

USA LAB CLOSED LOOP RECIRCULATING CHILLER — ETL CERTIFIED

The USA Lab CLC Series is a line of high-performance closed-loop recirculating chillers engineered for demanding lab and process applications. Mechanically cooled by Invotech scroll compressors and using inline plate heat exchangers instead of passive bath cooling, the CLC Series transfers thermal load faster and more efficiently than traditional immersion chillers — with less loss and easier integration into your existing fluid loop.

Available in seven models with cooling temperatures down to -40°C , reservoirs from 9 L to 19 L, and flow rates up to 53 L/min, the CLC line pairs with rotary evaporators, jacketed reactors, short paths, vacuum systems, condensers, and analytical instruments. Every unit is ETL certified to UL and CSA standards for confidence in installation and operation.

KEY BENEFITS:

- **ETL Certified** – Third-party tested to UL and CSA standards for electrical and mechanical safety compliance.
- **Inline Heat Exchanger Cooling** – Plate-type exchangers transfer thermal load faster than passive bath chillers, with less loss.
- **Invotech Scroll Compressors** – 2 HP to 5 HP across the line for reliable, continuous-duty performance.
- **Wide Temperature Range** – Models cool from ambient down to -20°C , -30°C , or -40°C to fit your process.
- **High Flow & Lift** – Up to 53 L/min and 28 m of lift for demanding loops, jacketed reactors, and long runs.



BUILD A COMPLETE THERMAL LOOP

Pair the CLC Series with USA Lab rotary evaporators, jacketed reactors, short path systems, and vacuum pumps for a fully integrated, temperature-controlled workflow from ambient to -40°C .



Lowest Cooling Temperature
 -20°C to -40°C
depending on model



Pump Flow Rate
30 to 53 L/min
depending on model



Invotech Scroll Compressor
2 HP to 5 HP
depending on model

MODEL LINEUP

CLC-10/40

-40°C
9 L tank
30 L/min
2 HP

CLC-20/20

-20°C
9 L tank
30 L/min
2 HP

CLC-20/40

-40°C
9 L tank
30 L/min
3 HP

CLC-30/30

-30°C
9 L tank
53 L/min
3 HP

CLC-30/40

-40°C
9 L tank
53 L/min
4 HP

CLC-50/30

-30°C
19 L tank
42 L/min
5 HP

CLC-50/40

-40°C
19 L tank
42 L/min
5 HP

UNIT VIEWS



FRONT



SIDE / FLUID PORTS



REAR

Compare full specifications across all seven CLC Series models. All units are ETL certified, use Invotech scroll compressors, R-448a refrigerant, and 1/2" FNPT port connections.

SPECIFICATION COMPARISON

Specification	CLC-10/40	CLC-20/20	CLC-20/40	CLC-30/30	CLC-30/40	CLC-50/30	CLC-50/40
Temperature Range	Amb. to -40°C	Amb. to -20°C	Amb. to -40°C	Amb. to -30°C	Amb. to -30°C	Amb. to -30°C	Amb. to -40°C
Reservoir Capacity	9 L	9 L	9 L	9 L	9 L	19 L	19 L
Reservoir Dimensions (mm)	300×100×300	300×100×300	300×100×300	300×100×300	300×100×300	400×140×340	400×140×340
Compressor Type	2 HP Invotech	2 HP Invotech	3 HP Invotech	3 HP Invotech	4 HP Invotech	5 HP Invotech	5 HP Invotech
Compressor Capacity (BTU @ 20°C)	15,051	15,051	22,576	22,576	30,102	37,617	37,617
Compressor Capacity (BTU @ Min Temp)	253	2,007	376	1,505	502	2,508	628
Compressor Capacity (Watt)	4410 – 294	4410 – 588	6615 – 110	6615 – 441	8820 – 147	11025 – 184	11025 – 184
Pump Model	GPD20-6S	GPD20-6S	GPD20-6S	GPD25-8S	GPD25-8S	MS-6332	MS-6332
Pump Wattage	100 W	100 W	100 W	245 W	245 W	370 W	370 W
Pump Flow Rate (water)	30 L/min	30 L/min	30 L/min	53 L/min	53 L/min	42 L/min	42 L/min
Pump Lift (water)	4 m / 12 ft	4 m / 12 ft	4 m / 12 ft	6 m / 20 ft	6 m / 20 ft	28 m / 92 ft	28 m / 92 ft
Pump Pressure	2.2 bar	2.2 bar	2.2 bar	2.2 bar	2.2 bar	2.2 bar	2.2 bar
Tube High Pressure (MPa)	2.80	2.80	2.80	2.80	2.80	2.56	2.56
Tube Low Pressure (MPa)	0.10	0.10	0.10	0.10	0.10	0.12	0.12
Refrigerant (R-448a)	1300 g	900 g	1400 g	1000 g	1900 g	2500 g	2700 g
Port Connection	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT	1/2" FNPT
Power Requirements	220V / 60 Hz / 15 A (20A 1Φ)	220V / 60 Hz / 15 A (20A 1Φ)	220V / 60 Hz / 15 A (20A 1Φ)	220V / 60 Hz / 15 A (20A 1Φ)	220V / 60 Hz / 20A	220V / 60 Hz / 22.5A (30A 1Φ)	220V / 60 Hz / 22.5A (30A 1Φ)
Plug Type	L6-30P	L6-30P	L6-30P	L6-30P	L6-30P	L6-30P	L6-30P
Overall Dimensions (in, W×D×H)	26.8×23.6×37.8	26.8×23.6×37.8	26.8×23.6×37.8	26.8×23.6×37.8	26.8×23.6×37.8	31×26.8×42	31×26.8×42
Weight	256 lbs	256 lbs	256 lbs	256 lbs	256 lbs	330 lbs	330 lbs

INSTALLATION & OPERATION NOTES

- **Power compatibility:** NOT compatible with 208V power input. Acceptable supply range is 219V – 253V.
- **Duty cycle:** Not intended for 24-hour operation; maximum continuous run time is 16 hours.
- **Environmental conditions:** Indoor use only, altitude up to 2,000 m, ambient 5°C to 25°C, max 80% RH up to 31°C (decreasing linearly to 50% RH at 40°C).
- **Bypass:** An external bypass loop may be required for low-flow or high-restriction applications.
- **Certifications:** ETL listed to UL and CSA standards. 1-year warranty on all CLC Series chillers.