



# INDICATIONS FOR USE -WHEN TO USE COLD TEMPERATURE THERAPY

Use of cold therapy is intended to be prescribed by a properly licensed practitioner to temporarily reduce pain and swelling resulting from injury to or surgery to areas such as the shoulder, knee and back.

- Any other uses of this product are not recommended.
- Ask your doctor whether you can use compression or mild exercise to ensure adequate blood flow to the affected area before, during and/or after use of this unit.
- DO NOT use until you have completely read this User Guide.

SAFETY ALERT FOR HEALTHCARE PROVIDERS! THIS UNIT CAN CAUSE SERIOUS COLD-INDUCED INJURIES IF NOT PROPERLY PRESCRIBED. DO NOT prescribe this unit if you have not read and understood all unit and therapy blanket warnings, contraindications and the *User Guide* or if you do not feel you are appropriately trained on the use of this unit. ALWAYS consider the individual patient's medical history in comparison to the warnings and contraindications prior to prescribing this unit. **ALWAYS** provide the patient with specific written instructions on the (1) frequency and duration of use during individual therapy sessions, (2) mandatory use of a skin barrier, (3) correct therapy blanket application, (4) methods and frequency of skin inspection, (5) total length of treatment and, when appropriate, (6) use of compression or mild exercise to ensure adequate blood flow before, during and/or after use of this unit. **ALWAYS** review your patient-specific instructions and all product information with the patient. **IMMEDIATELY DISCONTINUE** use of this unit if your patient experiences, at the treatment site, any change in skin condition or appearance, including burning, numbness, tingling, discoloration, itching, blisters, welts, irritation; temporary loss of normal motor function; or increased pain, redness or swelling.

## SAFETY ALERT FOR PATIENTS! THIS UNIT CAN CAUSE SERIOUS COLD-INDUCED

**INJURIES. DO NOT** use this unit without a prescription from your healthcare provider. DO NOT use this unit if you have not read and understood all unit and therapy blanket warnings, contraindications and the *User Guide* or if you do not feel you are appropriately trained on the use of this unit. **DO NOT** use this unit if your healthcare provider has not provided you with specific written instructions on (1) how long and how often to use this unit during individual therapy sessions, (2) mandatory use of a wrap to serve as a barrier between the skin and therapy blanket, (3) correct therapy blanket application, (4) how and when to inspect skin, and (5) total length of treatment with the unit. DO NOT use this unit if you do not understand the instructions or product information provided by your healthcare provider. **DO NOT** use this unit if you are not able to inspect the condition of your skin underneath the therapy blanket on at least an hourly basis or as otherwise recommended by your healthcare provider. IMMEDIATELY DISCONTINUE use of this unit and CONTACT YOUR HEALTHCARE PROVIDER if you experience, at the treatment site, any change in skin condition or appearance, including burning, numbness, tingling, discoloration, itching, blisters, welts, irritation; temporary loss of normal motor function; or increased pain, redness or swelling.

#### **CONTRAINDICATIONS – WHEN NOT TO USE COLD THERAPY**

**DO NOT** use cold therapy on patients with any of the following contraindications:

- · History of cold injury, frostbite or adverse reactions to cold
- Incoherent due to sedation, anesthesia, coma or sleep.
- Decreased skin sensitivity or localized circulation or wound healing problems. including those caused by multiple surgical procedures.
- Circulatory syndromes due to Raynaud's disease, Buerger's disease, peripheral vascular disease, vasopastic disorders, or hypercoagulable clotting disorders.
- Hand/wrist or foot/ankle surgery exhibiting polyneuropathy.
- Hypersensitivity to cold.
- · Children 12 and under.
- · Local tissue infection.
- · Diabetes.

If you have any of the above contraindications, ask your healthcare provider for alternate treatments.

- Condensation on therapy blankets and couplings may occur when in use depending on the air temperature and temperature at the treatment site. This is normal; however, **DO NOT** continue use if skin barrier becomes moist. Change to dry barrier
- Avoid pouring water directly over the power receptacle located on back of the unit.
- · Unplug unit when not in use.
- Use proper country electrical adapter.

# COMPONENTS

- **Reservoir** holds water and/or ice for circulating chilled water.
- Circuit Board (inside unit) controls pump motor, regulating water flow from unit reservoir to therapy blanket.
- Pump Motor circulates water between unit reservoir and therapy blanket.
- Motor Cage is located inside the unit and secures the pump motor.
- Therapy Blanket covers the treatment site allowing water to flow through and return back to unit (sold separately or as a combo unit).
- Screw-on Lid allows user to securely close lid.
- Carrying Handle can be used to transport unit.
- **Hose** (attached to the unit/reservoir) circulates cold water through the therapy blanket and returns water back to the unit.
- Power Adapter provides 12.0V electrical voltage to unit.
- Pressure Release Plug helps to relieve pressure if unable to unscrew lid.

# **WARNINGS**

- · Read and understand all unit and therapy blanket warnings, contraindications, precautions and the *User Guide* prior to using this unit.
- This unit can cause serious cold-induced iniury. **IMMEDIATELY DISCONTINUE** use of this unit and **CONTACT YOUR HEALTHCARE PROVIDER** if you experience, at the treatment site, any change in skin condition or appearance, including burning, numbness, tingling, discoloration, itching, blisters, welts, irritation; temporary loss of normal motor function; or increased pain, redness or swelling.
- This unit is prescription (Rx) only. **DO NOT** use this unit without a prescription from a healthcare provider. Use of this unit without a prescription or failure to follow or understand the prescription may result in serious injury, including frostbite and
- **DO NOT** use this unit if you are not able to inspect the condition of the skin underneath the therapy blanket on at least an hourly basis. However, due to individual differences in sensitivity and susceptibility to cold temperatures, **ALWAYS** observe the treatment area as recommended by your healthcare provider.
- **DO NOT** apply therapy blanket underneath a fiberglass or plaster cast or other dressing, wrapping or bracing that would prevent the patient from checking the skin under the therapy blanket.
- **DO NOT** let any part of the therapy blanket touch the skin or an open wound. **ALWAYS** use a barrier between the skin and the therapy blanket. If a sterile dressing has been applied to the treatment site that does not completely cover the skin under the therapy blanket, use an additional barrier. Application of the therapy blanket directly on the skin may result in serious injury, including frostbite and tissue necrosis.
- ALWAYS check for moisture on the barrier between the skin and the therapy blanket. Because moisture on the barrier may create colder temperatures on the skin and result in serious injury, immediately discontinue use of this unit if moisture is present on the barrier. Change to dry barrier as necessary.
- **DO NOT** use a therapy blanket that is leaking water as this may result in serious injury, including infection and tissue necrosis. **ALWAYS** check for a secure connection between the unit and therapy blanket. ALWAYS check for any leaks at the start of every individual therapy session.
- **DO NOT** use this unit with any therapy blanket other than a DeRoyal brand therapy blanket. Other therapy blankets may be colder, increasing the risk of serious injury.
- **ALWAYS** follow the healthcare providers directions for (1) how long and how often to use this unit during individual therapy sessions, (2) mandatory use of a wrap to serve as a barrier between the skin and therapy blanket, (3) correct therapy blanket application, (4) how and when to inspect skin, and (5) total length of treatment with the unit. Failure to follow or understand the directions may result in serious injury, including frostbite and tissue necrosis.
- This unit is intended for single-patient use. Secondary use can cause serious injury, including infection.
- **DO NOT** use in the presence of flammable anesthetics or other flammable materials. Such use may result in serious injury due to the risk of explosion.
- **DO NOT** plug or unplug adapter from wall outlet with wet hands or handle or use this unit in a wet location. The electrical connections of this unit are not waterproof and must be kept dry. Failure to follow this warning may result in electrical shock and serious injury.
- **DO NOT** use any power adapter other than the one provided with this unit.
- **DO NOT** operate this unit with an extension cord or if the power adaptor is
- · ALWAYS use a properly grounded AC electrical wall outlet.
- · DO NOT modify this equipment.
- Cables and hoses may cause strangulation hazard. **Keep out of reach of** children.

# **OPERATING INSTRUCTIONS**

**Note:** Before filling reservoir, ensure the pressure relief plug located on the top of the unit is secured tightly. **Environment Operating Temperature/Conditions:** 41°F to 104°F (5°C to 40°C); 15-90% Humidity; and Atmospheric Pressure: 700-1050 hPa.

- 1. Twist and open lid.
- **2.** Fill reservoir with cold tap water to WATER FILL LINE marked on the side of the unit's motor cage.
- Next, add ice to ICE FILL LINE marked on the top of the unit's motor cage. Note: DO NOT overfill unit. Condensation may collect on top of unit if ice/water level is above ICE FILL LINE. Larger pieces or amounts of ice will equal longer cooling times.
- 4. Close and lock lid.
- **5.** Attach the therapy blanket fittings to the unit hose by inserting ends of blanket tubes into hose fittings. Push each fitting together firmly until you hear a "click." Check for secure connection by lightly tugging on each hose.
- **6.** After all connections are made, first plug the power adapter into the back of the unit. Then, plug the power adapter into a properly grounded AC electrical wall outlet. **Note:** Place unit within user's reach so user can unplug power adapter with ease.
- 7. Place the therapy blanket over treatment area with clear side towards covered skin and secure. Follow directions included with the therapy blankets and wraps sold separately or included in cold therapy unit/blanket combo sets.
- **8.** To maximize water flow efficiency, place unit at or above the therapy blanket (**Note:** no more than 3 feet) and treatment site level. Avoid twisting or kinking hoses when unit is running.
- **9.** A green light will illuminate, signaling the unit is running.
- 10. If the unit needs additional water and/or ice, unplug the power adapter from the wall, empty any remaining water and add water to WATER FILL LINE and ice to ICE FILL LINE. With dry hands, plug the power adapter into a properly grounded AC electrical wall outlet and restart the unit.









## TO DISCONNECT UNIT

- **1.** First, unplug the power adapter from the electrical wall outlet. Then, unplug the power adapter from the back of the unit.
- 2. Next, disconnect hose tubes from the unit and therapy blanket by pushing each metal button at connection points.

## **CLEANING AND STORAGE**

- 1. Disconnect unit and remove from patient.
- **2.** Drain water/ice from reservoir by removing lid and dumping out. **Note:** Open pressure relief plug if unable to unscrew lid.
- 3. Next, use a dry towel to collect any remaining moisture. Tip: When storing unit, leave a few dry towels in unit to collect any condensation that may not have been removed when cleaning. Transport and Storage Temperature: -13°F to 158°F (-25°C to 70°C); 93% Maximum Humidity; and Atmospheric Pressure: 700-1060 hPa

# DISPOSAL

1. Dispose of product according to local regulations.

## **TEMPERATURE THERAPY PROTOCOLS**

Treatment Period:	Frequency/ Duration:	Type of Barrier:	Inspect Skin Every:	Inspection Method:
Day: Through				
Day:				
Day: Through Day:				
Day:				

### LIGHT DISPLAY INFORMATION

**Solid Green Light:** Indicates the unit is operating properly. The temperature is between 40-50°F/4.4-10.0°C.

**Blinking Green Light:** Indicates the unit is operating properly. This is an indication that the blanket temperature has risen above 51°F/10.6°C and that the ice level in the reservoir may need to be checked soon.

**Solid Amber Light:** Indicates the unit is operating properly. However, the temperature is above 65°F/18.3°C.

**Blinking Red Light:** Indicates there may be a kink in the black hose or the therapy blanket may be folded over or elevated too high above the bucket, thereby restriciting the water from properly flowing. Unplug unit, check and adjust blanket and hose as needed, then reconnect. If blinking red light continues please contact DeRoyal.

**Solid Red Light:** Indicates the unit is operating properly. Add warm water to the reservior to raise the temperature **Note: DO NOT** overfill unit.

**Note:** The motor will stop running when the temperature is below  $43^{\circ}F/6.1^{\circ}C$ . The motor will start again when the temperature rises above  $42^{\circ}/5.6^{\circ}C$ . This is a feature of automatic temperature control (ATC $^{\infty}$ ).

#### WARRANTY

DEROYAL® PRODUCTS ARE WARRANTED FOR NINETY (90) DAYS FROM THE DATE OF SHIPMENT FROM DEROYAL AS TO PRODUCT QUALITY AND WORKMANSHIP. **DEROYAL'S WRITTEN WARRANTIES ARE GIVEN IN LIEU OF ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** 

### **TROUBLESHOOTING**

Problem	Solution	
Unit will not turn on	Check all adaptor and therapy blanket connections and ice/water level.	
No water flow to therapy blanket	Check for hose kinks or folds in therapy blanket.	
Unit runs continuously at a speed	Check water/ice level and add if low.	
Unit continuously stops and starts	Unit is maintaining optimal temperature. Refer to "Light Display Information."	
Red light stays illuminated	Refer to "Light Display Information."	
Motor stops running	During normal operating mode, unit motor will pause as needed to maintain correct temperature. Length of the pause may vary.	

# **EXPLANATION OF SYMBOLS**

# deroyal.com/symbols







Symbol	Description		
★	Type BF, Applied Part		
	Class II Equipment		
12V 125mA O	12 Volts DC, 125 milliAmps		

## IP21

IP2X - Protected against solid foreign objects of 12.5mm diameter and greater

IPX1 - Protected against vertically falling water drops



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