

**Quick Release Double Chambers  
Hydration Bladder**  
Model: COMP-DCHB-25/40

Rev. A

**Operation Manual**



**Compcooler Technology**  
**Jan. 2021**

## COMP cooler Introduction:

Comp cooler Technology specializes in working for personal cooling & heating systems for harsh conditions. Comp cooler has established its resume as a manufacturer for Military, Electronic, Medical cooling equipment. The employees at Comp cooler's state of the art manufacturing facility have been producing liquid heating & cooling systems over 15 years. Quality system: ISO9001 and AS9100 registered facility. Certifications for major items: CE, FCC, UL, PSE, CB, FDA.

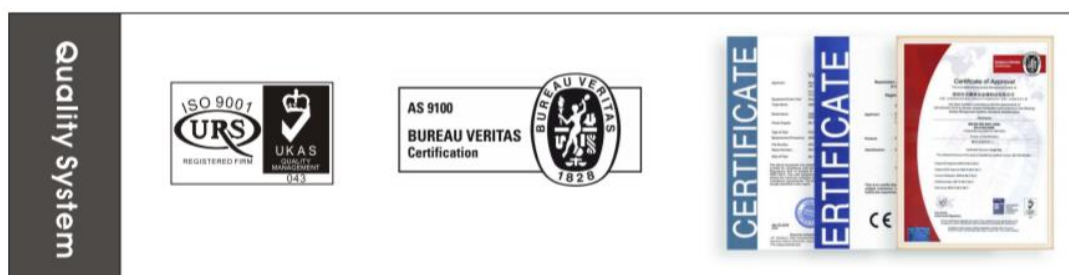
## Product Categories

1. Personal ICE Water Circulation Systems
2. Micro Refrigeration Chiller Units
3. Liquid Heating & Cooling Chiller
4. Liquid Cooling & Heating Garment
5. Industrial Chiller Unit Module
6. Customized Cooling Systems

## Certifications for major items



## Quality System for facility



COMP cooler, PERSONAL THERMAL TECHNOLOGY

## **BACKGROUND OF PERSONAL COOLING SYSTEM**

In conditions of extreme heat, people may be at risk of heat stress where body under stress from overheating. Heat stress is not only a serious condition for workers, but it can result in occupational illnesses and injuries, heat related discomforts and illnesses include heat exhaustion, heat cramps, heat rash or even heat stroke. Symptoms can range from profuse sweating to dizziness, cessation of sweating and collapse. At greatest risk of heat stroke are the elderly, children and people with medical conditions, however, even young and healthy individuals can succumb to heat if they participate in strenuous physical activities during hot weather. It will need immediate action to cool the person until help arrives.

## **LIQUID CIRCULATION COOLING SYSTEM**

Liquid circulation cooling system is an active cooling solution, it can cool the body temperature fast to decrease incidence of thermal stress and heat stroke while increase comfort, safety, focus and endurance. Liquid circulation system includes a liquid circulation unit and a cooling garment. Mini pump circulates cold water from chiller or ICE bladder to cooling channels embedded on the cooling garment, and continuously flow around the body, it will keep the user's body temperature at a comfort and safety range.

## **BENEFITS OF LIQUID COOLING SYSTEM**

Reduction in body core temperature, increased duration.  
Reduction in skin temperature, decrease in hydration need  
Reduction in heart rate, improve mental acuity  
Reduction in sweat rate, maintain physical performance

## **COMP cooler Personal ICE Water Circulation Cooling System (PICS)**

PICS includes a liquid circulation unit and liquid cooling garment. Mini pump circulates the cold ICE water from bladder to micro-tubing cooling channel embedded on the liner of garment, it continuously flows around the body to reduce body core temperature and keep user at a comfortable cool range in hot conditions.

Detachable Bladder: 1.5L, 2.0L, 3.0L and 4.0L (Hydration)

Cooler Unit: 6L, 25L Cooler

Pump Control Unit:

ON/OFF mode: cold water circulation only

Flow control mode: 3 levels water flow control

Temp control mode: precise temp control for circulation liquid

Liquid Temperature range: 2°C-10°C (36 °F -50 °F )

Cooling time:

1-3 hours for 1.5L frozen bladder

3-6 hours for 3.0L frozen bladder

4-8 hours for 6L ICE Cooler

8-12 hours for 25L ICE Cooler

Operation Ambient: 10°C-65°C (36 °F -148 °F )

## **COMP cooler, PERSONAL THERMAL TECHNOLOGY**

## Quick Release Double Chambers

### Hydration Bladder

Model: COMP-DCHB-25/40

#### Introduction:

COMP cooler double chambers ICE Bladder was designed for personal ICE water cooling systems, it includes two chambers, main chamber with roll-top is for water freeze, the other chamber with screw-top is for cool water circulation.



---

#### Bladder Size and Applications

- 2.5L Hydration Bladder:  
Backpack Single Compartment and UniVest
- 4.0L Hydration Bladder:  
Backpack Single and double compartments

#### Cooling Features:

- Cool Water Circulation
- Cold Frozen ICE Block Water Circulation
- Cold Water Hydration
- ICE Cubes Water Circulation

COMP cooler, PERSONAL THERMAL TECHNOLOGY

## Preparation: Unit Connection and Primary Circulation



### Bladder Connection:

Fill water into Roll-Top, connect the bladder Outlet/Inlet #2 grey quick fitting with backpack unit.

Checking: bladder no leaks, quick fittings connection is fine,

### Vest Connection:

Connect backpack unit with cooling vest, once you hear a click, it's in position.

Checking: Vest no leaks, quick fittings connection is fine.

### Start circulation:

Press On/Off switch, Pump circulates water from bladder into micro tubing cooling channels of cooling vest, then return to bladder. User may see the water flow back to bladder from Inlet #2 Grey fitting.

Checking: Battery works fine, pump works fine.

**Mode A :**

**Cool Water Circulation and Hydration**

**Temp Range: 15°C -20°C (59°F -68°F)**

**Frozen Bladder**



**Step I : Bladder Freeze**

Fill water from Roll-Top to fill line.

**No water into Screw Tap before freeze.**

**Step II: Circulation Water**

Fill circulation water from Screw-top

**Step III: Bladder Connection**

Connect the frozen bladder Outlet/Inlet #1 Blue quick fitting with backpack unit

**Step IV: Start circulation**

Press On/Off Switch, pump starts to circulation, user may feel the cooling in 2-3 minutes

**Cooling Performance :**

Cooling time: 3-4 hours by 2.5L Bladder

5-6 hours by 4.0L Bladder

Temp Range: 15°C -20°C (59°F -68°F)

Hydration: ICE melt more than 60%

**COMP cooler, PERSONAL THERMAL TECHNOLOGY**

## **Mode B**

### **Cold Water Circulation**

Temp Range: 2°C -5°C (36°F-41°F)

### **Frozen Bladder**



#### Step I : Bladder Freeze

Fill water into Roll-Top to fill line.

#### Step II: Circulation Water

Fill small amount circulation water from Roll-Top

Waiting for 5-8 minutes till Outlet/Inlet#2 fitting melt, then go to the next step.

#### Step III: Bladder Connection

Connect the frozen bladder Outlet/Inlet #2 Grey quick fitting with backpack unit

#### Step IV: Start circulation

Press On/Off Switch, pump starts to circulation, user may feel the cooling in 60 seconds

### **Cooling Performance**

Cooling time: 2-3 hours by 2.5L Bladder

4-5 hours by 4.0L Bladder

Temp Range: 2°C -5°C (36°F-41°F)

Hydration: Not Available

COMP cooler, PERSONAL THERMAL TECHNOLOGY

**Mode C :**

**Quick Cold Water Circulation**

Temp Range: 4°C -6°C (39°F-43°F)

**ICE Cubes**



Step I : Bladder Freeze

Fill ICE Cubes from Roll-Top.

Step II: Circulation Water

Fill small amount circulation water from Roll-Top

Step III: Bladder Connection

Connect the frozen bladder Outlet/Inlet #2 Grey quick fitting with backpack unit

Step IV: Start circulation

Press On/Off Switch, pump starts to circulation, user may feel the cooling in 60 seconds

**Cooling Performance**

Cooling time: 1-2 hours by 2.5L Bladder

2-3 hours by 4.0L Bladder

Temp Range: 4°C -6°C (39°F-43°F)

Hydration: Not Available

COMP cooler, PERSONAL THERMAL TECHNOLOGY



**Safety:**

It is important to become thoroughly familiar with the manual and operating characteristics of the unit. It is the owner's responsibility to assure proper operator training, installation, operation and maintenance of the unit. Observe all warning can result in injury to the operator and severe mechanical damage to the unit.

**Warranty:**

Compcooler Warrants to the original Purchaser that products sold shall be free from defects material and workmanship for warranty period not exceed one year from the date of shipment. Compcooler agrees to correct for the original user of this product, either by repair, or at the manufacturer's election by replacement. This warranty shall not apply if the defect or malfunction was caused by accident, neglect, unreasonable use, improper service, or other causes not arising out of defects in material or workmanship. The manufacturer's sole obligation under this warranty is limited to the repair or replacement of a defective product and shall not in any event be liable for any incidental or consequential damages of any kind resulting from use or possession of this product.

**COMPCOOLER**

Personal Thermal Technology,  
Keep you body cool and comfortable in harsh conditions!