Portable Precision Liquid Chiller

MiniCool™800

Overview:

The MiniCool™ series laboratory recirculating liquid chiller is a refrigeration system based on compressor cooling technology. It is specifically designed for laboratory applications in chemistry, biology, and physics, providing precise cooling and temperature control for a wide range of equipment.

This system offers an economical and environmentally friendly cooling solution with constant temperature circulation. Its compact structure and small footprint allow placement directly on a desktop or inside a fume hood. The chiller-800 operates extremely quietly, making it ideal for laboratory environments.

It is particularly suitable for:

1. Laboratory
2. Calorimeter
3. Rotary evaporator
4. Kjeldahl apparatu
5. Distillation system
6. Coal quality analyzer
7. Analytical instrument
8. Small molecular pump
9. Vacuum pump condenser
10. Electrophoresis equipment
11. General laboratory equipment

Applications

Chemical Experiments
Provides low-temperature cooling and temperature control for rotary evaporators, double-layer glass reactors, etc., ensuring stable low-temperature reaction conditions.

Biopharmaceuticals
Used for cooling ultrasonic processing samples and electrophoresis equipment, maintaining biological activity and product quality.

Physical Experiments
Cools heat-generating components in spectrophotometers, laser processing machines, electron microscopes, ensuring stable instrument operation.

Key Features

Compact & Space-Saving Design
Engineered with a minimal footprint, the unit fits easily on a desktop or inside a fume hood, making it ideal for space-constrained laboratories.

Energy-Efficient Temperature Control
Advanced adaptive control with heat-exchange differential regulation reduces energy consumption while maintaining stable performance.

Maintenance-Free Pressure Pump
Designed for long service life, the pump automatically adjusts pressure and flow based on system demand, protecting connected equipment and minimizing wear.

Flexible Circulation Operation
The circulation system can run independently or in combination with the cooling function, offering greater operational flexibility.

Integrated Liquid Level Monitoring
A durable glass level indicator provides real-time visibility of fluid levels and resists aging over time.

Reliable, High-Quality Construction
Built with premium components to ensure consistent, stable performance in demanding environments.

Comprehensive Safety Protection
Equipped with multiple safeguards, including condenser and tank temperature protection, as well as compressor overheat and overcurrent protection, with both audible and visual alarms.

Intelligent Alarm System
Clear error codes are displayed instantly, allowing users to quickly identify and resolve issues.

Precision Temperature Sensing
NTC sensor supports accurate measurement and single-point calibration for improved temperature control.

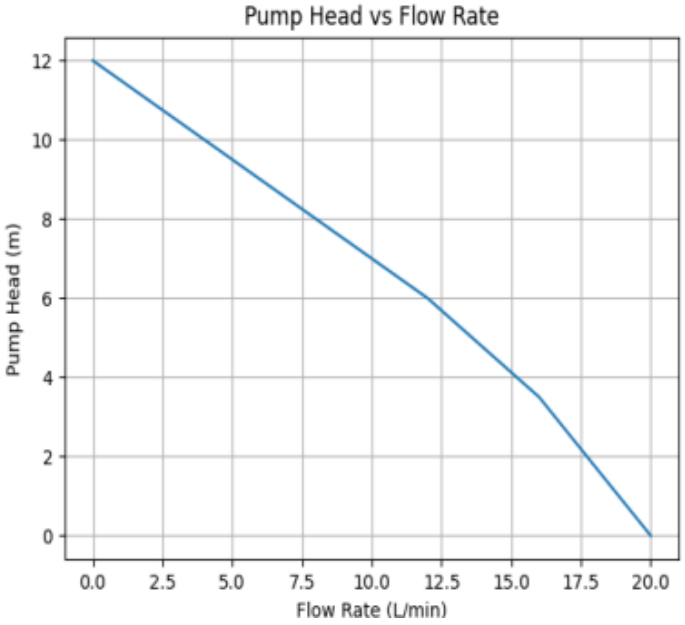
Multiple Operating Modes
Offers flexible operation settings and automatic restart after power interruption, ensuring uninterrupted cooling.

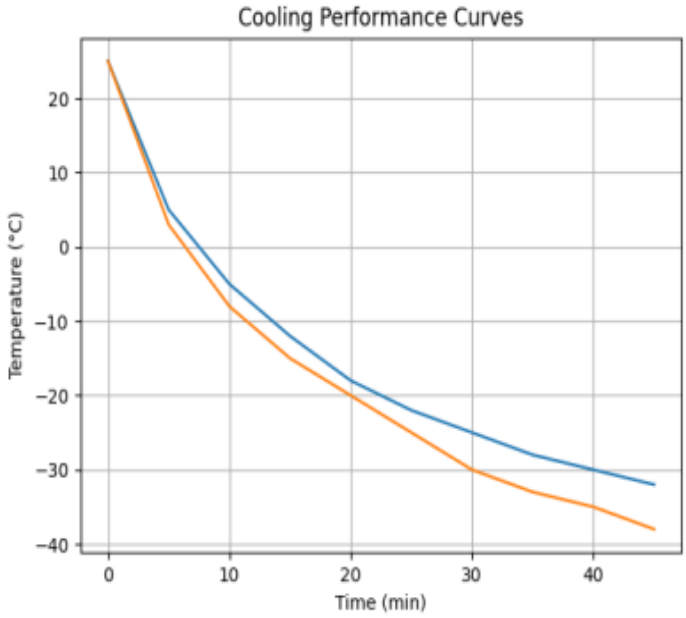
Remote Control Ready
Standard RS485 (DB9) interface with MODBUS RTU protocol enables easy integration into remote monitoring and control systems.

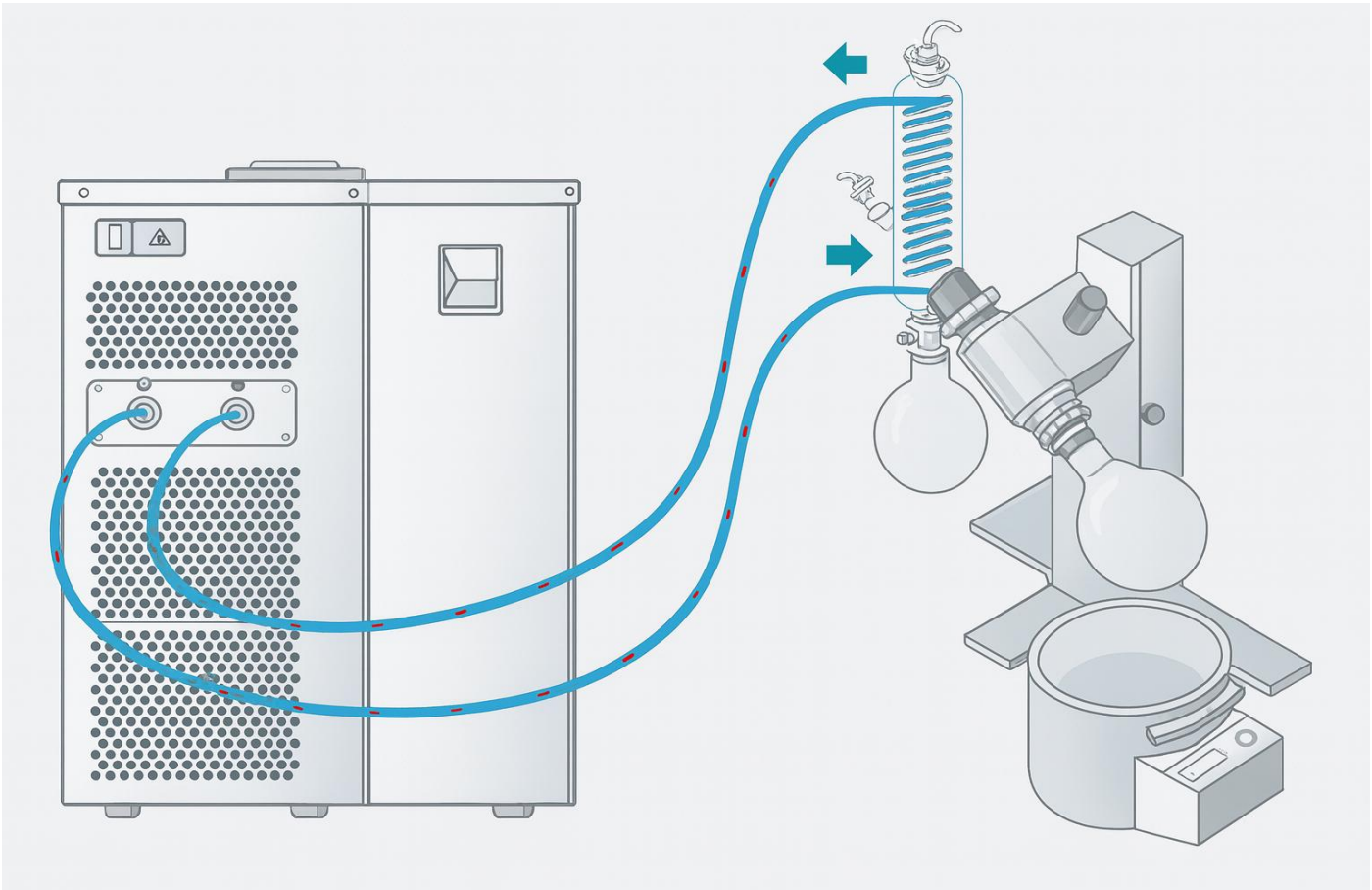
Waterproof Control Panel
Features a high-brightness LED display with a splash-resistant design for reliable operation in lab environments.

Eco-Friendly Refrigeration
Uses environmentally responsible refrigerant with low global warming potential and zero ozone depletion, fully compliant with modern regulations.

Cooling Performance Curve







Technical Specifications

Model Name	Laboratory Water Chiller	MiniCool™800
Temperature Range	°C	-20°C to Room Temperature
Temperature Stability	± K	±2 K
Display	-	LED
Display Resolution	°C	0.1°C
Control Method	-	Heat-exchange control
Temperature Sensor	-	NCT10K
Heating	W	No heat
Cooling Capacity	20°C/KW	0.8
	10°C/KW	0.7
	0°C/KW	0.6
	-10°C/KW	0.4
	-20°C/KW	0.3
Pump Type	[-]	Pressure pump
Max Pump Pressure	[bar]	1.2
Max Pump Suction	[bar]	No
Max Flow Rate	[L/min]	20
Pump Connection	[-]	G1/2 internal thread
Tank Volume	[L]	4
Dimensions (W×D×H)	[mm]	200 × 430 × 450 mm
Installation Type	[-]	Benchtop
Continuous Operation	[%]	100%
Ambient Temperature	[°C]	5°C~32°C
Relative Humidity	[%]	80%
Power Supply	[V/Hz]	220V/50Hz
Weight	[KG]	24
Package Size	[mm]	280 × 500 × 600 mm
Communication Interface	[RS485]	RS485 (standard)
Protection Level	[IP]	20
Power Consumption	[kw]	0.5