

Important Safegaurds

1. Do not plug CRYOPress into any electrical outlet that is not protected by a ground fault circuit interrupter (GFCI).
2. Do not use CRYOPress in acute conditions where the possibility of fracture has not been eliminated.
3. Do not use CRYOPress with conditions where pressure is contraindicated or could cause further injury.
4. Do not use CRYOPress when peripheral vascular disease exists.
5. Do not use CRYOPress if the cord or plug has been damaged or if it is not working properly. Contact Grimm for examination and repair.
6. Do not use CRYOPress outdoors or operate where oxygen is being administered.
7. Do not use CRYOPress with attachments or liquids not recommended by GRIMM.
8. Do not modify the power cord in any way or use with any type of extension cord.
9. Do not use the CRYOPress with uncovered wounds.
10. Do not use antifreeze solution as coolant. Using only water eliminates risk of freezing skin and tissue.

Set up

Step 1: Unpack the components

Remove CRYOPress and accessories box from the shipping pallet. Place CRYOPress upright on its casters and wheel it to a location near a ground fault interrupted 110-120 volt, 20 amp outlet and a water source.

Check accessories included:

- Fill hose
- Miniature screwdriver

Step 2: Ground the unit

The CRYOPress operates on 110-120 volt, 60 Hz current and comes with a 3-prong hospital grade plug. Only plug into a receptacle that is protected by a ground fault circuit interrupter (GFCI). Consult electrician for installation and local code requirements.

Step 3: Fill reservoir

Locate the fill port under the foot end of the boot assembly and remove the threaded plug. Thread the male fill hose fitting into the port and hand tighten only; thread the other end of the fill hose to a water source.

Plug in the CRYOPress, the Red "Add" LED will light up and the alarm will sound.

Turn on the cold water faucet and fill the reservoir until the Green "Full" LED lights up. Do not overfill. Once the CRYOPress is full, remove both ends of the fill hose and install the threaded plug back into the fill port. Hand tighten only.

Step 4: Set water temperature

Depress the small black button marked "Set" located to the left of the digital temperature readout on the CRYOPress panel. While holding in the black button, use the miniature screwdriver provided to rotate the dial marked "Adjust". Set the water temperature at the desired setting and release the black "Set" button.

The readout on the CRYOPress panel reflects the actual water temperature; the unit will cool the water to the set temperature.

Step 5: Purge air from the system

Set compression dial to 40 mmHG and gradient switch to "off". Close and latch the boot. Press "Fill" button and allow the three sleeve segments to fill.

After all three pressure gauges show 40 mmHg, simultaneously press the "Drain" and "Stop" buttons. The CRYOPress will drain for 2 ½ minutes. When the drain pump stops, check and see if the sleeve is empty and the green "Full" LED is on. If not, press and hold the "Drain" button until the sleeve is completely drained. If "Full" LED is not on after the sleeve is empty, repeat Step 3 until the "Full" LED light is on.

Step 6: Allow cooling time

Allow time for the CRYOPress to cool the water to the desired temperature. This time may vary depending on the initial temperature of the water but should occur at a rate of, not less than, 10 degrees per hour. Once the digital temperature readout displays the desired temperature, the CRYOPress is ready for use. The yellow "Cooling" LED light will be lit when the CRYOPress is in cooling mode.

Operation

Roll CRYOPress to the end of a DURALast CRYOPress table or to another table which approximately matches the height of the CRYOPress base (30"-32"). Align the open end of the CRYOPress boot with the end of the table and lock the CRYOPress casters to avoid rolling.

Step 1: Place patient's limb in sleeve

Release the five latches and open the boot. Place the patient's limb deep inside the sleeve. Assure patient comfort, close the boot around the limb, and re-secure the five latches. Give the patient the Remote Drain Switch and explain its operation.

If at any time during the treatment the patient feels discomfort from too much pressure within the boot, the button on the Remote Drain Switch can be depressed and the boot will drain as long as the button is depressed. At this point the clinician should; 1) reduce the pressure setting on the unit consistent with patient comfort for the remainder of the treatment, or 2) decide to discontinue treatment.

Caution...open wounds must be covered with sterile dressing to avoid contamination of the interior sleeve and other surfaces. (see page 4, Cleaning/Disinfection procedures)

Step 2: Pressurize sleeve

Set compression dial at 60 mmHg and press the "Fill" button. Observe the "Distal", "Mid", and "Proximal" LED bars as the boot fills, this usually takes up to 2 minutes. Once each bar reaches the 60 mmHg level press the "Drain" button for a few seconds to discontinue filling and lower the boot pressure to below 60 mmHg. Proceed to Step 3.

Step 3: Select pressure

Adjust the compression dial and gradient switch to the desired treatment parameters. It is good practice for patients who are first time users of the CRYOPress to start with a lower pressure setting. Pressures can be increased or decreased as needed during the treatment to adjust to patient tolerance. A range of 60 to 80 mmHg is a good starting point. Gradient setting will be dependent on location of injury and treatment goals.

Step 4: Select treatment time

Once pressure and gradient settings are selected, set the treatment time using the black button marked "Set" located above the LED bar labeled "Minutes". Press the black "Set" button repeatedly until the LED bar shows the desired treatment time (usually 20 minutes). Once the desired number of minutes is selected, press "Start". The LED bar will count down as the treatment continues showing treatment time remaining.

Step 5: Observe cycle sequence

The treatment will cycle in 2-minute intervals for the length of time selected on the "Minutes" LED bar. The "Distal" segment will fill with water and hold the selected pressure for 90 seconds. The "Mid" and "Proximal" segments will fill sequentially and hold for 60 and 30 seconds respectively. After 90 seconds all segments will drain for 30 seconds which completes the 2-minute interval and a new treatment interval will commence. This sequence will repeat until the treatment time is exhausted.

Step 6: Terminate the treatment

When the timer times out, the unit will drain for 2½ minutes to empty the sleeve.

Once the drain cycle is complete the boot latches may be released and the patient's limb removed. It is normal for some water to remain in the sleeve segments at the completion of the draining cycle. If a long period is expected before the next treatment it is advisable to press the "Drain" button to completely empty the sleeve.

Cleaning and Maintenance

The CRYOPress sleeve should be cleaned and disinfected on a regular basis. Wash the sleeve with any standard household detergent and rinse thoroughly so as to remove all detergent from the surface of the sleeve. If it is found that the sleeve has been exposed to contaminants from an open wound or broken skin, follow the disinfection procedures below.

All other CRYOPress surfaces can be cleaned with any standard household cleaner.

Disinfection procedures

1. Unplug CRYOPress from electrical outlet before disinfection and make sure it is completely dry before plugging back into outlet.
2. Apply solution of diluted bleach (1/4 cup to 1 gallon of water) or EPA approved intermediate level disinfectant with cloth or sponge. Wet the surface thoroughly and allow surface to remain wet for at least ten (10) minutes.
3. Rinse clean with water to reduce residue of the disinfectant on the surface to a non-toxic level.
4. Examine sleeve and associated components for damage and visual cleanliness.

Maintain water level

The level of the CRYOPress water supply is monitored with the red "Add" LED light and the green "Full" LED light. Over time some of the water will evaporate. When the red "Add" LED lights during operation water level is extremely low. Drain the sleeve completely and fill the reservoir until the green "Full" LED lights up. Refer to Setup instructions, page 2, for further description of the filling procedure.

Replace water

At least once a year the reservoir should be drained and refilled with fresh water. Drain all sleeve segments by depressing and holding the "Drain" button. Release the locks on the casters and wheel the CRYOPress over a floor drain. Remove the threaded drain cap located underneath the CRYOPress at the proximal end of the boot. Allow the reservoir to drain completely and replace the threaded cap. Refill with fresh water following the instructions on page 2. Note: it is normal for the water drained from CRYOPress to be slightly discolored.

Cleaning filters

Filters can be cleaned by removing the front and rear grills and unscrewing the filter retainers held by two small screws along the top and bottom of each grill. Filters can be vacuumed or shaken to remove accumulated dust.

Check calibration

Every year the CRYOPress should be checked by a qualified service technician. Pressure control calibration should be verified with a mercury monometer and the temperature control with a mercury thermometer. The unit should also be tested electrically for grounding and dielectric. Grimm can provide this service.

Service

Replacing the Sleeve

- Step 1: Completely drain the sleeve by pressing the “Drain” button until sleeve is empty and then unplug CRYOPress
- Step 2: Open boot and unsnap sleeve from both boot halves
- Step 3: Remove right boot assembly and rear cover from the panel mount
- Remove eleven (11) flat head screws from around the rear exterior metal panel and four (4) screws from the boot brackets on the distal and proximal ends inside the right boot half
- Step 4: Identify and mark three (3) large fill hoses and three (3) small sensor hoses with tape (proximal, mid, and distal segments) to assure proper reconnection.
- Step 5: Loosen hose clamps and pull hoses from fittings on the sleeve
- Step 6: Remove old sleeve and install new sleeve
- New sleeves may require some stretching to line up and fit into the port holes, do so carefully without ripping the sleeve and be careful not to deform the brass fittings
- Step 7: Reconnect hoses and tighten hose clamps, DO NOT over tighten clamps, they should be snug but not so tight as to deform brass fittings.
- Step 8: Reinstall rear cover and right boot assembly, snap sleeve to both boot halves
- Step 9: Plug in CRYOPress, latch boot closed, and fill sleeve to 100 mmHg to check for leaks
- Step 10: Drain sleeve completely until all air and water are removed

Service

Replacing the Drain Pump

Step 1: Unplug CRYOPress and drain the reservoir

Release the locks on the casters and wheel the CRYOPress over a floor drain. Remove the threaded drain cap located underneath the CRYOPress at the proximal end of the boot. Allow the reservoir to drain completely and replace the threaded cap.

Step 2: Remove the hood from the panel by removing eight (8) screws and lifting hood away

Step 3: Unhook drain pump cord from the circuit board by removing the red fastons from leads, remove ground from the stud and push cord through hole out of panel

Step 4: Remove the front grill by turning the screws on each corner 1/4 turn counterclockwise

Step 5: Locate the drain pump mounted vertically on two black brackets on the left hand side of CRYOPress. Release the inlet and outlet fittings of the pump by pushing the clip upward and remove the fittings from the pump by pulling them out.

Step 6: Unscrew the four (4) mounting screws holding the drain pump to the black brackets to release and remove the pump

Step 7: Install the new pump using the four (4) mounting screws and reinsert the fittings into the inlet and outlet, make sure the fittings are fully inserted and snap fittings into place with the clips.

Note: The replacement pump may require turning the head 180 degrees so that the outlet points to the right when the pump is mounted in the vertical position. If the pump was shipped from the Grimm factory this has been done for you already. If not, the head can be turned by loosening the four (4) screws on each corner of the pump head, turning the head ½ turn, and retightening the screws.

Step 8: Feed the pump cord back up into the panel and reattach to the circuit board. Attach the blue wire to the lead marked white and the red wire to the lead marked black. Attach the green wire to the stud in the panel and tighten down the nut to ground the pump.

Note: If the pump came from the Grimm factory the cord has been prepared for you. If not, contact a qualified electrician to modify the drain pump cord to attach on the CRYOPress circuit board.

Step 9: Reinstall the front grill and the panel hood

Step 10: Plug in CRYOPress and follow "Set Up" instructions (pg. 2) to prepare for operation.

Service

Replacing the Circulation Pump

Step 1: Unplug CRYOPress and drain the reservoir.

Release the locks on the casters and wheel the CRYOPress over a floor drain. Remove the threaded drain cap located underneath the CRYOPress at the proximal end of the boot. Allow the reservoir to drain completely and replace the threaded cap.

Step 2: Remove the front grill by turning the screws on each corner 1/4 turn counterclockwise

Step 3: Locate the circulation pump which is mounted horizontally on the base.

Unscrew the four (4) mounting screws holding the circulation pump to the CRYOPress base, doing so requires removal of the drain pump mounting brackets. It may be helpful to remove the drain pump (mounted vertically) from the brackets before attempting to remove the brackets. See steps 5 and 6 of *Replacing the Drain Pump*, page 6.

Step 4: Unscrew both plastic unions (front of the pump which joins the pump to the reservoir and on top of the pump which feeds the fill valves.)

At this point the circulation pump should be freed up enough allowing you to lift it and rotate it so you see the back of the pump.

Step 5: Remove the back cover of the pump

Step 6: Disconnect all the electrical connections from the old pump and reconnect to the new pump in the same orientation, contact a qualified electrician for this step.

Step 7: Replace the back cover of the pump and set the pump back in place aligning it with the mounting holes and the plastic fitting on the reservoir

Step 8: Tighten the union on the front of the pump and then replace and retighten the union on the top of the pump

Step 9: Replace and tighten the four (4) mounting screws and drain pump mounting bracket to secure the circulation pump to the CRYOPress base.

Reattach the Drain Pump if you removed it from the mounting brackets

Step 10: Reinstall the front grill, plug in CRYOPress and follow "Set Up" instructions (pg 2) to prepare for operation.

One Year Warranty

The CRYOPress warranty applies to the original purchaser and any subsequent owner. Grimm Scientific Industries Inc. (warrantor) warrants this product to be free from defects in material and workmanship under normal use for one year from the date the product is shipped. The warrantor may opt to replace the product rather than repair it. This warranty does not cover damage resulting from accidents, improper use, or maintenance of this product, and in no case shall the warrantor's liability exceed the original purchase price paid for the product. This warranty is expressly in lieu of all other express warranties.

CRYOPress Repairs

Should repairs be needed on your CRYOPress simply call the factory and ask to speak to a service technician. We will repair it free during the first year and assist you as desired with parts and labor after the warranty expires.

Call 1-800-223-5395

All Grimm products are sold and serviced directly by the factory. Call us toll free Monday through Friday 8:00 am to 5:00 pm. EDT about your thermal therapy needs. We are often available before and after hours so call us anytime.

Specifications

Model	#3000
Dimensions	40"L X 24"W X 54"H
Weight Empty	216 lbs
Weight Full	341 lbs
Reservoir Capacity	15 gal
Electrical	110-120V, 60Hz, 20 Amps
Temperature Range	40-60 F
Compression Range	0-100 mmHg
Treatment Time	0-20 Min
Cycle Time	2 Min
Compression Sequence	Distal 90 sec
	Mid 60 sec
	Thigh 30 sec
	Decompression 30 sec