Liquid Heating Pad & Blanket System

Model: COMP-LHPS-12240
Rev: A

Operation Manual

Compcooler, keep your body cool and comfortable in harsh conditions.

COMPCOOLER Introduction:

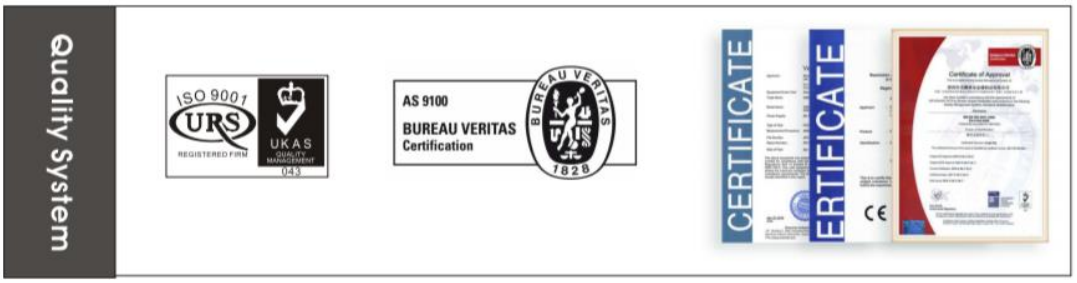
Compcooler Technology specializes in working for personal cooling & heating systems for harsh conditions. Compcooler has established its resume as a manufacturer for Military, Electronic, Medical cooling equipment. The employees at Compcooler's state of the art manufacturing facility have been producing 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. ICE Water Circulation Systems
2. Micro Refrigeration Chiller Units
3. Liquid Heating Systems
4. Liquid Cooling & Heating Garment and Pad
5. Customized Cooling Systems
6. Industrial Chiller or Cooling Module

Certifications for major items

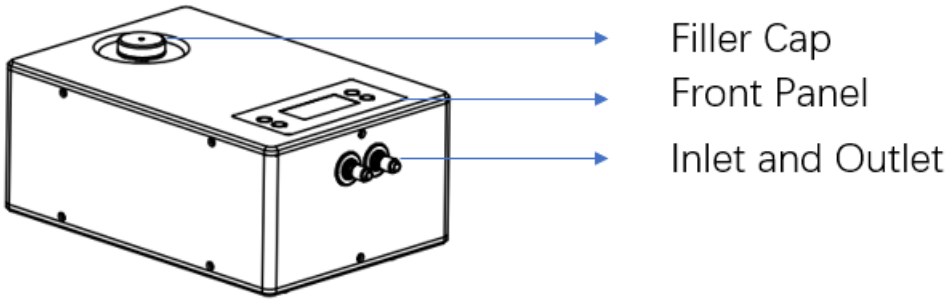
Quality System for facility

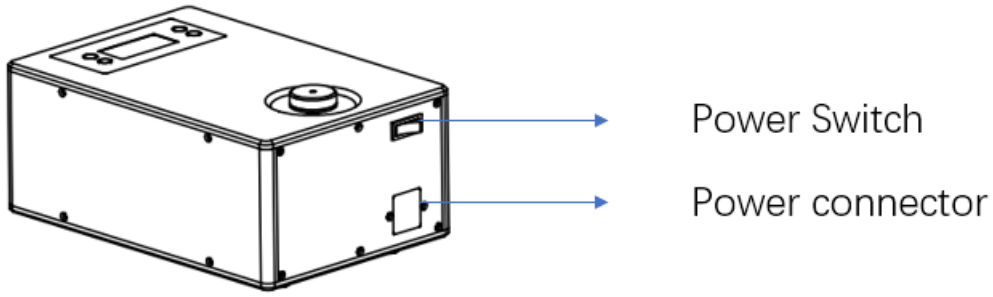


Liquid Heating Pad & Blanket System
Model: COMP-LHPS-12240
Description:

COMPCOOLER Liquid Heating Pad & Blanket System (LHPS) is an active heating unit powered by AC110 or AC220 wall plug. LHPS is made up of Indoor Liquid heating unit, liquid heating pad/blanket and Extension tubing. Liquid heating unit delivers 240W heating capacity to warm the liquid, temperature setting 30℃-48℃ (86℉-120℉), LHU pumps heated water to heating channel embedded on pad/blanket and continuously flow, once the circulation liquid reaches to set point temperature, system intellectually control the heating capacity to that temperature. User may expect more comfortable body warming from the liquid heating pad if compare with electric heating pad or blanket.

Benefits:
Quality sleep every night, perfect physical recovery
Reduces the Risk of Hypothermia, Maintains Body Core Temperature
Reduces the Cold stress and Cold injuries, protect Vital organs
Recover vital signs, Rescue the life in cold conditions





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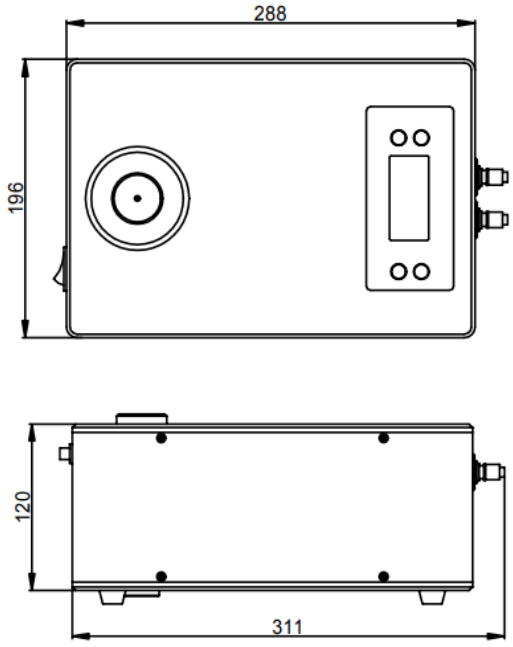
Components List:

Item	Part number	Description	Quantity
1	COMP-ILHU-12240	Indoor Liquid Heating Unit	1
2	COMP-ET5FT-S	Extension Tubing 2 meter (6ft) with soft cover	1
3	COMP-PCAC-US	Power Cord US type	1
4	COMP-HCP-XXXX	Liquid Heating & Cooling Pad/Blanket	1
5		Operation Manual	1

Liquid Heating Pad

Item	Part number	Description	Quantity
1	COMP-HCP-S6038	Single size liquid Heating & Cooling Blanket 60”x38” (1524x990mm)	1
2	COMP-HCP-F5475	Full size liquid Heating & Cooling Pad 54”x75” (1905x1372mm)	1
3	COMP-HCP-K7680	King size liquid Heating & Cooling Pad 76”x80” (2032x1930mm)	1

Heat Unit Dimension

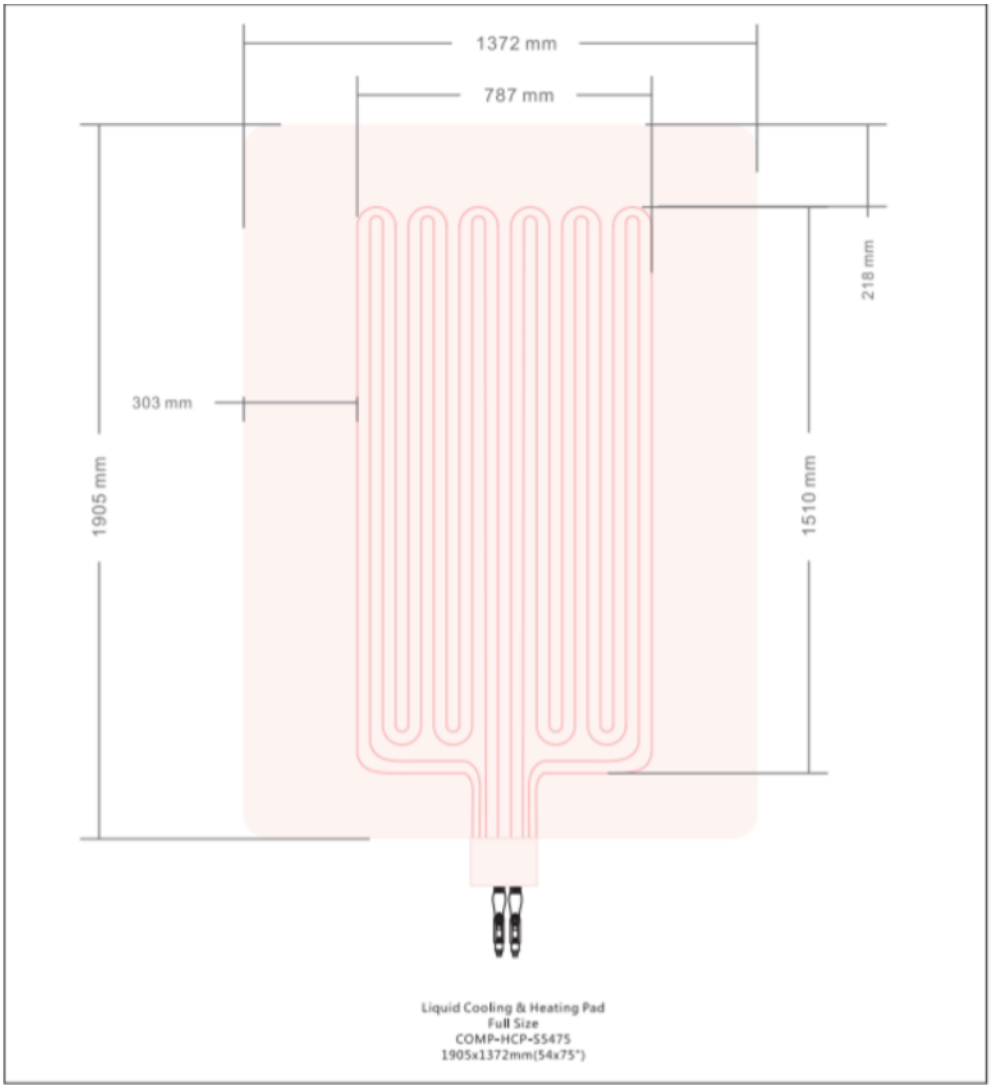


Technical Datasheet for Indoor Liquid Heating Unit

Heating Capacity (Ambient Temp. 30℃)		W	240
Heating Unit Voltage		V DC	12
Operation Voltage		V AC	110 or 220
Built-in Power supply		W	350
Power Connector		Type	3 Pins
Power Consumption		W	250
Temp Control		℃	30 to 48
		℉	86 to 120
Accuracy		+/-℃	1
Reservoir		ml	800
Pump	Voltage	V DC	12
	Water flow	L/Min	5
	Lift	M	5
Circulation Liquid	Antifreeze	℃	-20
		Mixture	70%water and 30% Glycol
Operation Ambient		℃	-20 to 50
Storage Temp		℃	-30 to 70
Protection for Heating Unit	Overheating for Heating rod	≥80℃	Yes
	Overheating for liquid 10 ℃ more than setting	≥10℃	Yes
	Liquid Level		Yes
Noise	Max	dBA	40
Color			Silver Black
Dimension	L x W x H	mm	288x196x120
		Inch	11.4x7.7x4.7
Weight		KGS	3.5
		LBS	7.7

Specification
Liquid Circulation Heating Pad and Blanket

Fabric Material: Modal Cotton wrinkle free Scuba
85% Poly 15%Spandex
Color: Pink or White
Tubing Material: Silicon
Manifold fitting: Aluminum
Connector: Quick Fitting
Weight:2kg
Size: Single, Full, King



Dimension for Full Size Liquid Heating & Cooling Pad

Operation processes

Preparation

Power connection:
Plug the power cord into Liquid Heating Unit, and then plug into a wall outlet.
Liquid Heating Unit will in standby power mode.

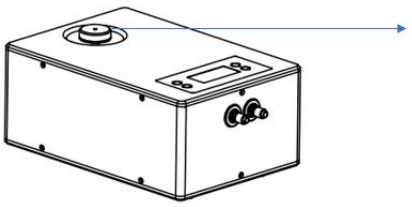
Heating/Cooling Pad Connection:
Connect heating unit with heating/cooling pad by quick release fittings, once you hear a click, it's in position.
(No inlet or outlet from pad or blanket)

Temp Setting:
Press Up and Down to set up temperature from 30 to 48℃

Overheating Testing:
User may start overheating protection testing before fill circulation liquid.
Turn on ON/OFF, heat unit will start to work, front panel will show E4 in 10-30seconds. It means protection works fine.
Turn off the power switch, then restart the heating unit, it will back to work.

Circulation Liquid
User needs to fill circulation liquid by twice.
The first time, remove the filler cap from top side, add liquid to full by funnel, connect liquid heating pad, turn on the pump, unit circulates the liquid from reservoir to heating pad.

The second time, keep running and allow the liquid heating pad fill with water for 30-60 seconds (without heating), refill again to full (maybe couple times, be patient), then tight the filler cap.



Clean or distilled water is fine if ambient more than 1℃
Deionized water for isolation request.
Anti-freeze liquid for ambient below 0℃.
DO NOT use salt water, caustic, corrosive or flammable fluids!

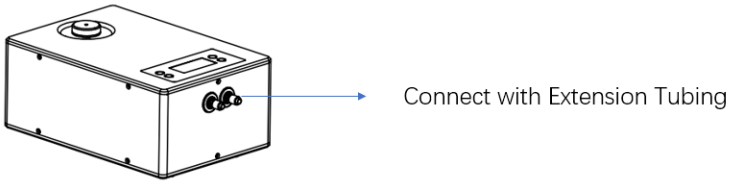
Pre-heating testing:
User may turn on the system and start heating, no pump circulation, temperature will be increased in minutes.

Leak checking
User may check if any leak from heating pad or extension tubing or liquid heating unit.

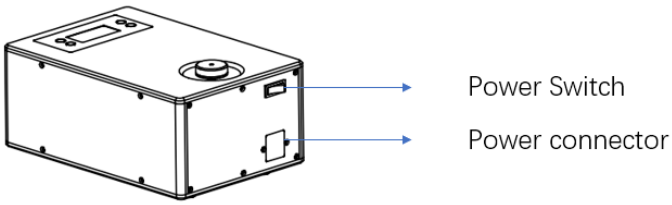
Operation

Operation Processes:

1. Pad connection: Connect the extension tubing with liquid heating unit.
   Once you hear a click, it's in position.



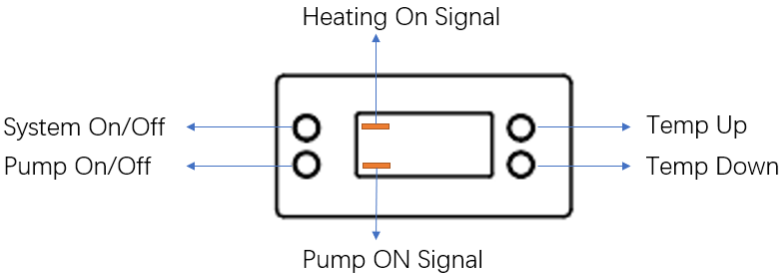
2. Power connection: turn on power switch and light the front panel.
   The heating unit will be in standby mode.



3. Start heating: user may press ON/OFF to start heating, liquid temp will go up to set point in minutes.
   Pump will start to work once temp get to set point.

4. Temp setting: user may press up and down to set up the temp for circulation liquid as need.
   If you are unsure the temp to begin, start at 35℃(96℉) and adjust up or down from there.

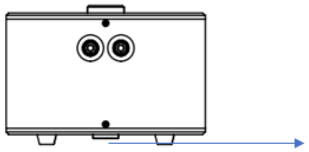
5. Start circulation: Pump will start to work by auto once liquid temp get to set point.
   User may press the pump to start or stop circulation. Please make sure the tubing is connected (no kinks) before circulation.



Clean and Maintenance

Liquid Heating Unit:
Unplugged the power, use a clean damp cloth to clean the outside of heating unit.
Use compressed air to remove dust and debris.

Reservoir cleaning
Please disconnect the extension tubing from heating unit, then remove the remain water from Drain cap and open for dry.



Liquid Heating & Cooling Pad:
Machine wash, wash liquid heating and cooling pad 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

Heating Unit Storage:

1. Turn off heating unit, disconnect the power cord.
2. Disconnect the extension tubing.
3. Empty the circulation water and open dry.
4. Pack the unit for storage.

Restart: after long term storage, please fill in clean water with less degerming agent, run system over 10 minutes with pad connection. Then empty the system and re-fill in the liquid as need

Trouble shoot and Code

Item	Code	Description
1	E1	Wrong Polarity or reverse connection from power input
2	E2	Low voltage protection, less than 10V
3	E3	High voltage protection, more than 18V
4	E4	Overheating protection for heating rod, over 80℃ if lack water
5	E5	High temp protection for circulation liquid, 10℃ higher than setting
6	P1	No temp signal from circulation liquid
7	P2	No temp signal from overheating protection device

Cautions:

Compcooler, keep your body cool and comfortable in harsh conditions.

1. Please check voltage is 110 or 220V AC before connection.
2. Please make sure pad or blanket be connected before start pump circulation, it may cause unit leak because of pump pressure.
3. Please use anti-freeze liquid if ambient lower than 0℃
4. Please do not run the system close to fire or under water.
5. Please stop operation and disconnect the power if more steam from filler cap.

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

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