



Air-cooled Air Chiller

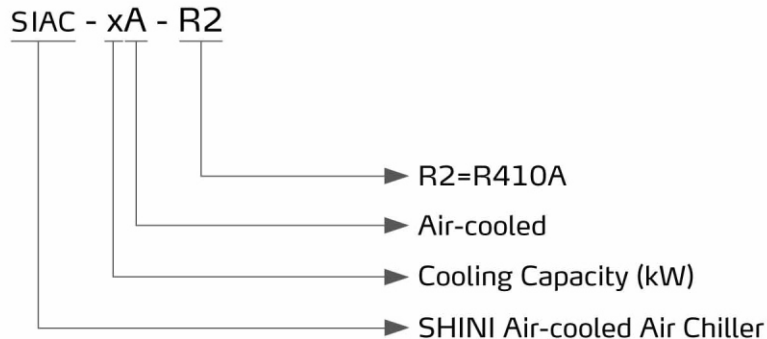
SIAC-49A-R2



Refer carefully to this manual before operation.

SIAC-A-R2 Series

■ Coding Principle



■ Features

Standard configuration

- Temperature control range: 10~20°C
- With hot air bypass valve, its accuracy of temperature control reaches to $\pm 1^{\circ}\text{C}$.
- Adopt environmental friendly refrigerant R410A to ensure good cooling effect.
- With fin style condenser, it's no need to provide chilling water . Refrigerant will exchange heat with air directly to achieve good cooling effect.
- Chilling system is protected by high and low pressure controllers.
- Both compressor and pump have overload protection.
- Adopt original precise temperature controller with accuracy of $\pm 0.1^{\circ}\text{C}$.
- Feature convenient operation, simple structure and easy maintenance.



Control Panel

Accessory option

- Liquid pipe solenoid valve is optional.
- Refrigerant indicator is optional.
- When changed to safety circuits of European standard, the machine models should be followed by "CE".



Internal Structure 1



Internal Structure 2

SIAC-A-R2 Series

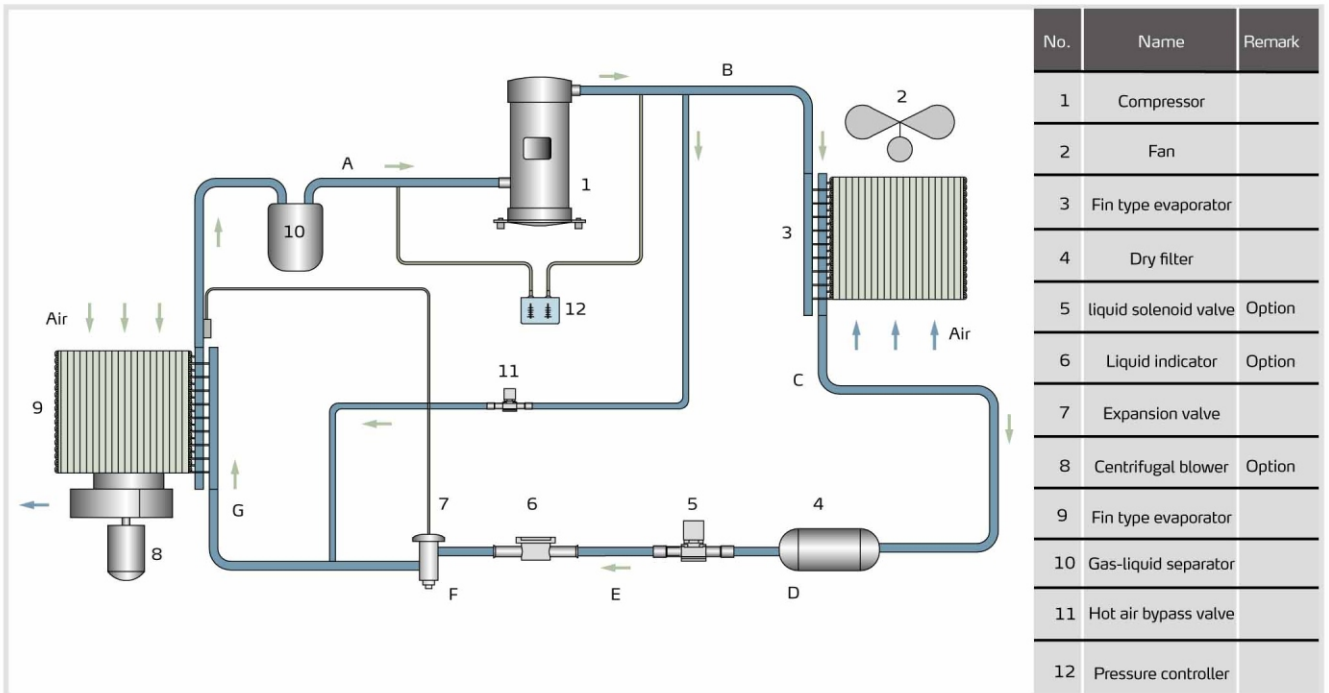
Application

SIAC-A-R2 series is mainly used for chilling and molding of plastic film and PE plastics bag or other situations where needs air-cooled air chiler.

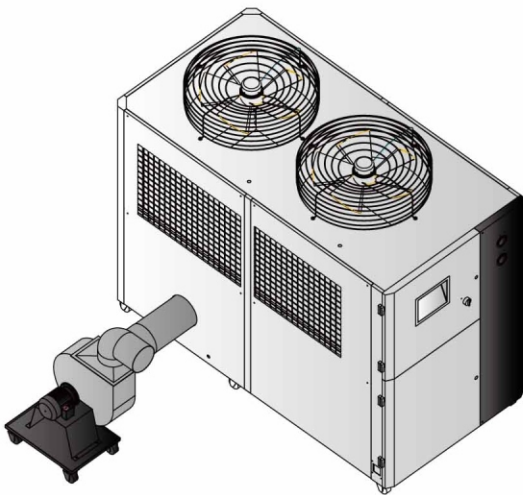
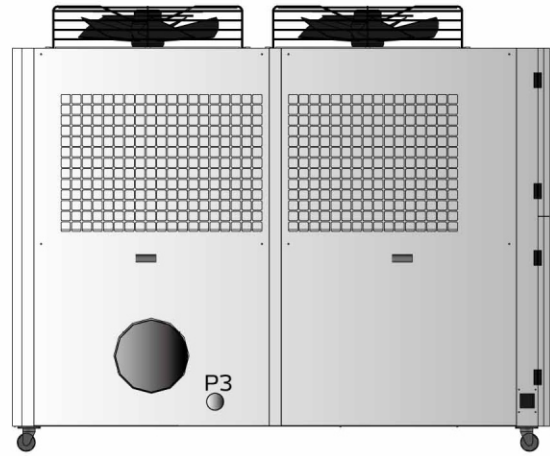
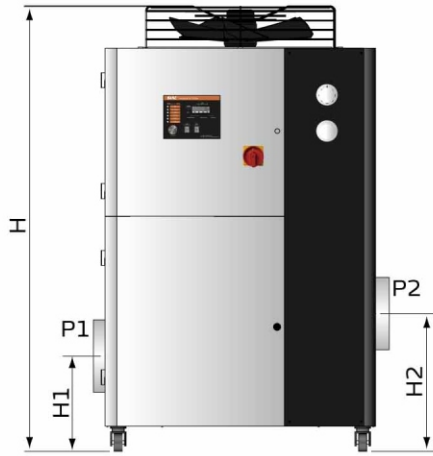
Working Principle

For SIAC-A-R2 series air chiller, when started up, compressor 1 starts to work to turn refrigerant into high pressure gas. Then the gas moves along BC to enter into condenser 3 to exchange heat with air and become liquid while its heat is taken away by air. During procedures of C-D-E-F, the liquid refrigerant come out from condenser 3 goes through dry filter 4. After being dried and filtering out impurities, the refrigerant passes through liquid pipe solenoid valve 5 and liquid indicator 6 to reach expansion valve 7. During procedure of F-G, the temperature of high pressure liquid refrigerant will go down after the pressure of refrigerant is reduced by going through thermostatic expansion valve. During procedure of G-A, refrigerant of low temperature and low pressure exchanges heat with air and cools air to the set temperature by going through evaporator 9. Then the refrigerant of low temperature from evaporator moves back to compressor. Such procedures repeat.

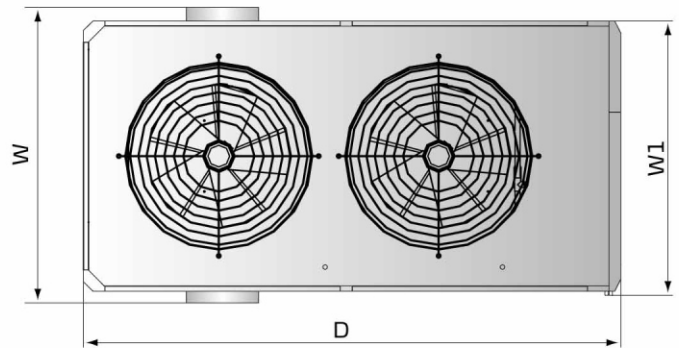
Function of hot air bypass valve: After the air is chilled down to the set temperature, the hot air bypass valve starts to work. Some refrigerants of high temperature and high pressure goes through hot air bypass valve 11 to exchange heat with refrigerants from expansion valve to balance refrigerating capacity of machine. When the air temperature is higher than the set temperature, the hot air bypass valve turn closed and the machine will fully work to chill refrigerant to make the air temperature constant.



■ Dimensions



With fans



Model	H (mm)	H1 (mm)	H2 (mm)	W (mm)	W1 (mm)	D (mm)	P1 air outlet (inch)	P2 air Inlet (inch)	P3 Water Outlet (inch)	Weight (kg)
SIAC-49A-R2	1885	403	583	1255	1160	2275	12	12	1/2	660

SIAC-A-R2 Series

Specifications

Item	Parameter	Model	SIAC-49A-R2
Refrigeration Capacity ¹⁾	kW		49
	kcal/hr		42,140
Compressor	Type		Scroll
	Output Power	kW	12.7
		HP	15
Refrigerant	Filler Content (kg)		9.8
	Control Mode		Thermostatic expansion valve/Electronic expansion valve
	Type ²⁾		R410A
Evaporator	Type		Plate evaporator
Condenser	Type		Plate evaporator
	Blower Power (kW)		2×1.1
	Total Power ³⁾ (kW)		15
High-pressure Blower ²⁾ (50Hz)	Power (kW)		1.5/2.2
	Air volume (m ³ /H)		3,000
	The minimum static pressure (kPa)		150
Pipe Coupling (inch)	Chilling Water Outlet (inch)		1/2
Protective Device	Compressor		Overload relay
	Blower		Overload relay (Optional)
	Cooling Water Circuit		High and low pressure switches/Anti-freezing switch
	Power ⁴⁾		3Φ.400VAC,50Hz
	Measures Exchange		1 kW = 860 kcal/hr 1 RT = 3,024 kcal/hr 10,000 Btu/hr = 2,520 kcal/hr

Notes: 1) Refrigeration capacity is tested under conditions that outlet air temp. is 7°C and ambient dry bulb temp. is 35°C.

2) Adopt R410A refrigerant, used to improve coefficient of performance (COP) and R410A is ozone-friendly.

3) The blower is optional, with different powers for customers' demands.

4) Demands on special voltage of power supply can be satisfied.

5) SIAC-A-R2 is applicable to the conditions under environment temperature of 43°C.

We reserve the right to change specifications without prior notice.

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