

SUB-ZERO CIRCULATION CHILLER BATH

Microprocessor based



CE



Working Principle

- The Recirculation chiller is mechanically cooled by a hermetically sealed compressor based Refrigeration system. The cooling evaporator is made of high purity copper coils provided on the interior of the inner walls of the cooling tank. CFC-free, eco-friendly refrigerant is continuously expanded and circulated through the evaporator coil which in turn cools the secondary coolant/water in the tank.
- The cooled secondary refrigerant is then circulated through built-in circulation pump, which can be used to convey to the heat exchanger of the supporting equipment or condensation coil through external circulation pipeline. This method can indirectly cool the material in the reactor or cool and liquefy evaporating vapours by indirect contact with condensation tube.
- During external circulation, the outlet pipe of this equipment from the built-in pump is connected to the lower inlet pipe of the kettle body or condenser of external system. The cold liquid exits from the circulation discharge port and then returns to inlet of equipment through pipeline into the recirculation chiller tank system forming a complete circulation. Generally speaking, this chiller can be connected to the interlayer of double glass reactor, rotary evaporator, condensation coil of reactor etc for secondary cooling purposes.
- If the equipment is to be used for internal circulation only, then outlet of the discharge valve is to be connected to the inlet valve for closed loop circulation of coolant liquid/water. Use the Digital Temp controller to set the required temperature so that the heater output can regulate and maintain the desired temperature in the chiller tank.

Technical Parameters

Model	SZCCB-20	
Usable temperature range	-20°C ~ ambient temperature	
Environment temperature	+5°C ~ +35 °C	
Environment humidity	70% ventilation	
Power supply	Single phase 220V 50Hz	
Safety protection	Delay, over-current, overheat	
Display	LED display, key operation	
Temp control accuracy	±0.1°C	
Sensor	PT100	
Total power	2000 W	
Compressor	Power	1300W
	Cooling capacity	1700W @ -25°C evap temp
Circulation pump	Power	165W
	Lift	4-6M
	Flow	50L/min
	Pressure	0.1MPa 1 bar
Air-cooling condenser	Power	140W
	Heating exchange area	2.0 m ²
	Air flow	2600 m ³ /h
Refrigerant	CFC & HCFC- free, Eco-friendly R404A	
Evaporator coil	Φ12 copper tube plated by nickel	
Equipment Outer / inner material	Cold plate spray, anti-corrosion / Stainless Steel SS304	
Inner tank Dimension & volume	200W × 300D × 400H (mm)	About 24L
Usable water tank size	175W × 275D × 400H (mm)	
Lid opening Size	200 W × 300 D (mm)	
Outer circulation interface	Ball Valve with Φ12mm outer diameter	
Overall dimension(W*D*H)	650 × 500 × 1100 (mm)	
Net weight approx	95KG	