

ICE Cooler Cooling System

Model: COMP-BMCS-746L

Rev. B

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.

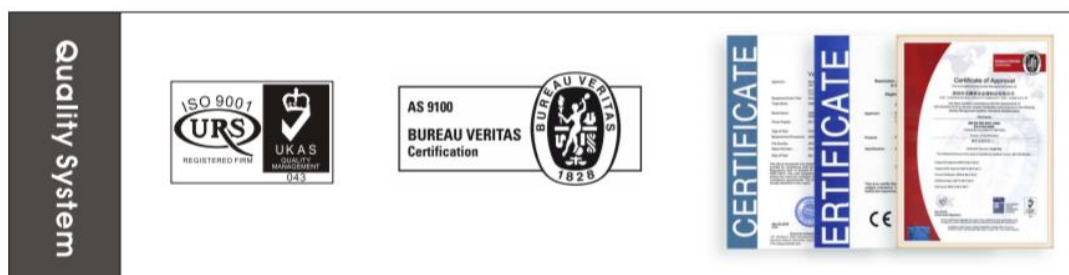
Product Categories

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: 0°C-65°C (32 °F -148 °F)

COMP cooler, PERSONAL THERMAL TECHNOLOGY

ICE Cooler Cooling System

Model: COMP-BMCS-746L

Description:

Compcooler ICE Cooler Cooling System is made up of ICE Cooler (6L or 25L), 3.0L ICE container, On/Off pump unit, Extension tubing and liquid cooling vest. Pump unit circulates cold water from cooler to cooling channel embedded on the vest liner, continuously flow around the body to reduce body core temperature, it keeps user at a comfort and safety range to against heat stress. ICE cooler model with 3.0L container provides 3-5 hours cold water circulation. Mesh liquid cooling vest has better air permeability, front zipper and sides adjustable device, body fit design. Major applications are Motorcycle Riders, Racing drivers and Floor type use. Operation by 7.4V battery, 12V power adapter and 110-220V power adapter.

Components List



Cooler 6L ON/OFF Mode



Black Mesh Cooling Vest



Cooler 6L Temp Control Mode



Blue Mesh Cooling Vest

Item	Description	Quantity
1	ICE Cooler 6L Circulation Unit	1
2	3L ICE Container	1
3	Pump unit (On/Off, Flow or Temp Control)	1
4	Mesh Liquid Cooling Vest	1
5	Extension Tubing 6ft	1
6	Power Adapter 12V Or 110-220V	1
7	Battery 7.4V and Charger 110V-220V	Optional
8	Manual	1

COMP COOLER, PERSONAL THERMAL TECHNOLOGY

Motorcycle Riders ICE Cooler Solo Cooling System (ON/OFF Mode)

Model: COMP-BMCS-746L-V

Operated by 12V motorcycle power

Specifications:

ICE Cooler 6L

Material: PP with insulation

Cooler pack: Black Oxford with reflective insulation

ICE Container 3L

Material for soft container: TPU

Material for hard container: PP

Diaphragm Pump unit

Control: On/Off mode

Water flow: 500ml/min

Voltage: 7.4V

Current: 0.2A

Pump Case: plastic

Connector: CPC female quick fittings

Power Adapter

12V to 7.4V with 4017 and SAE plug

Power cable with SAE plug



Mesh Liquid Cooling Vest

Fabric: Nylon Stretch Mesh

Liner: Mesh

Color: Black, Green, Blue

Zipper: YKK

Cooling Channel: Silicon Tubing

Manifold: aluminum

Connector: CPC male quick fittings

Sides adjustable device: stretch Velcro

Dry weight: 0.5kg

Size: XS/S, M/L, XL/2XL, 3XL/4XL

Vest size				
Item	XS/S	M/L	XL/XXL	3XL/4XL
Chest	84cm/33.1"	100cm/39.4"	108cm/42.5"	123cm/49.6"
Length	64cm/25.2"	68cm/26.8"	70cm/27.6"	73cm/28.8"

COMP COOLER, PERSONAL THERMAL TECHNOLOGY

Motorcycle Riders ICE Cooler Tandem Cooling System (ON/OFF Mode)
Model: COMP-BMCS-746L-2V
Operated by 12V motorcycle power



Racing Driver ICE Cooler Cooling System (Temp Control Mode)
Model: COMP-BMCS-74TC-T
COMP-BMCS-74TC-FRT(Fire Resistant T-shirt)
Operated by 12V racing car power



Indoor ICE Cooler 6L Cooling System (Temp Control Mode)
Model: COMP-BMCS-11074TC-V
Operated by Indoor AC110-220V wall plug.

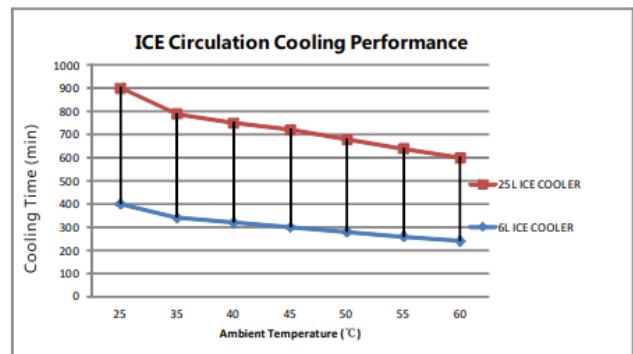


Indoor ICE Cooler 25L Tandem Cooling System (Temp Control Mode)
Model: COMP-BMCS-7425L-2V
Operated by indoor AC110-220V wall plug



ICE Cooler Water Cooling System Performance:

Cooling time:
 3-4 hours for 6L ICE Cooler
 8-10 hours for 25L ICE Cooler
 Liquid Temperature range: 2°C-10°C (36 °F - 50 °F)
 Noise: 45dBA
 Ambient Temperature: 0-65°C

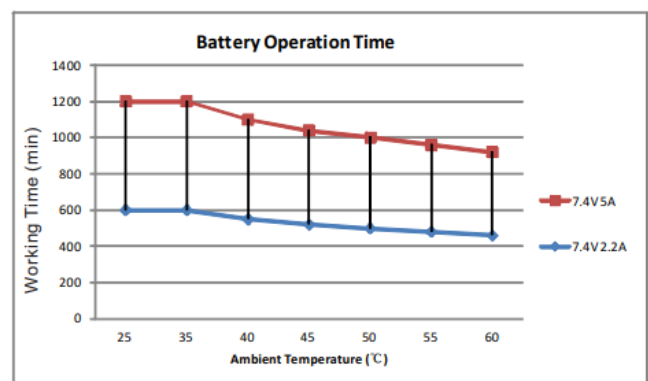


Optional Components

- Pump unit
 Flow control mode, 3 levels pump control
 Level I 200ml/min
 Level II 350ml/min
 Level III 500ml/min

Temp Control Pump Unit
 0°C-30°C (32 °F -92 °F)

- Battery
 7.4V 2.2A rechargeable battery
 7.4V 5.0A Rechargeable battery



COMP cooler, PERSONAL THERMAL TECHNOLOGY

Operation Processes

Preparation and Unit Checking

1. Water Circulation

Fill water into Cooler

Checking: Cooler no leaks

2. Vest Connection:

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

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

3. Start circulation:

Press On/Off switch, Pump circulates water from cooler to micro tubing cooling channels of cooling vest, then flow back to cooler. User may see the water flow back to cooler from Inlet fitting.

Checking: pump works fine.

Operation step I

1. Container Freeze:

Fill water into container to fill line.
Freeze ICE container in the fridge.

2. Circulation Water

Add small amount water into ICE cooler for pump circulation

Operation Step II

1. Liquid Cooling Vest:

Put on liquid cooling vest, adjust sides body fit device and make sure cooling channel contact your skin.

Tips: User may adjust the size to a comfortable range and get better cooling performance.



2. Liquid Cooling Vest Connection

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

Tips: no difference for inlet or outlet for cooling vest connection.

COMP COOLER, PERSONAL THERMAL TECHNOLOGY

3. Start cooling
User may press On/Off switch to start cold water circulation or stop circulation.
Please make sure vest be connected before circulation.
4. Extend cooling time
User may replace the frozen container to extend cooling time.
User may fill in ICE cubes for quick cooling operation.

Clean and Maintenance

1. Cooler Unit:
User may use wet clothing to clean the cooler exterior dirty directly.
2. Vest clean:
Prefer to clean by hand wash then hang dry.
Machine wash by Laundry bag: wash liquid heating and cooling vest using a front-loading wash machine with cold water on a gentle/delicate cycle, secure the connection tubes to minimize risk of it flailing in the spin cycle and damaging connector and tubing sewing.

Note: DO NOT BLEACH, NO IRON, NO DRYER, TUMBLE DRY ON LOW

Components Renewal

1. Battery: user may purchase an extra replacement battery or 7.4V 5A battery.
2. Pump: user may purchase flow control pump unit to replace On/Off pump unit.
3. Cooling vest: user may purchase cooling T-shirt or cooling garment to replace the cooling vest, all Compcooler cooling garments are compatible with backpack circulation unit.

Storage:

Unit Storage

Please empty the circulation water from circulation system and vest before storage.

1. Vest empty: empty cooler, press On/Off to restart circulation, pump will push the water inside cooling channel to cooler,

Tips: please raise the inlet tubing, make sure no water re-circulation from cooler to vest.

2. Restart system: after long term storage, please fill in clean water and run the unit more than 10 minutes to reactive pump.

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!