

CRYOPress™

Sequential Cryocompression



Users' Guide

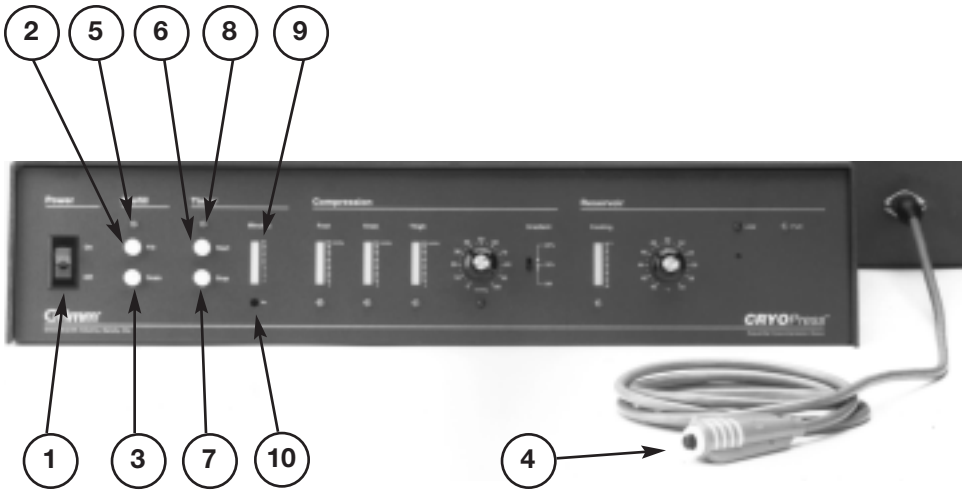
*Please read thoroughly
before use and retain
for later reference.*

Important Safeguards

The following safety precautions should always be followed when using CRYOPress™.

1. Do not plug CRYOPress into any electrical outlet that is not protected by a ground fault interrupter.
2. Do not use CRYOPress in acute conditions where the possibility of a fracture has not been eliminated.
3. Do not use CRYOPress with conditions where pressure would 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 extension cord.
9. Do not use CRYOPress with uncovered wounds.
10. Do not use antifreeze solution as coolant. Using only water eliminates risk of freezing skin and tissue.

Control Functions

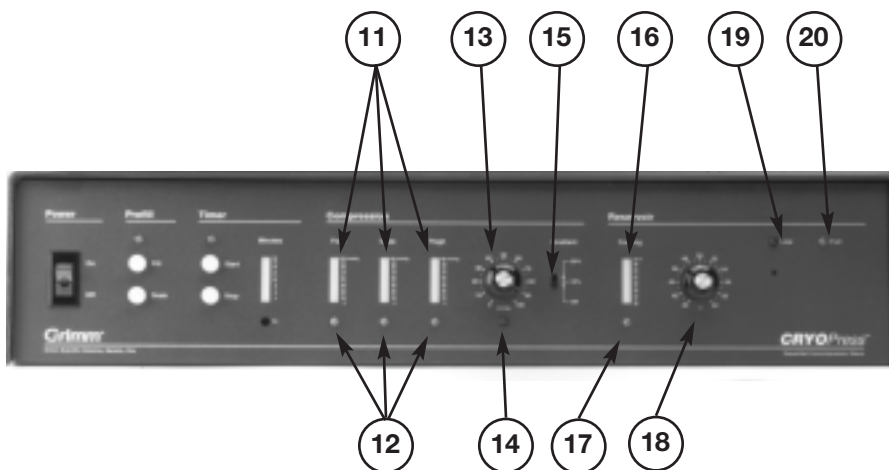


1. **Power Switch** - Activates all electrical components.
2. **Fill Button** - Fills sleeve segments manually.
3. **Drain Button** - Stops manual fill and drains sleeve manually.
4. **Remote Drain Button** - Drains sleeve and sounds alarm.
5. **Prefill LED** - Indicates sleeve is filling manually.
6. **Start Button** - Starts sequential compression timer.
7. **Stop Button** - Stops sequential compression and resets cycle.

Note: Press “Stop” button and “Drain” button simultaneously for 5 seconds to drain sleeve for 2 minutes.

8. **Timer LED** - Indicates sequential compression timer is on.
9. **Minutes LED Bar** - Indicates sequential compression cycles remaining. Each cycle is two minutes long, consisting of 90 seconds “Foot”, 60 seconds “Knee”, 30 seconds “Thigh”, and 30 seconds drain.
10. **Set Button** - Sets number of cycles.

Control Functions



11. **Compression LED Bars** - Indicate individual sleeve segment pressures.
12. **Segment LEDs** - Indicate pressurized sleeve segments.
13. **Compression Dial** - Sets compression pressure.
14. **Limit LED** - Indicates over pressure limit switch(s) is open.
15. **Gradient Switch** - Selects percent of automatic pressure reduction per segment from foot to thigh.

Example: Compression Dial @ 100 mmHg and Gradient Switch @ 10% then
Foot = 100 mmHg, Knee = 90 mmHg, and Thigh = 80 mmHg.
16. **Temperature LED Bar** - Indicates coolant temperature.
17. **Cooling LED** - Indicates refrigeration compressor is operating.
18. **Temperature Dial** - Sets coolant temperature.
19. **Low LED** - Indicates water needs to be added to reservoir.
20. **Full LED** - Indicates reservoir is full.

Installation

Step 1: Unpack the components.

Remove CRYOPress and accessories box from the shipping pallet. Place CRYOPress upright on its casters and wheel it to the end of a treatment table located near a ground fault interrupted 110-120 volt outlet.

Check accessories included.

- Fill Hose
- Drain Pump Impeller
- Water Treatment Solution

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 interrupter. Consult electrician for installation and local code requirements.

Step 3: Fill reservoir.

Locate “Fill” port under the foot end of the boot assembly and remove the threaded plug. Thread male fill hose fitting into “Fill” port. Pour 2 ounces of water treatment solution into the female fitting and connect to cold water faucet. Turn “Power” switch on. Red “Low” LED will light and the alarm will beep five times every minute. Turn on the cold water faucet and fill the reservoir until the green “Full” LED lights. Do not over fill. Remove fill hose and install threaded plug.

Step 4: Select coolant temperature

Rotate temperature dial to desired temperature. Allow between two to three hours for coolant to reach the set temperature. The temperature LED bar will indicate the actual coolant temperature.

Step 5: Purge air from system.

Set compression dial to 40 mmHg and “Gradient” switch off. Close and latch the boot. Press “Fill” button and allow all three sleeve segments to fill.

After sleeve is filled to 40 mmHg press “Drain” and “Stop” buttons at the same time. The CRYOPress will drain for 2 minutes. There will be a gurgling sound while the air is purged from the system. Check to see if the sleeve is empty and the green “Full” LED is on. If not, press the “Drain” button and completely drain it manually. If green “Full” LED is not on after the sleeve is empty, repeat Step 3.

Maintenance

Clean regularly.

After each patient use, wash with any standard household detergent and inspect for contaminants or bloodborne pathogens. If patient has an open wound or contaminants are found, follow the disinfection procedure below.

Note . . . The entire CRYOPress should be inspected, cleaned, and disinfected at the end of the day.

CAUTION . . . When cleaning the CRYOPress, wear protective gloves.

Disinfection Procedure.

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

Maintain Coolant Level.

CRYOPress has an internal coolant supply. Its level is monitored with a red “Low” LED and a green “Full” LED. Over time some of the coolant will evaporate. When the red “Low” LED lights, drain the sleeve completely and fill the reservoir until the green “Full” LED Lights. (see Page 5, Step 3).

Replace Coolant.

Once a year the reservoir should be drained and refilled with fresh water. Drain all sleeve segments completely with “Drain” button. Wheel CRYOPress over a floor drain. Remove the threaded drain cap located underneath the CRYOPress at the thigh end. Allow the reservoir to drain completely and replace the threaded cap. Refill with fresh water. (see Page 5, Step 3)

Check Calibration.

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

Operation

Step 1: Place limb in sleeve.

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

CAUTION . . . Open wounds must be covered with sterile dressings to help prevent blood components from contacting interior sleeve or other surfaces. (see Page 7, Clean Regularly and Disinfection Procedure)

Step 2: Select pressure.

Adjust the compression dial and "Gradient" switch to the desired sleeve pressure and gradient. Start with a lower setting. Pressures can be increased or decreased as needed during the treatment. A range of 60 to 80 mmHg and 20% gradient is a good starting point.

Step 3: Pressurize sleeve.

Press "Fill" button and allow sleeve to fill, observing "Foot", "Knee", and "Thigh" LED bars. After all three segments cycle, press "Drain" button for a few seconds then increase or decrease the setting(s) according to patient tolerance. The patient may tolerate a higher setting after they become familiar with the device.

Step 4: Start Timer.

With "Prefill" LED off press "Set" button to select treatment time then press "Start" button to begin compression cycle sequence.

Step 5: Observe cycle sequence.

The foot segment will fill with coolant and hold pressure at the set-point for the full 90 second cycle. After 30 seconds, the "knee" segment will pressurize for 60 seconds. After 60 seconds, the "Thigh" segment will pressurize for 30 seconds. After 90 seconds, all segments will drain for 30 seconds. Cycles repeat until the timer times out or the "Stop" button is pressed.

Step 6: Terminate treatment.

After the timer times out, the segments will drain for 2 minutes and allow the boot latches to be released. Some coolant will remain in the segments. If a long period is expected before the next treatment, press "Drain" button to completely drain the segments.

CAUTION . . . Never run drain pump dry. This will cause the pump to wear excessively and fail.

Service

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 quote a nominal parts and labor fee 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 a.m. to 5:00 p.m., EDT about your thermal therapy needs. We are often available before and after office hours so call us anytime.

Specifications

Model.....	#3000
Dimensions	40"L x 24"W x 54"H
Weight Empty	216 lb
Weight with Coolant	341 lb
Reservoir Capacity	15 gal
Electrical	110-120V, 60Hz, 15Amp
Temperature Range	40-60 F
Compression Range	0-100 mmHg
Treatment Time	2-20 Min
Cycle Time.....	2 Min
Compression Sequence:	
Foot	90 Sec
Knee	60 Sec
Thigh	30 Sec
Decompression	30 Sec



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