OWNER'S MANUAL

PressureGuard®

APM Bariatric

Span-America Medical Systems, Inc.

P17159 R0 ECO#2277

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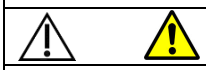
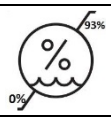
DOCUMENT SYMBOLS

This manual contains different typefaces and symbols to make the content easier to read and understand:

- Standard text – used for regular information.
- **Boldface text –** stresses a word or phrase.
- **NOTE:** - sets apart special information or important instruction clarification.

Symbol			
	Attention, Please Read Instructions	IP21	Protection against the ingress of fingers or similar objects and dripping water
	Stand-by		Foot End
	Attention, Read Instruction Manual		Manufacturer
	Electrical shock hazard warning		Class II, Double Insulated system
	WEEE	EN 60601-1-2	Electromagnetic Emissions
	Type BF applied part	IEC 60601-1	Electrical Safety
	Serial number		Not made with natural rubber latex
	Non Sterile		Batch Code
	Catalogue Number		Quantity
	Consult operating instructions for use		
	Temperature limitation Operation:10° C to 40° C (50° F to 104° F) Storage: -15° C to 50° C (5° F to 122° F) Shipping: -15° C to 70° C (5° F to 158° F)		
	Humidity limitation: Operation: 10% to 90% non-condensing Storage: 10% to 90% non-condensing Shipping:10 % to 90% non-condensing		

INTRODUCTION PRESSUREGUARD® APM
Alternating Pressure Mattresses

DESCRIPTION: The system consists of a foam shell with a high-density foam topper serving as the support surface underneath the patient. The foam shell also includes contoured foam bolsters at the sides and ends of the mattress, providing added patient stability and positioning. The system also includes the unique Heel Slope™ feature, designed to further reduce pressure for the sensitive heel area. Within the foam shell is housed the inflation system, consisting of air cylinders which run lengthwise within the mattress. The air Control Unit connects to the mattress at the patient foot-end. The product is intended to be operated by personnel who are qualified to perform general nursing procedures and have received adequate training in the treatment and prevention of pressure injuries.

MODES OF OPERATION: The PressureGuard® APM Bariatric provides alternating pressure and a reactive flotation surface in a programmable cycle time.

INTENDED USE: A powered, alternating pressure management system used for the prevention and treatment of pressure injuries in the professional healthcare environment.

INDICATIONS FOR USE: The PressureGuard® APM (Alternating Pressure Mattress) are powered, flotation therapy mattresses providing a pressure management surface for the prevention and treatment of pressure injuries.

CONTRAINDICATIONS:
Not recommended for patients for whom turning is contraindicated, such as, but not limited to, unstable spinal cord injury, unstable skeletal fractures requiring immobilization and/or skeletal traction, physician orders prohibiting turning, or severe posterior burns requiring skin grafts.

WARNING - To reduce the risk of electrocution
READ ALL INSTRUCTIONS BEFORE USING THIS UNIT.

AVERTISSEMENT - Pour réduire le risque d'électrocution
LISEZ TOUTES LES INSTRUCTIONS AVANT D'UTILISER CET APPAREIL.

1. Always unplug this unit immediately after using.
2. Do not operate near water.
3. Do not place or store product where it can fall or be pulled into a tub or sink.
4. Do not place in or drop into water or other liquid.
5. Do not reach for a product that has fallen into water. Unplug immediately.
6. Use this unit only for its intended use as described in the operating instructions.

7. Never operate this product if it has a damaged cord or plug, if it is not working properly, ifit has been dropped or damaged, or dropped into water.
   Contact Span-America Medical Systems, Inc., for return of Control Unit for examination and repair.
8. Keep the cord away from heated surfaces.
9. Never drop or insert any object into any opening or hose.
10. Do not use outdoors.

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1. Débranchez toujours cet appareil immédiatement après l'avoir utilisé.
2. Ne pas utiliser près de l'eau.
3. Ne placez pas et ne stockez pas le produit où il peut tomber ou être tiré dans une baignoire ou un évier.
4. Ne pas placer ou laisser tomber dans l'eau ou tout autre liquide.
5. N'attrapez pas un produit tombé dans l'eau. Débranchez immédiatement.
6. Utilisez cet appareil uniquement pour l'usage auquel il est destiné, tel que décrit dans le mode d'emploi.
7. N'utilisez jamais ce produit s'il a un cordon ou une fiche endommagé, s'il ne fonctionne pas correctement, s'il est tombé ou endommagé, ou s'il est tombé dans l'eau. Contactez Span-America Medical Systems, Inc., pour le retour de l'unité de contrôle pour examen et réparation.
8. Gardez le cordon éloigné des surfaces chauffées.
9. Ne laissez jamais tomber ou n'insérez aucun objet dans une ouverture ou un tuyau.
10. Ne pas utiliser à l'extérieur.

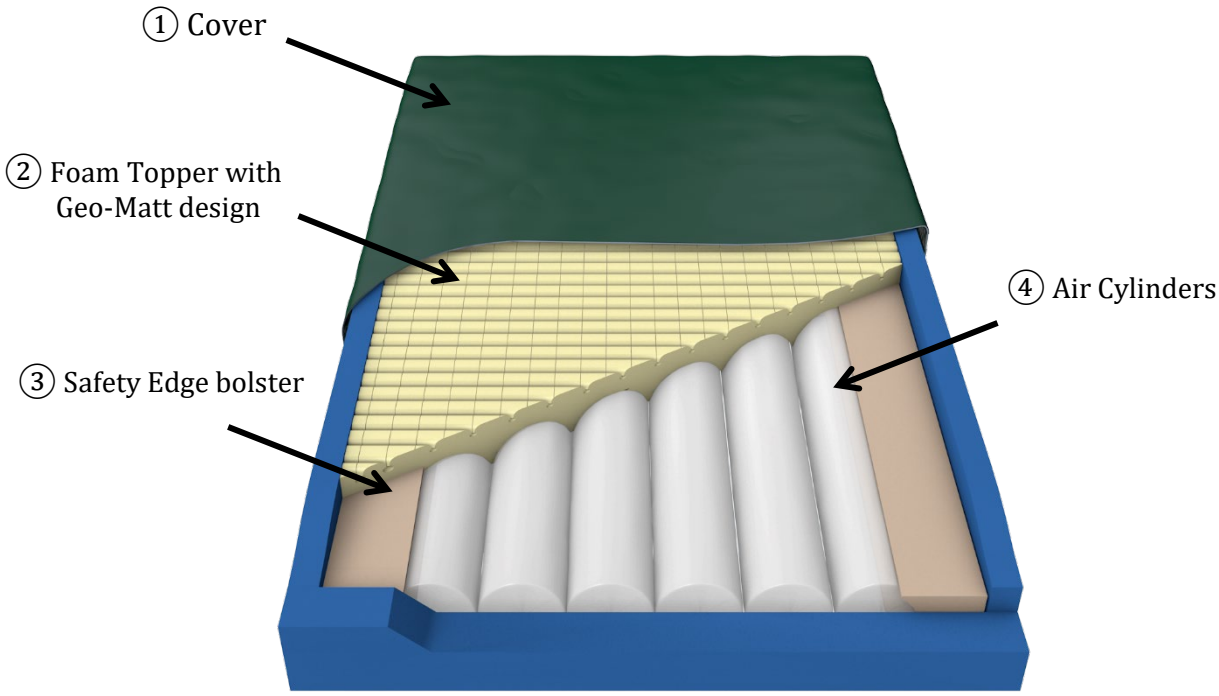
WARNING: POSSIBLE EXPLOSION HAZARD IF USED IN THE PRESENCE OF FLAMMABLE ANESTHETICS.

AVERTISSEMENT : RISQUE D'EXPLOSION POSSIBLE SI UTILISÉ EN PRÉSENCE D'ANESTHÉSIQUES INFLAMMABLES.

WARNING: DO NOT OPEN, DISSASSEMBLE, OR MODIFY THIS EQUIPMENT WITHOUT THE EXPRESS AUTHORIZATION OF THE MANUFACTURER.

AVERTISSEMENT : NE PAS OUVRIR, DÉMONTER OU MODIFIER CET ÉQUIPEMENT SANS L'AUTORISATION EXPRESSE DU FABRICANT.

FEATURES



⑤ Model 7510 Bariatric

COMMON FEATURES
All APM Models

The air-cylinder inflation system and the foam shell work in concert to maintain low interface pressures throughout the surface, making the APM family of mattresses effective for prevention and treatment of pressure injuries.	
Cover [Illustration item ①]	The bacteriostatic top fabric is fire resistant, fluidproof, tear resistant, cleanable, and replaceable. The pleated design allows full integration with the mattress's Geo-Matt style shear-relieving surface while minimizing hammocking.
Foam Topper: [Illustration item ②]	The Geo-Matt® style foam topper is a high density, medical grade foam. The unique geometric design consists of over 800 individual cells, each of which acts individually to redistribute pressure, to reduce heat and moisture buildup on the skin, and to reduce shear to underlying tissues. This foam topper is 2" in height and includes the unique Heel Slope™ feature, designed to further reduce pressure for the sensitive heel area.
Safety Edge™ Bolsters [Illustration item ③]	The Safety Edge™ consists of contoured foam bolsters around the sides and ends of the mattress for added patient stability in sitting and lying down.
Air Cylinders: [Illustration item ④]	The inflation system consists of six urethane air cylinders, that run head to foot underneath the body and the foam topper. These cylinders perform the alternating pressure therapy, Cylinders inflate and deflate in a selectable cycle on the Bariatric Model The cycles and inflation levels are designed to provide and maintain low interface pressures throughout the mattress, and to redistribute peak interface pressure points during the alternating cycle.
Control Units:	⑤ Model 7510 – PressureGuard APM Bariatric Solutions

DIRECTIONS FOR SET-UP

1. Place the PressureGuard mattress on the bed frame with the air line connectors at the foot end of the bed. Hospital-grade models have a gray vinyl side that should be down on the bed frame, a green fabric side that should be face up toward the patient.

2. Hang the PressureGuard Control Unit firmly on the end of the bed using the hanger, or place it on a stable horizontal surface at a position where a caregiver can access it easily.

WARNING: To avoid potential for injury to patient's foot, the control unit should be positioned such the hangers remain flush to the headboard and do not extend on to the sleep surface.

AVERTISSEMENT : Pour éviter tout risque de blessure au pied du patient, l'unité de commande doit être positionnée de manière à ce que les crochets restent au ras de la tête de lit et ne s'étendent pas sur la surface de couchage.

3. Insert the connectors at the ends of the air lines into the corresponding connectors on the side of the mattress. Ports are located beneath a fabric flap. Ensure that the airlines are not kinked, twisted, or compressed by the mattress or the bed frame. Push in securely until you hear a "click".

Never thread airline through mechanical parts of the bed or bed rails where normal bed movement may damage the airlines, power cord or the control unit itself. Check to be sure the motion of the bed does not interfere with the airlines, power cord or plug.

Ne faites jamais passer le conduit d'air à travers les pièces mécaniques du lit ou les barrières du lit où le mouvement normal du lit pourrait endommager les conduits d'air, le cordon d'alimentation ou l'unité de commande elle-même. Assurez-vous que le mouvement du lit n'interfère pas avec les lignes aériennes, le cordon d'alimentation ou la prise.

4. Connect the other ends of the air lines into the corresponding connectors on the Control Unit. They will click into place as they do on the side of the mattress (Bariatric Control Unit, model 7510).

5. Ensure that the ON/OFF switch on the Control Unit is in an OFF position. Plug the power cord into an electrical outlet. Switch the Control Unit to ON. The POWER ON light is now amber.

6. Allow the mattress 20 minutes to inflate fully before placing a patient on the surface.

7. To disconnect the control unit, unplug it from the wall and the mattress.

Always plug the power cable securely into the wall outlet. Make sure the wall-mounted outlet will accommodate a heavy duty or hospital-grade plug and that the outlet is in good working order. The plug of the power cord should fit tightly into the wall outlet. The plug body, the wall outlet, and the wall plate should not be cracked or chipped. The plug blades should be securely retained in the plug body. The ground pin of the plug should be intact and secure.

Branchez toujours solidement le câble d'alimentation dans la prise murale. Assurez-vous que la prise murale peut accueillir une prise robuste ou de qualité hospitalière et que la prise est en bon état de fonctionnement. La fiche du cordon d'alimentation doit être bien insérée dans la prise murale. Le corps de la fiche, la prise murale et la plaque murale ne doivent pas être fissurés ou ébréchés. Les lames du bouchon doivent être solidement maintenues dans le corps du bouchon. La broche de terre de la prise doit être intacte et sécurisée.

Do not connect the power cord to an extension cord or to a multiple outlet strip. If the use of extension cords or multiple outlet strips cannot be avoided, use only heavy duty or hospital-grade connectors that are approved by the facility engineering department. Multiple outlet strips should be mounted on a fixed object to reduce the risk of liquid spills and physical damage. In addition, if multiple-receptacle outlet boxes are used, they also should be protected from the risk of liquid spills and physical damage. All extension cords and multiple outlet strips should be tagged and inspected routinely.

Ne connectez pas le cordon d'alimentation à une rallonge ou à une multiprise. Si l'utilisation de rallonges ou de multiprises ne peut être évitée, n'utilisez que des connecteurs à usage intensif ou de qualité hospitalière approuvés par le service d'ingénierie de l'établissement. Plusieurs bandes de sortie doivent être montées sur un objet fixe pour réduire le risque de déversement de liquide et de dommages physiques. De plus, si des boîtes de sortie à prises multiples sont utilisées, elles doivent également être protégées contre le risque de déversement de liquide et de dommages physiques. Toutes les rallonges et les multiprises doivent être étiquetées et inspectées régulièrement.

Do not cover the power cord with a rug or carpet. Rugs or carpets can prevent normal air flow, which can lead to greater heat built-up. Place the cord in a low or no traffic area. Check to be sure the motion of the bed does not interfere with the bed's power cord or plug.

Ne couvrez pas le cordon d'alimentation avec un tapis ou une moquette. Les tapis ou les moquettes peuvent empêcher la circulation d'air normale, ce qui peut entraîner une plus grande accumulation de chaleur. Placez le cordon dans une zone de circulation faible ou nulle. Assurez-vous que le mouvement du lit n'interfère pas avec le cordon d'alimentation ou la prise du lit.

False latching of side rails could result in patient injury. The bedrail could fall suddenly because the latch failed or was not fastened securely.

Un faux verrouillage des barrières latérales peut entraîner des blessures pour le patient. La barrière de lit pourrait tomber soudainement parce que le loquet a échoué ou n'a pas été solidement fixé.

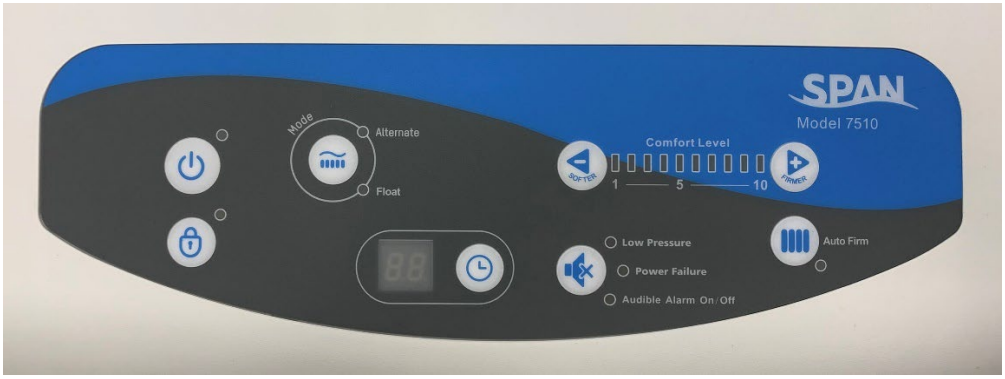
DIRECTIONS FOR USE OF 7510 CONTROL UNIT WITH PRESSUREGUARD APM BARIATRIC

1. Switch the power ON and then Press the amber power button on the left side of the control unit. The green “power on” indicator light on the switch will come on and the control unit will emit a beep to signal that the unit has entered its calibration phase. Allow up to 20 minutes for initial set up.
2. The system will remain in “auto firm” mode until this process is complete. The “Low Pressure” indicator light and sound will remain on as well. The sound can be muted by pressing the Audible Alarm On/Off button.
3. When system check is complete, the control unit will revert to previous comfort setting, therapy setting, and timing setting. Low Pressure indicator light will turn off. System is now ready to be set for the next user

WARNING: If the amber Low Pressure light indicating a low pressure condition does not turn off, check to see that all air line connections are securely and correctly installed. If no obvious connection problem can be corrected, contact local dealer, or call Span-America customer service at (800) 888-6752).

AVERTISSEMENT : si le voyant orange de basse pression indiquant une condition de basse pression ne s'éteint pas, vérifiez que toutes les connexions de conduite d'air sont correctement et solidement installées. Si aucun problème de connexion évident ne peut être corrigé, contactez votre revendeur local ou appelez le service client de Span-America au (800) 888-6752).

7510 CONTROL UNIT FUNCTIONS

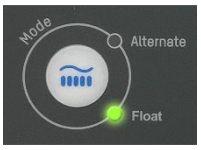


Comfort Level Selection:

Allows selection of air cylinder firmness within a relatively small range. Press "Softer" or "Firmer" button to achieve desired setting. Begin in softest setting, then adjust for comfort as desired.

Mode Selection: *Press button to select "Alternate" or "Float" indicated by green indicator light.*

"Alternate" mode: Creates an "A-B-C" sequence of inflation and deflation of the mattress's six air cylinders designed to change loading across the surface in a selectable cycle time.

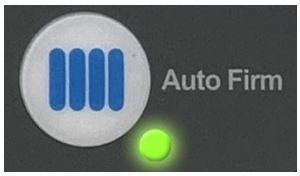


"Float" (powered flotation therapy) mode:
Suspends cyclical inflation/deflation of the air cylinders and instead provides powered flotation therapy. In this mode, all four air cylinders are evenly inflated, and the system maintains ideal pressure management by adjusting in response to any repositioning of the user on the surface.

The use of Alternating should be viewed only as an adjunct to manual repositioning of the patient for whom this repositioning is possible, never as a replacement for it. "Frequent repositioning of the patient has long been recommended as a means for preventing pressure ulcers."[1] "All patients at risk for pressure ulcers continue to require regular manual repositioning (turning), even those who are benefitting from the use of a specialty lateral rotation surface"[1] Routine manual repositioning should be used to provide opportunities for total offloading of pressure from the sacrum, assessing the skin and maintaining proper alignment and position on the support surface.

[1]Krapfl, LA, Gray, M; Does Regular Repositioning Prevent Pressure Ulcers? JWOCN. 2008; *35(6):571-57*

"Cycle Time" Selection mode: Allows the user to determine the cycle time of the A-B-C inflation and deflation cycle. The control will cycle from A down B up C up → A up B down C up→A up B up C down within the time illuminated on the display. Cycle time options are 20 minutes, 25 minutes, or 30 minutes.



"Auto Firm" mode: Suspends cyclical inflation/deflation and sets system to firmest inflation level for 20 minutes to facilitate user transfer, feeding, dressing changes, and other activities of daily living (ADLs), and CPR. After 20 minutes, system will revert to previous comfort setting, therapy mode, and timing.

"Lockout" mode: When this button is pressed and held the mattress will go into lockout mode. Lockout mode on is indicated by an amber light next to the lock button. This removes the ability of a user to override any of the comfort settings on the unit without first holding down the lockout button to remove the lockout mode.

Power Failure and Low Pressure Alarms:

Audible Alarm On/Off: When indicator light is on, an audible alarm will sound if either the Low Pressure or Power Failure indicator light is on. Press button to silence the audible alarm. Alarm can also be toggled off in advance if audible alarm is not desired for low pressure conditions.

Power Failure:
During power failure situation or upon power down, the Power Failure indicator light will come on and the audible alarm will sound. Press the mute button to silence the alarm.

Low Pressure:
If "Low Pressure" indicator light comes on after initial set-up or when moving mattress or control unit, first check that all airlines are properly connected and that they are not kinked. If light is still on after 30 minutes, call for service.

POWER LOSS/PATIENT TRANSPORT: In case of loss of power, or while transporting a patient on the mattress: disconnect the air lines from the Control Unit and push the Transport Cap in place on the ends of the airlines. This will seal the air in the mattress for days or weeks.

WARNING: DO NOT MOVE USER ON MATTRESS ONLY.
Mattress should not be used alone for user/patient transport.
AVERTISSEMENT : NE PAS DÉPLACER L'UTILISATEUR SUR UN MATELAS UNIQUEMENT.
Le matelas ne doit pas être utilisé seul pour le transport de l'utilisateur/patient.

GENERAL DIRECTIONS FOR USE OF ALL MATTRESS MODELS

TROUBLESHOOTING PATIENT COMPLAINTS: Occasionally a patient will complain of feeling as if they are "sinking into a hole".

1. Sometimes this happens when the head of the bed is elevated and the mattress is in either lateral rotation or alternating pressure. This sensation is a combination of the deflation of the cylinders during their cycle and the increased weight of the patient on the sacrum and pelvis when the head of the bed is elevated. This demonstrates the need to minimize elevation of the head of the bed. To improve this situation decrease elevation of the head of the bed.

2. Often patients complain when they are supine or side-lying and are not used to the changing pressures within the air system. Reassure the resident that this is normal functioning, as the cylinders alternately inflate and deflate. The "deflated" tubes are not fully deflated. Some air is always maintained in them to prevent bottoming out. After reassurance, patients get used to the changing pressures.

ELECTROMAGNETIC OR OTHER INTERFERENCE – see Appendix on page 21

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving device.
- Increase the separation between the equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer for help.

BED LINENS: Seven-inch deep fitted sheets are recommended. Multiple layering of linens or underpads beneath the patient should be avoided for the prevention and treatment of pressure injuries.

CAUTION: Be careful not to puncture the mattress with needles or sharp instruments. This may result in loss of integrity of the cover or internal air system. Regularly inspect the mattress cover for cuts, rips, cracks or tears. Do not use the mattress if the cover is damaged.

ATTENTION : veillez à ne pas percer le matelas avec des aiguilles ou des instruments pointus. Cela peut entraîner une perte d'intégrité du couvercle ou du système d'air interne. Inspectez régulièrement la housse du matelas pour des coupures, des déchirures, des fissures ou des déchirures. N'utilisez pas le matelas si la housse est endommagée.

WARRANTY: All PressureGuard® APM models are unconditionally guaranteed against failure due to manufacturing defects under normal use for 18 months.

HEAD-OF-BED ELEVATION: All support surfaces using air as a support medium are designed for distributing pressures over the body in a flat, horizontal position. Bending the support surface and the body at the midpoint when elevating the HOB concentrates the body weight over the center of the surface, stressing that small area. This extreme change in dynamics creates a challenge for all air support surfaces. Maximum pressure management benefits are realized between zero and 30° HOB elevation. Beyond 30°, the amplitude of the changes in the air cylinders begins to decrease in proportion to the increased elevation of the HOB. Although the mattress will maintain its support and therapeutic capabilities up to and including 70° HOB, for maximum benefit we recommend that any pressure management surface be used with the head of the bed elevated as little as possible, and for limited periods at a time.

STORAGE AND TRANSPORTATION: Store the mattresses in a clean, dry place. Once the mattress is removed from the box, store in a flat position if possible. If mattress must be stored on its side, ensure that the inflation system is in correct position within the mattress prior to placing a user on the surface. Protect from damage. Avoid temperature extremes (below freezing or above 120° F). Allow to acclimate to room temperature before use. Do no stack more than 10 high. Do not stack other equipment on top of the mattresses.

Store the control unit in a clean, dry place, protected from accidental damage or falls. Avoid temperature extremes (below freezing or above 120°F). Do not stack other equipment on top of the control unit. Avoid storage of other equipment on top of the mattress. When removing the mattress from storage, always ensure the internal inflation system is aligned correctly prior to placing a patient on the surface. For transportation, secure to prevent damage or falls. For shipment, use box and packaging as provided by the manufacturer.

BED RAILS: Due to concerns over the possibility of patient entrapment, Span-America recognizes that the use of rails of any length is a matter currently addressed by various regulations from local, national and international government agencies, and by individual facility protocol. It is the responsibility of the facility to be in compliance with these laws, which typically require that decisions on the use of bed rails of any type are based on assessment of the physical and mental status of each patient individually. If bedrails are needed by the patient to prevent fall-related injury, as determined by this assessment, we recommend that the bedrails be locked in the up position at all times.

CPR: The Standards for Life Support recommended by the American Heart Association for performing CPR recommend a hard level surface for performing CPR. This means movingthe person to the floor if possible.

For performing CPR on the PressureGuard® APM

1. Place a crashboard beneath the patient.
2. Select AUTO FIRM.
3. Follow CPR procedures.
4. Re-Select “Auto Firm” if necessary when system reverts back to previous setting after 20 minutes.

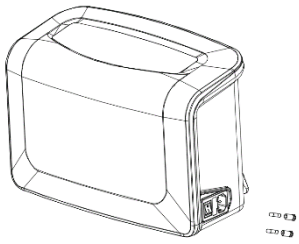
USE IN WOUND CARE: Use of PressureGuard® APM models is only one element of care in the prevention and treatment of pressure injuries. Frequent repositioning, proper care, routine skin assessment, wound treatment and proper nutrition are but a few of the elements required in the prevention and treatment of pressure injuries. As there are many factors that may influence the development of a pressure injury for each individual, the ultimate responsibility in the prevention and treatment of pressure injuries is with the health care professional.

AIR FILTER PREVENTIVE MAINTENANCE: The air filter for the Control Unit should be checked routinely for signs of dirt or contamination. The frequency for cleaning depends on the air quality. The air filter is accessible from the backside of the Control Unit. As the filter is white, the need to clean is obvious. Simply turn the controller off and remove the plastic cover, remove the filter, and hand wash using warm water and mild detergent. Rinse thoroughly and allow to air dry. Replace the filter and the plastic cover.

Access Filter

Remove, Clean, and Return Filter

Fuse Replacement: Disconnect the plug from the power supply. Use an appropriate tool to remove the cover form the fuse holder. Remove the blown fuse and replace the fuse. The fuse should be rated as F1AL/250V.



ENVIRONMENTAL CONDITIONS FOR USE:

- Indoor Use
- Atmospheric Pressure 700hPa to 1060hPa
- Operation Temperature 10° C to 40° C(50° F to 104° F), Storage Temperature: -15° C to 50° C (5° F to 122° F), and Shipping Temperature: -15° C to 70° C (5° F to 158° F)
- Operation humidity: 10% to 90% non-condensing, Storage Humidity: 10% to 90% non-condensing and Shipping humidity:10 % to 90% non-condensing.
- Mains Supply Voltage Fluctuation up to 10 +/-% of the nominal voltage
- Overvoltage Category II
- Pollution Degree 2

CLEANING and DISINFECTION
All Models

It is important to follow cleaning procedures to avoid cross contamination. Be sure to clean the surface of the control unit in a dry and dust free environment. Wipe down the control unit with a damp cloth pre-soaked with a mild detergent. Avoid contact with dust and proximity to dusty areas. Make sure that any cleaning agents you use will not harm or corrode the plastic casing on the control unit. If your doctor or medical facilities have other special cleaning instruction, please follow the professional instruction.

CAUTION- Do not immerse or soak control unit.
ATTENTION- Ne pas immerger ou faire tremper l'unité de pompe

WARNING- Do not remove the control unit housing. All disassembly or repair should be done by professional technicians to avoid shock risk.
AVERTISSEMENT- Ne retirez pas le boîtier de la pompe. Tout démontage ou réparation doit être effectué par des techniciens professionnels pour éviter les risques de choc

CAUTION- The control unit does not need oil lubrication; please do not disassemble the system.
ATTENTION- La pompe n'a pas besoin de lubrification à l'huile ; veuillez ne pas démonter le système

The Cover can be wiped clean with neutral suds and lukewarm water. Rinse and dry. For hard to clean spots, use standard liquid household/vinyl cleaners with a soft bristle brush.

CAUTION: DO NOT USE HARSH CLEANERS OR SOLVENTS.
ATTENTION : N'UTILISEZ PAS DE NETTOYANTS OU DE SOLVANTS

For long-term incontinent applications, clean and disinfect cover daily. A scented cleaner/disinfectant is recommended. Iodophor type disinfectants (Betadine for example) will stain the fabric.

For disinfection, phenolic or quaternary type disinfectants are recommended. Disinfectants should be hospital grade (tuberculocidal). Follow manufacturer's instructions for use concentrations, contact times and rinsing.

Contamination with blood on the fabric can be disinfected with a 1:10 dilution of household bleach (5.25% sodium hypochlorite) as recommended by the CDC. The use of bleach at improper dilutions may result in fabric discoloration and fluid pass-through.

Where surveillance and epidemiology indicate ongoing transmission of *C. difficile,* an EPA-registered hypochlorite-based disinfectant is recommended. Follow the manufacturer's instructions for use concentrations, contact times and rinsing. Generic sources of hypochlorite (e.g. household chlorine bleach) may also be used. Prepare the disinfection solution fresh daily at a 1:10 dilution. Improper dilutions may result in ineffectiveness and higher than recommended concentrations will damage the fabric. Note: alcohol-based

disinfectants are not effective against *C. difficile* and should not be used to disinfect environmental services. For further information relative to this organism and infection control in the healthcare setting, please refer to www.cdc.gov/ncidod/hip.

Disinfect mattress covers following contamination with bodily fluids and between patients. Inspect the covers and zipper area for signs of damage, puncture, or wear that could result in fluid pass-through. If the cover is stained, soiled, or torn, inspect the internal components for signs of contamination.

Allow cover fabrics to air dry (approximately 20 – 30 minutes) before use.

WARNING: If contamination is evident, quarantine the mattress and remove from service following infection control procedures.

AVERTISSEMENT : Si la contamination est évidente, mettez le matelas en quarantaine et retirez-le du service en suivant les procédures de contrôle des infections.

ROUTINE INSPECTION AND SAFETY TIPS TO PREVENT FIRES

1. Assure that the electrical resistance of the safety ground conductor and the level of leakage current (line conductor-to-safety ground and neutral conductor-to-safety ground) meet applicable standards for resistivity and leakage current. Protection afforded by the ground pin is negated if the receptacle is not properly grounded. If you have questions about the adequacy of your facility's building wiring, contact qualified electrician or consult the code authority in your jurisdiction.

   Assurez-vous que la résistance électrique du conducteur de terre de sécurité et le niveau de courant de fuite (conducteur de ligne à terre de sécurité et conducteur neutre à terre de sécurité) sont conformes aux normes applicables en matière de résistivité et de courant de fuite. La protection offerte par la broche de mise à la terre est annulée si le réceptacle n'est pas correctement mis à la terre. Si vous avez des questions sur l'adéquation du câblage du bâtiment de votre installation, contactez un électricien qualifié ou consultez l'autorité du code de votre juridiction.

2. Check all electrical outlets, including accessory outlets for cleanliness, physical integrity and functionality. The IEEE standard 602-1996, section 4.2.2 advises that hospital-grade outlets be used and that they should be mounted with the ground pin or neutral blade up to assure that any metal that may drop between the plug and the wall will most likely contact an unenergized blade.

   Vérifiez la propreté, l'intégrité physique et la fonctionnalité de toutes les prises électriques, y compris les prises accessoires. La norme IEEE 602-1996, section 4.2.2 conseille d'utiliser des prises de qualité hospitalière et de les monter avec la broche de terre ou la lame neutre vers le haut pour garantir que tout métal pouvant tomber entre la fiche et le mur sera très probablement entrer en contact avec une lame non alimentée.

3. Check the power cord to assure that contact pins are straight and secure

   Vérifiez le cordon d'alimentation pour vous assurer que les broches de contact sont droites et sécurisées

4. Routinely inspect the power cord for damage sustained from crushing, pinching, shearing, cutting, or from being worn through. They can be damaged by bed movement, deterioration from use or aging, or human or

equipment traffic. The cord's insulation should be intact and there should be no evidence of bulging, stretching, crimping, cracking, or discoloration, especially at the ends, where the cord is attached to the plug body and the control unit

Inspectez régulièrement le cordon d'alimentation pour déceler les dommages causés par l'écrasement, le pincement, le cisaillement, la coupure ou l'usure. Ils peuvent être endommagés par le mouvement du lit, la détérioration due à l'utilisation ou au vieillissement, ou la circulation des personnes ou des équipements. L'isolation du cordon doit être intacte et il ne doit y avoir aucun signe de gonflement, d'étirement, de sertissage, de fissuration ou de décoloration, en particulier aux extrémités, où le cordon est attaché au corps de la fiche et à l'unité de commande

5. Regularly inspect as parts of the bed frame, motor, mattress and controller, and the floor beneath and near the bed for build-up of dust and lint.

   Inspectez régulièrement le cadre du lit, le moteur, le matelas et le contrôleur, ainsi que le sol sous et près du lit pour détecter l'accumulation de poussière et de peluches.

6. Inspect the cover of the control panel to assure that the covering is not cracked or damaged, allowing liquids or other conductive material to penetrate to the switches.

   Inspectez le couvercle du panneau de commande pour vous assurer qu'il n'est pas fissuré ou endommagé, permettant à des liquides ou à d'autres matériaux conducteurs de pénétrer dans les commutateurs.

7. Report any unusual sounds, burning odors, or anything unusual to maintenance personnel. Discontinue use of the power cord immediately and contact Span-America Medical Systems, Inc. for replacement.

   Signalez tout son inhabituel, odeur de brûlé ou tout autre élément inhabituel au personnel de maintenance. Cessez immédiatement d'utiliser le cordon d'alimentation et contactez Span-America Medical Systems, Inc. pour le remplacer.

Mattress

Inspect the covers and zipper area for signs of damage, puncture, or wear that could result in fluid pass-through. If the cover is stained, soiled, or torn, inspect the internal components for signs of contamination. If contamination is evident, quarantine the mattress and remove from service following infection control procedures.

You may use the Preventive Maintenance Log provided on the last page of this manual to monitor and document regular inspection and maintenance of your mattress and control unit

SPECIFICATIONS

COVER:	Bacteriostatic, flame resistant, fluidproof, tear resistant
FOAM:	High-density open-cell polyurethane. Conforms to NFPA 101 small scale and Cal TB# 117.
AIR CYLINDERS:	Urethane and/or Fabric Coated PVC
ELECTRICAL:	110-120VAC, 60 Hz, 0.17A With respect to electric shock, fire and mechanical hazards only in accordance with UL 60601-1. With respect to electric shock, fire, mechanical and other specified hazards only in accordance with CAN/CSA C22.2 No. 601.1 Medical equipment certified for Canada.
Control Unit:	7510 Classification: Class II, Type BF Ingress Protection: IP21 Third conductor is only a Functional Earth. Applied Part: Mattress No AP or APG protection Weight: 6.9 pounds Dimensions: 13.4" x 5.9" x 9.2" Fuse: F1AL, 250V
SURFACE SIZES:	80"L X 42"W X 7"H - Bariatric 80"L X 48"W X 7"H – Bariatric 80"L X 54"W X 7"H - Bariatric
WEIGHT RANGE:	120 lbs. - 750 lbs.
CYCLE TIME:	Programmable cycles of 20, 25, or 30 minutes.
PLACEMENT	All mattresses can be placed directly on a hospital bed frame or standard bed frame or box spring.
WARRANTY:	18 months, not pro-rated, against manufacturing defects.
Expected Service Life:	5 year
Flammability:	All Models comply with 2000 NFPA 101 (life Safety Code) via ASTM1590, Cal TB # 129 and 16 CFR 1632 and 1633.

ORDERING INFORMATION

Product Name	Catalog Number	Mattress Size
PressureGuard APM Bariatric	AP8042-29	80”L X 42”W X 7”H
with 7510 Control Unit	AP8048-29	80”L X 48”W X 7”H
	AP8054-29	80”L X 54”W X 7”H
	AP8442-29	84”L X 42”W X 7”H
	AP8448-29	84”L X 48”W X 7”H
	AP8454-29	84”L X 54”W X 7”H
Replacement Air Systems		
For 80”/84” x 42”	P09371	
For 80”/84” x 48	P09372	
For 80” /84”x 54”	P09373	
7510 control unit only (Bariatric)	7510	
Replacement Airlines only		
APM Bariatric	P17160	

Call Customer Service (800-888-6752) for information on coverlets, transport bags, and other available accessories.

Attention: Observe proper Disposal of Electrical & Electronic equipment (WEEE). This product or its parts are designated for separate collection at an appropriate collection point. At the end of useful life, dispose of all waste according to local requirements.

TROUBLESHOOTING GUIDE

Problem	Possible Cause	Solution
System will not power up. **Note:** **Always plug power supply into properly grounded receptacle.**	The system is not plugged in.	Plug power cord into wall receptacle.
	There is no power at outlet.	Restore power.
	Power cord is damaged.	Call for service.
	Blown fuse.	Call for service.
Patient not alternating properly.	System is not turned ON.	Plug power cord into wall receptacle.
	Patient not centered on mattress.	Reposition the patient.
	Defective Control Unit	Call for Service.
	Patient exceeds weight limit.	Call Span-America for assistance with product selection.
Mattress not inflating or patient reports a sinking feeling.	Control Unit is not turned on.	Turn control unit on.
	Airlines not connected.	Ensure secure connection of airlines at control unit and mattress.
	Airlines or quick disconnect connectors are damaged.	Call for replacement.
	Head of bed elevated.	Lower head of bed and allow air to equalize. Return head of bed to elevated position that is comfortable for patient.
	Defective control unit (mattress fills without patient, sinks with patient weight).	Call for service.
Low pressure indicator illuminated.	Airlines not connected.	Disconnect and reconnect airlines to verify they have all locked into place.
	Airlines or quick disconnect connectors are damaged.	Call for replacement.
	Defective Control Unit.	Call for service.
	Leaking inflation system.	Call for replacement. To replace, turn mattress upside down and unzip cover. Remove inflation system, install new system, zip cover and restore mattress to upright position.

Problem	Possible Cause	Solution
Mattress is too firm	Comfort level too high.	Adjust comfort level down to desired level.
	Control unit vent valve failure.	Disconnect control unit, connect airlines to one another to equalize the mattress. Exhaust air from fittings to achieve desired comfort level and reconnect (repeat as needed). Contact Technical Service (800) 888-6752.
Interference produced to electronic equipment/devices in surrounding area.	Electromagnetic interference caused by the unintentional emission of electromagnetic waves of energy. These waves are transmitted through the air at various frequencies which may produce interference such as abnormal functioning to nearby electronic equipment.	Determine if emissions are causing the interference by turning the equipment off and on. If the interference in the affected device subsides when control unit is off, proceed with the following steps. a) Reorient or relocate the affected device. b) Increase the distance between the equipment. c) Connect the equipment into an outlet on a circuit different than that of the affected device. d) Consult the field service technician or manufacturer of the affected device.

Technical Service:

(800) 888-6752

Service to be performed by authorized personnel only.

L'entretien doit être effectué uniquement par du personnel autorisé.

Error Code	Problem	Trouble Shooting
Er00	Low pressure alarm	The mattress is inflated too long and over the set-up time.
Er01	Low pressure alarm	The pressure is lower than 10mmHg.
Er02	Service alarm	Selector is not in position after rotating 2 minutes
Er03	Service alarm	Pressure sensor of the mainboard is abnormal
Er04	Service alarm	EEPROM of the mainboard - IC memory function is abnormal

Appendix A: EMC Information

Guidance and Manufacturer's Declaration- Electromagnetic Emissions:

This device is intended for use in the electromagnetic environment specified below. The user of this device should make sure it is used in such an environment.

Emissions Test	Compliance	Electromagnetic Environment-Guidance
RF emissions CISPR 11	Group1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment
RF emissions CISPR 11	Class B	The device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network
Harmonic emissions IEC61000-3-2	Class A	
Voltage fluctuations / Flicker emissions IEC61000-3-3	Complies	
⚠Warning: 1. The device should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the device should be observed to verify normal operation in the configuration in which it will be used. 2. Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation. 3. Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Pump, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.		

Guidance and Manufacturer's Declaration- Electromagnetic Immunity:

This device is intended for use in the electromagnetic environment specified below. The user of this device should make sure it is used in such an environment.

Basic EMC standard	Immunity Test Levels		Compliance Levels	Electromagnetic Environment-Guidance
	Professional healthcare facility environment	HOME HEALTHCARE ENVIRONMENT		
Electrostatic Discharge (ESD) IEC61000-4-2	±8kV contact ±15kV air		±8kV contact ±15kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/ burst IEC61000-4-4	±2kV for power supply line ±1kV for input/output line		±2kV for power supply line ±1kV for input/output line	Mains power quality should be that of atypical commercial or hospital environment
Surge IEC61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV line(s) to line(s)	± 1 kV line(s) to line(s)	Mains power quality should be that of atypical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC61000-4-11	Voltage Dips: i) 100% reduction for 0.5 period, ii) 100% reduction for 1 period, iii) 30% reduction for 25/30 period, Voltage Interruptions: 100% reduction for 250/300 period		120V	Mains power quality should be that of a typical commercial or hospital environment. If the user of this device requires continued operation during power mains interruptions, it is recommended that the device be powered from an uninterruptible power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC61000-4-8	30 A/m	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Conducted RF IEC 61000-4-6	3 Vrms 0,15 MHz – 80 MHz 6 Vrms in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	3 Vrms 0,15 MHz – 80 MHz 6 Vrms in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	6Vrms	Portable and mobile RF communications equipment should be used no closer to any part of this device, including cables, than there commended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF EM Fields IEC61000-4-3	3 V/m 80 MHz to 2.7 GHz 80 % AM at 1 kHz 385-6000 MHz, 9-28V/m, 80% AM(1kHz) pulse mode and other modulation	10 V/m 80 MHz to 2,7 GHz 80 % AM at 1 kHz 385-6000 MHz, 9-28V/m, 80% AM(1kHz) pulse mode and other modulation	3V/m	Recommended separation distance $d = \sqrt{P}$ 150kHz to 80MHz $d = 0.6\sqrt{P}$ 80MHz to 800MHz $d = 1.2\sqrt{P}$ 800 MHz to 2.7G MHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).[b] Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey ,[a] should be less than the compliance level in each frequency ranged. Interference may occur in the vicinity of equipment marked with the following symbol:

NOTE 1: U_T is the a.c. mains voltage prior to the application of the test level
NOTE 2: At 80 MHz and 800 MHz, the higher frequency range applies.
NOTE 3: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people

a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the device is used exceeds the applicable RF compliance level above, the device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the device.
b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 10 V/m.

Recommended separation distances between portable and mobile RF communications equipment and this device:

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

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d=\sqrt{P}$	80 MHz to 800 MHz $d=0.6\sqrt{P}$	800 MHz to 2,7 GHz $d=1.2\sqrt{P}$
0.01	0.1	0.06	0.12
0.1	0.31	0.19	0.38
1	1	0.6	1.2
10	3.1	1.9	3.8
100	10	6	12

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

Note 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.