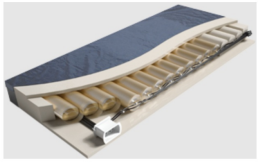
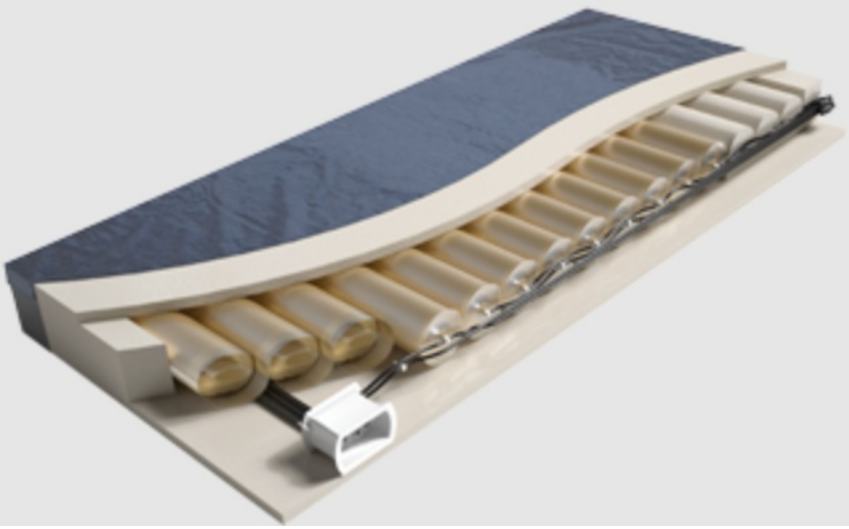


Joerns P.R.O. Matt Plus Mattress System User Manual

Contents

Joerns P.R.O. Matt Plus Mattress System



Product Information

The product is a mattress system designed for use in healthcare facilities. It is intended to provide comfort and support to patients while preventing injuries. The product is manufactured by Joerns Healthcare. The user manual provides important precautions and instructions for the safe and proper use of the product. It is essential for facility staff and users to read and understand the user manual before using the product.

Some key points mentioned in the user manual include:

- The equipment must be installed and operated as intended.
- Facility staff/user is responsible for ensuring that all mattresses properly fit the bed frames.
- Proper positioning of the patient within the bed is crucial.
- Disconnect control unit hoses if the surface appears to be protruding outward and contact a certified technician.
- Avoid using the product in the presence of flammable anesthetics, smoking materials, or open flame.
- Adhere to instructions to reduce the risk of shock, burns, fire, or personal injury.

Product Usage Instructions

1. Use the product only for its intended purpose as described in the user manual.
2. Only use attachments and accessories recommended by the manufacturer.
3. Do not operate the product if it has a damaged power cord or plug, is not working properly, has been dropped or damaged, or has been dropped into water. Contact Joerns for examination and repair.
4. Keep the control unit and power cord away from heated surfaces.
5. Ensure that the air openings of the product are not blocked. Do not place the control unit on a surface where the air opening and/or filter compartment may be blocked.
6. Avoid dropping or inserting any object into any opening or hose of the product.
7. In case of spills on the control unit, turn off the unit, disconnect it from power, and allow at least 24 hours for drying.
8. Avoid using the product outdoors, in direct sunlight, under extreme cold conditions, or where aerosol spray products are used.
9. Only plug the product into an outlet installed by a qualified electrician.
10. Ensure that the power cord is not obstructed and is not located where it can be stepped on or tripped over.

Important Precautions

Important Notice: The equipment must be installed and operated in the manner for which it was intended. Facility staff/user is responsible for reading and understanding the product user manual and contacting Joerns Healthcare if anything in this manual is unclear. Joerns will not be held responsible for any injuries resulting from failure to comply with the instructions and precautions in this manual.
Warning: Joerns® specialty support surfaces are designed as mattress replacement systems. The risk of entrapment may occur when the equipment is placed on bed frames that leave gaps of even a few inches between the mattress and the head panel, foot panel, and bed or side rails. The equipment is NOT to be used when such gaps are present.
Facility staff/user is responsible for ensuring that all mattresses properly fit the bed frames. Joerns is not responsible for the placement of its equipment on bed frames that leave gaps between the mattress and bed head panel, foot panel, or side assists, which present a risk of harm to patients.
Warning: An optimal bed system assessment should be conducted on each patient by a qualified clinician or medical provider to ensure maximum safety of the patient. The assessment should be conducted within the context of, and in compliance with, the state and federal guidelines related to the use of restraints and bed system entrapment guidance, including the Clinical Guidance for the Assessment and Implementation of Side Rails published by the Hospital Bed Safety Workgroup of the U.S. Food and Drug Administration. Further information can be obtained at the following web address:
http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/GeneralHospitalDevicesandSupplies/HospitalBeds/default.htm.
When using the mattress system, always ensure that the patient is positioned properly within the confines of the bed. Do not let any extremities protrude over the side or between the bed rails when the mattress is being used.
Warning: Disconnect control unit hoses if surface appears to be protruding outward. Remove patient from surface and call a certified technician.
Danger Explosion Hazard: Do not use in the presence of flammable anesthetics. Do not use in the presence of smoking materials or open flame. Air flowing through the air mattress will support combustion.
Danger: To reduce the risk of shock, adhere to the following instructions. Failure to do so could result in personal injury or equipment damage.

- Immediately after using the P.R.O. Matt® Plus control unit, unplug it from its power source.
- Do not place or store the product where it can fall or be pulled into a tub or sink.
- Do not place or drop the product into water or other liquid.
- Do not remove the back of the control unit. Refer servicing to Joerns Healthcare.

Warning: To reduce the risk of burns, shock, fire, or personal injury, adhere to the following instructions. Failure to do so could result in personal injury or equipment damage. All references to the “control unit” pertain to the PMP-CU control unit.

1. Use this product only for its intended purpose as described in this manual. Only use attachments and/or accessories that are recommended by the manufacturer.
2. Do not operate this product if this product has a damaged power cord or plug, it is not working properly, has been dropped or damaged, or has been dropped into water. For examination and repair, return the product to Joerns.
3. Keep the control unit and power cord away from heated surfaces, e.g. space heaters.
4. Never block the air openings of the product. Do not place the control unit on a surface, such as a bed or couch, where the air opening and/or filter compartment, located on the back of the control unit, may be blocked. Keep the air openings free of lint and hair.
5. Never drop or insert any object into any opening or hose.
6. Do not spill food or liquids onto the control unit. If a spill does occur, turn off the unit, disconnect it from its power supply, and allow at least 24 hours for drying.
7. Do not use the product outdoors, in direct sunlight, under extreme cold conditions, or where aerosol-spray products are used.

8. Only plug this product into an outlet installed by a qualified electrician.
9. Ensure nothing is placed on the power cord, and ensure it is not located where it can be stepped on or tripped over.
10. Do not attempt to service the control unit. Please call Joerns Healthcare for any service requests.
11. The therapy pad (top cover) of this product is not air permeable and may present a suffocation risk. It is the responsibility of the caregiver to ensure that the patient can use this product safely.
12. Do not drop the control unit.

Expected Service Life
The P.R.O.Matt® Plus system is designed for a minimum service life of five (5) years, subject to the use and maintenance procedures stated in this manual. Use, other than in accordance with these instructions, may compromise service life. Medical electrical equipment needs special precautions regarding EMC. Shall the device be used within one mile distance from AM, FM, or TV broadcast antennas, it needs to be installed according to the EMC information provided. Do NOT use unapproved accessories or attempt to modify, disassemble, or otherwise misuse the P.R.O. Matt system or any of its components.

Save These Instructions for Future Reference

Bed System Entrapment Information

Although essential in the practice of long-term care, bedside assists, in recent years, have also been a subject of regulatory review and evolution in design and use. That focus includes not only the challenge of achieving an appropriate balance between patient security and unnecessary restraint, but also the additional safety issue of entrapment. The U.S. Food and Drug Administration (FDA), working with our company and other industry representatives has addressed the potential danger of entrapment with new safety guidelines for medical beds. These guidelines recommend dimensional limits for critical gaps and spaces between bed system components. Entrapment zones involve the relationship of components often directly assembled by the healthcare facility rather than the manufacturer. Therefore, compliance is the responsibility of the facility. As the leading manufacturer of long-term care beds and a frontrunner in addressing this critical issue, Joerns Healthcare can offer you the expertise, assistance and products to bring your facility into compliance.

Joerns Compliance Solutions
Matching the right bed components in order to meet regulatory guidelines can be complex. That is why Joerns offers a wide array of compliance options. We assist customers in selecting compliant accessories recommended for their specific bed model.

Creating a Safer Care Environment
While the guidelines apply to all healthcare settings, (hospitals, nursing homes, and at home), long-term care facilities have particular exposure since serious entrapment events typically involve frail, elderly, or dementia patients.

For More Information
To learn more about compliance options with Joerns products, visit our website at **www.joerns.com**, or contact our Customer Care representatives at 800-826-0270 and ask for free informational publications. To learn more about entrapment zones, assessment methods, and guidelines concerning entrapment, contact Joerns Healthcare at 800-826-0270 or consult the FDA website:
http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/GeneralHospitalDevicesandSupplies/HospitalBeds/default.htm.

Introduction

The P.R.O. Matt® Plus, provided by Joerns Healthcare, is a convertible, dynamic pressure reducing mattress

replacement system. Pressure redistribution and alternating pressure therapy have been demonstrated to reduce the risk of pressure injuries and as being a valuable aid in the treatment of pressure injuries.
Warning: The risk of entrapment can arise when equipment is placed on bed frames that leave gaps of even a few inches between the mattress and the head panel, foot panel, and bed or side rails. The equipment is NOT to be used when such gaps are present. See “Important Precautions” section of this manual.
Pressure Redistribution Optimization (P.R.O.) Technology is a unique, patent pending, air control technology. The P.R.O. Technology® system requires no adjustments or manual inflation devices and features a four-zone inner air core that automatically adjusts to meet the needs of each patient based on body profile and weight. The head zone remains static and is comprised of high density foam for maximum patient comfort while the shoulder, torso, and foot zones are optimized independently to maximize pressure redistribution. We have ensured that the P.R.O. Matt Plus addresses key areas in the treatment of compromised skin, including pressure redistribution and reduction in both friction and shearing forces.

Pressure Redistribution
P.R.O. Matt Plus is a convertible dynamic pressure redistribution mattress system that has three modes of operation: non-powered, alternating pressure, and powered (static therapy). The alternating and powered (static therapy) modes require the use of an optional control unit. The non-powered mode requires only that a control unit not be attached and that any external hoses are disconnected from the mattress. In the non-powered mode, P.R.O. Matt Plus functions as a dynamic pressure redistribution mattress. The alternating mode provides active pressure redistribution by alternating pressure between adjacent therapy cells. Maximum pressure redistribution is achieved through the delivery of a specific amount of air to each therapy cell, which distributes the patient’s weight evenly over a wide surface area providing a favorable interface pressure profile.

Shear and Friction Reduction
Shearing occurs when the skin is stationary in relation to the support surface, while the underlying tissues and vessels are stretched and damaged. When a patient’s skin rubs against another surface the result is friction. The P.R.O. Matt® Plus therapy cover is constructed of a breathable, non-plasticizing/moisture-proof nylon with a scratch-resistant rubber backing with low friction and shear properties to protect the patient’s skin from these damaging forces.

Indications for Use

Pressure Redistribution

- Pressure Injuries Rehabilitation
- Neurology Dermatology
- Burns Amputations

The selection of a pressure redistribution surface should be based on each individual patient’s clinical condition or diagnosis and co-morbidities. The P.R.O. Matt® Plus provides average pressure readings well below capillary closure levels and allows for adequate perfusion to promote healing. In the non-powered mode, the P.R.O. Matt Plus design allows the provision of optimal interface pressures through controlled air cell inflation for at-risk patients in the prevention and treatment of Stage 1 and 2 pressure injuries and treatment of uncomplicated Stage 3 and 4 injuries in patients with multiple turning surfaces. For Stage 3 and/or Stage 4 treatment, care staff should be able to position the patient off of the pressure wound in at least 2 positions. In the powered alternating pressure mode, the P.R.O. Matt Plus adds the benefit of cyclic offloading for advanced treatment of uncomplicated Stage 3 or 4 pressure injuries for patients where such therapy may improve pressure redistribution and circulation. In all cases, Joerns clinical indications are guidelines and should be taken only as recommendations for consideration during individual patient assessment by the clinician.

Pain Management
AIDS Arthritis
Oncology
The P.R.O. Matt Plus provides uniform distribution of weight over a wide surface area, which redistributes pressure over bony prominences providing a comfortable, soft, gentle therapy surface to lie on. For patients

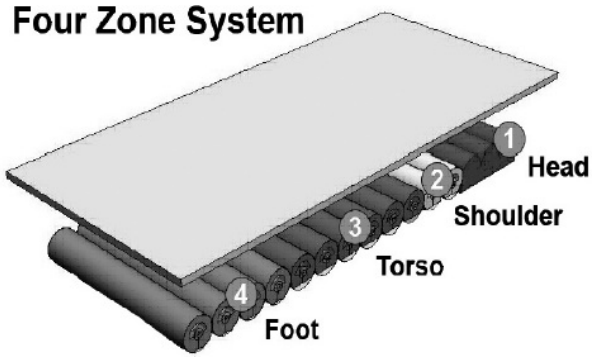
experiencing severe pain and discomfort due to pressure and/or positioning limitations, consider the P.R.O. Matt Plus as an adjunct to pain management interventions.
Note: The above are conditions and diagnoses for which the P.R.O. Matt Plus may be indicated. Occasionally, there are orthopedic and neurological patients that require body positioning to be maintained in specific alignment. The P.R.O. Matt Plus has safety features and an inner therapy core to prevent deflation of the therapy cells and to keep your patients in flotation at all times. However, in the event of a puncture or malfunction, the therapy cells may deflate and may not provide the necessary alignment. The use of the P.R.O. Matt Plus for these patients should be considered on an individual basis and discussed with the attending physician.

Intended Users
The Mattress System is intended for use by those who are youth to geriatric. The control unit should not be operated by the patient.

Features

Mattress Features

- Four-zone (head, shoulder, torso, and foot) dynamic pressure redistribution profile with 15 cell internal design that automatically adjusts to each patient's body profile and weight



- The head zone remains static and is comprised of high density foam for maximum patient comfort while the shoulder, torso, and foot zones are optimized independently to maximize pressure redistribution
- Dynamic, non-powered mattress easily converts to alternating and powered modes with connected control unit (PMP-CU)
- Automatic re-inflation of air zones through P.R.O. Technology® after patient removal – no adjustment or manual inflation required
- Viscoelastic one-inch foam topper provides maximum pressure redistribution, patient support, and increased comfort
- Integrated foot zone helps to protect delicate heel area
- The surrounding firm perimeter provides stability during patient care and transfer and helps support patient safety
- Five-inch deep internal cells are specially designed for automatic re-inflation without the use of a powered system
- Therapy cover is constructed of a breathable, non-plasticizing/moisture-proof nylon and aids in the prevention of friction and shearing. Optional stretch cover available.
- Scratch-resistant rubber backing
- Internal non-kinking hose sets
- Top cover is stain and odor resistant and is treated with a highly effective bacteriostatic agent to inhibit the growth of bacteria and fungus
- Internal fully enclosed fire barrier meets BFD IX-11 and 16CFR Part1633 flammability standards

- 500 lb* SWL

Control Unit Features

- Three modes of operation: Autofirm, Therapy, and Alternate
- Autofirm mode provides maximum air inflation designed to assist both patients and caregivers during patient care and transport
- Autofirm safety feature automatically returns to Therapy mode after approximately fifteen minutes in the Autofirm mode
- Therapy mode is a static pressure redistribution mode
- Alternate mode alternates the air pressure in adjacent cells throughout the mattress (excluding the head section)
- Four alternating pressure cycle times: 5, 10, 15, and 20 minutes
- Five Comfort Adjust settings provide the ability to increase or decrease the general firmness of the P.R.O. Matt Plus mattress
- Quick disconnect hoses allow easy setup and CPR release
- Compact lightweight control unit is quiet and energy efficient
- Crisp, easy-to-read graphics for intuitive setup and therapy control

Setup

Warning: For important precautions, see page two.
Caution: Do not place the control unit on the floor. Position the power cord to keep personnel from tripping over it.

1. Remove the existing mattress from the bed.
2. Place the P.R.O. Matt® Plus mattress with the logo at the foot end of the bed.
3. Allow the mattress to sit for five to ten minutes so that the P.R.O. Technology® valve can adjust the pressure in any internal cells that may have deflated during storage or shipment.
4. Place the patient on the mattress.
5. Connect the control unit if powered therapy is preferred. Set the preferred mode of operation and comfort setting.
6. It is recommended that you periodically remove the patient from the mattress for five to ten minutes so the P.R.O. Technology valve can re-inflate cells that have lost air through natural diffusion.
7. If the therapy is changed from powered to non-powered mode, be sure to disconnect the hoses from the mattress connection so that the non-powered mode can function properly.

Operation
Warning: For important precautions, see page two.
Warning: The patient’s head should be positioned in the center of the top section of the mattress. When using the mattress system always ensure that the patient is positioned properly within the confines of the bed. Do not let any extremities protrude over the side or between the bed rails when the mattress is being used.

Non-Powered Mode

The P.R.O. Matt Plus in its non-powered mode is a dynamic pressure redistribution mattress replacement system consisting of four zones: the head, shoulder, torso, and foot. The head zone remains static and the shoulder,

torso, and foot zones are connected to the P.R.O. Technology valve that allows air to automatically be drawn into the cells in order to provide the optimal amount of support throughout each zone. Based on the average patient's body weight distribution, the volume of air in each of these zones was developed to provide the precise amount of air/foam mix to ensure optimal clinical outcomes with average pressure readings well below capillary closure levels. Over a period of time the air in the therapy cells will naturally diffuse and the cells will deflate when a patient is lying on the mattress. The P.R.O. Technology requires regular opportunities to recalibrate the therapy cells, as the air in the cells will naturally diffuse over time and the cells will deflate as the patientlies on the mattress. Time off the mattress, such as that during normal activities of daily living, as well as standard patient turning and repositioning schedules and protocols, allows the system to fully engage the P.R.O. Technology to recalibrate the air in the therapy cells.

Powered Modes
Patient Comfort Controls and Monitoring
The P.R.O. Matt® Plus converts to an alternating pressure redistribution system when connected to a control unit.

-  **Power Button**

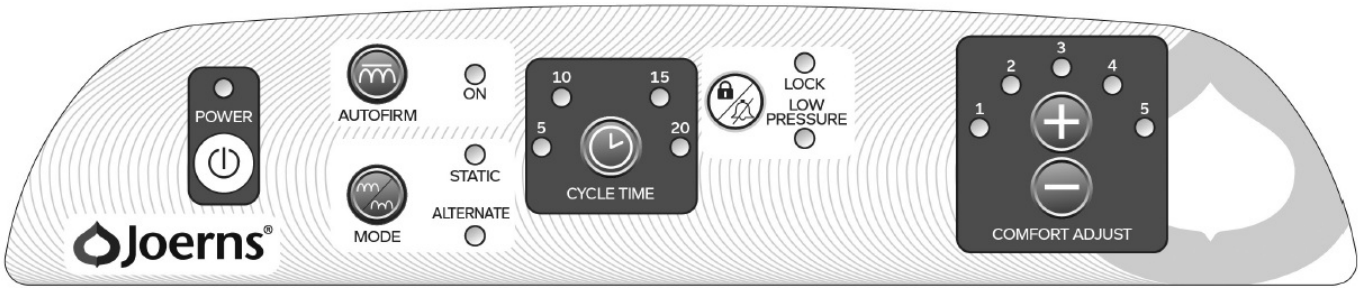
  Power button is used to turn the power on and off.

Standby Light
The Standby light illuminates when the unit is initially plugged in, indicating power is available. If the unit is turned off by pressing the Power button, the Standby light re-illuminates. If the Standby light illuminates without a caregiver pressing the Power button, it indicates that there has been a power interruption and the therapy control unit is ready to be turned back on. Press the Power button and reset the preferred mode of therapy and comfort level.

-  **Autofirm**

  Autofirm mode provides maximum air inflation designed to assist both patients and caregivers during patient transfer and treatment. Pressing the Autofirm button will illuminate the On light. The unit will automatically return to the mode it was in prior to Autofirm in approximately 15 minutes.

Control Unit



The control unit has two therapy modes: Static and Alternate. The Mode button is used to place the control unit in one of the desired modes of operation.

- **Static:** The Static light is illuminated when in Static mode. This mode should be used along with the Comfort Adjust buttons to increase or decrease the general firmness of the P.R.O. Matt Plus mattress.
- **Alternate:** The Alternate light is illuminated when in the Alternate mode. The pressure automatically alternates

between adjacent cells. The alternate frequency is carried out at preset time intervals set by the Cycle Time button.

-  **Cycle Time**

  When the unit is placed in Alternate mode, the five-minute time light illuminates and the mattress therapy cells will alternate in pressure on a five-minute cycle. The cycle times can be adjusted to 5, 10, 15, and 20-minute intervals by pressing the Cycle Time button.

-  **Comfort Adjust**

  The Comfort Adjust buttons are located on the right of the control panel. Use the plus and minus buttons to increase or decrease general firmness in the mattress.

-  **Lockout/Silence**

  The unit is designed to lockout all the adjustment controls after the patient has been positioned correctly. Approximately five minutes after the last button is pushed, the Lockout is enabled, and the Lock light will illuminate. This feature is to prevent any unauthorized changes to the patient settings. To unlock and make adjustments to the settings, press and hold the Lockout/Silence button. Lockout mode will return after approximately five minutes of inactivity. The audible warning can be temporarily muted by pressing the Lockout/Silence button on the front panel – audible warning will be muted for 20 minutes.

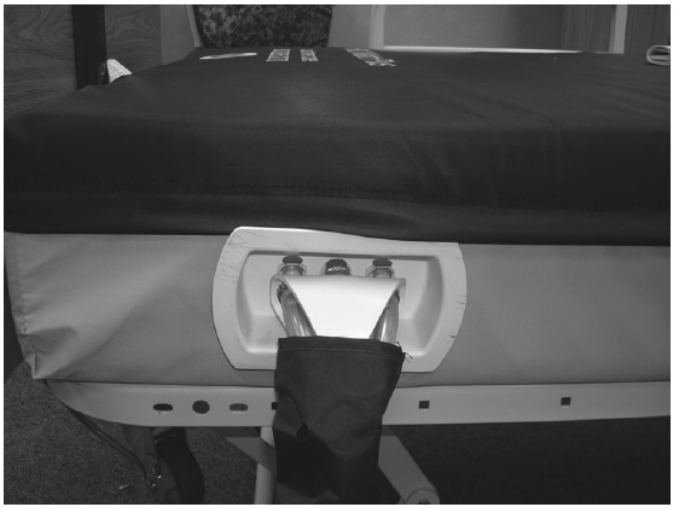
Low Pressure Indicator
The Low Pressure light will illuminate and an audible warning will occur if there is not enough pressure in the inner air cells. If this occurs, check the hose connection to the mattress to ensure the hoses are tightly connected without air leakage.

Power Failure
In case of an extended power failure, the P.R.O. Matt® Plus mattress system should be disconnected from the control unit. The patient can be left on the mattress which will force out air from the internal alternating cells. In the non-powered state, the mattress will continue to function as a dynamic pressure redistribution mattress replacement system. Alternatively, to maintain pump function during a power outage, an Uninterruptible Power Supply (UPS) may be used. The pump will return to its normal operation when power is resumed.

Mattress Connection

The control unit features a detachable hose set that attaches to the side of the control unit. The connector that attaches to the mattress has three ports. The
left and right are of the same connector type and are interchangeable. The center connection is different and must be connected to the center port.

1. To disconnect the control unit from the mattress, locate the ports at the foot end of the mattress .



2. Disconnect the hose set by pressing down and pulling the left and right connectors.

3. Repeat with the middle connector to fully disconnect the mattress from the control unit .

Note: If the control unit is not powered for a long period of time, the connector should be disconnected from the P.R.O. Matt Plus mattress and the control unit should be stored (see “Storage and Care” section in this manual).

Transport/Return to Non-Powered Operation

Patients being transported on the P.R.O. Matt Plus mattress should be transported in the non-powered mode of operation.

1. Turn the control unit off
2. Disconnect the air hoses from the mattress inlet valve

3. Unplug the power cord from line power

Disconnecting the hose set will allow pressurized air to vent from the internal cells. In the non-powered state, the mattress will once again function as a dynamic pressure redistribution system.
After transport, if powered therapy is desired, reconnect hoses and system power according to setup instructions.

Troubleshooting

P.R.O. Matt® Plus surface is not alternating or increasing in pressure:

1. Ensure the hose connection from the therapy mattress system (mattress) to the control unit is securely connected.
2. Verify that the control unit is in the Alternating mode.
3. Ensure that the control unit is plugged into an AC outlet.
4. Ensure that the Power light is illuminated.
5. Please contact Joerns Healthcare at 800.826.0270 if problem persists.

Nursing Procedures
To ensure the system is operating correctly, the mattress and control unit should be checked during patient repositioning, scheduled per facility protocol.

Recommended Linen
Based upon the patient's specific needs, the following may be utilized:

- Draw or slide sheet to aid in positioning and to further minimize friction and shearing
- Incontinence barrier pad for urine and/or stool and patients with heavily draining wounds
- Top sheet, blanket, and/or bedspread as needed for patient comfort
- Minimal padding between the patient and the surface to provide optimum performance

Patient Positioning and Comfort

General Repositioning
Patients should be turned and repositioned per an individual turning schedule or per facility policy. If it is not contraindicated, it is desirable to keep the back section of the bed in the flat position to provide optimal pressure redistribution and minimize the risk of shearing injuries.

Elevating Patient into Sitting Position
The special properties of the P.R.O. Matt Plus reduce the opportunity for shear and friction that may occur when raising the back section of other beds systems. As with any surface, sliding can be expected; therefore, patients should be repositioned after elevation. The knee gatch or knee section of the bed may be elevated first to help prevent the patient from sliding when the back section is elevated.

Contractures
Contractures and foot drop are a concern for all bedridden and immobilized patients. Physical therapy and any prescribed exercises may be performed on the P.R.O. Matt Plus as is done on any traditional hospital bed.

Incontinence
Moisture against the skin surface leads to maceration, or softening of the tissues. To prevent maceration, we recommend you use an incontinence barrier pad to absorb the excess moisture. In the event of incontinence or

excess drainage, you should wipe off the excess fluid from the bed surface.

Safety Information

Patient Migration
Specialty bed products are designed to redistribute pressure and reduce the shearing/friction forces on the patient's skin. The risk of gradual movement and/or sinking into hazardous positions of entrapment and/or inadvertent bed exit may be increased due to the nature of these products.

Traction
With any traction or unstable fractures, maintain physician-directed angle of articulation and guard against risks of patient migration or inadvertent deflation of patient surface.

Skin Care
Monitor skin conditions regularly, particularly in areas where incontinence and drainage occur or collect. Early intervention may be essential to preventing serious skin breakdown.

Bed Height
To minimize the risks of falls or injury, the mattress support platform should always be in the lowest practical position when the patient is unattended. Make sure areas under and around the frame are clear of objects, persons, and parts of body before adjusting height.

Cleaning

Warning: Unplug the control unit from its power source. Failure to do so could result in personal injury or equipment damage.
Warning: Do not expose the mattress or control unit to excessive moisture that would allow for liquid pooling. Personal injury or equipment damage could occur.
Caution: Do not use harsh cleansers/detergents, such as scouring pads and heavy-duty grease removers, or solvents, such as acetone. Equipment damage could occur.

General Cleaning
The P.R.O. Matt® Plus system should be routinely decontaminated between patients and at regular intervals while in use for infection control. If there is no visible soil age with possible body fluids, we recommend that you clean the mattress system with a mild detergent and warm water. If disinfection is desired, you may use a combination cleanser/disinfectant as explained in the "Disinfecting" section in this manual.

1. Patient care equipment that does not come in direct contact with the patient requires only low-level disinfection. Wiping surfaces with a properly prepared detergent/disinfectant carries out low-level disinfecting.
2. Processing of dirty patient care equipment should take place in a designated area away from clean or sterile supplies and food preparation areas.
3. Detergent/disinfectants should not be mixed with other germicides or detergents. Using the proper dilution ensures the most effective killing power of the disinfectant.
4. Patient care equipment that is used in isolation areas should be disinfected in accordance with all internal policies and procedures regarding such equipment.

Disinfecting
When there is visible soilage, remove it and clean the area prior to disinfecting. Clean and disinfect the product between patient uses. We recommend that you disinfect the unit and mattress with a tuberculocidal disinfectant. Disinfectant should be registered with the Environmental Protection Agency (EPA).

1. Use rubber gloves and eye protection
2. Prepare detergent/disinfectant (registered by EPA as hospital disinfectant) solution according to instructions on label for correct use-dilution
3. Thoroughly wipe down entire mattress
4. Remove gloves and dispose; wash hands

Filter Replacement
When using an optional control unit, check the air filter on the side of the unit periodically for buildup of dust/dirt. If buildup is visible, turn off the control unit and disconnect the power cord from the wall outlet. To access the filter, first remove the filter cover, and then remove the filter. Replace with a new filter. Ensure the filter covers the entire filter region after replacement. Reinstall the filter cover.


Air Filter Holder Closed


Air Filter Holder Open

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

Control Unit Cleaning
Wipe off dust. If necessary, clean the housing exterior with a disinfectant solution or a mild detergent and a damp cloth, then wipe dry. Wipe power cord.
Caution: Do not use phenol based cleaning solution. Equipment damage could occur.

Periodic Inspection
Joerns Healthcare recommends the P.R.O. Matt® Plus control unit, filter, power cord, and hose set be inspected at least once a year for proper operation.
Warning: Only authorized personnel trained by Joerns Healthcare should perform preventative maintenance. Preventative maintenance performed by unauthorized personnel could result in personal injury and/or equipment damage.
Any maintenance done without Joerns Healthcare's authorization will void any warranties on this product.

Storage and Care

Support Surface

- Thoroughly wipe down outside of the support surface as described in previous section and allow to air dry prior to storage.
- Cover with plastic and return to storage area. It is recommended not to fold the mattress and to avoid storage of the mattress other than in a flat format.

Control Unit
Detach the hose set from the control unit and carefully coil for storage with the unit. The power cord may be wrapped around the unit for convenience. Wrap the unit in a plastic bag for dust resistance, then store the unit in an area appropriate for an electronic medical device.
Note: When the product is not in use, store the power cord properly. Failure to do so could result in personal injury.

Waste Disposal
This product has been supplied from an environmentally aware manufacturer that complies with the WEEE. Please be environmentally responsible and recycle this product through your recycling facility at its end of life or dispose of it in accordance with local regulations.

Service Parts List

Fuse (1 pc)……..11016482
Air Filter (1 pc)……11016483
Replacement Hooks Kit…… 39001847
Air Filter and Cover…… 39001848
Hose Set with Cover…….. 31009766
Mains Cable, NEMA, Class II, 5M……11016474
Mains Cable, BS1363, Class II, 5M……..11016475
Mains Cable, CEE 7/7, Class II, 5M……11016476
Mains Cable, AU/NZ 3112, Class II, 5M……11016477

Fuse Replacement
Gently pry open the fuse holder to gain access to the fuse. Remove the fuse, inspect, and replace with a new one, if required. Press the fuse holder back into its original position to close.

Fuse Holder Closed


Fuse Holder Open

System Specifications

Weight
Mattress…….. 24.5 lb (11 Kg)
Maximum weight capacity*:…….. 500 lb (227 Kg)
Control Unit…….. 6 lb (2.7 Kg)

Dimensions:

Mattress
36″ (91cm) W x 80″ (203cm) L x 7″ (18cm) D
36″ (91cm) W x 84″ (213cm) L x 7″ (18cm) D
42″ (107cm) W x 80″ (203cm) L x 7″ (18cm) D

Control Unit (PMP-CU)

12.4″ (31.5 cm) W x 7.7″ (19.5 cm) H x 4.3″ (11 cm) D

Electrical Specifications
Control Unit
AC 100-240V 50/60 Hz 0.2-0.1A

Classification:

- Class II 
- Type BF 

Not AP or AGP type
Fuse rating: T2AL 250V
Ingress Protection Rating: IP21
Power Cable: 15ft, non-shielding, AC powered

Key Symbols
The following symbols are used on the mattress and control unit:

	Caution, consult accompanying documents		Refer to Instruction Manual/Booklet
	Class II Equipment		Type BF Applied Parts
	Waste Disposal		

- Mattress weight capacity only; total weight must not exceed bed frame manufacturer’s specified load capacity.

Environmental Conditions

Operating Conditions:
Ambient temperature: 59°F (+15°C) to 104°F (+40°C) Relative humidity: 15-93%
Storage And Shipping Conditions:
Ambient temperature: 41°F (5ºC) to 140°F (+60ºC) Relative humidity: 30-93%
Operation Atmospheric Pressure Range: 800 hPa to 1013 hPa
Operation Altitude: 0 to 2000 meters Agency Approvals
Internal Fire Barrier

- Boston Fire Department BF IX-11 Mattress Fire Test
- Federal Fire Standard 16 CFR Part 1633

Control Unit

- **IEC Classified:** IEC 60601-1 / IEC 60601-1-2 /IEC 60601-1-11

IEC Classification refers to the power unit only, not the complete mattress replacement system.

Call for Assistance
If you have any questions or require service on a Joerns product, please call Joerns Healthcare at 800.826.0270

Appendix A: Electromagnetic Compatibility (EMC) Related Notifications

Recommended separation distances between portable and mobile RF communications equipment and the P.R.O. MATT Plus

The P.R.O. Matt Plus Control Unit (PMP-CU) is intended for use in an electromagnetic environment (for home healthcare and professional healthcare) in which radiated RF disturbances are controlled. The customer or the user of the P.R.O. Matt Plus Control Unit (PMP-CU) can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the P.R.O. Matt Plus Control Unit (PMP-CU) 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 $d=1,2\sqrt{P}$	**80 MHz to 800 MHz** $d=1,2\sqrt{P}$	**800 MHz to 2,7 GHz** $d=2,3\sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

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

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

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

Guidance and Manufacturer’s Declaration –Electromagnetic Emissions		
The P.R.O. Matt Plus Control Unit (PMP-CU) is intended for use in the electromagnetic environment (for home h ealthcare and professional healthcare) specified below. The customer or the user of the P.R.O. Matt Plus Control Unit (PMP-CU) should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment – guidance (for home healthcare and professional healthcare environment)**
RF emissions CISPR 11	Group 1	The P.R.O. Matt Plus Control Unit (PMP-CU) uses RF energy only fo r its internal function. Therefore, its RF emissions are very low and a re not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The P.R.O. Matt Plus Control Unit (PMP-CU) is suitable for use in all establishments, including domestic establishments and those directl y connected to the public low-voltage power supply network that sup plies buildings used for domestic purposes.
Harmonic emissions IE C 61000-3-2	Class A	
Voltage fluctuations / flic ker emissions IEC 6100 0-3-3	Compliance	

Guidance and Manufacturer’s Declaration

Electromagnetic Immunity:
The P.R.O. Matt Plus Control Unit (PMP-CU) is intended for use in the electromagnetic environment (for home healthcare and professional healthcare) specified below. The customer or the user of the P.R.O. Matt Plus Control Unit (PMP-CU) should assure that it is used in such an environment.

Immunity Test	IEC60601 Test Level	Compliance Level	Electromagnetic Environment-Guidance (for home healthcare and professional healthcare environment)
Electrostatic discharge (ESD) IEC 61000-4-2	Contact: ±8 kV Air±2 kV,±4 kV, ±8 kV,±15 kV	Contact: ±8 kV Air±2 kV,±4 kV, ±8 kV,±15 kV	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 IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines Not applicable	Mains power quality should be that of a typical home healthcare and professional healthcare environment.
Surge IEC 61000-4-5	±0.5kV,±1kV line(s) to line(s)±0.5kV,±1kV,±2kV line(s) to earth	±0.5kV,±1kV line(s) to line(s) Not applicable	Mains power quality should be that of a typical home healthcare and professional healthcare environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Voltage dips: 0% U_T; 0,5 cycle 0% U_T; 1 cycle 70% U_T; 25/30 cycles Voltage interruptions: 0% U_T; 250/300 cycle	Voltage dips: 0% U_T; 0,5 cycle 0% U_T; 1 cycle 70% U_T; 25/30 cycles Voltage interruptions: 0% U_T; 250/300 cycle	Mains power quality should be that of a typical home healthcare and professional healthcare environment. If the user of the P.R.O. Matt Plus Control Unit (PMP-CU) requires continued operation during power mains interruptions, it is recommended that the P.R.O. Matt Plus Control Unit (PMP-CU) be powered from an uninterruptible power supply or a battery.
Power frequency (50, 60 Hz) magnetic field IEC 61000- 4-8	30 A / m 50 Hz or 60 Hz	30 A/m 50 Hz, 60 Hz	The P.R.O. Matt Plus power frequency magnetic fields should be at levels characteristic of a typical location in a typical home healthcare and professional healthcare environment.
Note: U_T is the a.c. mains voltage prior to application of the test level.			

- During DIP interference, the pump will outage these are normal. The pump outage does not affect the motor operation.

Guidance and Manufacturer's Declaration – Electromagnetic Immunity			
The P.R.O. Matt Plus Control Unit (PMP-CU) is intended for use in the electromagnetic environment (for home healthcare and professional healthcare) specified below. The customer or the user of the P.R.O. Matt Plus Control Unit (PMP-CU) should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance (for home healthcare and professional healthcare environment)
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	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 1kHz 10 V/m 80 MHz – 2,7 GHz 80% AM to 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 1kHz 10 V/m 80 MHz – 2,7 GHz 80% AM to 1 kHz	Portable and mobile RF communications equipment should be used no closer to any part of the P.R.O. Matt Plus Control Unit (PMP-CU), including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d=1.2\sqrt{P}$ $d=1.2\sqrt{P}$ 80 MHz to 800 MHz $d=2.3\sqrt{P}$ 800 MHz to 2,7 GHz 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 metres (m). Interference may occur in the vicinity of equipment marked with the following symbol: 
Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.			
Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

Manufacturer's declaration-electromagnetic immunity Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment							
The P.R.O. Matt Plus Control Unit (PMP-CU) is intended for use in the electromagnetic environment (for home healthcare and professional healthcare) specified below. The customer or the user of the P.R.O. Matt Plus Control Unit (PMP-CU) should assure that it is used in such an environment.							
Test Frequency (MHz)	Band a) (MHz)	Service a)	Modulation b)	Maximum Power (W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)	Compliance LEVEL (V/m) (for home healthcare and professional healthcare environment)
385	380-390	TETRA 400	Pulse modulation b) 18 Hz	1,8	0,3	27	27

450	430-470	GMRS 460, FRS 460	FM c) ±5 kHz deviation 1 kHz sine	2	0,3	28	28
710	704-787	LTE Band 13, 17	Pulse modulation b) 217 Hz	0,2	0,3	9	9
745							
780							
810	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation b) 18 Hz	2	0,3	28	28
870							
930							
1720	1700-1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation b) 217 Hz	2	0,3	28	28
1845							
1970							
2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation b) 217 Hz	2	0,3	28	28
5240	5100-5800	WLAN 802.11 a/n	Pulse modulation b) 217 Hz	0,2	0,3	9	9
5500							
5785							
Note: If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.							
a) For some services, only the uplink frequencies are included.							
b) The carrier shall be modulated using a 50% duty cycle square wave signal.							
c) As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.							

- Recommended separation distances between other equipment and this device – avoid stacking and locating it near other electronic devices.
- If abnormal behavior is observed due to EM disturbances, please relocate the device accordingly. To avoid negative influence on electromagnetic compatibility, only use attachments and/or accessories that are recommended by the manufacturer.

Documents / Resources

	**Joerns P.R.O. Matt Plus Mattress System** [pdf] User Manual P.R.O. Matt Plus, P.R.O. Matt Plus Mattress System, Mattress System, System

References

- U.S. Food and Drug Administration
- Medical Equipment | Healthcare Technology | DME | Joerns Healthcare