

Univest ICE Water Cooling System

Model: COMP-UICS-7430

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



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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: 2°C-65°C (36 °F -148 °F)

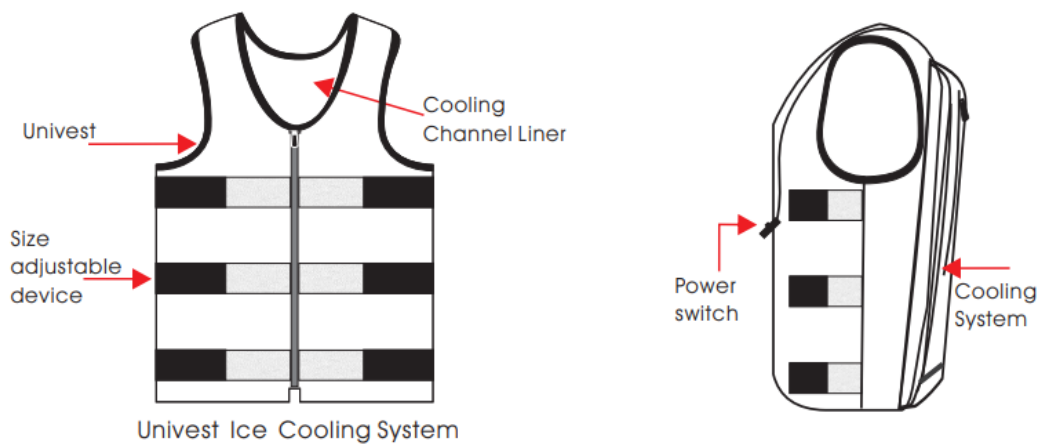
COMP cooler, PERSONAL THERMAL TECHNOLOGY

Univest ICE Water Cooling System Model: COMP-UICS-7430

Description:

Compcooler Univest ICE Water Cooling System (UICS) combines ICE water circulation unit and liquid cooling vest as one item, this significant improvement provides a better wearability for end users. UICS includes 3L quick release bladder, mini water pump, rechargeable battery and Univest. Mini pump circulates cold water from bladder to micro tubing cooling channel embedded on the mesh liner, and continuously flow around the body, it keeps user cool and comfortable in hot conditions. Water proof and breathable outer fabric, interlayer 3D material, reduce the weight loading, stretch soft mesh liner, better skin touch feeling, ergonomic vest design, comfort to wear, easy don. Univest was designed for outwear application.

Components List



Item	Description	Quantity
1	Univest Cooling System	1
2	Mini water pump	1
3	Battery 7.4V 2200mAh	1
4	3.0L Bladder	1
5	Manual	1

Univest ICE Water Cooling System (On/Off Mode)

Model: COMP-UICS-7430BG

Univest Material:

Outer Fabric: 320T Nylon Taslon
 Water proof 5000WR
 Breathable 3000MVP

Color: Beige
 Interlayer: 3D fabric
 Liner: Soft mesh with Micro-tubing cooling channel
 Adjustable device: Stretch strap with Velcro
 Color: Black and beige
 Cooling Channel: Silicon Tubing
 Zipper: YKK

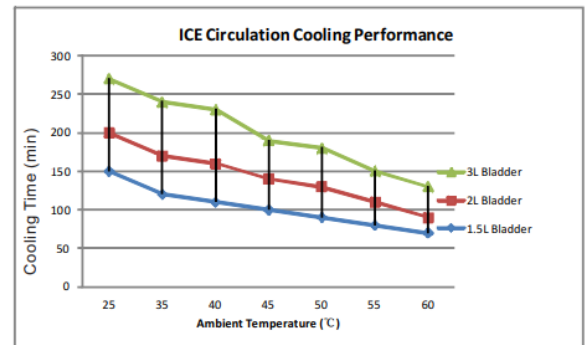


ICE Water Circulation System

Interior Backpack: Reflective Insulation
 Bladder: 3.0L quick release bladder
 Pump: 7.4V diaphragm pump
 Connector: quick fitting
 Switch: ON/OFF
 Zipper: Water proof zipper
 Battery: 7.4V 2200mAh rechargeable Li-Ion battery
 Noise: 45dBA
 Dry weight: 1KG

Univest Performance:

Cooling time: 2-4 hours by 3.0L frozen bladder,
 1-3 hours by Ice cubes
 Circulation: 500ml/min
 Temperature Range: 46°F -68°F
 Battery Operated: 8 hours
 Operation Ambient: 0°C-60°C (32°F -140°F)



Garment Size:

Item	XS/S	M/L	XL/XXL	3XL/4XL
Chest	84cm/33.1"	100cm/39.4"	108cm/42.5"	126cm/49.6"
Length	64cm/25.2"	68cm/26.8"	70cm/27.6"	73cm/28.8"

Note: Garment size has 15% expansion stretch (max 15cm/6") by adjustable device

Optional Components

1. Pump unit

Flow control mode, 3 levels pump control

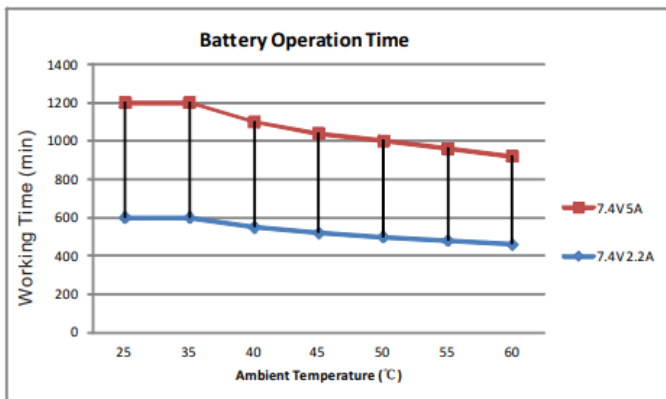
Level I 200ml/min

Level II 350ml/min

Level III 500ml/min

2. Battery

7.4V 5A Rechargeable battery



Univest ICE Water Cooling System (On/Off Mode) Model: COMP-UICS-7430BK

Black Univest ICE Water Cooling System



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Univest ICE Water Cooling System (Flow Control Mode)

Model: COMP-UICS-7430BK-FC

Black Univest ICE Water Cooling System (Flow Control)

Model: COMP-UICS-7430BG-FC

Beige Univest ICE Water Cooling System (Flow Control)



Flow Control Pump Unit

3 levels water flow control



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Fire Resistant Univest ICE Water Cooling System (On/Off Mode)

Model: COMP-UICS-7430-FR



High Visible Univest ICE Water Cooling System (On/Off Mode)

Model: COMP-UICS-7430-HV



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Operation Processes

Preparation and Unit Checking

1. Battery Charging

Full Charge of battery, LED light of charger change from RED to GREEN

TIPS: press “Remaining Battery Capacity” on battery,
 3 Led lights mean 80-100%, 2 lights mean 60-80%, 1 light means 50% less.



2. Bladder Connection:

Fill water into Roll-Top, connect the bladder Outlet/Inlet with Univest

Checking: bladder no leaks, quick fittings connection is fine, 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 bladder into micro tubing cooling channels of Univest, then flow back to bladder. User may see the water flow back to bladder from Inlet fitting.

Checking: Battery works fine, pump works fine.

4. Bladder Freeze:

Step I- Freeze Bladder: Fill water into ROLL TOP. Water must be below FILL LINE to create an air packet.

Step II-After bladder is frozen, fill small amount circulation water into the roll top.

Step III-Connect ICE bladder to cooling unit, Outlet and Inlet.

Step IV-Start circulation with ON/OFF switch or Temp controller.

ICE Cubes option:

For instant use, fill ICE cubes with small amount water into Roll Top.

(ICE cubes may melt faster than frozen bladder.)



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Operation step I

1. Bladder connection:
Fill small amount circulation water into roll top for quick operation
Connect bladder with Univest by quick fittings

Tips: if bladder was not lay flat or not create an air packet in the fridge, quick fittings are possible to be froze, please be patient for fitting melt or unfreeze quick fittings by tap water.

2. Battery connection
Connect battery with pump unit by 4017 plug.

Operation Step II

1. Put on Univest:
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. Start cooling
User may press On/Off switch to start cold water circulation or stop circulation.
3. Extend cooling time
User may replace the frozen bladder to extend cooling time.
User may fill in ICE cubes for quick cooling operation.



Clean and Maintenance

1. Univest:
User may use wet clothing to clean the Univest exterior dirty directly.
Prefer to clean by hand wash then hang dry.
Machine wash: wash Univest using a front-loading wash machine with cold water on a gentle/delicate cycle.

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. Bladder: user may purchase more extra bladders to extend cooling time.
3. Pump: user may purchase flow control pump unit to replace On/Off pump unit.

Storage:

Unit Storage

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

1. Bladder empty: disconnect the bladder from Univest, empty the liquid.
2. Vest empty: connect the empty bladder with Univest, lean or upside down, press On/Off to restart circulation, pump will push the water inside cooling channel return to bladder,

Tips: make sure no water re-circulation from bladder to vest.

3. Unit dry: please hang dry the bladder and unit more than 10 hours before storage.
4. Restart system: after long term storage, please fill in clean water and run the unit more than 10 minutes to reactive pump.

Battery Storage

1. Shall be in the clean and dry ventilation room at temperature 0°C-35°C (32°F -95°F)
2. Shall keep out of fire or heat and avoid touching corrosion elements
3. Shall be charged every 6 months during storage
4. Keep the battery out of children's reach

Please STOP using the battery if any abnormal be found!

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!