

Burke Tri -Flex™ II Air Mattress **OPERATING INSTRUCTIONS**

OPERATING INSTRUCTIONS MANUAL **Burke Low Air Loss Support System Alternating** **Pressure System With Width Expansion** Using Real Time Pressure Monitoring (RTPM) Sensor Technology



US & INTERNATIONAL PATENTS PENDING

An FDA Registered Company, Products are FDA listed.

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DO NOT USE IN THE PRESENCE OF FLAMMABLE ANESTHETICS OR AN OXYGEN TENT AROUND THE CONTROL UNIT



Symbol used in the manual apply to hazards or unsafe practices which could result in personal injury or property damage.



Do not use in the presence of smoking materials or open flame. Air flowing through air mattress will support combustion.

- Risk of electrical shock, do not remove control unit back cover.
- Refer servicing to qualified service personnel.
- Equipment should only be connected to a properly grounded three pronged wall outlet, using 10 foot (305 cm) hospital grade power cord provided with the product.



- Never drop or insert any object into any opening of the control unit.
- Please read this manual before operating Burke Low Air Loss Support System. If you are unable to understand the manual fully or partially, please contact your dealer or the manufacturer before attempting to use this equipment. Otherwise personal injury or property damage may result.



In the event of mechanical damage or any issue which may compromise product performance or patient safety, discontinue use and contact qualified service personnel or distributor immediately.









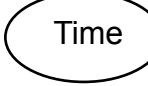











INFORMATION CONTAINED IN THIS OPERATING INSTRUCTION MANUAL IS SUBJECT TO CHANGE WITHOUT ANY PRIOR NOTICE.

MANUFACTURER'S LIABILITY

BURKE INC.'S original warranty on the Burke Low Air Loss Support System will remain in effect during the warranty period, provided any changes, readjustments, or repairs have been carried out by a factory authorized service center or a technician of BURKE INC., or whenever the control unit and mattress system has been used according to the following operating instructions.

BURKE INC.'S liability under the warranty is the repair or replacement provided and, in no event, shall BURKE INC.'S liability exceed the purchase price paid by the customer for the product. Under no circumstances shall BURKE INC. be liable for any loss, direct, indirect, incidental, or special damages arising out of or in connection with the use of this product.

EXPLANATION OF SYMBOLS USED ON THIS DEVICE

SYMBOL	EXPLANATION
 POWER	Turns unit On/ Off
 SOFT  FIRM	Up or Down key adjusts patient comfort pressure levels.
Low Air Loss  Max Inflate	Inflates mattress rapidly (30 minute timer)
Low Air Loss  Low-Air-Loss Max Inflate	Supplies air into the low air loss section of the mattress or into the optional special multi-chamber air distribution layer in the top sheet
 Therapy	Selects Static, Alternating Pressure (AP) therapy or Upright (Fowler) mode
 Time	Sets Alternating Pressure Therapy times, 5, 10, 15, 20 minutes
 Upright	Boosts air pressures in the mattress to avoid patient bottoming out
 LOCK	Locks out all control unit functions to prevent patient settings tampering
○ Power Fail  ○ Low Pressure 	In the event of power failure or if the hose is disconnected an audio /visual alarm will sound
 ALARM SCIENCE	Mutes audio alarm
	Indicates the point of attachment of the equipment to earth (Grounding Point)
	Attention: Instructs end user / care giver / operator to refer to the manual
	Indicates that the degree of protection against electrical shock is TYPE BF.
	Not for use in presence of flammable anesthetics.
	Risk of electrical shock, do not remove back cover
	Recycle waste electrical & electronic equipment

Burke Low Air Loss Support System (Figure -1 Page 14):

The Burke Low Air Loss Support System is an alternating pressure & on-demand low air loss system with width expansion side air bolsters, used to provide pressure reduction. It consists of a control unit (A) which is used to inflate a mattress replacement system (B) with width expansion side air bolsters on each side. The control unit is designed to provide continuous static or alternating pressure with low air loss relief at required patient comfort levels. The ABS/PVC blend enclosure houses a medium output air pump (42~52 LPM), an alternating pressure solenoid valves, and a micro-controller with pressure sensors, R.F auto fowler receiver, the micro controller controls all of the above components, and provides desired patient comfort pressure and therapies.

The mattress replacement system (B) is comprised of a durable Cordura base (C) with a safety 1" (3cm) convoluted foam base, 5" (13cm) (inflated) detachable air cushions (T), and covered with a vapor permeable, water proof, low friction and low shear nylon quilted top sheet (E) The Low air loss top sheet has a special multi-chambered air distribution layers which administers low air loss relief directly underneath the patient] with zipper or straps to fasten the top sheet to the mattress base. The complete mattress system has 6 straps (F) in several areas so it can be easily fastened to any size hospital bed. Ties straps for moving the mattress are mounted inboard. The mattress has a side air bolster on each side of the mattress. These bolsters, when in use to provide additional width to the bed, are always maintained at a constant pressure via a separate line with sensor feedback.

Burke Low Air Loss Support System SYSTEM FEATURES

CONTROL UNIT (A) {Figures on page 15}

- Medium flow (42~52 LPM) air output and quiet operating control unit, Max flow mode (W) inflates mattress in 2 to 5 minutes. Has 30 minute Max Flow timer.
- State of the art micro-controller technology unit for accurate patient comfort pressure values and AP times (TT).
- Front panel (G) has power switch (PS), and desired comfort pressure level.
- Comfort control keys (K) to set comfort levels.
- 0 to 9 levels of patient comfort level control as measured in Parts per Millimeter of Mercury mmHg (CC).
- Static (non-alternating) mode LED (M).
- AP (alternating Pressure) mode (LED) (N).
- Integrated handle/hanger (P) for easy carrying and hanging of the control unit from the footboard of the bed.
- 10' (305 cm) long detachable 16 AWG hospital grade power cord (Q).
- Durable ¼" (.635) flow (4) couplings (R) for quick connection and disconnection (CPR deflation).
- Control unit has short circuit / over voltage protection with single/dual fuse (FP) not shown in the picture.
- Power Fail (PF) LED flashes to indicate power outage and a warning buzzer sounds.
- Low Pressure (LP) LED flashes to indicate low pressure.
- Lock Switch (LO) to lock out all control functions.

SUPPORT SURFACE (B)

Figure - 1 page 14

- Self contained mattress replacement system (B) with easily detachable components for cleaning.
- Detachable urethane coated, 70 Denier nylon taffeta, flame retardant / water repellent, mildew resistant, low friction and low shear, 5" (13cm) high (inflated) detachable lateral tubular air cushions (T) (pg.20).
- Detachable urethane coated nylon constant air pressure safety side air bolsters enable the mattress to be reduced in width to allow easy patient transport in the bed. Side bolsters can also be deflated for easy patient access into and out of the mattress, and also other easy patient procedures.
- Detachable zippered highly breathable urethane coated, 70 Denier nylon, flame retardant / water repellent, highly vapor permeable, anti-microbial, low friction and low shear quilted reusable top covers a Special multi-chambered air distribution layered low air loss top sheet (E) which administers low air loss relief directly underneath the patient. 1" (3cm) convoluted safety foam enclosed in the base (C) to support the patient in the event of loss of air pressure in the mattress.
- The mattress hose assembly has a quadruple tubing (V) with four easy to use quick connect and disconnect connectors (R) enclosed in a single Plastic housing. The mattress can be disconnected from the unit by simply squeezing and pulling the release button on the two quick connectors of the single piece hose connector.

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

	<u>U.S.</u>	<u>INTL.</u>
Input Voltage AC:	120V	220 / 240V
Input Frequency:	60 Hz	50 Hz
Current:	1A	0.5 A
Maximum Power Consumption:	40 +/- 5 W	40 +/- 5 W
Circuit Protection:	Single/Dual fused, 250V, 1A fast blow fuses.	
Mode of Operation:	Continuous	Continuous

PERFORMANCE SPECIFICATIONS

Weight Capacity:

Bariatric Mattress: 1000 Lb. (455 Kg.) maximum.

	<u>U.S. / INTL.</u>
Pressure Zone:	2
Max Flow:	42~52 LPM
Max Flow Pressure:	35 +/- 6 mmHg
Max Flow Timer:	30 minutes
Support Surface Inflation Time:	2 ~ 5 minutes.

Patient Comfort Control Pressures:

Soft Pressure:	7 +/- 4 mmHg
Firm Pressure:	32 +/- 6 mmHg
Bolster Pressure:	55 +/- 20 mmHg
Cycle Time:	5,10,15,20 Min

Patient Contact:

Control unit and mattress have Latex-Free components.

MECHANICAL SPECIFICATIONS

Control Unit (A):

Dimensions, LxWxH:	13.5" x 5.5" x 11" (34cm x 14cm x 28cm)
Weight:	14 lbs. (6 Kg.)
Power Cord:	14' (427cm) Long Hospital Grade
Connection:	Four ¼" (.635cm) flow couplings
Packaging:	1piece/box
Air Filter:	None.

Support Surface (B):

Air Cushions and Side Bolsters: 70 denier urethane coated nylon, R.F. welded, liquid proof and washable. Pass Cal.117.

Base: 1000 denier cordura, liquid proof and washable.

Top Sheet: 70 denier urethane coated nylon, low friction, low shear force producing, breathable, liquid resistant and highly vapor permeable. Pass Cal.117. includes a Low Air Loss top sheet with 3 layers: Top layer is breathable nylon, air distribution special spacer material middle layer, and the bottom layer is water resistant nylon layer.

<u>Description</u>	<u>Inflated Dim. LxWxH</u>	<u>Weight</u>
LAL Top Sht:	86"x39"x5" (218x99x13cm)	8 lbs. 3 Kg.
Mattress:	86"x39"x7" high (218x99x18 cm)	23 lb. 10 Kg.
Side Bolsters	86"x4"x7" high (2 per) (218x5x18 cm)	
Packaging:	1 Piece per Box	

ENVIRONMENTAL SPECIFICATIONS

Operating Conditions:

Ambient Temperature: 40° ~ 104° F
10° ~ 40° C

Relative Humidity: 30% ~ 75% Non-Condensing

Atmospheric Pressure: 700 hPa to 1060 hPa

Storage And Shipping Conditions:

Ambient Temperature: -40° ~ 158° F
-40° ~ 70° C

Relative Humidity: 10% ~ 100%

Atmospheric Pressure: 500 hPa to 1060 hPa

Protection Against Harmful Ingress Of Liquids:
Ordinary Protection (IPXO)

Mattress Sanitation:

Complete support surface is made of superior quality materials and is modular in construction. All components such as manifold, hose assembly, air cushions, top sheet, and foam base are interchangeable and can be easily cleaned or detached for laundry.

SAFETY AGENCY APPROVALS

ETL Listed:



To standard for safety of Medical Electrical Equipment

Conforms To: UL STD 60601-1 with respect to
Electrical Shock, Fire and Mechanical Hazards

Flame

Resistance: Unit components meet UL 94V-0.
Mattress components pass
Standard for California117.

FDA REGISTRATION

The Manufacturer is an FDA registered company as a manufacturer and as a contract manufacturer whose quality system meets the requirements of FDA 21 CFR, PART 820-Good Manufacturing practices for medical devices and ISO 9001.














Products are FDA listed.

PATENTS


US & INTL.: Patent Pending

Complies with Medical Device Directive
93 / 42 / EEC

SAFETY INSTRUCTIONS

-  Always consult the patient's physician before using the Burke Low Air Loss Support System for contra indicated conditions.
-  To avoid damaging your Burke Low Air Loss Support System control unit (A), before operating be sure the AC power (X) available at your location matches the power requirements printed on the product identification label on the back of the unit.
-  To avoid electric shock, always plug in the power cord of the control unit into a properly grounded power source (X).
-  Do not insert items into any openings of the control unit (A). Doing so may cause fire or electrical shock by shorting internal components.
-  Do not spill liquids or food on or into the control unit (A). In the event of any spillage, immediately turn off the control unit and disconnect it from the power source (X). Return the control unit for servicing to a factory authorized service center.
-  Care should be taken such that the controls on the footboard of the bed frames are not obstructed by the Burke Low Air Loss Support System control unit.
-  Care should be taken such that the control unit (A) is not blocked, and kept away from any heat sources or radiators during the operation of the unit.
-  Care should be taken such that the power cord (Q) of the control unit is not pinched, or has any objects placed on it, and also ensure it is not located where it can be stepped on or tripped over.
-  Do not attempt to service the control unit except as explained in this operating instructions manual. Contact factory for servicing instructions. Always follow operating and service instructions closely.
-  Do not place the patient directly on the mattress without the top sheet. Breathable nylon top sheet is water repellent, highly vapor permeable, anti-microbial, low friction and low shear quilted reusable top sheet.
-   The control unit enclosure should only be opened by a factory authorized qualified service technician.
-  Smoking by the patient or anyone else around or on the Burke Low Air Loss Support System is prohibited. Burke Low Air Loss Support System uses room air for circulation through the mattress, smoking will contaminate the system.

UNPACKING THE SYSTEM

 **When opening the large system box or the small Control Unit box, care should be taken such that object used to open the box does not penetrate the box and damage the components inside.**

Components Supplied:

Burke Low Air Loss Support System Box

1 Control Unit Box
1 Mattress

Control Unit Box

1 Control Unit
1 Operating Instructions Manual
1 Power Cord

Unpacking and Inspection

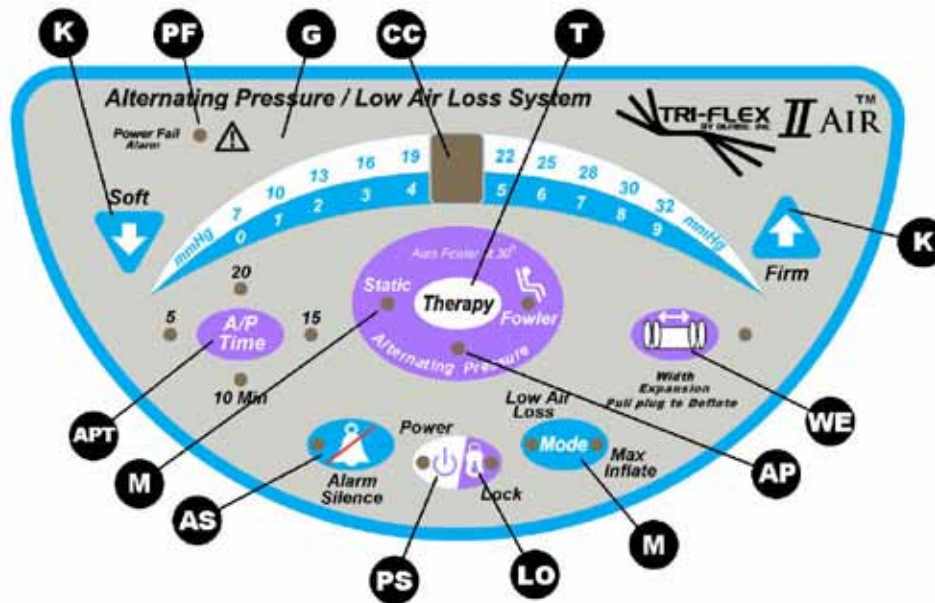
Before accepting and signing for the box or boxes, please inspect the box or boxes for external and internal damages. Verify that the number of boxes listed on the packing list matches the number boxes received. Also verify that no components are damaged or missing. Report any missing boxes, missing components and or damages to the transportation carrier immediately.

QUICK REFERENCE GUIDE

Pages 18, 19, & 20



THIS SECTION IS FOR QUICK REFERENCE ONLY, PLEASE READ THE ENTIRE MANUAL BEFORE OPERATING THE Burke Low Air Loss Support System SYSTEM



DISPLAY PANEL (G): Displays all of the product functions.

POWER SWITCH (PS): Press power switch to turn ON or OFF the unit. Amber Light On = Main Power is On but Control Unit is Off, Green Light On = Control Unit is operating.

THERAPY (MD): To select Alternating Pressure (AP) therapy mode, Static mode, or Upright mode. Press “MD” to activate LED (M) for Static mode, or LED (AP) for AP, or LED (U) for Upright mode.

ALTERNATING PRESSURE (N): Press Therapy “MD” and activate AP mode (AP). Press Time (APT) and activate one of the 4 AP (Alternating Pressure) times. AP mode is activated.

MODE (FN): Press “FN” key to select Max Inflate (W) mode or Low Air Loss (AL).

MAX INFLATE (W): Rapid inflation of mattress to max firmness. Will change back to previous setting in 45 minutes or can be disengaged by pressing MAX INFLATE key.

LOW AIR LOSS (AL): Provides on-demand low air loss relief.

SOFT & FIRM (K): To adjust patient comfort pressure levels up or down.

COMFORT CONTROL (CC): 10 LED's displays the patient comfort pressure levels from 0 to 9. It also provides a guide to the care giver to set approximate comfort pressure level as measured in Parts per Millimeter of Mercury (mmHg), depending on the patient weight.

LOCK (LO): Lock out key completely locks the control panel including power switch.

ALARM SILENCE (AS): To mute audio alarm.

UPRIGHT (U): Activates patient fowler boost mode. In patient fowler position the control unit boosts pressure in the mattress to avoid patient bottoming out.

POWER FAIL (PF): Audiovisual alarm in the event of power outage. Has internal memory, will retain previous settings during power outage.

LOW PRESSURE (LP): Audiovisual alarm in the event of mattress hose disconnection.

WIDTH EXPANSION (WE): Activates Width Expansion, push "off" and pull plugs to narrow bed width for transport.

• QUICK OPERATING INSTRUCTIONS •

1. Unroll the Burke Low Air Loss Support System mattress and place it on the bed frame and attach it firmly with straps. Hang the Burke Low Air Loss Support System control unit on the footboard and make sure that the mattress hose assembly is connected securely to the control unit.
2. Plug the hospital grade power cord provided with the unit into a three pronged hospital socket, the amber "STANDBY" LED will light up. Press power switch (PS) to turn on green LED. Press Mode (FN) and light up Max Inflate (W) LED. The pump will come on and inflate the mattress. Place patient on the mattress after mattress is inflated.
3. Refer to the patient weight chart and using "SOFT" / "FIRM" keys (K) set patient comfort pressure level appropriate to patient weight. Number of LED's (CC) lit will display the patient comfort pressure level.
4. To set Alternating Pressure therapy mode (N) press the Therapy key (MD) and select AP mode (N). Press Time key (TT) to select appropriate AP time from 4 different AP times. To change AP time simply press Time (TT) key to light up appropriate AP time LED. In this mode every other air cell in the mattress will change pressures from high to low or low to high.
5. To set THERAPY (STATIC) (M) mode press Therapy (MD) key until THERAPY LED lights up. In this mode constant pressures are maintained in the mattress.
6. To set UPRIGHT mode manually, press Therapy key (MD) to light up Upright LED (U), (patient's fowler position). When Upright (U) is activated (LED lights up) the control unit inflates the mattress to higher pressures to eliminate patient bottoming. The unit also has an Automatic fowler setting, (see below) activated whenever the mattress is elevated 30 degrees or more.
7. Upright Sensor Automatically senses patient fowler position and boosts pressure in the mattress to avoid patient bottoming out.
8. For CPR or quick deflation, disconnect mattress hose connector from the control unit by simply squeezing both buttons of the body couplings and pulling them away from the control unit. Also disconnect the bolster deflate insert connector from the bolster body connector to deflate the side bolsters.
9. The mattress has a 1" (3cm) safety convoluted foam pad to provide support to the patient during transportation or power failure.

SYSTEM SET-UP



Figure -1

PLEASE NOTE: Burke Low Air Loss Support System ALTERNATING PRESSURE System must be installed on bed frames that are equipped with side rails. Please raise side rails on the bed and lock them in position after the patient is on the mattress.



NEVER LEAVE PATIENT UNATTENDED ON MATTRESS SYSTEM WITH BED SIDE RAILS IN THE DOWN POSITION.

CONTROL UNIT SET-UP

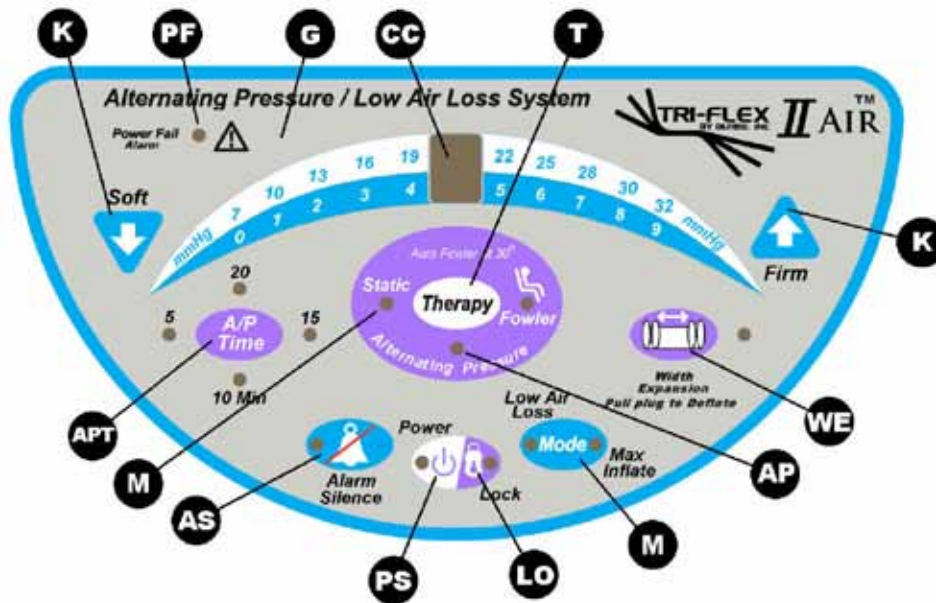


Figure - 2

CONTROL UNIT RIGHT SIDE



Figure – 3

CONTROL UNIT LEFT SIDE

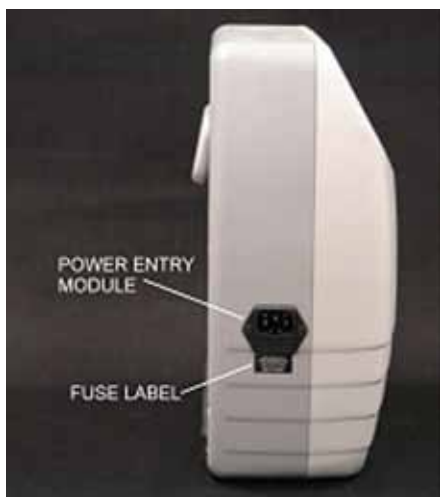


Figure – 3

CONTROL UNIT REAR

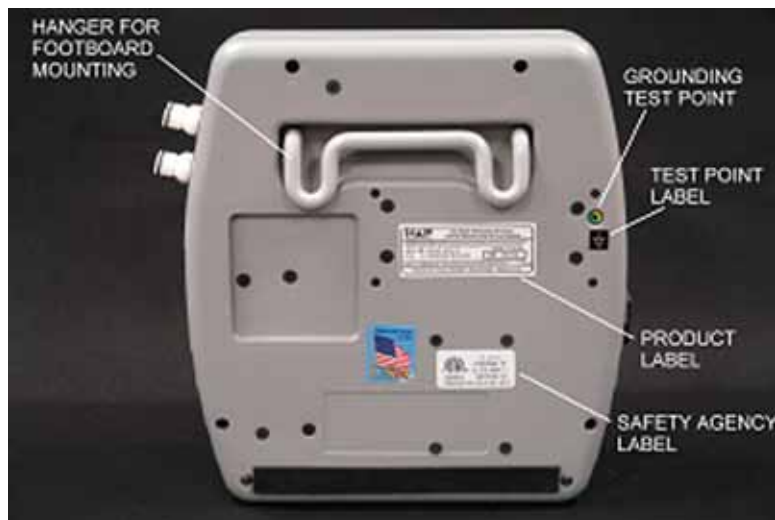


Figure – 4

1. Before using the Burke Low Air Loss Support System ALTERNATING PRESSURE mattress replacement system remove any non Burke Low Air Loss Support System mattress system from the bed frame (BF).

2. **Burke Low Air Loss Support System Mattress Replacement system:** When using a Burke Low Air Loss Support System mattress replacement system, unroll the Support System mattress (B) and place it on the bed frame (BF). Note: Make sure that the hose end of the mattress is towards the foot of the bed.

3. **Mattress Replacement System:** There are six nylon black straps with buckles (F), two straps at the head of the mattress, two on the foot of the mattress, and 2 in the middle (one on the each side of the mattress) as shown. Loop each strap around the bed frame and fasten it securely to the bed frame using the buckle.


4. Unroll the Burke Low Air Loss Support System Replacement Mattress and place it on the bed frame (BF).

⚠ Verify that the hose end of the mattress is towards the foot of the bed.

5. Open the hooks (P) on the back of the control unit (A) and suspend the control unit from the footboard (FB) of the bed (BF). If the bed you are using does not have a footboard, place the control unit (A) on its base or on its back on a flat surface underneath the bed near the foot of the bed frame (BF).

⚠ Care should be taken such that the air inlet vent on the control unit is not covered, and the control unit is not placed on the floor in such a manner that it is a hazard for flow of traffic.

6. Uncoil the power cord (Q) and plug the cord into the appropriate AC power source (X), which is properly grounded. Plug the other end of the power cord into the control unit and press it in place.

7.  Care should be taken such that the power cord of the control unit is not pinched, or has any objects placed on it, and also ensure it is not located where it can be stepped on or tripped over. Run cord under the bed when possible

8. Connect the mating coupling body (R) on the mattress hose assembly (V) into the insert on the control unit connector and lock it in place. (page 22) Also make sure the Side Bolster (CT) insert connector is securely connected into the mattress manifold body connector on the end of the mattress.


 Make sure the connectors have a good connection by gently tugging on the hoses. Also, care should be taken such that the mattress hose is freely suspended without being pinched or kinked.




Figure – 5


OPERATING INSTRUCTIONS

1. Make sure the mattress hose assembly (V) is connected securely to the control unit (A). Make sure that the bolster deflate insert connector is plugged into the bolster hose body connector and locked in place. Also make sure **Width Expansion** Tag (CT) insert connector is securely connected into the mattress manifold body connector on the side of the mattress.


INITIAL POWER UP

2. During initial power up (when power cord (Q) is plugged into the power source), the control unit (A) will be in “STAND BY” with the amber LED on.
3. If the unit is in stand by mode with amber LED on,  press the power key and the green LED will turn on. Press Mode (FN) and light up Max Inflate LED (W) the pump will turn on at maximum flow.
4. If the power comes on after a power outage, the control unit will go through its system initialization routine for few seconds and then resume the desired function.



MAX INFLATE (W)

1. Press  Mode (FN) key, the green LED will turn on. This mode is used to rapidly inflate the mattress. During this mode a series of beeps will sound every 3 minutes as a reminder that Max Inflate mode has been activated. Max Inflate mode will deactivate after 30 minutes. The LED will turn off and the unit will default to previous setting. In this mode the entire mattress will be pressurized to 32 +/-6 mmHg.
2. The mattress (B) will inflate to its normal size in 2 +/- 5 minutes. (Inflation time depends on the size of the mattress).

THERAPY (STATIC) {M}



1. To set STATIC mode (M) press  (MD) key to “STATIC” position, green LED (M) lights up.
2. In STATIC mode all the air cushions in the mattress will be maintained at a constant pressure.

ALTERNATING PRESSURE (N)

1. To set ALTERNATING PRESSURE {N} mode, press the  (MD) key and light up the AP LED (N).
2. Press  (TT) key and select appropriate AP times, the green LED (N) lights up. The AP times are 5, 10, 15, 20 minutes.
 - a. In the AP mode the odd numbered air cushions in the mattress will be maintain at a constant set patient comfort pressure, and the even numbered air cushions will deflate to 50% of the set patient comfort high pressure in the first half of the AP cycle and visa versa for the second half of the cycle, and continue back and forth.

PATIENT COMFORT CONTROL LEVEL (CC)

The Burke Low Air Loss Support System is designed for patients weighting between 50≈1000 lbs. (22 Kg. ≈ 455 Kg.). Pressing the comfort control buttons increases or decreases the pressure

a. Pressing the  SOFT key (K) towards the LED 0 position reduces the pressure setting, pressing the  FIRM key (K) towards the LED 9 position increases the pressure. The patient comfort pressure ranges from SOFT (1) 7 +/- 4 mmHg to FIRM 32 +/- 6 mmHg. Depending on the desired patient comfort level the micro-controller / sensors will set appropriate air pressure in the mattress, and maintain the desired pressure in the mattress.



b. **IMPORTANT!** Once the mattress is inflated to its normal size with the patient lying on it, set the COMFORT CONTROL KEY to the desired patient comfort level. Wait 5 minutes for the mattress pressure to stabilize, verify the appropriate pressure required to support the patient by performing a simple “four finger check”.




Figure – 6

c. Make sure that the patient is lying flat on his or her back in the middle of the mattress. Unzip Cover and Place four fingers between the air cushions directly underneath the sacral region of the patient's body. There should be a minimum of 3 to 4 finger width clearance between the bottom of the patient and the safety foam base. Repeat this procedure until the desired patient comfort pressure is achieved.

RECOMMENDED PRESSURE SETTINGS


- For rapid inflation of the mattress press (FN) key and activate “Max Inflate” (W) LED.
- For extra firm support during Patient ingress / egress, or Patient wound care, or Patient turning, or Patient cleaning it is recommended to set the mattress pressure to Max Inflate (W).
- If a patient's weight to height ratio is above average, it is recommended to set the comfort control to 20% more than the set pressure level.

ON- DEMAND LOW AIR LOSS


To activate Low Air Loss mode (AL) please press  (FN) key. The Low Air Loss (AL) LED will light up. In this mode the patient will receive low air loss relief. This mattress contains a Low Air Loss Top Sheet; the low air loss relief is administered directly underneath the patient in a special multi-chamber air distribution layer in the top sheet.

UPRIGHT (U)

Press  (MD) key to light up  UPRIGHT (U) LED. In this mode pressures in the entire mattress will be increased manually to higher than the set comfort pressure level. This enables the patient to be supported without bottoming out.


 **Auto Fowler Pressure Boost:** This system contains the auto upright sensor. The microcontroller will automatically sense patient fowler position and boosts the pressure in the mattress to avoid patient bottoming out when the mattress head is elevated to 30 degrees or more.

LOCK OUT (LO)

Control unit functions (including power) can be completely locked out from being tampered with, by simply pressing and holding the  lock key until the light comes on (approximately 3~5 seconds).

ALARM SILENCE (AS)

An audio-visual alarm is sounded in the event of power failure if the unit is on or when the hose is disconnected from the unit.

Audio alarm can be muted by pressing  alarm silence key.

FAILURE MODES

POWER FAIL (PF) – TRANSPORT MODE

In the event of power outage the microprocessor will activate an audiovisual signal to alert the caregiver by flashing the amber “POWER FAIL” LED and turning on the buzzer. Once the power is restored to the control unit the audiovisual signal will cease and unit resumes operating its set mode. During power outage the mattress will retain air as long as the mattress is connected to the control unit.

LOW PRESSURE (LP)

In the event of hose disconnection while the unit is on the microprocessor will activate an audiovisual signal to alert the caregiver by flashing the amber “LOW PRESSURE” LED and turning on the buzzer. Once the low pressure problem is fixed the audiovisual signal will cease and the unit resumes operating its set mode.

HOLDS AIR IN THE MATTRESS DURING POWER OUTAGE – TRANSPORT MODE

The mattress will hold air during transportation or power failure as long as the mattress is connected to the control unit.

The mattress also has a 1” (3cm) safety convoluted foam pad to provide support to the patient when the mattress is deflated.

Transport function

The advantage of the mattress is that the patient need never be disturbed in order to move for tests or other procedures. The patient may remain in position and the side bolsters can be deflated in order to narrow the width of the Burke Bed to fit through doors.

To narrow the bed

Make sure the switch marked “Width Expansion” is off (light out).

Remove the “wide Expansion” plugs at the foot of the bed to allow the air to escape.

Gently move the bed side rails inward to completely deflate the cells and narrow the bed to it's 37” (94cm) width position for transportation.

To widen bed

Make sure the “Width Expansion” plugs are plugged in to the proper ports at the foot of the bed.

Move side rails to the outer 48” (122cm) position.

Press the “width Expansion” button on the pump control to inflate the side bolsters.

CPR FUNCTION

1. To deflate the mattress / overlay pad or for a CPR procedure, press the quick release buttons on both the coupling bodies (R), and simultaneously pull the single piece hose connector (V) from the control unit flange connector. Also disconnect the side bolster deflate insert connector from the bolster hose body connector present on the bottom right corner of the mattress where the mattress hose assembly exits.
2. In case of CPR emergency, for quick deflation of the mattress unzip the top sheet from the foot to the head by pulling the zipper located by the patient's right foot, near the exit location of the hose assembly (on some mattresses by unfastening the top sheet straps from the side of the mattress). Disconnect a few air cushions which are directly below the patient's chest from the mattress by pressing the quick release button on the connector with one hand and pulling the air cushion connector with the other.

PATIENT TRANSPORTATION (PT)

1. To transport a patient without removing the patient of the bed, press mode key to set unit in "STATIC" mode, wait a few minutes for the mattress pressure to stabilize. Turn off the control unit, disconnect the power cord from the power source and roll it up on the control unit securely.
2. To maintain full air pressure in the mattress or overlay please leave the mattress connected to the control unit at all times.
3. To narrow the bed width for transport, make sure the Width Expansion function is turned off and remove the two hose connector marked "width Expansion" at the foot of the mattress



Figure – 7

CLEANING PROCEDURE

CONTROL UNIT

- Before attempting to clean the control unit, turn off the unit and disconnect the control unit power cord from the power source. •



**DO NOT HEAT, STEAM AUTOCLAVE, OR IMMERSE
THE CONTROL UNIT IN LIQUIDS**

1. Wear eye goggles and rubber gloves before starting the cleaning procedure.
2. Quaternary or germicidal detergents / disinfectants are recommended as cleaning agents. A solution of mild detergent and warm water is recommended. If disinfection of bed is required, a chlorine solution not to exceed 10,000 ppm mixed with warm water is recommended.



Note: A fresh spray bottle of disinfectant / detergent solution should be prepared every day to clean the control unit.

3. By following the preparation instructions provided with the germicidal detergent /disinfectant solution, prepare the required amount of disinfectant solution or mild detergent solution.
4. Pour required amount of the germicidal solution into a spray bottle.
5. Using a brush or a cloth wipe off dust. If necessary, spray the exterior of the front and back of control unit, power cord and the cord plug with the prepared disinfectant / detergent solution. Using a damp cloth wipe down the sprayed surface cleanly. Note: Do not spray excess amount of solution on the control unit.
6. Once the control unit is clean, wipe the unit, the power cord, cord receptacle, and the cord plug dry with a clean dry cloth.
7. Place the control unit in a cool and dry area for an hour before operating the unit again. If the control unit is not used immediately, place the control unit in a plastic bag and store it in a storage area designated for medical electronic products.
8. After the cleaning operations are completed remove and dispose the rubber gloves appropriately. Wash your hands thoroughly with antibacterial soap.



CLEANING:

Prior to cleaning always check the cover for cuts, tears, cracks or other breakdowns in the covers liquid barrier. Check the internal foam core or fire barrier for soiling, and if soiling is found, replace. Because of the potential risk of infectious exposure, the mattress should be removed from the bed frame and examined on all surfaces for soil or points of potential contamination.

The mattress cover must be closed after inspection.

DO NOT clean or disinfect while the cover is open.

MATTRESS

Complete support surface is made of superior quality materials and is modular in construction. All the components such as manifold, hose assembly, air cushions, top sheet, side bolsters, rotation bladders, foam or air pad cover, and mattress base are interchangeable, and can be easily cleaned or detached for laundry.

1. Prior to cleaning/disinfecting, always check the cover for cuts, tears, cracks or other breakdowns in the covers liquid barrier. Because of the potential risk of infection exposure, the mattress should be removed from the bed frame or examined on all surfaces for soil or point of potential contaminants.

2. Follow steps 2 through 4 above to prepare disinfectant solution.

3. Using damp cloth wipe down the air cushions and the mattress base. Once the air cushions and the base are clean, wipe them down with a clean dry cloth.

4. Top sheet will require more frequent washing. Set wash cycle to heavy load with warm water. Once the water is full add manufacturer- suggested quantity of laundry detergent and/ or standard hospital disinfectants. If the air cushions or the top sheet becomes soiled with human waste, or blood, clean immediately by wiping down. Use hospital recommended laundry detergent and/ or disinfectant per manufacturer's instructions.

Note: Use non-chlorine bleach detergent.

5. Once the washing cycle is complete, make sure excess water from inside the air cushions is completely removed. Set the dryer to lowest heat settings, and operate the dryer until the air cushions or the top sheets are completely dry.

6. Leave the mattress to dry in a cool, dry area for an hour before using. If the mattress is not used immediately, roll the mattress and insert it into a plastic bag and store it in a storage area.

7. After the cleaning operations are completed remove and dispose the rubber gloves appropriately. Wash your hands thoroughly with antibacterial soap.

CARE AND STORAGE

1. When control unit is not in use, turn off the unit, disconnect the power cord from the power source and wrap the cord around the control unit. Wrap the control unit and the power cord in a plastic bag and cable tie it so that dust cannot enter the bag.

2. Roll the mattress and place it in a plastic bag and tie wrap the bag.

3. Store the control unit and the mattress in a storage area designated for medical electronic product storage.

TROUBLESHOOTING GUIDE

THE FOLLOWING INFORMATION IS FOR FACTORY AUTHORIZED SERVICE FACILITIES AND FACTORY QUALIFIED SERVICE PERSONNEL ONLY.

BURKE INC. can provide technical support to factory qualified technical personnel.

Contact BURKE INC. service department for more information.

PROBLEM	CAUSE	SOLUTION
A. Mattress Not Inflating / Not Alternating Properly	<ol style="list-style-type: none"> 1. Mattress hose disconnected 2. Air hose kinked or split 3. Major leak in the air cushions or overlay pad 4. Kinked or split manifold 5. Has power and fuse is good, control unit does not come on * 6. Not alternating, Solenoid malfunction 7. No air, Pump Malfunction 	<ol style="list-style-type: none"> 1. Connect hose connectors and lock them in place 2. Un-kink hose or replace split hose 3. Replace leaking air cushions or overlay pad 4. Un-kink manifold or replace split manifold 5. Send unit back for repair 6. Send control unit back to factory for repair 7. Send unit for repair
B. No Power	<ol style="list-style-type: none"> 1. Control Unit OFF 2. Power cord disconnected 3. No power in the power source 4. Power outage 5. Blown fuse * 	<ol style="list-style-type: none"> 1. Check power source and turn on unit 2. Connect power cord to the pwr source 3. Check power source has power and turn it "ON" 4. Wait till the power source has power 5. Replace blown fuse with an equivalent fuse

*See page 15, Fig. 3

• **Note:** To place an order or if you have any questions regarding the Burke Low Air Loss Support System and its warranties, please call BURKE INC. customer service at 800-255-4147, Email: burkebariatric@burkebariatric.com

WARRANTY

BURKE INC. warrants the Burke Low Air Loss Support System control unit and the mattress for a period of ONE (1) year from the original date of purchase.

BURKE INC. standard warranty is extended to the original buyer purchasing the equipment directly from BURKE INC. or through its authorized dealers. All warranty periods, where applicable, commence on the date of purchase from BURKE INC. or its authorized dealers.

BURKE INC.'S sole obligation and liability under this warranty is limited to (at BURKE INC.'S option) the repair or replacement by BURKE INC.'S authorized personnel of any parts or assemblies, which upon test and examination by BURKE INC., prove to be defective. This equipment may be returned prepaid to BURKE INC. after notification has been given and approval obtained for the return. Please call and ask for your BURKE INC. Service Personnel at (800) 255-4147 to arrange for warranty services.

BURKE INC.'S liability under the warranty is the repair or replacement provided and, in no event, shall BURKE INC.'S liability exceed the purchase price paid by the customer for the product. Under no circumstances shall BURKE INC. be liable for any loss, direct, indirect, incidental, or special damages arising out of or in connection with the use of this product.

The control unit warranty does not cover normal maintenance such as cleaning, periodic electrical tests, performance tests, and updating of equipment or parts thereof. This warranty shall be void and not apply if the control unit, including any of it's parts, is modified without BURKE INC.'S written authorization, is attempted to be repaired by personnel not authorized by BURKE INC., is not maintained in accordance with the prescribed preventive maintenance schedule, is used with accessories or parts not authorized by BURKE INC., or is damaged due to misuse, mishandling, abuse, negligence, accident, fire, or inadequate packaging by owner for shipment of the control unit for service, upgrade, repair, retrofit, or product return. All reasonable freight charges for valid factory approved warranty returns will be reimbursed. BURKE INC. makes no guarantee of clinical results.

• THE WARRANTY STATED ABOVE (INCLUDING ITS LIMITATIONS) IS THE ONLY WARRANTY MADE BY BURKE INC. AND IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BURKE INC. SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND.



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