CLOSED LOOP HEATER CHILLER

UHC

-40°C to 200°C Heater Chiller for 10L to 100L Reactors

The UHC Series uses both heating and cooling to provide a regulated temperature fluid output from -40°C to 200°C with +/- 2°C accuracy, for use with reactor jackets or other heat exchangers. A plate heat exchanger achieves large changes in temperature rapidly, and the closed loop reservoir, casters, and included insulated metal flex hoses support practical lab setups.

- **Heating and cooling.** Both work together for a regulated fluid output, +/- 2°C accuracy.
- **Rapid temperature changes.** Plate heat exchanger achieves large changes in temperature rapidly.
- **Closed loop reservoir.** Small in-feed hole closes the reservoir off from the outside environment.
- **Insulated metal hoses.** Two 3/4" insulated 6ft hoses included for higher and lower temperatures.
- **Mobile on casters.** Casters aid portability, with easily accessible control panels.

MODEL UHC



-40 to 200 °C	6,247 to 33,058 BTU	3 to 6 kW	18 to 35 L/min	6 to 12 L
TEMPERATURE RANGE	COOLING AT 20°C	HEATING WATTAGE	PUMP FLOW	RESERVOIR CAPACITY

Technical Specifications

Model **UHC**

TEMPERATURE CONTROL

Temperature range	-40°C to 200°C
Temperature accuracy	+/- 2°C
Control method	Heating and cooling for regulated fluid output
Recommended fluids	Silicone oil (-40°C to 200°C) or PG 60% : DW 40% (-40°C to 110°C)

REFRIGERATION

Refrigerant	R-448 (2025+)
Compressor	Phase change compressor
Heat exchanger	Plate heat exchanger
Refrigerating wattage	1.9kW to 10.2kW
BTU capacity @20°C	6,247 to 33,058
BTU capacity @-40°C	3,344 to 8,737

OPERATION

Controls	LCD control panel on front
Duty cycle	Maximum operation time 16 hours; not for 24-hour operation
Operating ambient	70°F or 20°C
Clearance	12-16 inches around the unit
Mobility	Casters

CIRCULATION

Pump flow	18L/Min to 35L/Min
Pump pressure	6.5 PSI to 28.48 PSI
Pump wattage	100W to 250W
Fluid connection	3/4" MNPT
Loop type	Closed loop

ELECTRICAL

Power supply	220-240V 60Hz Single Phase
Current	30A to 45A
Wattage	5kW to 10kW
Heating wattage	3kW to 6kW
Connection	NEMA 6-20P, NEMA 6-30P, or hardwired with quick disconnect panel
Voltage range	219V - 253V; not compatible with 208V

BATH AND DIMENSIONS

Reservoir capacity	6L to 12L
Dimensions	25" x 22" x 42" to 28" x 26" x 44"
Weight	412 lb
Included hoses	3/4" Insulated Tubing - 6ft, 2 pcs

ORDERING INFORMATION

CATALOG NO.	DESCRIPTION	ELECTRICAL
UHC-5040	12L Heater Chiller UHC-50/40 For 50L & 100L Reactors, -40°C to 200°C	220-240V 60Hz 45A Single Phase Hardwired with quick disconnect panel
UHC-2040	6L Heater Chiller UHC-20/40 For 20L Reactors, -40°C to 200°C	220-240V 60Hz 30A Single Phase NEMA 6-30p
UHC-1040	6L Heater Chiller UHC-10/40 For 10L Reactors, -40°C to 200°C	220-240V 60Hz 30A Single Phase NEMA 6-20P

IDEAL APPLICATIONS

Jacketed reactors · Rotary evaporators · Vacuum systems · Columns · Solvent tanks · Analytical instruments

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Specifications by Size

Model **UHC**

Specification	50/40 UHC-5040	20/40 UHC-2040	10/40 UHC-1040
Intended reactor	50L & 100L	20L	10L
Reservoir capacity	12L	6L	6L
Heating wattage	6kW	3kW	3kW
Refrigerating wattage	10.2kW	3.7kW	1.9kW
Wattage	10kW	5kW	5kW
Pump wattage	250W	100W	100W
Pump flow	35L/Min	18L/Min	18L/Min
Pump pressure	28.48 PSI (20m/65.62ft)	6.5PSI (6m/18ft)	6.5 PSI (6m/18ft)
BTU @20°C / @-40°C	33,058 / 8,737	11,976 / 3,344	6,247 / 3,412
Current	45A	30A	30A
Connection	Hardwired with quick disconnect panel	NEMA 6-30p	NEMA 6-20P
Dimensions	28" x 26" x 44"	25" x 22" x 42"	25" x 22" x 42"
Weight	430lbs	197lbs	187lbs

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