTION:**

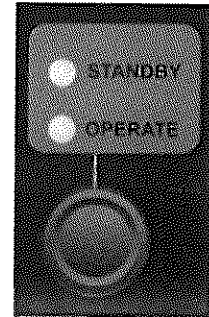
Do not store the Synergy® Air Elite Low Airloss Alternating Therapy System in direct sunlight or extreme cold conditions. Equipment damage could occur.

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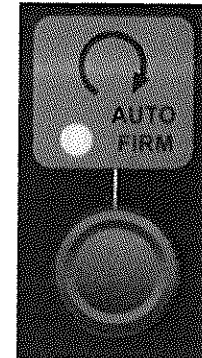
## **Installation**

1. Remove the existing mattress from the bed frame.
2. Turn the Synergy® Air Elite Low Airloss Alternating Therapy System mattress so its air tubes are at the foot end of the bed.
3. Put the mattress on the bed frame.
4. Use the elastic straps to attach the mattress to the bed frame.
5. Hang the control unit on the footboard of the bed frame.
6. Attach the air tube connectors and exhaust connector to the left-hand side of the control unit.
7. Examine the air hoses. Make sure the air hoses are not kinked under the mattress.
8. Plug the unit into an applicable power source.

9. Turn the **Power** switch **On**. The **Standby** indicator comes on.
10. Press the **Standby/Operate** control. The **Operate** indicator comes on, and the control unit starts.



11. Press the **Auto Firm** control. The **Auto Firm** indicator comes on, and the mattress starts to inflate.
12. Let the mattress fully inflate.



**NOTE:**

In Auto Firm mode, the mattress should fully inflate within 2 to 3 minutes.

13. After the mattress is fully inflated, move the patient on to the mattress in accordance with facility protocol.
14. After the patient is in position on the mattress, press the **Auto Firm** control to stop the inflation of the mattress.

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## Instructions for Use

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### CPR Mode

To quickly deflate the mattress for CPR procedures, pull the **CPR** release on the side of the control unit to disconnect the hose connector.



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### Alternating Therapy Mode

Alternating Therapy mode inflates and deflates the 18 air cells in this order:

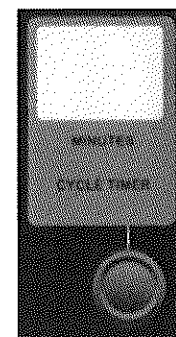
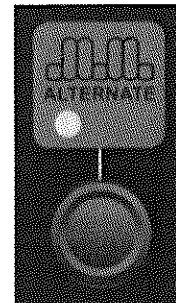
1. Every third air cell fully inflates
2. Air cells 2, 5, 8, 11, 14, 17 deflate
3. Every next third air cell fully inflates
4. Air cells 3, 6, 9, 12, 15, 18 deflate
5. Every final third air cell fully inflates

To start the Alternating Therapy mode, do as follows:

1. Press the **Alternate** control. The **Alternate** indicator comes on.
2. To set the necessary cycle time interval of the therapy, press the **Cycle Timer** control to adjust the **Cycle Timer** setting in 5 minute increments between 5 minutes and 95 minutes.

**NOTE:**

To estimate the total cycle time, multiply the **Cycle Timer** setting by 4.



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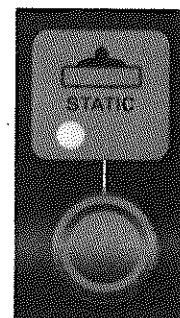
## Static Mode

Static mode supplies low airloss therapy **without** alternating therapy.

1. Press the **Static** control. The **Static** indicator comes on.

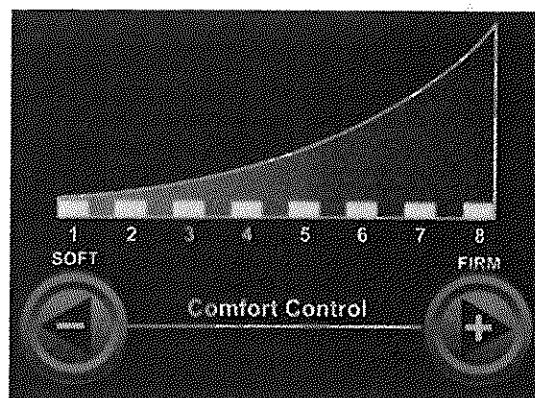
**NOTE:**

When Static mode is on, the **Cycle Timer** display is off.



2. If necessary, adjust the **Comfort Control** setting:

- **Decrease** pressure—press the **Soft (-)** control.
- **Increase** pressure—press the **Firm (+)** control.



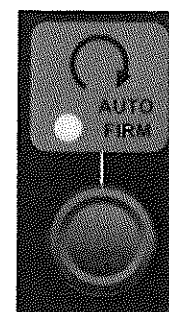
3. Put your hand between the air cells and the foam pad in the mattress assembly. Make sure at least 2" (5 cm) exists between the patient and the top of the foam pad.

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## Auto Firm Mode

Auto Firm mode quickly inflates the air cells to their maximum pressures to supply uniform firmness to help the caregiver do routine procedures. To turn the Auto Firm mode on or off, press the **Auto Firm** control.

When the Auto Firm mode is on, the **Auto Firm** indicator comes on.



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## Power Failure Alarm

If power to the control unit is lost, or the **Power** switch is turned off, the **Power Failure** indicator and alarm

come on to show that power to the unit has failed. To turn the alarm off, press the **Alarm Reset** control.



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## Cleaning

 **WARNING:**

Follow the product manufacturer's instructions. Failure to do so could result in personal injury or equipment damage.



**SHOCK HAZARD:**

The potential for electrical shock exists with electrical equipment. Failure to follow facility protocols may result in death or serious personal injury.



**SHOCK HAZARD:**

Unplug the unit from its power source. Failure to do so could result in personal injury or equipment damage.



**SHOCK HAZARD:**

Do not expose the unit to excessive moisture. Personal injury or equipment damage could occur.



**CAUTION:**

Do not use harsh cleansers, solvents, or detergents. Equipment damage could occur.

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## General Cleaning

We recommend that you clean the unit with detergent and warm water. Do not use excessive liquid, harsh cleansers, or phenol-based cleaning solutions.

### Control Unit

1. Before you clean and examine the control unit, turn the **Power** switch **Off**, and unplug the unit from its power source.
2. Use a damp soft cloth with mild detergent and warm water to clean the control unit.
3. If soil is present, wipe down the control unit with a sodium hypochlorite solution diluted to 1000 ppm or an EPA registered (US only), tuberculocidal, disinfectant.

**NOTE:**

The control unit case is made from acrylonitrile butadiene styrene (ABS) plastic.



## **Mattress**

To clean the mattress on the bed, use a damp soft cloth with mild detergent and warm water. Wipe down the air cells with a solution of sodium hypochlorite (1000 ppm) or any other non-phenolic germicidal solution.

If the top coverlet or bottom encasement is soiled, either discard it, or do as follows to machine wash and thermally disinfect it:

1. Put on applicable protective personal equipment (PPE).

### **Discard**

- a. Remove and discard the top coverlet or bottom encasement in accordance with the facility's procedures for contaminated waste.
- b. Replace with a clean top coverlet or bottom encasement.

### **Wash**

#### **Industrial laundry—**

- a. Break wash cycle in cold water for 10 minutes.
- b. Main wash cycle I at 140°F (60°C) for 6 minutes.
- c. Main wash cycle II at 158°F (70°C) for 10 minutes.
- d. Cold rinse for three standard cycles
- e. Extraction cycle for 5 minutes.

#### **Normal laundry—**

- a. Pre-wash in cold water for a standard cycle.
  - b. Main wash cycle at 158°F (70°C) for 10 minutes.
  - c. Extraction cycle for 2 minutes.
  - d. Cold rinse for a standard cycle.
  - e. Extraction cycle for 5 minutes.
2. Let the top coverlet or bottom encasement air dry, or machine dry at 110°F (43°C) for one hour.

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## **Steam Cleaning**

Do not use any steam cleaning device on the unit. Excessive moisture can damage mechanisms in this unit.

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## **Cleaning Hard to Clean Spots**

To remove difficult spots or stains, we recommend that you use standard household cleansers and a soft bristle brush. To loosen heavy, dried-on soil, you may first need to saturate the spot.

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## **Disinfecting**

When there is visible soil and also between patient use, we recommend that you disinfect the unit with an EPA registered (US only), tuberculocidal, disinfectant.

Dilute the disinfectant as specified on the manufacturer's label.

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## **Maintenance**

### **WARNING:**

Only Hill-Rom-authorized persons should service the Synergy® Air Elite Low Airloss Alternating Therapy System. Service by unauthorized persons could cause personal injury or equipment damage.

No daily maintenance is necessary. Only Hill-Rom-authorized persons should service the Synergy® Air Elite Low Airloss Alternating Therapy System. For minor problems, refer to “Troubleshooting” on page 13.

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## **Service Calls**

When you call Hill-Rom about your unit, be prepared to give the serial number from the product identification label. When you give the serial number, the Hill-Rom representative can identify your unit and give you the information you need more quickly.

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## Troubleshooting

### WARNING:

Only Hill-Rom-authorized persons should service the Synergy® Air Elite Low Airloss Alternating Therapy System. Service by unauthorized persons could cause personal injury or equipment damage.

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### Control Unit Does Not Operate

1. Make sure the power cord is plugged into the control unit and an applicable power source that supplies the correct voltage.
2. It may be necessary to replace the fuse in the control unit. Call Hill-Rom Technical Support for assistance.

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### Some Air Cells Have Lower Air Pressure than Others with Normal Air Pressure

1. Put the unit in Static mode. Unzip the top coverlet from the bottom encasement, and examine the air tubes between the air cells and the main air supply line for kinks. Adjust the air tubes as necessary.
2. Examine the air cells for leaks. If a leak is found, call Hill-Rom Technical Support for assistance.

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### Control Unit Supplies Air but Mattress Does Not Inflate

1. Make sure the unit is plugged into an applicable power source that supplies the correct voltage.
2. Examine the air tubes for kinks. Adjust the air tubes as necessary.
3. Make sure the air tubes are correctly connected. Connect the air tubes as necessary.
4. Unzip the top coverlet from the bottom encasement, and examine the air cells and air tubes for leaks. If a leak is found, call Hill-Rom Technical Support for assistance.

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## Storage and Handling

**⚠ CAUTION:**

Do not store the Synergy® Air Elite Low Airloss Alternating Therapy System in direct sunlight or extreme cold conditions. Equipment damage could occur.

Feature	Specification
Storage temperature range	-50°F to 104°F (-46°C to 40°C)
Storage relative humidity	30% to 95%



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