“Budget”Water-cooled Water Chiller

SIC-8W-EB

Refer carefully to this manual before operation.

SIC-W-EB Series

Coding Principle

SIC - W - EB

- EB → "Budget" Series
- W → W=Water Cooled
- SIC → Shini Industrial Water Chiller

Features

- Cooling range 7~25℃.
- Stainless steel insulated water tank, with prolonged service life and free of contanmination.
- Adopt R410 A refrigerant with good refrigeration effect.
- Refrigeration loop controlled by high and low pressure switches for accurate detection of system pressure.
- Compressor and pump overload protection.
- Shell and tube condenser with quick heat conduction and good dissipation effect.
- Adopt tube and shell evaporator.The copper pipe is directly mounted on water tank that is economical and practical.
- Adopt renowned brand of original precision temperature-controlled meter with an accuracy of ±0.1℃.

Control Panel

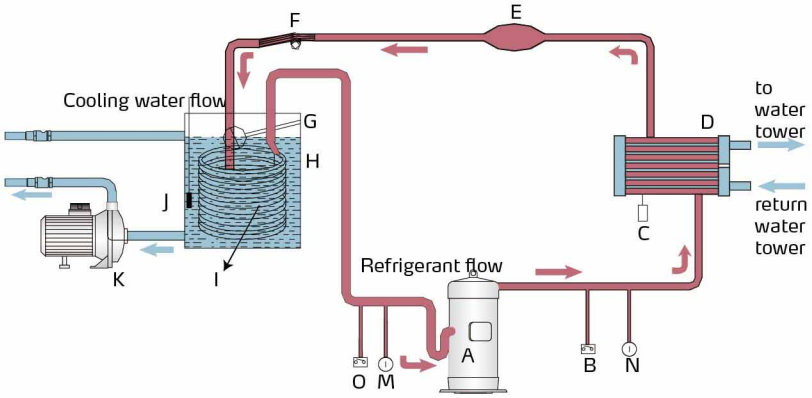
Application

SIC-W-EB series are applicable for cooling moulds to reduce products molding cycle time; also they are available in the cooling of equipments in order to maintain a normal temperature. Besides, they are suitable for other industries with the need of cooling.

Working Principle

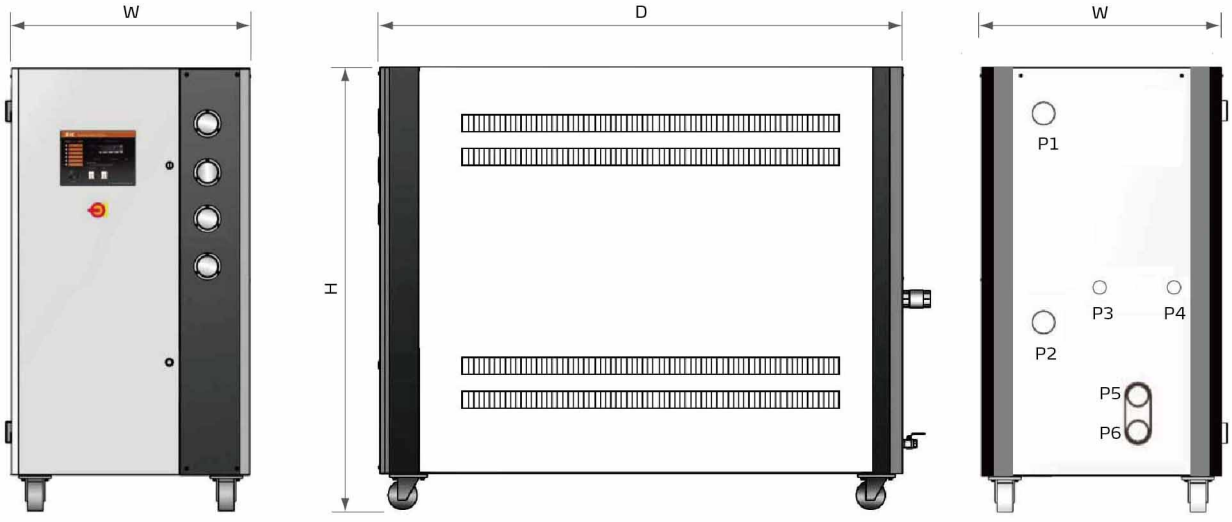
SIC-W-EB water-cooled water chiller mainly consists of compressor, condenser, capillary and tube evaporator. Adopting single-stage vapor compression refrigerating system, gas-liquid conversion of refrigerant, and the principle of heat adsorption and release, it achieves the cooling effect.

When SIC-W-EB water-cooled water chiller starting up, compressor (A) starts working. Refrigerant is compressed into high temperature high pressure gas, and then be cooled when passing through condenser (D) and changed into liquid. Heat is taken away by the cooling water. The liquid high pressure refrigerant passes through the capillary (F), and partial refrigerant is changed into gas under reduced pressure. At this time, the refrigerant is mixed with gas and liquid, which cools down the chilled water into required temperature after passing through the tube evaporator (I). By heat adsorption, the liquid refrigerant changes to gas and returns the compressor for this circulation.



A	Compressor	I	Tube evaporator
B	High pressure	J	Thermocouple
C	Fusible plug	K	Pump
D	Condenser	M	Low pressure gauge
E	Drying filter	N	High pressure gauge
F	Capillary	O	Low pressure controller
G	Floating-ball valve		
H	Water tank		

Outline Drawings



SIC-W-EB

SIC-W-EB Series

Outline Drawings

Model	H (mm)	W (mm)	D (mm)	P1 (inch) Chilled Water Inlet	P2 (inch) Chilled Water Outlet	P3 (inch) Water Tank Outlet Port	P4 (inch) Water Tank Overflow Port	P5 (inch) Cooling Water Outlet	P6 (inch) Cooling Water Inlet	Weight (kg)
SIC-5W-EB	1017	490	850	1	1	1/2	1/2	1 1/2	1 1/2	240
SIC-10W-EB	1385	660	1220	1	1	1/2	1/2	1 1/2	1 1/2	310

Model Selection References

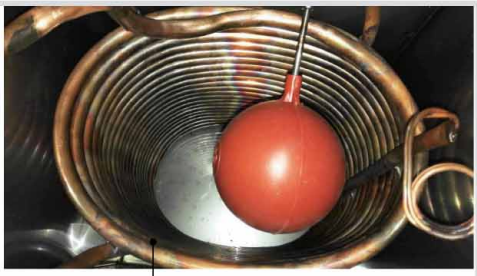
Model	SIC-5W-EB			SIC-10W-EB	
Mould Clamping Force (T)	≤300	≤350	≤450	≤550	≤650
Molding Capacity (kg/hr)	≤30	≤35	≤45	≤55	≤65

Structure of Water-cooled Models

Heat insulated stainless steel water tank for circulating water storage

Scroll compressor, excellent energy efficiency ratio, with low noise level

Drying filter



Tube evaporator

Refrigerant system low pressure gauge. It used to display low pressure of refrigerant system.

Pump pressure gauge, It used to display pump pressure.

Large-flow three-phase water pump which is not easy to block, and large start torque

Tube and shell condenser with with quick heat conduction and good dissipation effect.

Rack and controller adopt power coating, in solid design

Specifications

Model			SIC-5W-EB	SIC-10W-EB
Refrigerant[1] Capacity	kW		10	20
	kcal/hr		8,609	17,217
Compressor	Type		Scroll	
	Input power	kW	3.3	6.6
		HP	5	8
Refrigerant	Filling Volume (kg)		3.1	6.2
	Control Mode		Capillary	
	Type		R410A	
Evaporator	Type		Tube style	
Condenser	Type		Tube-in-shell style	
	Inlet/outlet pipe (inch)		1.5	1.5
	Cooling water flow(L/min)		65	90
Water Tank Capacity (L)			55	145
Water pump (50Hz)	Power (kW)		0.37	0.75
	Pump flow (L/min)		60	
	Working pressure (Bar)		2.0	
Total power (kW)			3.67	7.35
Pipe Coupling (inch)	Chilled Water Outlet		1	
	Chilled Water Inlet		1	
	Water Tank Drainage Port		1/2	
	Water Tank Overflow Port		1/2	
Protective Devices	Compressor		Built-in protective switch/Overload relay	
	Pump		Overload relay	
	Refrigerant loop		High/low pressure controller	
Power[2]			3Φ, 400VAC, 50Hz	
Measures Exchange			1 kW = 860 Kcal/hr	1 RT = 3,024 Kcal/hr 10,000 Btu/hr = 2,520 Kcal/hr

Note: 1) The refrigeration capacity is measured based on the outlet temperature (20℃) of chilled water under the environment temperature of 30℃.

2) Special orders of machine voltage can be acceptable according to customers's request.

We reserve the right to change specifications without prior notice.

Shini Group

Addr: No. 23, Minhe St., Shulin Dist.,
New Taipei, Taiwan

Tel: +886 2 2680 9119

Fax: +886 2 2680 9229

Email: shini@shini.com

Factories:

- Taiwan
- Dongguan
- Pinghu
- Ningbo
- Chongqing
- Pune