Recirculating Chiller - Cooling Bath Circulator - -10 to -40°C - 6.8 to 98 L

Model **MSRECL10-5SWISS, MSRECL30-50SWISS, MSRECL40-100SWISS** | Brand **Master Science**





The Master Science Recirculating Chiller uses a sealed compressor and nickel-plated copper coils on the tank wall to cool the bath liquid, then pumps it to the jacket of a glass reactor, a rotary evaporator or a condenser coil. Cooled liquid returns to the unit in a closed loop.

KEY HIGHLIGHTS

- Wide cooling range
- Precise control
- Two ways to cool
- Sized for pilot work
- Protected compressor

AT A GLANCE

-10 °C / -30 °C / -40 °C to room temperature TEMPERATURE RANGE	**1550 W / 6972 W / 23240 W** COOLING CAPACITY
±0.1 °C CONTROL ACCURACY	**±0.1 °C control.** UNSTABLE REACTION TEMPERATURE

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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Overview

The open bath can also hold flasks or containers directly for cooling or low-temperature reactions. Three sizes cover minimum temperatures of -10, -30 and -40 °C.

Specifications of the Master Science Recirculating Chiller range (MSRECL10-5SWISS / MSRECL30-50SWISS / MSRECL40-100SWISS):

For small rotary evaporators, a Master Science compact refrigerated circulator may be enough.

Key Benefits

Wide cooling range
the Master Science Recirculating Chiller reaches down to -40 °C.

Precise control
PT100 sensor and ±0.1 °C accuracy.

Two ways to cool
circulate to equipment or immerse vessels in the bath.

Sized for pilot work
up to 23 kW cooling for large reactors.

Protected compressor
delay, over-current and overheat protection.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSRECL10-5SWISS, MSRECL30-50SWISS, MSRECL40-100SWISS
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SKU	MSRECL10-5SWISS, MSRECL30-50SWISS, MSRECL40-100SWISS
Temperature Range	**-10 °C / -30 °C / -40 °C to room temperature**
Control Accuracy	**±0.1 °C**
Sensor	PT100
Cooling Capacity	**1550 W / 6972 W / 23240 W**
Circulation Pump	100 W, 20-40 L/min, 4-6 m / 100 W, 20-40 L/min, 4-6 m / 280 W, 30-50 L/min, 10-12 m
Pump Pressure	≤ 0.4 MPa
Refrigerant	R290 / R404A / R404A
Condensation Coil	Nickel-plated copper, Ø8 / Ø16 / Ø19 mm
Usable Tank Diameter	185 / 350 / 390 mm
Hose Connector	Hose barb Ø12 / Ø16 / Ø19 mm
Safety Protection	Delay, over-current, overheat (larger models add phase sequence and phase loss)
Display	LCD with key operation
Ambient Conditions	5 to 35 °C, ≤ 70 % RH, ventilated

POWER

Compressor Power	500 W / 2205 W / 7350 W
Power Supply	220 V 50 Hz / 220 V 50/60 Hz / 380 V 3-phase 50 Hz
Total Power	652 W / 2485 W / 7990 W

DIMENSIONS & WEIGHT

Tank Size and Volume	Ø220 × 180 mm, 6.8 L / Ø450 × 350 mm, approx. 55 L / Ø500 × 500 mm, 98 L
Overall Dimensions (W × D × H)	423 × 485 × (760 + 400) / 795 × 770 × (1150 + 500 pole) / 845 × 1100 × (1365 + 500 pole) mm
Net Weight	56 kg / 119 kg / 250 kg

COMMON LABORATORY PROBLEMS AND HOW THIS CHILLER HELPS

Common Laboratory Problems and How This Chiller Helps	How the Master Science Recirculating Chiller deals with frequent cooling needs:
Ice baths that warm up	continuous mechanical cooling.
Exothermic reactions overheating	high cooling capacity.
Unstable reaction temperature	±0.1 °C control.
Separate units for bath and circulation	one unit does both.

Applications of the Master Science Recirculating Chiller

- **Cooling jacketed glass reactors**
- **Rotary evaporator condensers**
- **Reactor condensation coils**
- **Low-temperature reactions in the bath**
- **Pharmaceutical and chemical pilot plants**

Refrigeration

- Fully enclosed compressor
- Nickel-plated copper coil in tank
- Air-cooled condenser

Circulation

- Built-in pump up to 50 L/min
- Hose barb outlet on the left side
- Closed-loop return

Control and Safety

- LCD with keys
- PT100 sensor
- Multiple protection functions