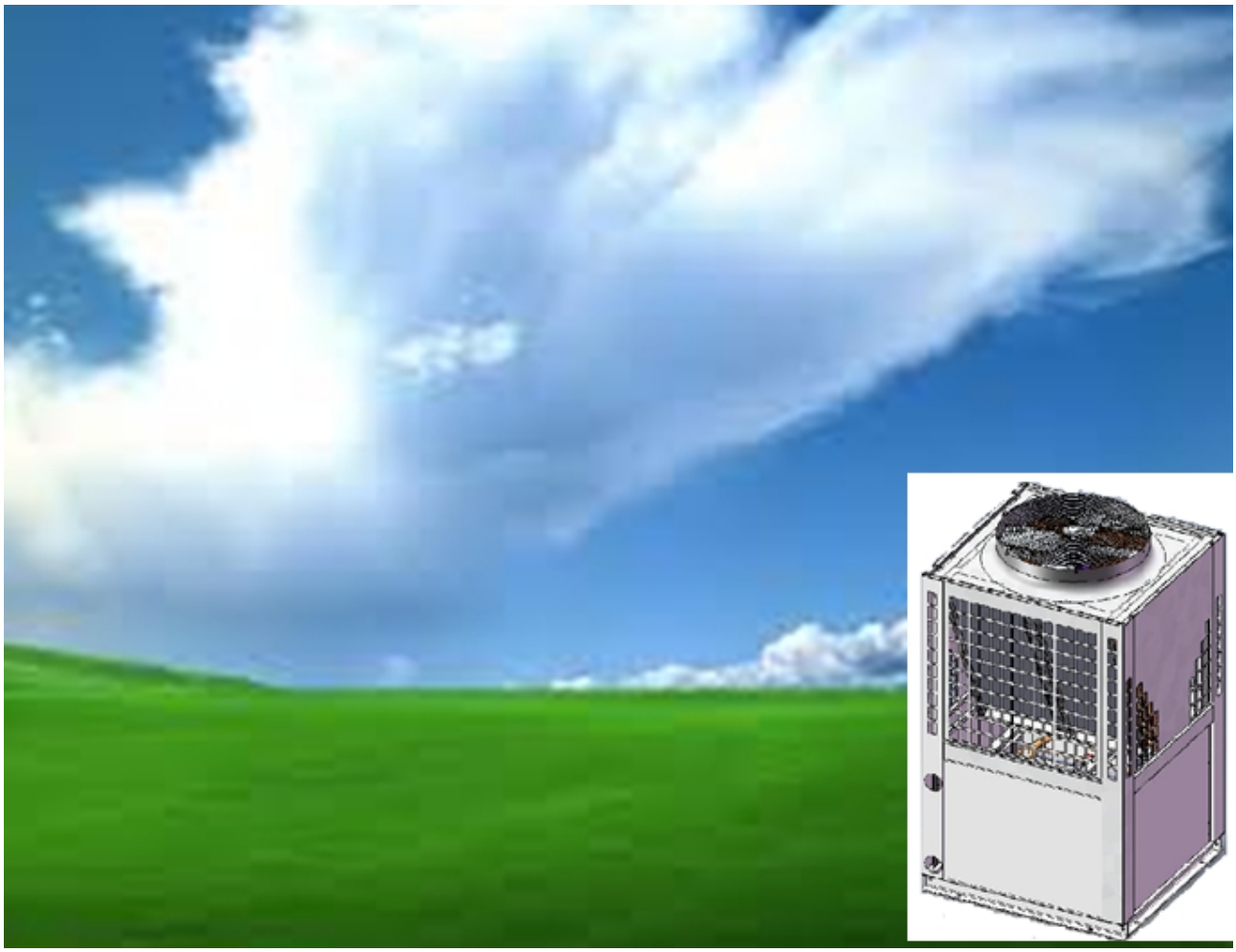
SINKO

AIR COOLED CHILLERS
SA MODULE SERIES



E-SA-2014B

SINKO Series Specifications and Parameter

Model / Item		SA-06 ES	SA-08 ES	SA-10 ES	SA-12 ED	SA-16 ED	SA-20 ED	SA-18 ET	SA-24 ET	SA-30 ET
Power supply		3 ϕ / 380V / 440/50HZ								
Cooling capacity	KCAL/HR	17550	22800	29240	35100	45600	58480	52650	68400	87720
Compressor	Type	Hermetic scroll type								
	Quantity	1	1	1	2	2	2	2	3	3
	Input power (KW)	6.3	8.5	11	12.6	17	22	18.9	26	33
Fan	Type	Axial type								
	Input power (KW)	1.1	1.1	1.1	2.2	2.2	2.2	3.3	3.3	3.3
Refrigeration oil	Type	SL32								
	Filling volume (L)	3.25	3.25	4.67	3.25*2	3.25*2	4.67*2	3.25*3	3.25*3	4.67*3
Evaporator	Type	Plate type heat exchanger								
	Water flow (L/MIN)	58.5	76	97	117	152	175.5	195	228	292
	Head loss (M)	1.5	1.7	2.3	1.9	2.0	2.7	2.1	2.4	3.2
Refrigerant	Type	R134a								
	Flow control	Expansion valve automatic regulation								
Protective devices		Overload protection, anti-freezing switch, high / low pressure switch, fusible link, loss of phase protection, converse-phase protection, over-current protection, temperature switch.								
Water type		1-1/2”	1-1/2”	1-1/2”	2	2”	2	2”	2-1/2”	2-1/2”
Dimension	Length (MM)	1100	1100	2200	2200	2200	2200	2200	3300	3300
	Width (MM)	1150	1150	1150	1150	1150	1150	1150	1150	1150
	Height (MM)	2150	2150	2150	2150	2150	2150	2150	2150	2150
Machine weight (KG)		525	550	650	1050	1300	1590	1575	1650	1950

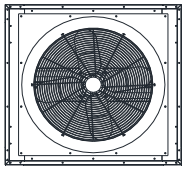
Notes: 1. The working conditions for cooling operation are as follows: the inlet temperature of chilled water at 12℃, the outlet temperature of chilled water at 7℃, and the outdoor ambient temperature at 35℃。

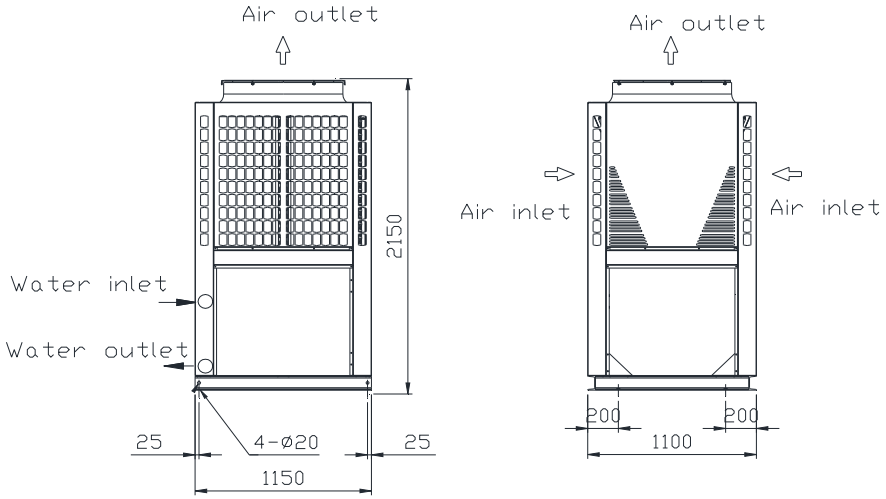
2. For ordering special specification, please contact our business department.

3. The SINKO reserve the right to modify product design. Any specifications given in this catalogue are subject to change without notice.

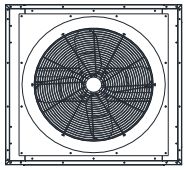
SINKO Chiller Appearance and Dimension

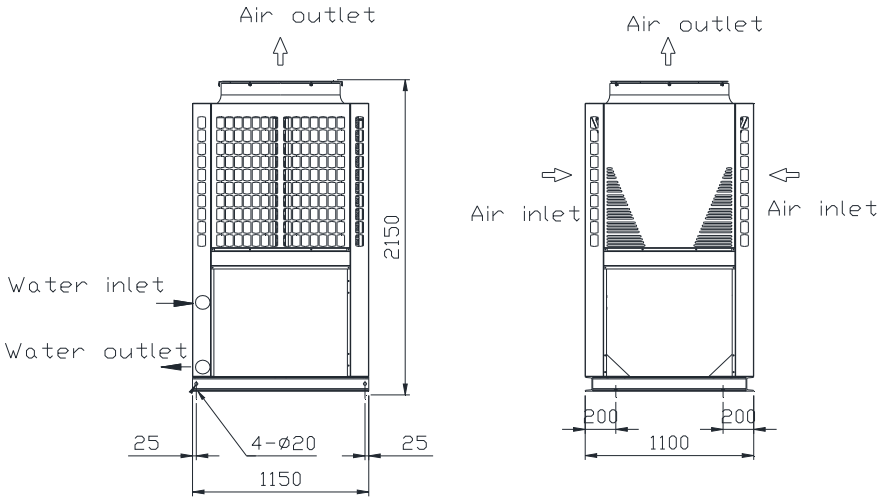
SA-06S/08S





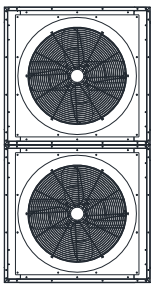
SA-10S

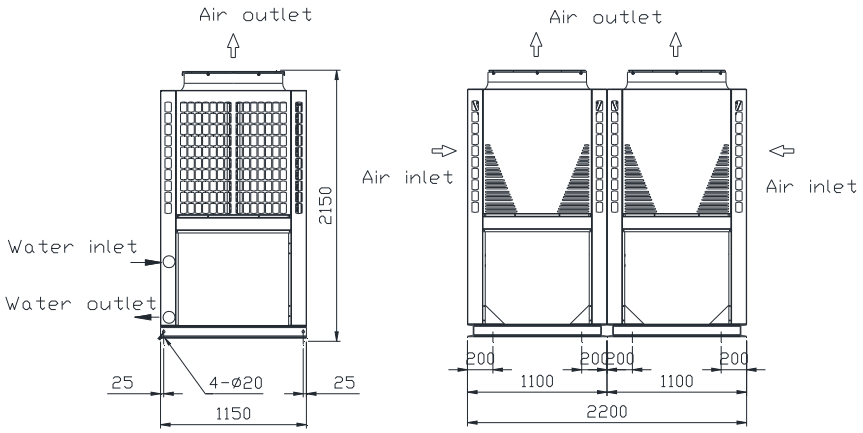




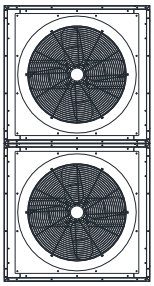
SINKO Chiller Appearance and Dimension

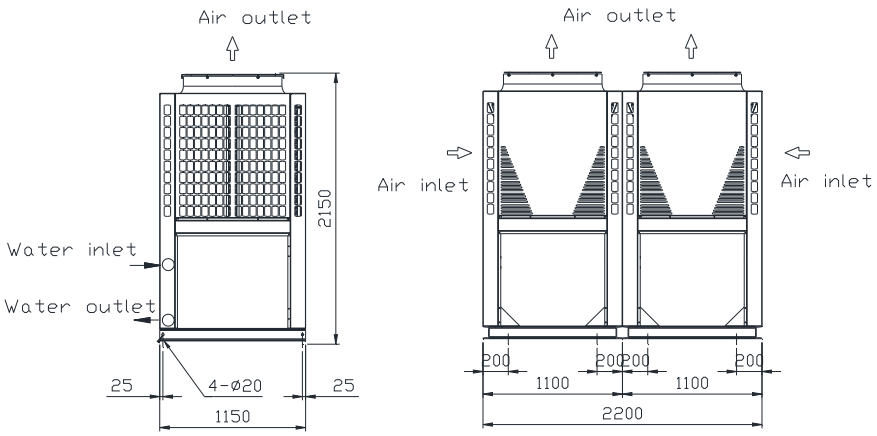
SA-12D/16D





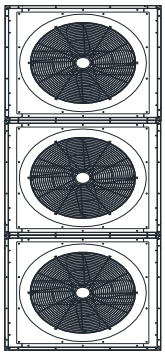
SA-20D

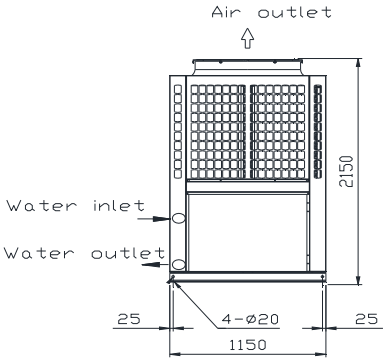


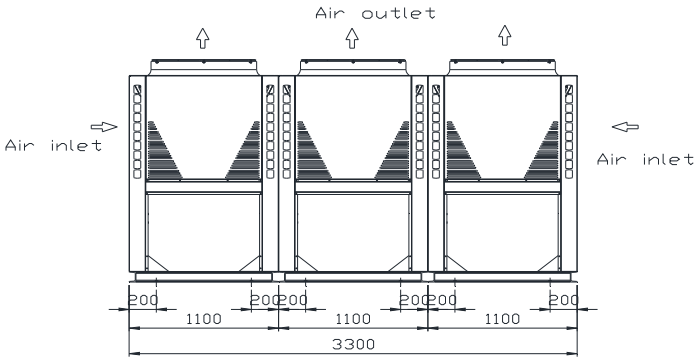


SINKO Chiller Appearance and Dimension

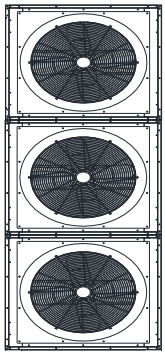
SA-18T/24T

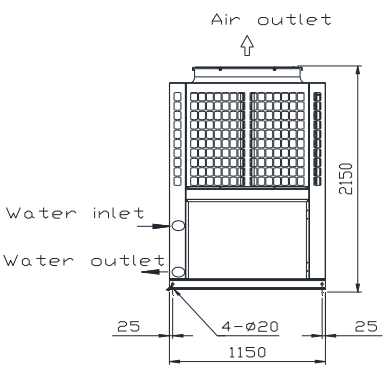


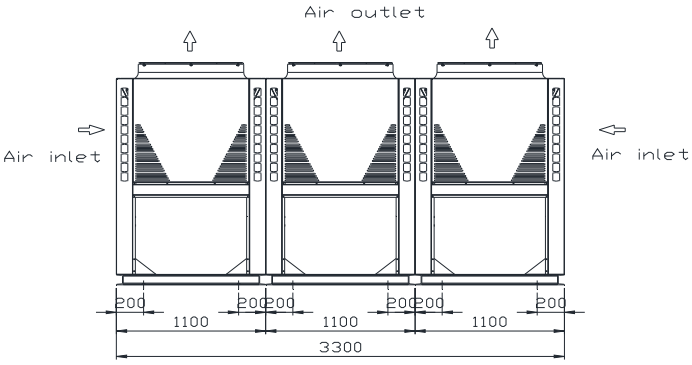




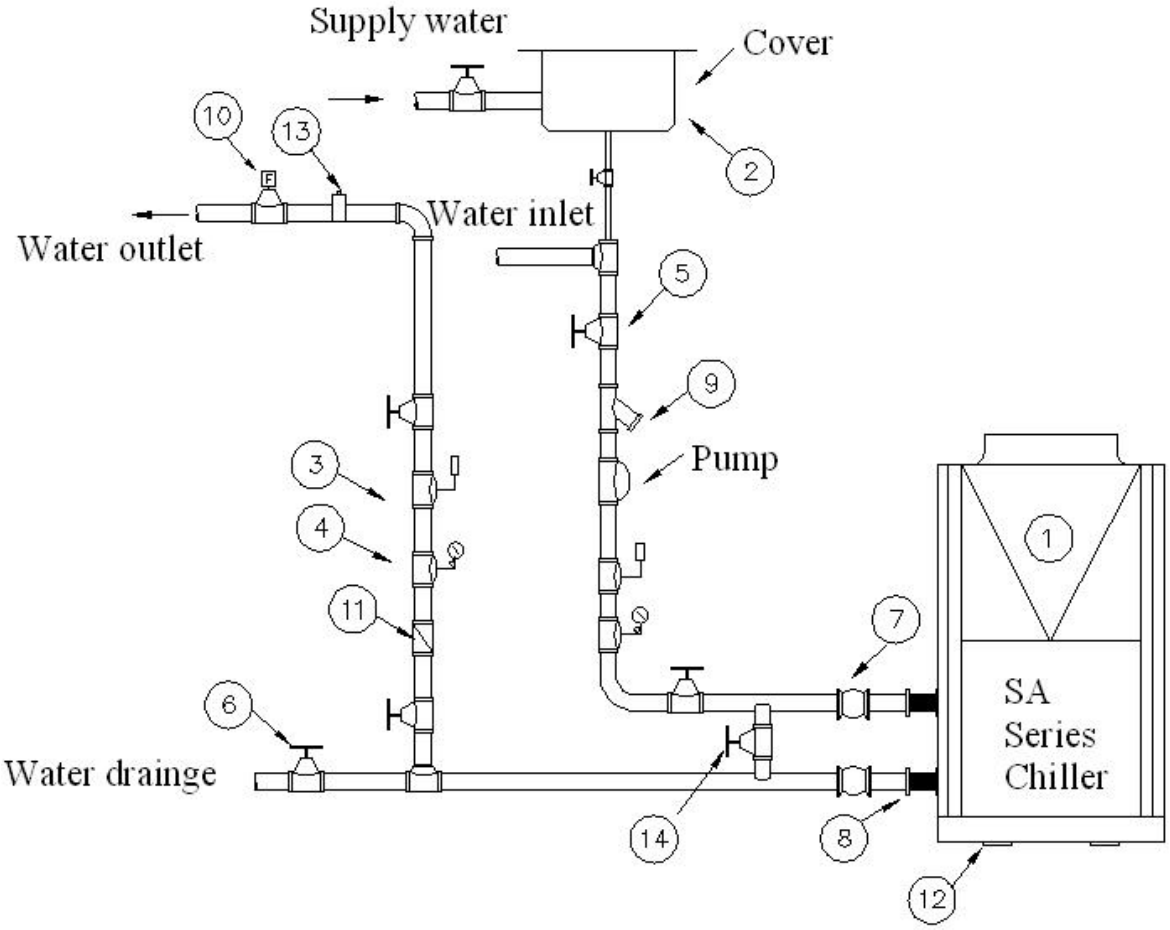
SA-30T







SINKO Diagram of Water Piping Installation



【Description of code】 ①Chiller ②Expansion water tank ③Thermometer ④Pressure gauge ⑤Gate valve ⑥Water drainage valve ⑦Union ⑧Flexible joint ⑨Water strainer ⑩Flow switch ⑪Check valve ⑫Vibration isolation pad ⑬automatic air relief valve ⑭bypass valve

Notes:

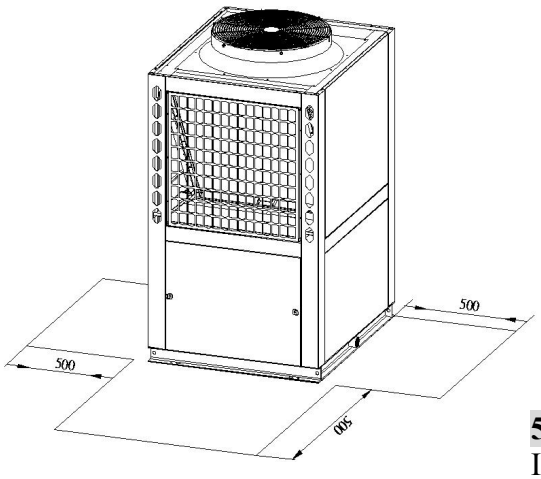
1. The water expansion tank should be made of anti-corrosive materials, and located at the highest point of the system and over 100cm in order to meet the needs of automatic air relief, and water supplying and water expansion.
2. In case of system with multi-chiller in combined piping, the water separator, header, and water pressure balance valve should be installed.
3. For first time of circulating water operation, the water inlet valves and outlet valves should be closed while the bypass valve opened. After a certain operation time duration of the water pump, the inlet valves and outlet valves can be opened and the bypass valve should be closed for starting normal operation.
4. An **automatic air relief valve** should be installed **at the highest point** of circulating water system. After completing the system, it needs to assure the water quality in the piping clean, air relief, and avoid damaging chiller due to operation without water.
5.

SINKO Notes for Chiller Installation

1
The chiller can be situated on rooftop, balcony or outdoor courtyard. Please avoid any buildings or barriers nearby which might block the ventilation.

7
If it is a special location where all the cases mentioned above not workable please contact SINKO sales department for other solutions.

2
Check the floor structural capability to bear the operating weight of the chiller, and the sufficient space available to allow the chiller moving in and out.



6
In case of double chillers on the rooftop, it needs a foundation structure made of angle steel or channel steel to elevate the chiller at least 30cm for better drainage and ventilation of the bottom side.

5
In case of installing on a balcony, if the chiller is the on top air exhausting type, the space over 1.5m height above the chiller should be void to avoid bad heat rejection; if the chiller is the on side air exhausting type, the air exhausting direction should keep away from the front wind. If it happens to exist an air duct should be installed to avoid chiller stopping due to high pressure too high in summer or unusual evaporating temperature drop in winter. No matter on rooftop or on balcony installation it need preventing the noise spread to the ground.

3
Choose the installation location where the water supply is near and the piping works are easy to install.

4
Choose the installation where the electrical main power supply is near in order to avoid excessive voltage drop that will cause chiller failing to start up.

SINKO Notes for Operation and Maintenance

1. Prior to starting the chiller, please check the electrical power specification on the name plate is same as the actual power supply, otherwise never starting the chiller.
2. The chiller has been commissioning completely before ex-factory, so that all the protective devices are set accordingly without any adjustment by the user. Any damages happened caused by user's own adjustment of setting will not in coverage of quality guarantee..
3. All the valves at the water side system please do not operate or turn off casually. The strainer at the water pump return side should be cleaned after 24 hours operation of commissioning.
4. The surrounding area of the chiller in outdoor should keep dry, clean, and ventilated well, and have no any stuff located.
5. The manual switch or remote switch of the chiller should not operate too frequently, i.e., less than 4 times in an hours. The switches should be turned to off position during maintenance and to on position once the maintenance is done.
6. After one season of operation and if the chiller cooling capacity is not sufficient, check the strainer of possible clogging or the indoor cooling unit coil existing too much dust.
7. The chiller heat rejection unit should be cleaned with chemical solution at least once a year, besides with blowing or washing clean once per 2 or 3 months in order to maintain good heat rejection result and energy saving.
8. If the chiller had problem, please make a phone call to inform the chiller model, series number, and situation for sending maintenance personnel as soon as possible.

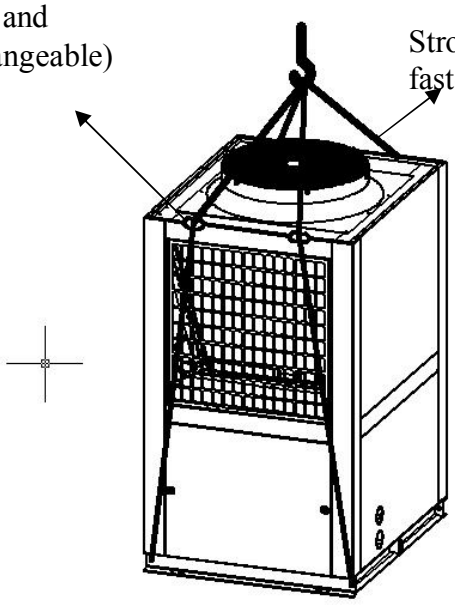
Notes for Hanging and Transporting

Before transporting from factory to installation site and hanging, the chiller should be roped very well.

The chiller should be move carefully and slowly to maintain always at vertical position and never make it tilted at over 30° .

Protective pads (hard and unchangeable)

Strong and fastened rope



To avoid scratch or deformation of the chiller outer casing, protective pads should be inserted at the contacting portion of the steel rope and chiller body (see the drawing attached).

During the time of chiller lifting up avoid to hit anything and slipping. In the same time all the personnel should avoid standing at under or near the chiller for safety reason.

Diagram of proper and safe lifting of chiller