

# INSTRUCTIONS



## Cool Flow<sup>®</sup> & CoolOR<sup>®</sup>

PERSONAL COOLING SYSTEMS



# **POLAR** PRODUCTS

800-763-8423

[polarproducts.com](http://polarproducts.com)

# Cool Flow<sup>®</sup> & CoolOR<sup>®</sup>

## PERSONAL COOLING SYSTEMS

### Instructions for Patients and Medical Professionals

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*Users of this system should carefully read all instructions and warnings before using and operating the Polar Cool Flow<sup>®</sup> or CoolOR<sup>®</sup> cooling system.*

*Note: Each Polar Cool Flow<sup>®</sup> or CoolOR<sup>®</sup> system has been fully tested in the factory with a distilled water and alcohol solution. There will be some residual solution in the system.*

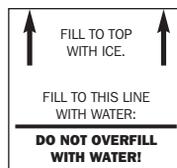
***Warning: Prior to using this or any body cooling product for a medical condition, always consult your licensed health care practitioner.***

**Polar Products, Inc. will not be liable for injuries that result from misuse or misapplication of this system.**

**Thank you for your order. We are proud to offer you a high-quality, American-made personal cooling system.**

### **Setting up the Cool Flow® and CoolOR® System with Ice**

- a) **CAUTION: Always begin with power supply unplugged.** Do not turn on the system until all connections are complete and the hose from the cooling reservoir to the vest, head cap, wrap, blanket, seat, or bladder is free from bends or restrictions, as this will restrict water flow through the system.
- b) Open the reservoir and fill with clean cool water to the water fill line in the cooling reservoir. Be sure water covers the pump in the reservoir. **CAUTION: NEVER OPERATE THE UNIT WITHOUT WATER!** This can cause pump failure. **DO NOT OVERFILL THE RESERVOIR WITH WATER.**
- c) Fill with ice to below the return flow tube located near the top of the reservoir. **Water and/or ice should never cover this return flow tube.**



- d) Connect the vest, head cap, wrap, blanket, seat, or bladder hose tubes to the Cooling System with the quick disconnect couplings. **Tabbed couplings** include a metal or plastic tab on the female coupling. Depress the tab on this coupling first then press the male couplings into the female couplings. Couplings “click” when they are properly locked together. **Breakaway couplings** are simply pushed together.



- e) The temperature flow control valve will be located on the cooling reservoir or with a separate attachment; depending on your system. If it is a separate attachment it may be connected next to the cooling reservoir or next to the vest, head cap, wrap, blanket, seat, or bladder for easy access. Connect as described above. Turn this control to "Coldest."



Temperature Control Attachment

- f) Plug the power supply into the unit and into a wall outlet. Ensure all connections are securely seated.



Temperature Control on the reservoir

- g) If the optional battery pack and charger was purchased or is part of your system, it should arrive fully charged. The battery pack has two cords. One is labeled “To Cooler” and the other “To Charger.” Use the “To Cooler” cord to plug into the cooling reservoir to run the unit off the battery pack. To charge the battery pack, unplug the battery pack from the unit, plug in the cord labeled “To Charger” into the charger and plug into the wall. When unit is charging a red light is shown. Once battery pack is charged, a green light will show. The battery pack will run the unit for approximately 6 hours. Never use the battery pack in conjunction with the 12 volt transformer.

- h) Put the vest or head cap on or lay the wrap, blanket, seat, or bladder on a flat surface and then turn the unit on. Water will begin circulating through the vest, head cap, wrap, blanket, seat, or bladder and back into the cooling reservoir via the return flow tube. Allow the unit to run several minutes before tightening the vest, head cap, wrap, blanket, seat, or bladder to the body. This will ensure good flow through the system and returning into the cooling reservoir. Always ensure that there is water flowing through the return tube inside the cooling reservoir.
- i) Adjust the temperature control to the desired level. Always adjust this control to ensure there is a flow of water from the water return tube located in the cooling reservoir.

**CAUTION: Always use an insulation barrier (such as a T-shirt) between the body and the cooling garment or wrap.**

- j) When the temperature has risen above the desired temperature, refill the reservoir with ice. (See steps ‘b’ and ‘c’.) Drain excess water back to the fill line.
- k) Confirm that water is flowing through the return flow tube at the top of the cooling reservoir when the system is on.

**CAUTION: Never operate the unit without water. This may cause pump failure.**

### **Setting up the Cool Flow® and CoolOR® system with Chiller**

Read and follow all Instructions, Cautions and Warnings on this page, the Cool Flow® and CoolOR® instructions in this manual, the chiller instructions, and the instructions on the product(s) before operating this system.

- a) **CAUTION: Always begin with power supply unplugged.** Do not turn on the system until all connections are complete and the hose from the cooling reservoir to the vest, head cap, wrap, blanket, seat, or bladder is free from bends or restrictions, as this will restrict water flow through the system.
- b) Set the Chiller unit on a flat surface with the screen display facing towards you.
- c) Set the cooling reservoir to the right of the Chiller, with the tubing inputs located on the cooling reservoir lid in the back.
- d) Open the cooling reservoir and fill with cool clean water to the fill line (approximately 2-3 quarts). **CAUTION: Never operate the unit without water. This may cause pump failure.**
- e) Add two cupfuls of ice to the cooling reservoir water. This will assist the Chiller during start-up to quickly reach the target water temperature.
- f) Connect the Chiller to the cooling reservoir as shown below. Be sure the tabs on the couplings are depressed before connecting and that the couplings click when they lock together.

Connect the “out” connector on the chiller to the “in” connector on the cooling reservoir. Connect the “in” connector on the chiller to the “out” connector on the cooling reservoir.



Cooling reservoir may be blue or white depending on system.

- g) Refer to section “h” in previous section for fitting the vest, head cap, wrap, blanket, seat, or bladder.
- h) Plug in the Chiller power cord and turn the Chiller on. See Chiller label for proper voltage.
- i) Connect the transformer power supply into the cooling reservoir and then plug into a wall outlet. See power supply label for proper voltage.
- j) Flip the cooling reservoir power switches to the “On” position.
- k) Water will be circulating through the Chiller and the garment as follows:
  - Water will be circulating from the cooling reservoir to the chiller and back to the cooling reservoir. You can see this flow by slightly raising the cooling reservoir lid.
  - Water will be circulating from the cooling reservoir to the vest, head cap, wrap, blanket, seat, or bladder and back to the cooling reservoir. Slightly raise the cooling reservoir lid and ensure there is water flowing through the top return flow tube to the cooling reservoir from the vest, head cap, wrap, blanket, seat, or bladder.
- l) After all components have been filled and run with water, check the reservoir to assure the water level is well above the pump. Add additional water if necessary.
- m) Set the Chiller temperature: Hold down the “Set” button for 5 seconds. The Chiller will beep and the display screen will flash. Once it does, use the “up” and “down” arrows to select the desired temperature between 40 degrees F and 70 degrees F. Then press the set button again. The screen will switch back to display the current water temperature. To help the cooling process, add ice to the water in the cooling reservoir. **Note: Please read the instructions in this manual and included Chiller instructions for Care & Maintenance, Troubleshooting, Operating Instructions, Cautions and Warnings.**

## **Ending Session**

- a) Unplug all components from the power source and disconnect the vest, head cap, wrap, blanket, seat, or bladder and tubing.
- b) Disconnect the Chiller from the cooling reservoir if a chiller system was purchased. Follow Chiller instructions.
- c) To empty the cooling reservoir use the Drain Accessory which is located on a clip on the inside of the cooling reservoir lid. Connect the drain accessory to the female coupling on the end of the tubing coming from the cooling reservoir, placing the open end of the tubing in a sink or area where water may be drained without incident/injury. Run the system until the rate of draining water slows significantly. Note: Drain Accessory will not drain all water from the system. If pump is left running too long without water circulation, the motor may burn out.



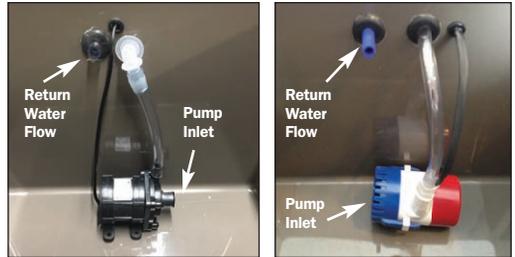
- d) Flip the power switch to the “Off” position and pour out the remaining 1-2 inches of water. Empty the reservoir and wipe out after each use .
- e) **Tabbed couplings** have a metal or plastic tab on the female side, depress this tab and gently pull the couplings apart. **Breakaway couplings** are simply pulled apart.

# CARE AND MAINTENANCE

## Cooling Reservoir

Empty and wipe out reservoir and tubes after each use. When necessary, wipe cooling reservoir and hoses with warm, antibacterial soapy water. Once every two weeks, pour 16 ounces of Isopropyl (Rubbing) Alcohol in the reservoir with the ice and water while system is in use. Periodically check the pump inlet to ensure it is clear.

Two styles of pumps may be used depending on your system



## Vest, Head Cap, Wrap, Blanket, Seat, or Bladder

**Cleaning:** Hand wash with a mild detergent and air-dry, being careful not to bend the tubing. The vest, head cap, wrap, blanket, seat, or bladder may also be spot cleaned with warm soapy water or washed on delicate cycle in a laundry bag. Always air-dry.

**Proper handling:** The vest, head cap, wrap, blanket, seat, or bladder should never be roughly handled, bent, folded, crushed or treated harshly. Always hang the vest, head cap, wrap, blanket, seat, or bladder when not in use!

**Proper fit:** The vest, head cap, wrap, blanket, seat, or bladder should fit comfortably on the body and not be over-strained or pulled.

**Proper storage:** Be sure the vest, head cap, wrap, blanket, seat, or bladder is always stored in a clean, dry environment with good ventilation.

**Care of system:** Once every two weeks, and prior to extended storage, pour 16 ounces of Isopropyl Alcohol (rubbing alcohol) in the cooling unit with the ice and water while the unit is being used. This will keep the system clear of the buildup that occurs in water-circulation systems.

## Extended Storage

Note: It is not possible to remove all of the water from the system and tubing, therefore before extended storage follow these instructions.

- a) When you have finished all of your cooling, prior to extended storage, fill the reservoir with water to the fill line and add 2 tablespoons of liquid bleach to the water and mix. This will help keep the system clean.
- b) Connect the vest, head cap, wrap, blanket, seat, or bladder to the system and turn the unit on.
- c) Allow the water mixture to circulate for 5 minutes.
- d) Turn unit off and unplug the power supply.
- e) Carefully drain the water mixture out of the unit and store in a cool dark place leaving the lid slightly open. (Exposure to sunlight and extreme heat may damage hoses and unit.)

## TROUBLESHOOTING GUIDE

If the possible solutions suggested below do not address your problem, please call our Customer Service department at 1.800.763.8423 and we will do everything possible to help.

**NOTE: Never run the pump without water flowing through the lines! This will cause pump failure.**

### **IF THE PUMP IS NOT RUNNING**

**Check the wall outlet to assure there is power to the unit. Confirm that all power cords are properly plugged in and seated. The transformer box has a small light on it that indicates it is getting power.**

### **IF THE VEST, HEAD CAP, WRAP, BLANKET, SEAT, OR BLADDER IS NOT GETTING COLD**

**FIRST: Is water flowing out of the top water return tube in the cooling reservoir?**

**If water is NOT flowing out the top water return tube or it is flowing weakly:**

- First: repeat set up steps on pages 1 through 5
- Ensure that the temperature control knob is turned to maximum cold (“COLDEST”). Always adjust the control knob to ensure there is a flow of water from the top water return tube.
- Check the water level in the cooling reservoir. Confirm that the pump is completely submerged in the water.
- Check for kinks. Ensure there are no kinks in the hoses, insulated tubing or vest, head cap, wrap, blanket, seat, or bladder.
- Check for obstructions. Turn the system off. Disconnect couplings to ensure there is not an obstruction. Remove anything lodged in the coupling or tubing. Also ensure there is no obstructions at the bottom pump intake in the reservoir.
- Check the couplings. Confirm that the vest, head cap, wrap, blanket, seat, or bladder is properly connected. (Couplings should “click” when locked) Reseat connectors between the hose and the vest, head cap, wrap, blanket, seat, or bladder. Turn the system off, disconnect couplings and reconnect. When connecting the couplings, be sure the tab on the female coupling is pushed in before trying to connect.
- Check the pump. Occasionally an air bubble can get lodged in the pump intake. Turn the pump motor vertically to horizontally to dislodge any air bubble.
- Remove the vest, head cap, wrap, blanket, seat, or bladder from the body and run the system on a flat surface. If there is flow, put on the target body part while running.



*Turn knob to “Coldest”*



**Troubleshooting Tip!** A good way to isolate the problem is to remove the couplings from the insulated tubing attached to the reservoir. To do this simply turn off the unit, pull off (or cut off) the couplings, place the end of the tubes over a sink and then turn the system on. If water flows freely, there is an obstruction in the coupling, vest, head cap, wrap, blanket, seat, or bladder. Couplings can become blocked with minerals, hair, etc. Use a paper clip to clear the blockage. A new coupling may be necessary. To reattach the couplings simply cut the tubing back to unused tubing and push the coupling back into the tube. See coupling pictures on page 1.

**If water IS flowing out the top water return tube:**

- Make sure the reservoir is filled with ice. Note the line inside the cooling reservoir.
- Ensure that the temperature control knob is turned to maximum cold (“COLDEST”)
- If the Chiller System has been purchased, check the chiller for proper operation. Refer to the chiller manual.

**If the unit is leaking at the connections:**

If a leak exists, turn off the unit. Disconnect and reconnect the couplings, make sure both sides are clicked in properly. When connecting tabbed couplings ensure that the release platform on the female coupling is pressed down prior to insertion. If the couplings have been replaced be sure the tubing was cut back to unused tubing before inserting the barbs.

**NOTE: Couplings have rubber “O” rings that can become worn and dysfunctional. Replacement couplings may need to be purchased from Polar Products.**

**Also available from Polar Products CoolOR® line:**

## **Non-Tethered Cooling Vests and Cooling Neck Wraps**

*(Note: vests weigh  
3 lbs to 6 lbs  
depending on size  
and style)*



## CAUTIONS AND WARNINGS

- 1) **Prior to using this or any body cooling or therapy product for a medical condition or injury, always consult a licensed healthcare practitioner.**
- 2) **Always wear the vest, head cap, wrap, blanket, seat, or bladder over a T-shirt or other clothing; do not wear directly on the skin.**
- 3) Be sure the unit is unplugged prior to filling with water and ice.
- 4) Refer servicing to qualified personnel at Polar Products Inc.

## WARRANTY AND SERVICE

***Polar Products, Inc. warrants that the Cool Flow® or CoolOR® System is fit for use under the normal use for which it is intended and free of any defects in materials and / or workmanship for 12 months from the date of initial purchase.***

Polar's obligation under this warranty is limited to the replacement or repair of any defective part(s) of this product. If you encounter a problem with your Cool Flow® or CoolOR® System, please call Polar's Customer Service Department at 1-800-763-8423 to obtain a Returned Goods Authorization number (RGA.) To obtain warranty service on your system, please return the system, dated sales receipt (or packing list, as proof of purchase) and RGA number to: **Polar Products, Inc. 3380 Cavalier Trail, Stow, OH 44224.** Please include your phone number, any correspondence, and an explanation of the problem. Upon receipt, Polar's Service Department will determine the cause of failure and, if determined to be an issue covered by the warranty, will repair (or replace, as necessary) your system and return it to you, postage paid.

*Please note: Couplings are a wear item and may need to be replaced. They are available for individual purchase.*

*Our non-tethered CoolOR® vests and neck wraps use Cool58® Phase Change technology with cooling packs that will recharge in a refrigerator or even a cooler of ice water and then release their temperature at a comfortable 58° F.*



# Options Available for Your Cool Flow® or CoolOR® System

## Cooling vest(s) styles:

**Adjustable (waist & chest) vest (#CFA)**

**Heavy Duty Adjustable vest (#CFA-HD)**  
Heavier water lines and higher flow rate.

**Fitted (#CFF)**

**Embroider your name on any of our vests! Call Polar for details.**



**Adjustable vest**



**Fitted vest**

## Cooling Blankets



**Cooling Seats**

Cooling reservoir size and number of systems:

**13-quart** one (1) or two (2) person system

**15-quart** one (1) or two (2) person system

**19-quart** one (1) through four (4) person system

**30-quart** one (1) through six (6) person system

## Four (4) ft. or eight (8) ft. insulated cool water line extensions with couplings



**Breakaway Couplings**



**Tabbed Couplings**



**Tabbed Euro Couplings**

## Options Available for Your Cool Flow® or CoolOR® System

**Easy to use Lithium-Ion Battery Pack (#BPL) eliminates cords and connected adapters. Will cool for up to 6+ hours on a single charge!**



**Cooling Head and Head & Neck Caps**



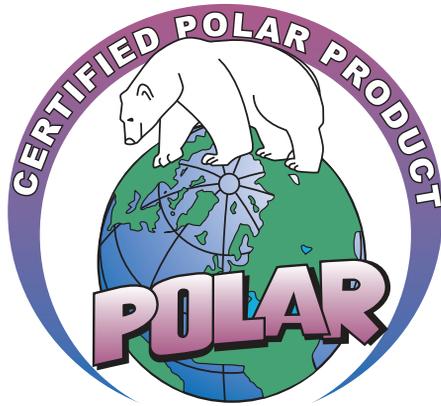
### Available accessories and replacement parts:

#XT4 & #XT8	4 ft. and 8 ft. long hose assemblies with couplings
#CM-Tabbed	Dry, quick-disconnect male coupling (used with the CF-Tabbed coupling)
#CF-Tabbed	Dry, quick-disconnect female coupling with metal tab
#CBF-Breakaway	Dry, high-flow, breakaway quick disconnect female coupling
#CBM-Breakaway	Dry, high-flow, breakaway quick disconnect male coupling
#TG	12 Volt Grounded Transformer
#CM-E Euro	Dry, quick disconnect male coupling (used with the CF-E Euro coupling)
#CF-E Euro	Dry, quick disconnect female coupling with plastic tab.

**See coupling pictures on page 8 for reference.**

Pumps, tube insulation and all other components are available for purchase. Call Polar for information and pricing.

Polar will manufacture custom designs for unique cooling applications (*we have even manufactured special cooling units for unmanned navy vessels and special HD 3D cameras used by Hollywood.*)



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