UHC Series

User Manual

Models: UHC-10/40, UHC-20/40, UHC-50/40

Original instructions

Read this manual before using the equipment

Retain this manual for future use

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Purpose of manual

This manual enables safe and efficient use of the UHC Series. This manual is part of the equipment and must be stored where it is accessible to operating personnel at all times.

The operating personnel must carefully read and understand this manual prior to beginning any work. The basic prerequisite for safe work is compliance with all safety instructions and operating instructions in this manual.

The local occupational safety regulations and general safety regulations for the area of application of the equipment also apply.

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1 Safety information

This section provides an overview of all safety aspects for the protection of people as well as safe and uninterrupted operation. Other task-related safety instructions are included in the specific sections.

1.1 Safety notices

This manual uses the following safety notice formats. Safety notices are used at the start of sections or embedded in operating instructions.

Make sure you fully understand and comply with the notices in this manual.

DANGER

Risk of death!

Indicates a hazardous situation which, if not avoided, will almost certainly result in death or serious injury.

WARNING

Risk of serious injury or death!

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Caution

Risk of injury!

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Notice

Indicates an important situation which, if not avoided, may seriously impair operations.

Additional information relating to the current section.

1.2 Special safety instructions

To draw attention to special hazards, this manual uses the following symbols.

Symbol	Meaning
	Electrical hazards and electrical shock hazards
	General warning
	Fire hazard
	Explosive materials
	Hot surface
	Heavy objects or equipment
	Corrosive substance
	Automatic starting equipment
	Trip hazard
	Non user serviceable parts

1.3 Intended use

The UHC Series chillers are devices that are used to provide a uniform temperature liquid loop. Usually used in conjunction with reactor jackets or other heat exchangers where a specific temperature requirement needs to be maintained. The UHC Series uses both heating and cooling to provide a regulated temperature fluid output.

WARNING

Danger due to misuse!

Misuse of the device can result in hazardous situations.

- Only operate the device if it is in an undamaged and working condition.
- Never deviate from the prescribed maintenance intervals.
- Only use parts that are specified in the technical data and approved for this device.
- Never modify the device without consulting the manufacturer.
- Never allow untrained personnel to operate the device.
- Never operate the device in potentially explosive atmospheres.

1.4 General safety warnings

WARNING

Risk of serious injury or death!

Only use this equipment for its intended purpose.

Do not leave the equipment running unattended.

Do not wear loose clothing, jewelry, hair, or any other articles that can be trapped by moving parts.

Do not operate equipment if you are fatigued, emotionally stressed, or under the influence of drugs or alcohol.

WARNING

Risk of electrical shock!

All power sources must be turned off when the equipment is not being used.

Ensure you use the correct power source for the equipment. Refer to the electrical specifications for the equipment being used.

WARNING

Risk of injury from trips or falls!

There is a risk of tripping on cables or pipe connections.

Ensure that cables or pipework are routed safely and that they are not trapped or pinched during use.

WARNING

Risk of injury from lifting heavy objects!

Use proper lifting and transportation devices when moving equipment.

WARNING

Automatically moving mechanical parts

Take care when in the vicinity of equipment with moving mechanical parts that may start automatically and unexpectedly.

Read the manual!

You must read this manual before starting work and operating this equipment.

Where required, you must use appropriate PPE when using this equipment.

Wear ear protection!

You must wear ear protection.

Wear eye protection!

You must wear eye protection.

Wear safe footwear!

You must wear safe and sturdy footwear.

Wear gloves!

You must wear appropriate gloves or hand protection.

Wear safe and protective clothing!

You must wear appropriate safe clothing.

Before using the equipment, locate the nearest of these facilities and resources:

Fire extinguisher!

Before using this equipment, locate your nearest fire extinguisher and fire prevention resources.

First Aid!

Before operating this equipment, locate your nearest first aid station.

1.5 Safe operating area

A safe operating area around the equipment and work area should be maintained at all times. Non-operators and other persons should not approach the equipment or work area.

Always leave 12-16 inches around the unit.

Caution

Risk of damage to the equipment!

Do not obstruct the ventilation on any side of the equipment. This can cause poor performance or part failure. Always keep the operating area clean and organized to prevent injury or damage.

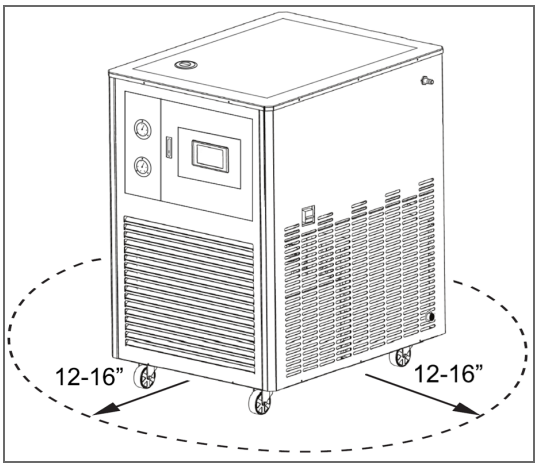

Figure 1 - Safe operating area around the chiller unit

1.6 Safety warnings

The following warnings and notices are safety information specific to the UHC Series - .

WARNING

Risk of serious injury or damage!

Only use approved thermal transfer fluids stated in this manual.

► For more information, see *Thermal transfer fluids* on page 18.

WARNING

Risk of serious injury or damage!

Follow all federal, state, municipal laws, codes, and ordinances when installing and operating the chiller.

WARNING

Risk of electrical shock!

Make sure the input voltage matches the specifications of the equipment.

Use the correct voltage, connection, and ensure proper grounding.

Do not unplug the chiller while it is in operation.

Do not use a generator to power the chiller.

Do not alter or change the length of the power cable.

WARNING

Risk of serious injury or damage!

Do not operate the fluid pump with your valve in the off position. The equipment will overheat the pump and lead to failure.

Do not run the liquid pump dry and allow plenty of time to prime the pump.

Do not allow the compressor to cycle more than 5 times per day.

The compressor has a 10 minute cool-down period before it can be run again.

Fluid lines must not have any hard bends which can prevent clear flow of fluids.

WARNING

Risk of serious injury or damage!

Do not use flammable, corrosive, or explosive substances on or near the equipment.

Only install the chiller in a climate-controlled environment.

Not to be serviced by users!

All repairs must be done following advice and information from USA Lab or one of their representatives.

Any repairs must only be done by qualified electricians.

Contact USA Lab for details if your equipment needs repair.

1.7 Responsibility of the owner

The owner is the person who operates the equipment for commercial or business purposes or allows a third party to use the equipment and bears legal responsibility for the product during operation for the protection of the user, personnel or third party.

1.7.1 Owner responsibilities

The equipment is used for commercial purposes. The owner of the equipment is therefore subject to the legal responsibilities for occupational safety.

In addition to the safety instructions in this manual, the applicable safety regulations as well as occupational safety and environmental regulations must be implemented for the area of application of the equipment.

This applies to the following:

- The owner must be informed of the applicable occupational safety regulations and conduct a risk assessment to identify any additional risks that may arise due to the special working conditions at the equipment location.
- This information must be implemented in the form of operating instructions for the operation of the equipment.
- During the entire period of equipment use, the owner must ensure that the operating instructions created reflect the current state of policy and adjust them if necessary.
- The owner must clearly regulate and define the responsibilities for operation, troubleshooting, maintenance and cleaning.
- The owner must ensure that all persons who work with the equipment have read and understood this manual.
- The owner must also train and inform personnel of hazards at regular intervals.
- The owner must provide personnel with the required protective equipment and must ensure that personnel wear the required protective equipment.
- The owner must ensure adequate ventilation of the installation site around the equipment and work area.
- The owner is also responsible for ensuring that the equipment is always in good working order. The following therefore applies:
    - The owner must ensure that the maintenance intervals described in this manual are observed.
    - The owner must ensure that the required fire protection measures are always compliant and functional.

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2 Hardware description

Before operating the equipment, you should be familiar with the location and names of all parts of the equipment. This will help you understand the operating procedures and assist with troubleshooting, if required.

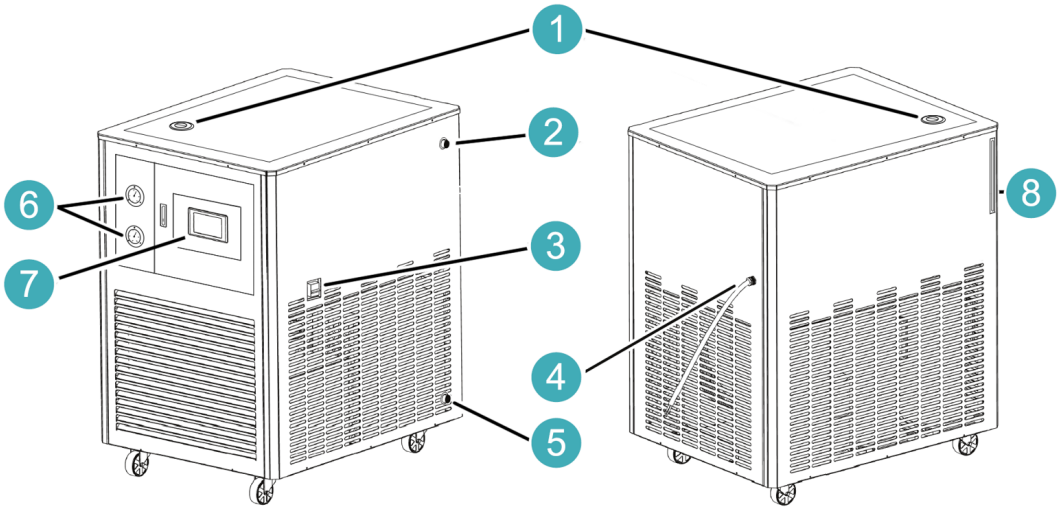
2.1 Overview

The UHC series chillers are high-performance closed-loop heater chillers with significantly large reservoirs. This heater chiller is ideal for applications involving vacuum systems, jacketed reactors, rotary evaporators, columns, solvent tanks, and even analytical instruments. The UHC heater chillers have easily accessible control panels for easy adjustments and repair.

2.1.1 Features

- The UHC Series of high-performance closed loop recirculating heater chillers use internationally recognized phase change compressors.
- The pump can move your transfer fluid quickly.
- Casters aid in the portability of the chillers.
- When connected to a reactor, the UHC can maintain consistent sub-zero or overboiling temperatures.
- Large changes in temperature can be achieved rapidly with the plate heat exchanger.
- The included insulated metal flex hoses hold higher and lower temperatures.
- Clear and easy to read display.

2.2 Chiller parts

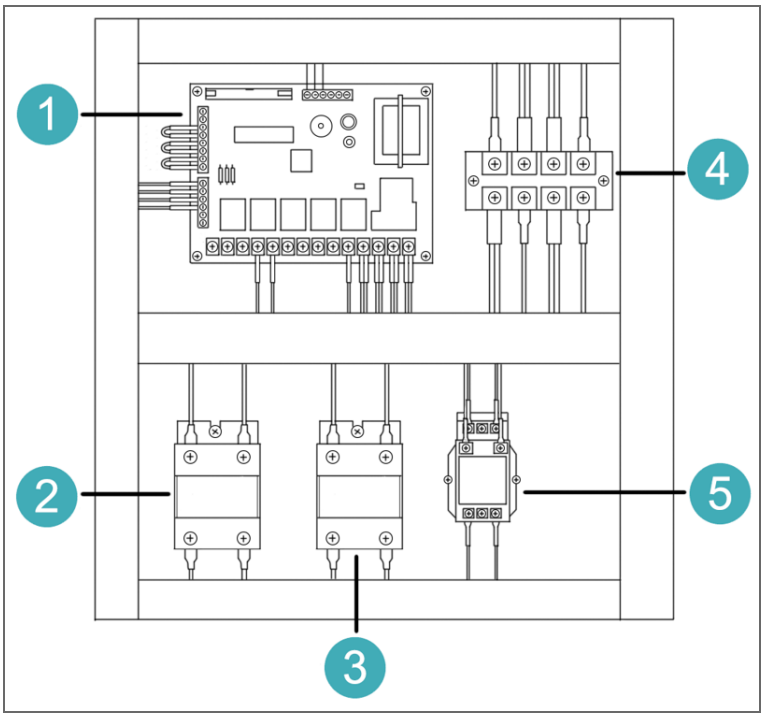


1	Main fluid reservoir. Screw lid included.
2	Fluid outlet port.
3	Main power ON/OFF breaker switch.
4	Main power cable input connection.
5	Fluid inlet port.
6	Compressor gauges.
7	Display and controls.
8	Fluid level indicator sight glass.

Figure 2 - Chiller heater parts

2.2.1 Front panel diagram

Manual and outlet valves are located behind the display.



1	Control board
2	Heating relay
3	Cooling relay
4	Power block
5	Pump relay

Figure 3 - Front panel diagram

2.2.2 Tubing connections

Insulated threaded NPT hosing and connections are provided with your heater chiller. Thread tape and red fiber gaskets need to be installed prior to connecting.

► For more information, see *Unpacking and assembly of the chiller* on page 23.

Tubing should be unobstructed without any hard bends in the run.

The tubing is connected to the inlet and outlet ports of the chiller.

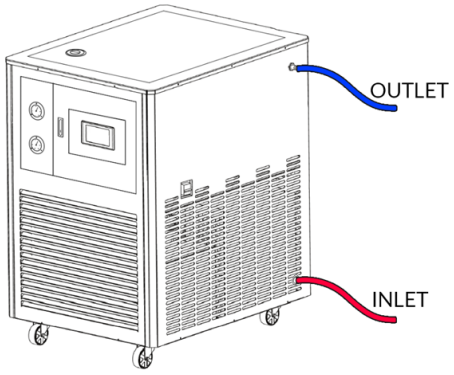


Figure 4 - Tubing connections

2.3 Thermal transfer fluids

WARNING

Risk of serious injury or damaged!

Do not use automotive anti-freeze, it contains additives that have been known to corrode heat exchangers.

Do not use tap water, as it can cause corrosion of internal parts.

USA Lab recommends using a High performance silicone oil (-40°C to 200°C) or a Propylene Glycol + Distilled Water | Ratio: PG 60% : DW 40% (-40°C to 110°C).

2.4 Electrical connection

Each heater chiller has its own power requirements. Make sure you are aware of the requirements for your heater chiller variant.

► For more information, see *Technical specifications* on page 35.

The heater chiller must operate on its own circuit Installed by a qualified electrician.

Depending on the heater chiller variant, different plug types maybe fitted to your heater chiller.

The following is a list of the plug types used with each variant:

- UHC-10/40 | NEMA 6-20P
- UHC-20/40 | NEMA L6-30P
- UHC-50/40 | Single phase quick disconnect 60 amp panel

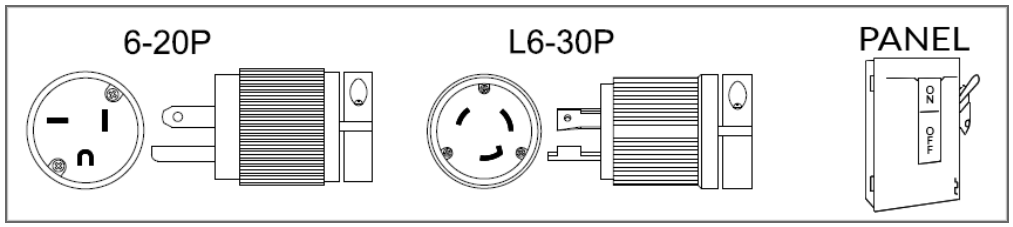
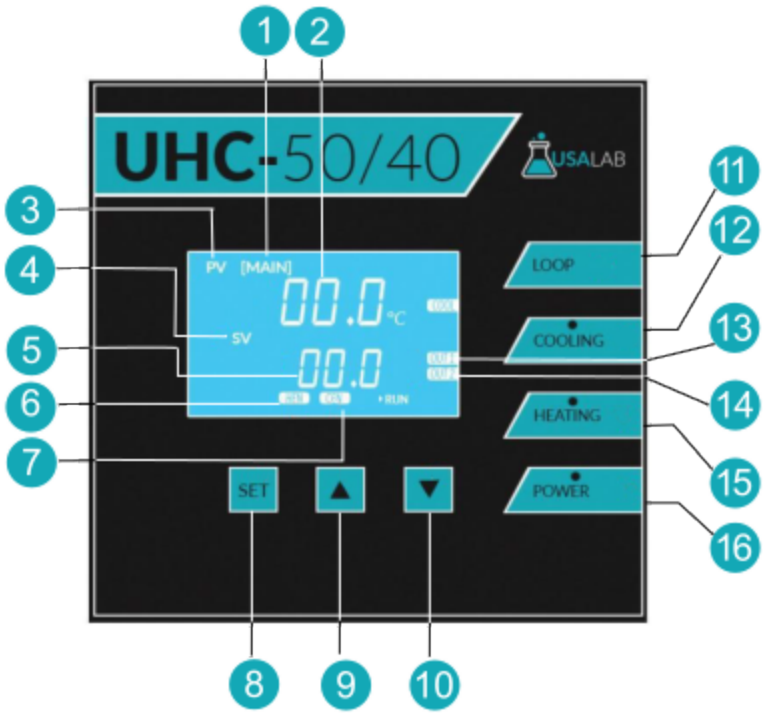


Figure 5 - Electrical connection

2.5 Control panel - LCD display

The LCD control panel is located on the front of the chiller.



1	Program menu mode	9	Setting value increase
2	PV temp zone	10	Setting value decrease
3	Point value (PV) (current fluid temperature)	11	Fluid pump On/Off button
4	Set value (temperature setting)	12	Cooling On/Off button
5	SV temp zone	13	Fluid pump solenoid
6	Heating enabled indicator	14	Compressor loop solenoid
7	Cooling enabled indicator	15	Heating On/Off button
8	Set temp modification button	16	Power On/Off button

Figure 6 - Control panel operation - LCD display

Prior to running the chiller, your fluid loop should be set-up and the tank filled.

To turn on the fluid pump, heating, and cooling:

1. Press Set (8) to enter the temperature set menu.
2. Adjust the value using the Up (9) or Down (10).
3. Then Press Set (8) again to save the desired value (5).
4. Next press Loop (11), then Cooling (12) and Heating (15).
5. This turns on the fluid pump, heating, and cooling.

Parameters are not allowed to be modified by end users. This is to protect the equipment from accidental damage. Modifying parameters for any reason, without our knowledge and permission will constitute a void of the warranty.

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3 Installation and set up

Before you start using your Chiller, make sure all parts are in place and the system is ready.

- Please open all packages completely before attempting assembly.
- All parts must be clean and dry before assembly.

3.1 What's in the box

The following parts are included in the package:

Table 1 - Packaging list

Part	Quantity
USA Lab UHC Series Unit	1 pcs
3/4" FNPT Insulated Bellow Hose - 6Ft.	2 pcs
3/4" FNPT Brass Valve	1 pcs
3/4" MNPT x 3/4" MNPT Hex Union	1 pcs
Roll of PTFE thread tape	1 pcs

3.2 Unpacking and assembly of the chiller

Unpack the chiller unit and confirm you have all necessary items before setting up the unit.

Notice

If you believe any parts are missing, contact USA Lab. Keep the original packaging in case you need to return or send the unit back for repairs. USA Lab is not responsible for providing the return packaging material.

1. Position the unit within 6 ft of the system to which you want to connect.

   Place the chiller in a way that guarantees proper ventilation.

   ► For more information, see *Safe operating area* on page 11.

   Notice

   Use the PTFE tape and wrap at least 4 times around the thread of the outlet port and the ¾” MNPT x ¾” MNPT fitting.

2. Attach the outlet ball valve to the outlet port.
3. Attach the thread wrapped ¾” MNPT x ¾” MNPT fitting to the outlet ball valve.
4. Add the red fiber gaskets to the ends of the hoses (included in the manual pouch).

5. Install one end of one hose to the fitting you just assembled.
6. The other end goes to the lowest port of the reactor jacket on the vessel.
7. With the second hose, connect it to the highest port on the reactor jacket on the vessel.
8. The final connector then goes to the inlet of the chiller.
9. Connect the unit to the power supply that matches the specifications of your model.

3.3 Priming the chiller

Priming the pump of your chiller is an important step to make sure there is no air in the pump that could prevent the unit from functioning properly.

Prime the pump in the following scenarios:

- On first use.
- After the reservoir is emptied, and then filled.
- If you notice any bubbling.
- If the liquid flow is visibly impeded.

To prime the pump, follow these steps:

- Power on the unit.
- Open the ball valve.
- Run the pump.
- Wait for 30 minutes to allow the air bubbles to empty from the pump.
- Then shut off the pump and close the ball valve.

The chiller is now primed.

4 Operations

This section describes common tasks required for the operation of the UHC Series.

4.1 Operating method

Only operate the unit in a climate-controlled facility. Operating temperature is 70°F or 20°C. If the temperature exceeds 80°F or 26°C performance will be degraded.

Units returned that have signs of outside use will automatically be determined to be improperly used and cared for.

Wait 12-hours after receiving shipment before operating the equipment. This gives the compressor oil a chance to settle back inside the compressor.

When filling the unit and/or a reactor:

- Power on the unit.
- Fill the tank ¾ full.
- Open the ball valve and turn on the fluid pump.
- Continue to fill the tank watching the level. Do not allow level to drop below 1/4.
- When the jacket is full and the tank reaches the 1/2 way point stop filling.
- Close the lid and follow the priming instructions.

4.2 Running the chiller

With the system and chiller pump primed, you can start the chiller to control the temperature in your system.

> **Notice**
>
> When using the unit always enable the pump first. Then enable the cooling AND heating functions. Both must be used to keep temperature accuracy. Otherwise, the temperature may overshoot the set point.

When not operating the unit, close the ball valve and shut off the power.

To run the chiller, follow these steps:

1. Power on the unit.
2. Open the ball valve.
3. Run the pump.

4. Set the target temperature.
5. Enable cooling and heating.
6. Run until the process is complete.
7. Shut off the pump and close the ball valve.

Caution

Failure to close the valve will cause the tank to overflow.

Your chiller is now running and adjusting the temperature of your system to the set temperature.

5 Service and maintenance

5.1 Inspecting the control system

1. Inspect all wire connections. They should seat into place firmly. To check tug the wire lightly. If a loose connection is found, tighten the connection.
2. Inspect the motherboard. If dust or other foreign material is found, use compressed air to remove the material.
3. Inspect the major components. Look for melting plastic, cut ribbon cable, cracks in components, or burn marks.

5.2 Cleaning the condenser

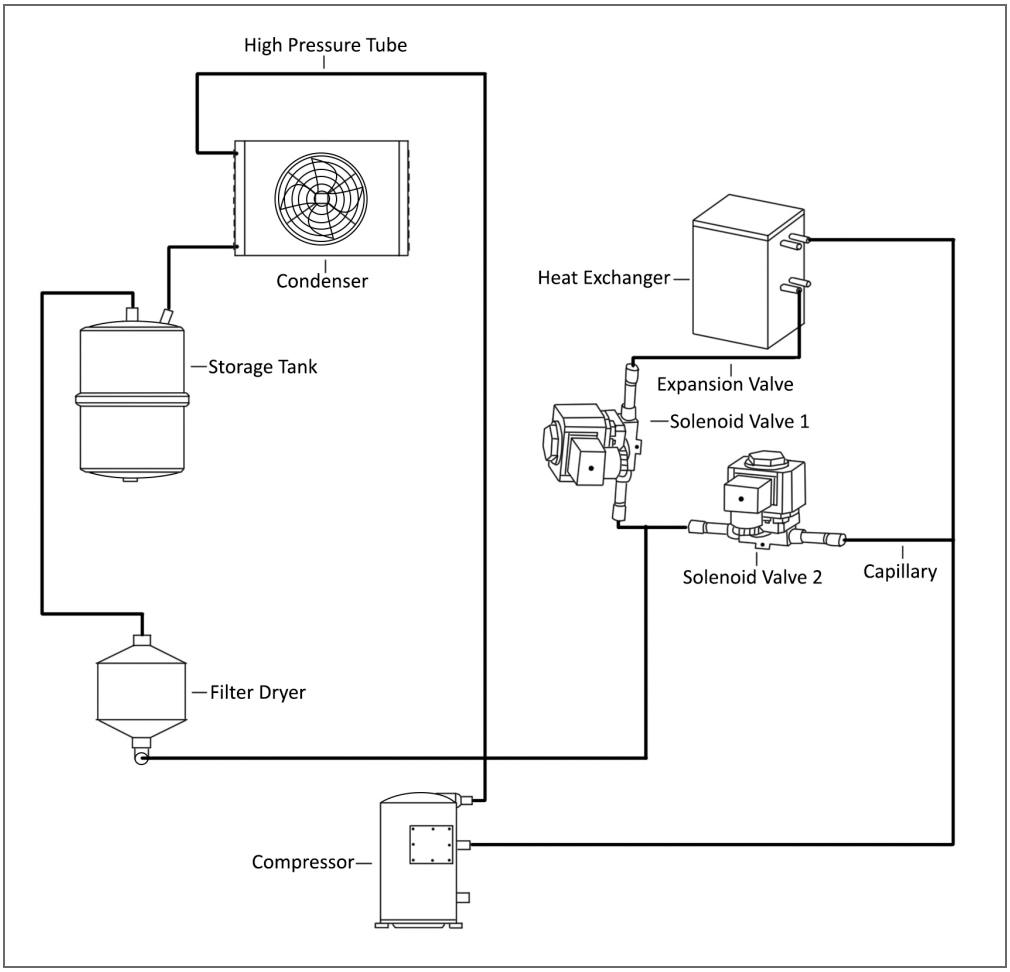

Figure 7 - Refrigeration system diagram

Dust must be removed regularly from the condenser to maintain cooling performance. This can be done easily with using: a hand brush, shop vac, and/or compressed air.

- Remove the front panel.
- Use a brush to remove large pieces of foreign material. Then use a vacuum to remove the collected pieces. Lastly, use compressed air to blow small particles out of the fins.
- Use compressed air to blow the loose particles behind the condenser out of the cabinet.

5.3 Cleaning the lower cabinet compartment

- Remove the panels from the lower cabinet.
- Using compressed air, blow the loose dust out of the cabinet.
- Inspect the copper lines, compressor, capacitors, and blower fan for damage/leaks.
- Clean any condensation stains or dirt with a damp microfiber cloth.

5.4 Periodic maintenance

WARNING
You must turn off the power switch AND disconnect the power cord before any maintenance.

- Please use a damp soft cloth to wipe clean. Stubborn stains should be cleaned by neutral detergents.
- The maintenance of internal electrical and heating parts must be performed by professionals or trained electricians.
- Do not directly splash water over the product or use abrasive powder, diluent, oil, kerosene, acidic material, and similar substance during cleaning, or else shock or other accidents will occur.

Fluid:

- If using Silicone Oil, degradation is not much of a concern. Keep an eye on the tank level.

- Propylene Glycol will degrade over time, it is recommended to purchase glycol test strips.

Condenser:

- Check and clean the condenser regularly. Every quarter for low dust facilities or every month for high dust facilities.

Unit:

- Check the unit over monthly for leaks, broken glass, melting, burning, or any other damages.
- Please bring any concerns to USA Lab's attention immediately.

5.5 Long term storage

To store the chiller for long term, ensure the following:

- Empty the unit of fluid.
- Cap the inlet and outlet.
- Clean the condenser.
- Clean the body of the unit.
- Wrap the unit with plastic.
- Store in a secure level location.

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6 Troubleshooting

If you encounter issues with your unit, refer to the following table.

Table 2 - Troubleshooting for the UHC Series.

Problem	Possible cause	Solution
No power	1. The chiller is not plugged in. 2. There is no power from the outlet. 3. There is power in the outlet, but not in the chiller. 4. Breaker tripped. 5. Power randomly turns off.	1. Plug in the chiller. 2. Reset the breaker in the front panel or at service panel. 3. Verify no power at circuit breaker in front panel. 4. Reset breaker in the front panel or at service panel. 5. Check screws inside of the plug, tighten if necessary.
Incorrect temperature display	1. The probe wire is loose. 2. The temperature probe has a short circuit. 3. The main board has failed.	1. Tighten the probe. Refer to T1 or T2 on the main board diagram. 2. Replace the temperature probe. 3. Replace the main board.
Temperature display not working correctly or flashing	1. Incorrect power supply. 2. Display cable loose or broken. 3. The display board has failed.	1. Supply the correct power to the unit. 2. Re-seat or replace the display cable. 3. Replace the display board.
Shock from the unit shell	1. Faulty system grounding. 2. An electrical component has failed.	1. Repair the fault in system grounding. 2. Contact us for further troubleshooting.

Problem	Possible cause	Solution
No cooling	1. Cooling is not enabled. 2. The condenser fan is not spinning. 3. The compressor does not start. 4. The compressor is louder than normal, bad. 5. The refrigerant has leaked.	1. Enable cooling. 2. Clean the condenser and replace the fan. 3. Check the capacitors, relay, and power board. 4. Check the windings for a short to ground. 5. Contact us for further troubleshooting.
Cooling slowly	1. The compressor has stopped. 2. The condenser fan is running slowly. 3. The glycol ratio is incorrect. 4. The capillary or refrigerant are blocked. 5. The liquid pump is not primed. 6. The load is greater than the chiller can handle.	1. Wait for the compressor delay to end. 2. Replace the condenser fan. 3. Change the fluid to the correct ratio. 4. Contact us for the further troubleshooting. 5. Re-prime the liquid pump . 6. Reduce the load on the chiller.
Not heating	1. Heating is not enabled. 2. Heating won't turn on	1. Enable heating 2. Check the relay and the over temperature safety dial.
Boiling/smoking	1. Temperature set too high (gylcol only). 2. Heating not increased slowly.	1. Reduce the temperature below 110°C or switch to silicone oil. 2. Increase the temperature slowly by 5°C increments.

7 Decommissioning, disassembly and disposal

After the service life of the equipment is reached, the equipment must be disposed of in an environmentally appropriate manner.

WARNING

Risk of serious injury or death!

All electronics and batteries, if fitted, must be recycled according to local regulations.

All metal components can be recycled according to local regulations.

All fluids must be fully drained and disposed of according to local regulations.

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8 Technical specifications

Technical specifications of each UHC series model are mentioned below.

Table 3 - Technical specifications

UHC Series Specifications	UHC-10/40	UHC-20/40	UHC-50/40
Reservoir Capacity (L)	6L		12L
Temperature Range (°C)	-40°C to 200°C		
Power Requirements (Phase / Volts / Amps)	Single / 220V / 30A		Single / 220V / 45A
Plug Type (NEMA)	NEMA 6-20p	NEMA 6-30p	Hardwired with quick disconnect panel
Wattage (kW)	5kW		10kW
Heating Wattage (kW)	3kW		6kW
Pump Wattage (W)	250W		
Pump Flow Rate of Water (L/min)	35L/min		
Pump Pressure and Head (psi | m / ft.)	28.48 psi | 20m / 65.62 ft.		
Compressor BTU Capacity (@20°C / @-40°C)	6,247 / 3,412	11,976 / 3,344	33,058 / 8,737
Fluid Connection Size	3/4" MNPT		
Dimensions (in)	25" x 22" x 42"	25" x 22" x 42"	28" x 26" x 44"
Weight (lbs.)	187 lbs.	197 lbs.	264 lbs.

Table 4 - Reactor Compatibility Chart

Adapter	JR-5	JR-10	JR-20	JR-50	JR-100	JRE-10	JRE-20	JRE-50
RH-5L	1/2" Barb to 1/2"MNPT	Adapter Not Needed	Adapter Not Needed	Adapter Not Needed	NOT COMPATIBLE	Adapter Not Needed	Adapter Not Needed	Adapter Not Needed
RH-30L	1/2" Barb to 1/2"MNPT	Adapter Not Needed	Adapter Not Needed	Adapter Not Needed	NOT COMPATIBLE	Adapter Not Needed	Adapter Not Needed	Adapter Not Needed
RH-50L	NOT COMPATIBLE	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	Adapter Not Needed	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT
UHC-10/40	NOT COMPATIBLE	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	Adapter Not Needed	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT
UHC-20/40	NOT COMPATIBLE	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	Adapter Not Needed	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT
UHC-50/40	NOT COMPATIBLE	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	Adapter Not Needed	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT	3/4" MNPT to 1/2"FNPT

This chart is a recommendation, not a requirement.

9 Spare parts

For a list of spare or replacement parts, contact USA Lab for details.

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10 Warranty

USA Lab products are warranted to be free of workmanship, mechanical, and material defects for one to three years from the date of purchase depending on product. Within this warranty period, USA Lab will replace or repair components that fail due to manufacturer defect.

Within continental United States repairs or parts, shipping charges will be covered in full or in part by USA Lab.

For all other locations, repairs or parts will be covered in full by USA Lab, and the customer will be responsible for shipping, labor, and custom duties.

This warranty does not cover any failures due to alteration, repairs, misuse, accident, or abuse. This warranty also does not cover wear items such as glassware, heating elements, thermocouples, oil seal sets, switches, and sensors.

The warranty does not cover wrongful input voltage. The customer needs to be responsible for monitoring power rating and routine checking.

If using water in a heater or chiller, the customer must only use distilled water. Other forms of water will void the warranty.

10.1 Return policy

USA Lab offers a 30-day returns policy from when your package is delivered to your shipping address. By placing an order with USA Lab, you express that you have read and agreed to the following returns policies:

- USA Lab does not accept returns for customized items. When purchasing a customized item, you agree that there are no returns due to the nature of the item(s) being specific to your needs. USA Lab does not accept returns on any solvents or consumables.
- For pre-orders, there is a 10 % non-refundable fee associated with canceled pre-orders. This covers the banking fees and the hold fee.
- By default, a minimum of 15 % restocking fee is applied on all items that are in original packaging and unused with no damage. This applies to all items returned within 30 days, without exceptions. You are responsible for the return shipment unless deemed defective by USA Lab. In that case, USA Lab will pay for return shipment and replacement shipment costs.

- The item(s) must be returned in original packaging and in undamaged condition. The item(s) must have no signs of usage or wear including stickers, scratches, dents, resins, non-standard fluids, plant matter, or any other wear not representing a new, unused item.

  Unused and undamaged products not in original packaging will be subject to a restocking fee equal to 25 % of the purchase price.

  Products deemed defective with any signs of usage, wear, or damage, including, but not limited to, the presence of botanical material, resins, cleaning agents, stickers or decals, or any damage, wear, or tear, will not be accepted for return.
- After the returned item is received, tested, inspected, and processed, a refund will be issued. If your item(s) are in original packaging and unused, you will be refunded the initial purchase price with the 15 % restocking fee deducted.

  If your item(s) are deemed damaged or used, you will not be refunded.
- Contact support@usalab.com at USA Lab

  ► For more information, see *Contact information* on page 2.

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