



Joerns  
Healthcare

User-Service Manual  
Joerns® Support Surface  
P.R.O. Matt® Plus Model

To avoid injury, read user's manual before using.



transforming wound management

## 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 the head panel, foot panel or bed or side rails 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/cdrh/beds/>.

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.

**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.

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. If this product has a damaged power cord or plug, is not working properly, has been dropped or damaged, or has been dropped into water, do not operate it. 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, or where aerosol-spray products are used.
8. Plug this product only into a properly grounded outlet. Refer to "Grounding Instructions".



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.

**Save These Instructions for Future Reference**

**Bed System Entrapment Information**

In April 1999, the U.S. Food and Drug Administration (FDA) in partnership with representatives from the hospital and post-acute bed industry, including Joerns Healthcare, national healthcare organizations, patient advocacy groups, and other federal agencies formed the Hospital Bed Safety Workgroup (HBSW). The workgroup's goal is to improve the safety of bed frames for residents and patients in all health care settings who are most vulnerable to the risk of entrapment. The efforts of the FDA and the HBSW culminated in the FDA's release of recommended guidelines intended to reduce the risk of entrapment, including dimensional limits for critical gaps and spaces between bed system components and clinical guidance for assessment and implementation of bed side rails in various health care settings.

Entrapment zones involve the relationship of bed 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 home care), 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](http://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: [www.fda.gov/cdrh/beds](http://www.fda.gov/cdrh/beds).



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## 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 ulcers and as being a valuable aid in the treatment of pressure ulcers.

**⚠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.

The P.R.O. Matt Plus has a safe working load (SWL) of 500 lbs. In the non-powered mode, the P.R.O. Matt Plus design allows healthcare providers to provide optimal interface pressures through controlled air cell inflation for at-risk patients and treatment for Stages I and II pressure ulcers. In the powered alternating pressure mode, the P.R.O. Matt Plus is appropriate for up to uncomplicated Stage III or IV pressure ulcers based on individual patient assessment.

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: pressure redistribution and reduction in both friction and shearing forces.

## Pressure Redistribution

P.R.O. Matt Plus is a convertible dynamic pressure relieving 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 (ES, ES2 or CBC). 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 Ulcers	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 healthcare providers to provide optimal interface pressures through controlled air cell inflation for at-risk patients and treatment for Stages I and II pressure ulcers. In the powered alternating pressure mode, the P.R.O. Matt Plus is appropriate for up to uncomplicated Stage III or IV pressure ulcers based on individual patient assessment.

### 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 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

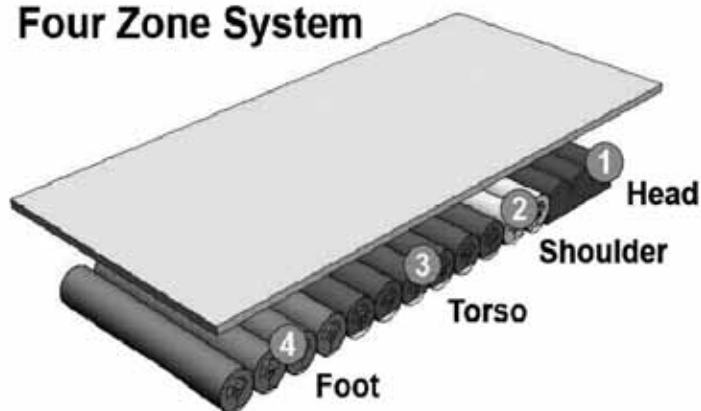
with the attending physician.

## Features

### Mattress Features

- Four-zone (head, shoulder, torso and foot) dynamic pressure redistribution profile with 15 cell internal design which 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 (ES, ES2, or CBC)
- 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 provide 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.

### Four Zone System



- 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 Part 1633 flammability standards
- 500 lbs.\* SWL

### ES Therapy Control Unit Features

- Three therapy modes of operation – *Autofirm*, *Powered* (static therapy) and *Alternate*
- *Alternate* mode alternates the air pressure in adjacent cells throughout the mattress (excluding the head section)
- Three alternating pressure cycle times: 5, 10 and 15 minutes
- *Autofirm* setting of unit 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 twelve minutes in the *Autofirm* mode
- Eight *Comfort Adjust* settings to maximize patient compliance and promote healing.
- Closed loop pressure sensor control system eliminates concerns of changes in mattress interface pressure due to ambient temperature and pressure changes
- Quick disconnect hoses allow for easy setup and CPR release
- Integrated swing out hanging brackets for affixing to most bed types
- Compact lightweight control unit is quiet and energy efficient
- Crisp, easy to read graphics for intuitive set up and therapy control

### ES2 Therapy Control Unit Features

- Three therapy 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 twelve 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)
- Three alternating pressure cycle times: 5, 10, and 15 minutes
- Five *Comfort Adjust* settings provide the ability to increase or decrease the general firmness of the P.R.O. Matt Plus mattress
- BMI *Comfort Adjust* chart which provides guidance to the caregiver in selection of the appropriate *comfort adjust* setting for the patient
- 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 set up and therapy control

### CBC Therapy Control Unit Features

- Therapy modes of operation: *Alternate* and *Static* powered
- *Alternate* feature alternates the air pressure in adjacent cells throughout the mattress (excluding the head section)
- Ten *Comfort Adjust* settings to maximize patient compliance and promote healing
- *Static* powered mode is a static pressure redistribution mode
- Quick disconnect hoses allow easy setup and CPR release
- Integrated swing out brackets for affixing to most bed types
- Compact lightweight control unit is quiet and energy efficient
- Crisp, easy to read graphics for intuitive set up and therapy control

\*Mattress weight capacity only; total weight must not exceed bed frame manufacturers' specified load capacity.

## Grounding Instructions

**Warning:** Use a properly grounded, three-prong, 120V AC outlet for this product. Failure to use a grounded outlet could result in personal injury or damage to equipment or house wiring, including risk of fire. A qualified electrician should be contacted to correct the wiring and ensure a properly grounded outlet.

Before installing this product, have the electrical system checked to make sure the electrical circuits and the electrical service are properly grounded.

Having a three-prong outlet does not necessarily mean it is grounded. Sometimes two-prong outlets are replaced with a three-prong type even though there is no ground wire.

There is always a chance of a loose connection or poor installation of a ground wire that causes the loss of proper ground at the outlet. Inadequate grounding at electrical outlets can occur even if there is a ground wire. Wires can become loose over time at the connection to the outlet.

**Note:** To install new wires on a circuit requires a qualified electrician.

### How to Determine if Outlet has the Proper Grounding

Most hardware stores sell circuit testers (Figure 1) that can be used to test an outlet for proper grounding. The tester plugs into an outlet and by observing the indicator lights you can determine if the outlet is properly grounded. For a higher level of assurance, an electrician should be requested to thoroughly test the electrical system with more reliable equipment.

If repair or replacement of the cord or plug is necessary, please contact Joerns Healthcare for assistance.



Figure 1

## Setup

**Warning:** For important precautions, please 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 been deflated during storage or shipment.
4. Place the patient on the mattress.
5. Connect a control unit (ES, ES2, or CBC) if powered therapy is preferred. Be sure to follow the directions for selected control unit. 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 at the mattress so that the non-powered mode can function properly.

## Operation

**⚠Warning:** For important precautions, see page two.

**⚠Caution:** 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 for 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 patient lies 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. By adding the optional ES control unit, the P.R.O. Matt Plus has three additional pressure redistribution modes: *Alternate*, *Powered* and *Autofirm*. By adding the optional ES2 control unit, the P.R.O. Matt Plus has three pressure redistribution modes: *Autofirm*, *Therapy*, and *Alternate*. By adding the optional CBC control unit, the P.R.O. Matt Plus has two pressure redistribution modes: *Alternate* and *Static*.

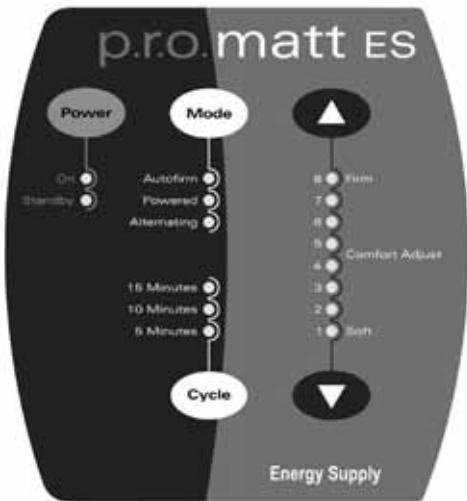


Figure 2

### ES Control Unit (Figure 2)

The ES control unit has three therapy modes: *Autofirm*, *Powered*, and *Alternating*.

- **Autofirm:** The *Autofirm* light is lit when in *Autofirm* mode. The mattress is manually inflated and can be used for patient transfer, or for a specific patient procedure where a firm mattress is preferable.
- **Powered:** The *Powered* light is illuminated when in the *Powered* mode. This is used along with the firm/soft keys to increase or decrease the general firmness of the P.R.O. Matt® Plus mattress.

**Note:** The very softest setting in the *Powered* mode is still firmer than the non-powered mode of the P.R.O. Matt Plus mattress.

- **Alternating:** The *Alternating* light is illuminated when in the *Alternating* mode. The pressure automatically alternates between adjacent therapy cells from the foot section up to the head section of the P.R.O. Matt Plus mattress. The alternating frequency is carried out at preset time intervals set by the *Cycle* key.

### Power Button

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

### Standby Light

This 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 is on 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.

### Mode Selection

The *Mode* key is used to place the control unit in one of the desired modes of operation.

### Comfort Adjust

The *Comfort Adjust* is located on the right of the control panel. The ES control unit can be customized to meet individual patient needs within a therapeutic window. Use the up and down keys to increase or decrease pressure in the mattress.

### Lockout

The unit is designed to lock out all the adjustment controls after the patient has been positioned correctly. Approximately five minutes after the last button is pushed, the *Power* light begins to flash indicating *Lockout* is enabled. This feature is to prevent any unauthorized changes to the patient settings. To unlock and make adjustments to the settings, press both up and down *Comfort Adjust* arrows at the same time. *Lockout* mode will return after approximately five minutes of inactivity.

### Cycle Key

When the unit is placed in *Alternating* 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 ten minute and fifteen minute intervals by pressing the cycle key.

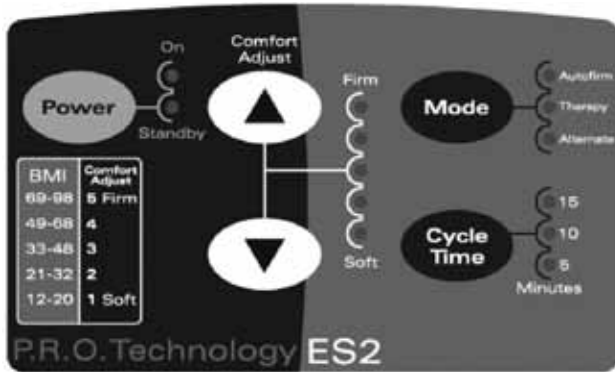


Figure 3

### ES2 Control Unit (Figure 3)

The ES2 Control unit has three therapy modes: *Autofirm*, *Therapy*, and *Alternate*.

- **Autofirm:** The *Autofirm* light illuminates when in *Autofirm* mode. The mattress is manually inflated and can be used for patient transfer, or for a specific patient procedure where a firm mattress is preferable. The unit is designed to return to *Therapy* mode after approximately 12 minutes in the *Autofirm* mode. This feature ensures the patient is not left in the *Autofirm* mode for an extended period of time.
- **Therapy:** The *Therapy* light is illuminated when in *Therapy* mode. This mode should be used along with the *Comfort Adjust* keys 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* key.

#### Power Button

The *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.

#### Mode Selection

The *Mode* key is used to place the control unit in one of the desired modes of operation.

#### Comfort Adjust

The *Comfort Adjust* buttons are located in the center of the control panel. Use the up and down keys to increase or decrease general firmness in the mattress.

#### BMI Comfort Adjust Guide (Page 12)

The ES2 Control unit includes a *BMI Comfort Adjust Guide* to provide caregiver guidance on selecting patient comfort adjust setting. This guide associates BMI ranges with optimal comfort adjust settings.

#### BMI Calculation

To calculate patient BMI, the patient weight and height is needed. See formula below:

$$\text{BMI} = \frac{\text{weight in pounds}}{(\text{height in inches})^2} \times 703$$

See page 12 for the full BMI Chart.

#### Lockout

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 *Power* light begins to flash indicating *Lockout* is enabled. This feature is to prevent any unauthorized changes to the patient settings. To unlock and make adjustments to the settings, press both of the up and down *Comfort Adjust* arrows at the same time. *Lockout* mode will return after approximately five minutes of inactivity.

#### 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 10 minute and 15 minute intervals by pressing the *Cycle Time* key.

# Joerns® Support Surfaces P.R.O. Matt® Plus Model

## BMI Chart

For reference only, caregiver should determine settings based on patient needs.

BMI	Comfort Adjust
12 - 20	1
21 - 32	2
33 - 48	3
49 - 68	4
69 - 98	5

weight in lbs	height in in																																					
	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82			
80	24	23	23	22	21	20	19	19	18	17	16	16	15	15	14	14	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
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500	98	95	92	89	86	83	81	78	76	74	72	70	68	66	64	62	60	59	57	56	54	53	51	50	49	47	46	45	44	43	42	41	40	39	38			

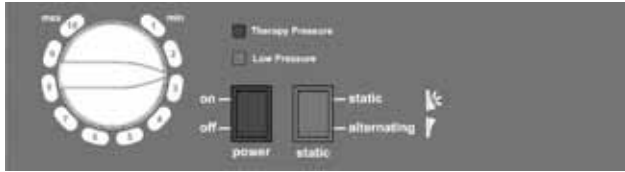


Figure 4

### CBC Control Unit (Figure 4)

The CBC control unit has two therapy modes: *Alternating* and *Static*.

- **Powered Static:** Used along with the firm/soft dial to increase the general firmness of the P.R.O. Matt® Plus mattress. After a period of 0-5 minutes, the amber mode switch will illuminate when in the powered *Static* mode.

**Note:** The very softest setting in the *Powered Static* mode is still firmer than the non-powered mode of the P.R.O. Matt Plus mattress.

- **Alternating:** The pressure automatically alternates between adjacent therapy cells throughout the length of the P.R.O. Matt Plus mattress on a ten minute cycle.

#### Power

The green *Power* switch is used to turn the CBC control unit on and off. When in the on position, the *Power* light is illuminated.

#### Mode Selection

The *Mode* switch is used to place the control unit in either the *Powered Static* or *Alternating* modes.

#### Comfort Adjust

The *Comfort Adjust* dial is located on the left side of the control panel. The CBC control unit can be customized to meet individual patient needs within a therapeutic window. Use the comfort dial to increase or decrease pressure in the mattress.

### Low Pressure Alarm

The low pressure light will illuminate 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.

The Therapy pressure light indicates the system has the appropriate amount of pressure in the system.

### Transport

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

- Turn the control unit off
- Disconnect the air hoses from the mattress inlet valve
- Unplug the power cord from line power

After transport, if powered therapy is desired, reconnect hoses and system power according to setup instructions.

### 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.

## Mattress Connection

All of the control units have a hose set permanently mounted 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.

To disconnect the control unit from the mattress, locate the ports at the foot end of the mattress (Figure 5). Disconnect the hose set by pressing down and pulling the left and right connectors (Figure 6). Repeat with the middle connector to fully disconnect the mattress from the control unit (Figure 7).

**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).



Figure 5



Figure 6



Figure 7

## 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

### **Recommended Linen**

Based upon the patients 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 patients incontinent of urine and/or stool, and patients with heavily draining wounds
- Top sheet, blanket and/or bedspread as needed for patient comfort
- Keep minimal padding between the patient and the bed 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

If there is no visible soilage 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 "Disinfecting".

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 and between patients, 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 Cleaning

When using an optional control unit, check the air filter on the rear of the unit regularly for buildup of dust/dirt. If buildup is visible, turn off the control unit and disconnect the power cord from the wall outlet. Remove the filter by grasping the filter and pulling outward. Replace with the second supplied filter. Ensure the replaced filter covers the entire filter region.

Hand-wash the removed filter in warm soapy water and allow to air dry. When dry, store the filter in a safe place for the next filter maintenance.

### 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.

## Maintenance

**⚠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

The permanently mounted hoses may be stored using the included hose management strap.

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.



## System Specifications

### Weight

Mattress.....24.5 lbs. (11 Kg)  
Maximum weight capacity\*.....500 lbs. (227 Kg)  
ES Control Unit.....11 lbs. (5 Kg)  
ES2 Control Unit.....7 lbs. (3 Kg)  
CBC Control Unit.....4.2 lbs. (1.9 Kg)

### Dimensions:

#### Mattress

36" (91cm) W x 80" (203cm) H x 7" (18cm) D  
36" (91cm) W x 84" (213cm) H x 7" (18cm) D  
42" (107cm) W x 80" (203cm) H x 7" (18cm) D

#### ES Control Unit

13.5" (34cm) W x 9" (23cm) H x 8.5" (21cm) D

#### ES2 Control Unit

7.5" (19cm) W x 12.25" (31cm) H x 5.5" (14cm) D

#### CBC Control Unit:

11.18" (28cm) W x 5.6" (14cm) H x 3.5" (9cm) D

### Electrical Specifications

#### ES Control Unit

US.....120V AC, 60Hz, 0.25A  
European/Australian.....220V/240V AC,  
60/50Hz, 0.1A

#### ES2 Control Unit

US.....120V AC, 60Hz, 0.6A

#### CBC Control Unit

US.....120V AC, 60 Hz

### Environmental Conditions

#### Operating Conditions:

Ambient temperature: +10°C to +40°C  
Relative humidity: 30% to 75% non-condensing

#### Storage And Shipping Conditions:

Ambient temperature: 10°C to +40°C  
Relative humidity: 10% to 100%

### Agency Approvals

#### Internal Fire Barrier

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

#### ES Control Unit

- UL Classified: Medical and Dental Equipment, UL 60601-1
- UL Classified per Canadian Standard: Medical and Dental Equipment, 60601-1 Risk Class 2G

#### ES2 Control Unit

- UL Classified: UL 60601-1 CAN/CSA C22.2 No. 60601-1
- Units manufactured prior to 1/1/10 are UL listed Medical and Dental, UL 544

#### CBC Control Unit

- UL Classified: Medical Electrical Equipment, UL 60601-1
- UL Classified per Canadian standard: Medical Electrical Equipment, CSA C22.2 NO. 601.1

UL 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.

*\*Mattress weight capacity only; total weight must not exceed bed frame manufacturers' specified load capacity.*

## Joerns Healthcare Warranty Program for Joerns P.R.O. Matt® Plus Support Surfaces

Joerns Healthcare, Inc. (Joerns), warrants the P.R.O. Matt Plus mattress to be sold free from defects in workmanship and materials, under normal and proper use, for a period of five (5) years. The cover warranty period is one (1) year. Damages arising from improper use will not be covered by this warranty.

The ES control unit will be covered for a period of two (2) years and the ES2 and CBC control units will be covered for a period of one (1) year.

Improper use is defined as those caused by:

- Burns
- Chemical
- Needle punctures, cuts or abrasions
- Excessive loads
- Staining
- Negligent or excessive usage
- Improper maintenance, handling and/or cleaning
- Failure to use in the manner indicated in the P.R.O. Matt Plus user manual

Any modification, repair or alteration done to the P.R.O. Matt Plus that was not authorized in writing by Joerns Healthcare will void this warranty.

Joerns will pay shipping and handling costs incurred in relation to this warranty for the period of one (1) year. Thereafter, those fees will be the sole responsibility of the purchaser. Any claims must be submitted to Joerns in writing within the defined warranty period.

Joerns reserves the right to repair or replace the mattress or mattress components free of charge during the warranty period. Substituted components will be of equal or greater quality. No returns, allowances, credits, discounts, charge-backs or other deductions will be made without Joerns's prior written authorization.

This warranty is the only warranty applicable to the P.R.O. Matt Plus and there are no other warranties, expressed or implied, and no one other than Joerns has the authority to modify this warranty.

Joerns liability will not exceed the purchase price (plus any shipping/handling fees) of the mattress. Joerns disclaims any liability for consequential damages arising from a breach of this warranty.

All warranty claims must have an assigned Joerns Return Authorization (RA) number. Returned products are subject to inspection. It is the sole discretion of Joerns personnel to determine if the claim is billable, or a non-charge warranty replacement.

*Note to Purchaser: please be advised that some fabric will stretch and all foam (regardless of chemical composition) and padding will compress during the product lifecycle. This is normal and is not included in this or any other warranty applicable to this product. The P.R.O. Matt Plus warranty is void if the manufacturer's tag is removed from the mattress.*

