



WATER COOLED SCROLL WATER CHILLER



RUIDONG GROUP COMPANY

About us

Ruidong group is located in the beautiful solar city Dezhou which is situated in the northwest of Shandong province. The Beijing-Shanghai high-speed railway and Beijing-Shanghai expressway which spread across the city make the city a main coordinate of national economic main artery.

The registered capital of group company is RMB100 million, covering an area of 300,000 m² with modern workshops and office buildings of more than 180,000 m². Ruidong Group consists of the following companies:

German Aero Phoenix commercial trading company;

Shandong Ruidong Air conditioning Co.,Ltd;

Beijing Ainuofeili Trading Co.,Ltd;

Shandong Ruidong New Energy Technology Co.,Ltd;

Shandong Ruidong Mechanical and Electrical Equipment installation Co.,Ltd.;

Dezhou Ruidong Purifying Air Conditioning Co.,Ltd.

A.Main Business scope

1.Chiller and heat pump series:

* Water-cooled series: Centrifugal cold(hot)water units,Screw Ground(water)source heat(cold)units, Scroll Ground(water)source heat(cold)units,Water loop units.

* Air-cooled series: Screw cold(hot) water units,Module cold(hot) water units,Villa-use cold(hot) water unit,VRV series units, Rooftop packaged unit, Rooftop split unit.

* Unit style series: Constant temperature humidity units,Air(water) cooling unitary air conditioning units, Dehumidification units.

2.Terminal series: Puffy Air Conditioning,Combined air handling unit,Fresh air handling units, Fan Coil Series.

3.Ventilation series: Fire fighting exhaust fan, Roof ventilator Axial flow fan,Diagonal fan,centrifugal fan and so on.

4.Cooling tower series:All kinds of FRP draft cooling tower,Stainless steel cooling tower.

5.Air-conditioning auxiliary:Cyclone desander, Water knockout drum(collector),Dirt separator,Water Softener Plant,Plate heat exchanger units, Constant pressure equipment.

6.Air Conditioning Parts:All kinds of fire dampers,Regulating valves, Tuyere series.

7.Other products:Low temperature industrial water chiller units, Freezing and refrigerating equipment ,Planting and breeding air-conditioning equipment.

B. Engineering construction:

Mechanical and electrical equipment installation,Fire engineering,Decoration and cecorating, Equipment Maintenance and Repair, and all kinds of qualifications related to those above mentioned.



Opening ceremony



Engineer team

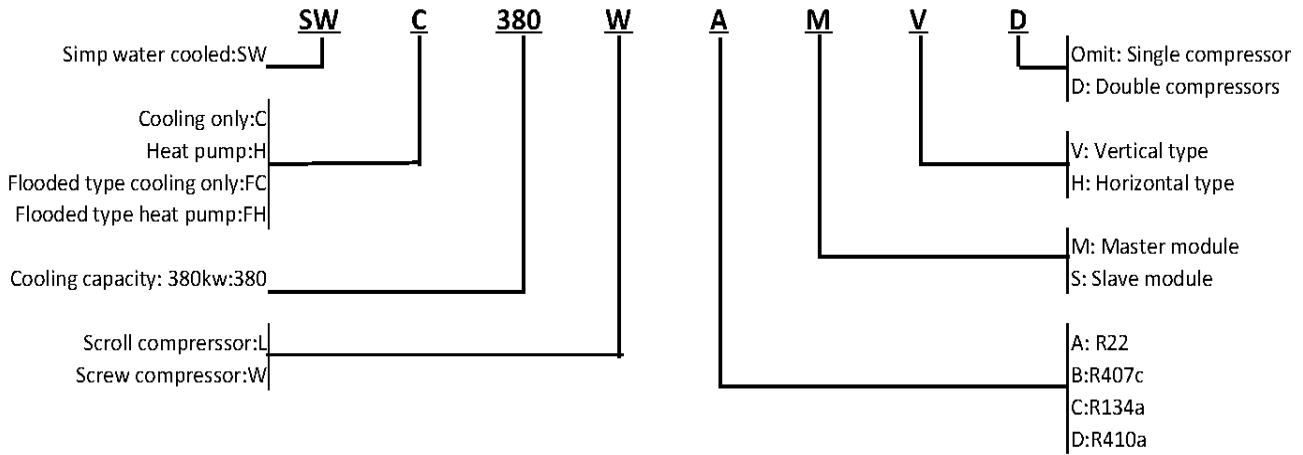


Modern workshop



National class testing center

Nomenclature



Products Description

The chiller adopts vortex cooling compressor, consisting of 1 to 4 compressors. And it matches up with the high efficiency shell and tube type condenser, evaporator and control system.

This series chiller is suitable to central air conditioning system for general residents, villa, small canteen, shops, hospital, TKV, office buildings and commercial building etc.

Main parts



<1>Compressor

Scroll compressor itself has excellent ability of resistance to liquid impact. It can more efficiently prevent the machine faults caused by insufficient oil fluorine separation while starting up.



<2> Evaporator

It applies direct expansion evaporation with single or multiple loop refrigerant system design: refrigerant will evaporate by absorbing heat in the copper pipe, the cold water will flow through the shell combined by steel pipe and clapboard. The heat exchanging between refrigerant and cold water will gain the best effect. Heat exchanging copper pipe: applying high efficient internal thread seamless steel pipe.



Steel shell: both the production and test conform with the provisions in JB/T4750-2003 Pressure Vessel for Refrigerant Device.

<3> Condenser



It applies direct expansion evaporation with single or multiple loop. The refrigerant will condense and release heat in the shell side; the condensed water will absorb heat while it flows through the tube.

Steel shell: both the production and test conform with the provisions in JB/T4750-2003 Pressure Vessel for Refrigerant Device.

**<4>Distribution control box**

It contains starter, overheat protector and power supply protector. The microcomputer controller applies famous wide temperature range electrical components, which can operate stably under the temperature range of -150C to 650C. It has perfect automatic control function and is equipped with RS-232, RS-485 standard communication interface, which can

realize the remote control.

Control Method

<1> Microcomputer control properties

It can adjust the cold water chiller according to the temperature of cold water returning or cold outlet. When the load lowers to the allowable minimum value, it will stop automatically and when will reset automatically. It has simple keyboard and complete LCD display screen.

It can show the inlet & outlet temperature of cold water and the set point, the alarm condition and the compressor running hours. It can receive remote starting and stopping signal. Several sets of chillers can operate parallely (as many as 7 sets).

Operation and safety equipment


<1>Safety valve

This device protects the system from damage caused by abnormal high pressure while the high or low switch is damaged.

<2>High or low switch

This device protects the compressor from system damage caused by extra high pressure or ultra-low pressure.

<3>Antifreeze temperature protection

This device will protect the system from damage caused by frozen cold water.

<4>Oil heating zone

Every compressor has a oil heating zone. As the compressor stops, it will heat the oil. And while the compressor start next time, it will protect the refrigerant from dilution caused by the mixture of refrigerant and oil.

<5>Temperature control

This device will automatically keep the system at a certain temperature.

<6>Liquid mirror

There will be a liquid mirror showing the humidity indication on the fluid pipe. Through the liquid mirror, we can check whether the refrigerant is enough or whether the moisture content in the refrigerant is out of limit.

<7>Dry filter

This device can filter the impurities and absorb the moisture in the system. It has properties of a great efficient communication area and minimal low pressure drop.

<8>Thermal expansion valve

This device can control the flow rate of the refrigerant and to suit the chiller capacity.

<9>Piezometer

It indicates the high and low pressure while the chiller runs, which can help the operator to know the running condition of the chiller.

<10>Refrigerant separate system

The refrigerant system combined by multiple compressors is independent. We can mend one compressor or replace the pipe parts while they others operate, not needing to turn off the whole system.

<11>Overload protector

When the load of the motor exceeds the rated current, it will stop the motor and prevent the system from damage.

<12>Power supply protector

This device prevents the compressor from reverse or owe phase operation caused by too high or too low voltage.

TECHNICAL SPECIFICATION

Mini type-Cooling tower condition

No.	Model	SWC06L	SWC08L	SWC10L	SWC14L	SWC18L	SWC20L	SWC30L	SWC40L	
Cooling capacity	KW	5.4	7.2	9.5	13.3	17.2	19	28	38	
Input power	KW	1.7	2.0	2.6	2.7	3.6	4.2	5.9	7.9	
Power supply		220V / 1PH / 50HZ				380V / 3PH / 50HZ				
Compressor	Type	Hermetic Rotary Type				Hermetic Scroll Type				
	Qty	1								
	Start model	Directly Start								
	Refrigerant	Type	R22 /R407c							
		Charge (kg)	1.3	1.6	2.2	2.8	3.8	3.0	5.0	7.0
	Control	TXV								
Evaporator	Type	Double tube / Plate								
	Pressure drop	KPa	≤50							
	Pipe connection size (DN)	25	25	25	25	32	50	50	50	
	Water in/out temp.	℃	12/7							
	Cooled water flow	m ³ /h	1.0	1.2	1.7	2.2	2.9	3.2	4.9	6.5
Condenser	Type	Double tube / Plate								
	Pressure drop	KPa	≤50							
	Pipe connection size (DN)	25	25	25	25	32	50	50	50	
	Water in/out temp.	℃	30/35							
	Cooling water flow	m ³ /h	1.3	1.6	2.1	2.6	3.5	4.3	5.8	7.8
Structure		Horizontal								
Dimension	L	mm	1200	1200	1200	1200	1200	1400	1400	1400
	W	mm	700	700	700	700	700	655	655	655
	H	mm	1000	1000	1000	1000	1000	1100	1100	1100
Net weight	KG	150	175	190	210	235	240	270	285	
Running weight	KG	195	206	224	248	280	285	325	340	
Noise	dB(A)	52	52	53	53	53	54	54	56	
Protection measures		1.High &low voltage protection; 2.Anti-freezing protection; 3.Temperature control; 4.Owe anti-phase protection; 5.High & low pressure protection; 6.High pressure exhaust temperature protection; 7.Built-in motor overheating protection; 8.Over-current protection; 9. Safe valve; 10.Check valve								

Notes:

- 1) Built-in water pump & expansion tank are optional
- 2) Different power supply are optional

TECHNICAL SPECIFICATION

Mini type-Underground water condition

No.		Model		SWC06L	SWC08L	SWC10L	SWC14L	SWC18L	SWC20L	SWC30L	SWC40L
				SWH06L	SWH08L	SWH10L	SWH14L	SWH18L	SWH20L	SWH30L	SWH40L
Cooling capacity		KW	6	8	10	14	18	19	31	41	
Cooling input power		KW	1.5	1.7	2.3	2.4	3.1	3.5	5.2	6.9	
Heating capacity		KW	7	9	11	15	19	21	32	44	
Heating input power		KW	2.1	2.5	3.3	3.4	4.5	4.7	7.3	9.9	
Power supply			220V / 1PH / 50HZ				380V / 3PH / 50HZ				
Compressor	Type		Hermetic Rotary Type				Hermetic Scroll Type				
	Qty		1								
	Start model		Directly Start								
	Refrigerant	Type	R22 /R407c								
		Charge (kg)	1.5	1.8	2.5	3.1	4.1	4.5	6.0	8.0	
Control		TXV									
Evaporator	Type		Double tube / Plate								
	Pressure drop	KPa	≤50								
	Pipe connection size (DN)		25	25	25	25	32	50	50	50	
	Water flow in/out	Cooling	m ³ /h	1.1	1.4	1.9	2.4	3.1	3.2	5.3	7.1
		Heating	m ³ /h	0.7	0.9	1.2	1.5	2.0	2.2	2.8	3.7
	Water temperature	Cooling	°C	12/7							
Heating		°C	40/-								
Condenser	Type		Double tube / Plate								
	Pressure drop	KPa	≤50								
	Pipe connection size (DN)		25	25	25	25	32	50	50	50	
	Water flow in/out	Cooling	m ³ /h	0.7	0.9	1.2	1.5	2.0	2.2	2.8	3.7
		Heating	m ³ /h	1.1	1.4	1.9	2.4	3.1	3.2	5.3	7.1
	Water temperature	Cooling	°C	18/29							
Heating		°C	15/-								
Structure			Horizontal								
Dimension	L	mm	1200	1200	1200	1200	1200	1400	1400	1400	
	W	mm	700	700	700	700	700	655	655	655	
	H	mm	1000	1000	1000	1000	1000	1100	1100	1100	

Net weight	KG	150	175	190	210	235	240	270	285
Running weight	KG	195	206	224	248	280	285	325	340
Noise	dB(A)	52	52	53	53	53	54	54	56
Protection measures	1.High &low voltage protection; 2.Anti-freezing protection; 3.Temperature control; 4.Owe anti-phase protection; 5.High & low pressure protection; 6.High pressure exhaust temperature protection; 7.Built-in motor overheating protection; 8.Over-current protection; 9. Safe valve; 10.Check valve								

Notes:

- 1) Built-in water pump & expansion tank are optional
- 2) Different power supply are optional
- 3) R410a refrigerant is optional

TECHNICAL SPECIFICATION

Mini type-Underground piping loop condition

No.	Model		SWC06L	SWC08L	SWC10L	SWC14L	SWC18L	SWC20L	SWC30L	SWC40L	
			SWH06L	SWH08L	SWH10L	SWH14L	SWH18L	SWH20L	SWH30L	SWH40L	
Cooling capacity		KW	6	8	10	14	18	19	31	41	
Cooling input power		KW	1.5	1.8	2.4	2.4	3.2	3.3	5.4	7.1	
Heating capacity		KW	8	9	12	15	19	22	31	42	
Heating input power		KW	2.1	2.5	3.1	3.4	4.5	4.3	7.7	9.9	
Power supply			220V / 1PH / 50HZ				380V / 3PH / 50HZ				
Compressor	Type		Hermetic Rotary Type				Hermetic Scroll Type				
	Qty		1								
	Start model		Directly Start								
	Refrigerant	Type	R22 /R407c								
		Charge (kg)	1.4	1.7	2.4	3.1	3.6	4.0	6.0	7.0	
Control		TXV									
Evaporator	Type		Double tube / Plate								
	Pressure drop	KPa	≤50								
	Pipe connection size (DN)		25	25	25	32	32	50	50	50	
	Water flow in/out	Cooling	m ³ /h	1.1	1.3	1.8	2.3	2.7	3.1	5.2	6.9
		Heating	m ³ /h	1.3	1.6	2.2	2.9	3.4	3.9	6.5	8.6
	Water temperature	Cooling	°C	12/7							
Heating		°C	40/-								
Condenser	Type		Double tube / Plate								
	Pressure drop	KPa	≤50								
	Pipe connection size (DN)		25	25	25	25	32	50	50	50	
	Water flow in/out	Cooling	m ³ /h	1.3	1.6	2.2	2.9	3.4	3.9	6.5	8.6
		Heating	m ³ /h	1.1	1.3	1.8	2.3	2.7	3.1	5.2	6.9
	Water temperature	Cooling	°C	25/30							
Heating		°C	10/-								
Structure			Horizontal								
Dimension	L	mm	1200	1200	1200	1200	1200	1400	1400	1400	
	W	mm	700	700	700	700	700	655	655	655	
	H	mm	1000	1000	1000	1000	1000	1100	1100	1100	

Net weight	KG	150	175	190	210	235	240	270	285
Running weight	KG	195	206	224	248	280	285	325	340
Noise	dB(A)	52	52	53	53	53	54	54	56
Protection measures	1.High &low voltage protection; 2.Anti-freezing protection; 3.Temperature control; 4.Owe anti-phase protection; 5.High & low pressure protection; 6.High pressure exhaust temperature protection; 7.Built-in motor overheating protection; 8.Over-current protection; 9. Safe valve; 10.Check valve								

Notes:

- 1) Built-in water pump & expansion tank are optional
- 2) Different power supply are optional
- 3) R410a refrigerant is optional

TECHNICAL SPECIFICATION

Cooling tower condition

No.	Model	SWC60L	SWC80L	SWC100L	SWC120L	SWC160L	SWC200L	SWC240L	SWC280L	
Cooling capacity	KW	56	76	95	114	152	190	228	273	
Input power	KW	11.8	15.8	23.7	23.7	31.6	39.5	47.4	52	
Power supply		380V / 3PH / 50HZ								
Compressor	Type	Hermetic Scroll Type								
	Qty	2	2	3	3	4	5	6	2	
	Start model	Directly Start								
	Refrigerant	Type	R22 /R407c							
		Charge(kg)	10	14	20	21	28	35.0	42.0	50.0
Control		TXV								
Evaporator	Type	Shell & Tube								
	Pressure drop	KPa	≤70							
	Pipe connection size (DN)	50	65	65	80	80	100	100	100	
	Water in/out temp.	°C	12/7							
	Cooled water flow	m ³ /h	9.7	13.1	18.2	19.6	26.1	32.7	39.2	47
Condenser	Type	Shell & Tube								
	Pressure drop	KPa	≤70							
	Pipe connection size (DN)	50	65	65	80	80	100	100	100	
	Water in/out temp.	°C	30/35							
	Cooling water flow	m ³ /h	11.6	15.6	22.0	23.4	31.2	39.5	46.8	55.3
Heat recovery	30%	Type	Shell & Tube							
		Pipe (DN)	40	40	50	50	50	50	65	65
		water flow (m ³ /h)	3.8	5.1	7.3	7.7	10.3	12.0	15.4	18.2
	100%	Type	Shell & Tube							
		Pipe (DN)	50	65	65	80	80	100	100	100
		water flow (m ³ /h)	11.6	15.6	22.0	23.4	31.2	39.5	46.8	55.3
Structure		Vertical								
Dimension	L	mm	2100(1800)	2100(1800)	2400	2400	2400	2800	3166	3166
	W	mm	800(650)	800(650)	800	850	850	850	850	850
	H	mm	1650(1200)	1650(1200)	1650(1350)	1700(1350)	1700(1400)	1700 (1400)	1700 (1400)	1700 (1560)

Net weight	KG	520(410)	630(495)	780(680)	830 (690)	920 (780)	1040 (880)	1350 (1150)	1360 (1160)
Running weight	KG	610(490)	760(610)	920(820)	920(830)	1050 (940)	1150 (1060)	1480 (1380)	1490 (1390)
Noise	dB(A)	56	56	58	58	61	62	64	65
Protection measures	1.High &low voltage protection; 2.Anti-freezing protection; 3.Temperature control; 4.Owe anti-phase protection; 5.High & low pressure protection; 6.High pressure exhaust temperature protection; 7.Built-in motor overheating protection; 8.Over-current protection; 9. Safe valve; 10.Check valve								

Notes:

- 1) Built-in water pump & expansion tank are optional
- 2) Different power supply are optional
- 3)Standard unit is without sheet casing, parameter in parenthesis for unit without sheet casing

TECHNICAL SPECIFICATION

Underground water condition

No.		Model		SWC60L	SWC80L	SWC100L	SWC120L	SWC160L	SWC200L	SWC240L	SWC280L	
				SWH60L	SWH80L	SWH100L	SWH120L	SWH160L	SWH200L	SWH240L	SWH280L	
Cooling capacity		KW	62	82	99	123	164	205	246	293		
Cooling input power		KW	10.4	13.8	18.2	20.7	27.6	34.5	41.4	46		
Heating capacity		KW	63	87	112	131	174	218	261	302		
Heating input power		KW	14.6	19.8	24.8	29.7	39.6	49.5	59.4	65.2		
Power supply				380V / 3PH / 50HZ								
Compressor	Type		Hermetic Scroll Type									
	Qty		2	2	3	3	4	5	6	2		
	Start model		Directly Start									
	Refrigerant		Type	R22 /R407c								
			Charge(kg)	11	15	23	23	30	38	45	54	
Control		TXV										
		Type		Double tube / Plate								
Evaporator	Pressure drop		KPa	≤70								
	Pipe connection size (DN)		50	65	65	80	80	100	100	100		
	Water flow in/out	Cooling	m ³ /h	10.7	14.1	21.2	21.2	28.2	35.3	42.3	50.4	
		Heating	m ³ /h	5.7	7.5	11.2	11.2	15.0	18.7	22.5	26.5	
	Water temperature	Cooling	°C	12/7								
		Heating	°C	40/-								
Condenser	Type		Double tube / Plate									
	Pressure drop		KPa	≤70								
	Pipe connection size (DN)		50	65	65	80	80	100	100	100		
	Water flow in/out	Cooling	m ³ /h	5.7	7.5	11.2	11.2	15.0	18.7	22.5	26.5	
		Heating	m ³ /h	10.7	14.1	21.2	21.2	28.2	35.3	42.3	50.4	
	Water temperature	Cooling	°C	18/29								
Heating		°C	15/-									
Structure				Vertical								
Dimension	L	mm	2100 (1800)	2100 (1800)	2400	2400	2400	2800	3166	3166		
	W	mm	800 (650)	800 (650)	800	800	850	850	850	850		
	H	mm	1650 (1200)	1650 (1200)	1650 (1350)	1700 (1350)	1700 (1400)	1700 (1400)	1700 (1400)	1700 (1560)		

Net weight	KG	520 (410)	630(495)	780(680)	830(690)	830(690)	920(780)	1350(1150)	1360(1160)
Running weight	KG	610 (490)	760(610)	920(820)	920(830)	920(830)	1150 (1060)	1480(1380)	1490(1390)
Noise	dB(A)	56	56	58	58	58	62	64	65
Protection measures	1.High &low voltage protection; 2.Anti-freezing protection; 3.Temperature control; 4.Owe anti-phase protection; 5.High & low pressure protection; 6.High pressure exhaust temperature protection; 7.Built-in motor overheating protection; 8.Over-current protection; 9. Safe valve; 10.Check valve								

Notes:

- 1) Built-in water pump & expansion tank are optional
- 2) Different power supply are optional
- 3)Standard unit is without sheet casing, parameter in parenthesis for unit without sheet casing

TECHNICAL SPECIFICATION

Underground piping loop condition

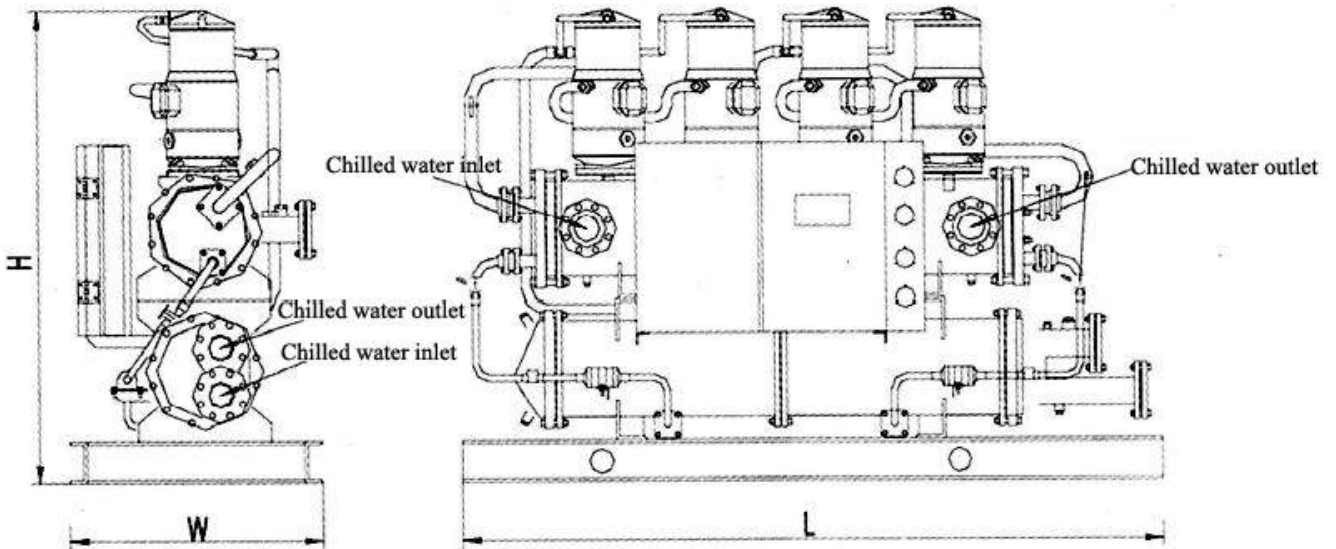
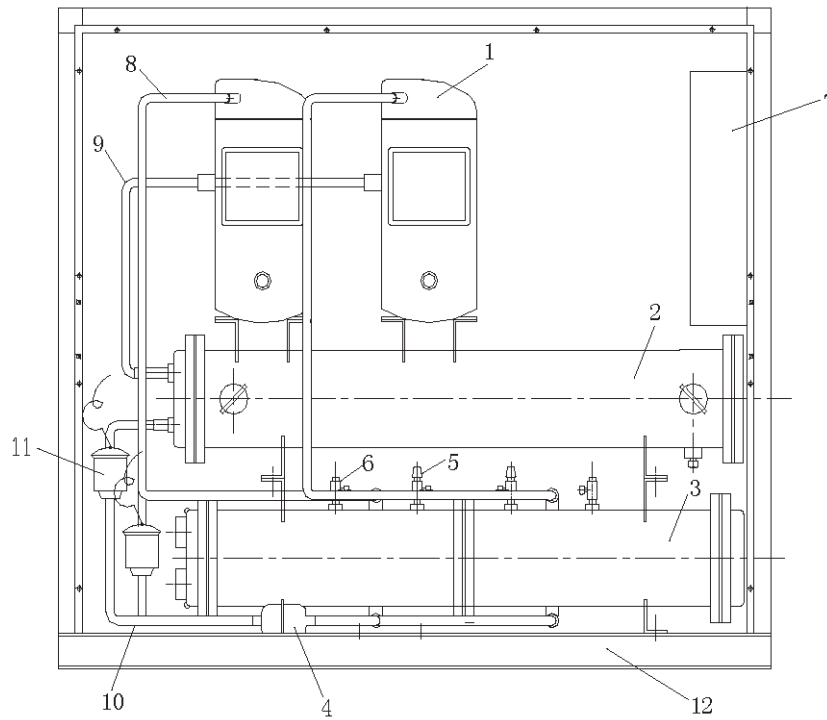
No.		Model		SWC60L	SWC80L	SWC120L	SWC160L	SWC200L	SWC240L	SWC280L
				SWH60L	SWH80L	SWH120L	SWH160L	SWH200L	SWH240L	SWH280L
Cooling capacity		KW	60.6	80	120	160	200	240	290	
Cooling input power		KW	10.8	14.2	21.3	28.4	35.5	42.6	46.8	
Heating capacity		KW	62	83	125	167	209	250	312	
Heating input power		KW	15.4	19.8	29.7	39.6	49.5	59.4	65.2	
Power supply			380V / 3PH / 50HZ							
Compressor	Type		Hermetic Scroll Type							
	Qty		1	2	3	4	5	6	2	
	Start model		Directly Start							
	Refrigerant	Type	R22 /R407c							
		Charge (kg)	11	15	22	30	37	44	54	
Control		TXV								
Evaporator	Type		Double tube / Plate							
	Pressure drop		KPa	≤70						
	Pipe connection size (DN)		50	65	80	80	100	100	100	
	Water flow in/out	Cooling	m ³ /h	10.4	13.8	20.64	27.5	34.4	41.3	49.9
		Heating	m ³ /h	13	17.2	25.8	32.4	40.5	48.6	57.9
	Water temperature	Cooling	°C	12/7						
Heating		°C	40/-							
Condenser	Type		Double tube / Plate							
	Pressure drop		KPa	≤70						
	Pipe connection size (DN)		50	65	80	80	100	100	100	
	Water flow in/out	Cooling	m ³ /h	13	17.2	25.8	32.4	40.5	48.6	57.9
		Heating	m ³ /h	10.4	13.8	20.64	27.5	34.4	41.3	49.9
	Water temperature	Cooling	°C	25/30						
Heating		°C	10/-							
Structure			Horizontal							
Dimension	L	mm	2100	2100	2400	2800	2800	2800	2800	
	W	mm	800	800	800	800	1200	1200	1200	
	H	mm	1700	1700	1700	1800	1800	1800	2000	
Net weight		KG	520	630	830	920	1040	1360	1420	

Running weight	KG	610	820	920	1050	1150	1480	1550
Noise	dB(A)	56	56	58	61	62	64	65
Protection measures	1.High &low voltage protection; 2.Anti-freezing protection; 3.Temperature control; 4.Owe anti-phase protection; 5.High & low pressure protection; 6.High pressure exhaust temperature protection; 7.Built-in motor overheating protection; 8.Over-current protection; 9. Safe valve; 10.Check valve							

Notes:

- 1) Built-in water pump & expansion tank are optional
- 2) Different power supply are optional
- 3)Standard unit is without sheet casing, parameter in parenthesis for unit without sheet casing

Unit diagram



NO.	Part	NO.	Part
1	Compressor	7	Electric Box
2	Shell&tube evaporator	8	High pressure pipe
3	Shell&tube evaporator	9	Air return pipe
4	Dry filter	10	Liquid pipe
5	Air release valve	11	Expansion valve
6	Safety valve	12	Bottom Base

Acceptance and carrying

1. Checking if the good is same as the order with all parts, and if there is any damage during the transport. If it is different from the order or lack of parts, even damage, please contact the transporter or our group.
2. Before installation, less carriage, less damage, don't hang the unit with the parts, and never stand on the parts, such as control box, pipes, and pipe accessories.
3. When hanging by forklift or hoist, it can hang the hanging hole at the base and use hanging support and pay attention to electrical control box, pipe, pipe accessories. Avoiding to scratch the surface and putting protect pad between cable wire and the unit by hanging. Keep the unit vertical, the angularity less than 30°, preventing slide. Pay attention to put on and off lightly.

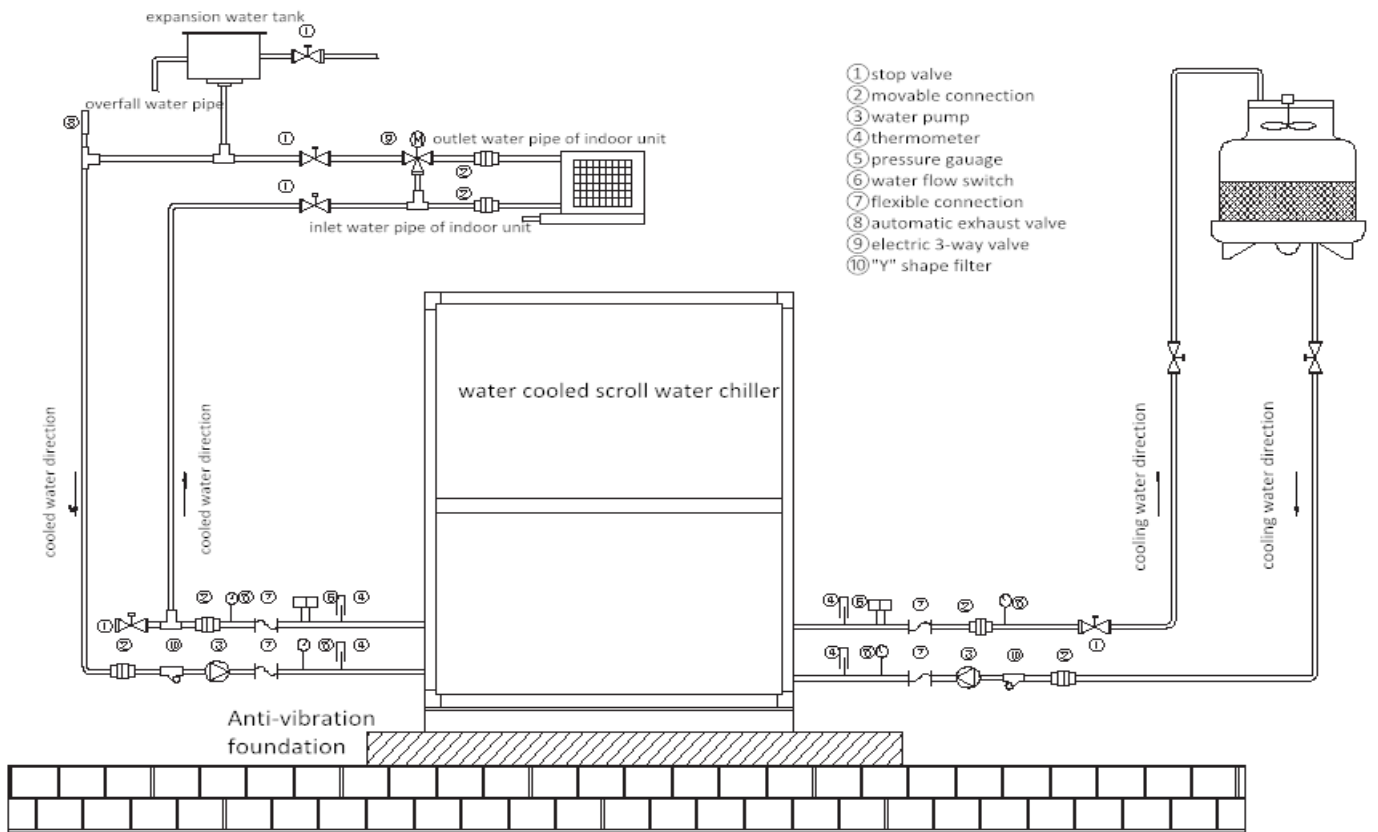
Installation

1. Foundation: Concrete or steel plate, it must can sustain the operating weight of the unit, the levelness shall be within 3%.
2. Shock proof
The foundation must be enough strong to reduce the vibration. Vibration damper is required to avoid the noise and reduce the vibration.
3. Installation space
Ensure there is enough space to move the unit and maintain, keep enough space at both side in order to wash the condenser and evaporator
4. There shall be good ventilation in the room.
5. Drainage, it must install drainage pipe around the foundation to discharge the water in the pipe and equipment.
6. Water proof, The unit must not install equipment under the pipe with condensate water or water leakage. Water proof is very important for the safety of equipment.

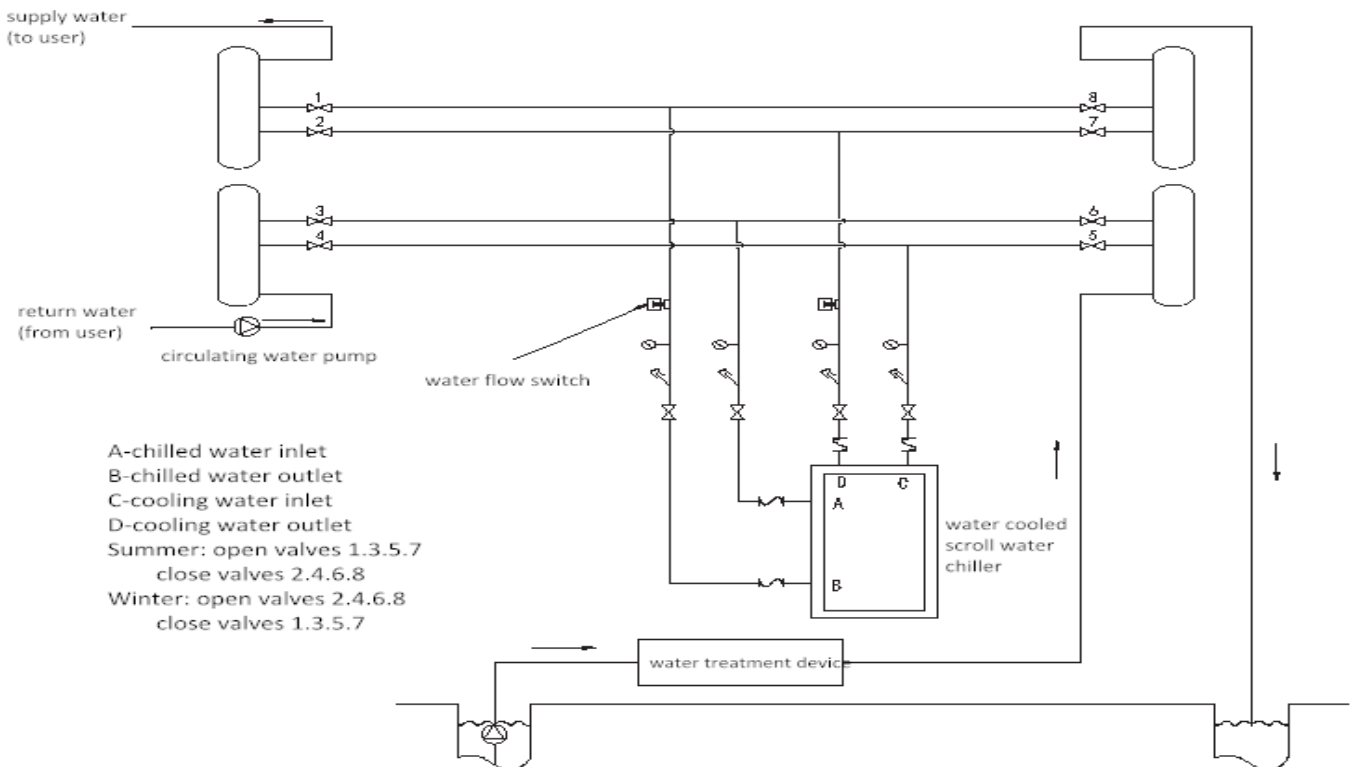
Install water pipe for condenser and evaporator

1. After horizontal adjustment of the equipment, install the water pipes. Shall install vent valve on the top of all pipes. Water pipe of evaporator need thermal insulation to prevent condensation. Thermal insulation of condenser is depend on local condition.
2. Install water pipes for condenser and evaporator correctly.
3. It is better to install temperature gauge and pressure gauge to monitor the running state of equipment.
4. It must install filter on the inlet of water pump to avoid damage caused by the impurity in the pipe.
5. Install drain valve at the lowest point of the water pipe of condenser and evaporator, easily to discharge the water inside the condenser and evaporator when maintain or shut down.
6. Install flexible connection between water pipe and inlet/outlet of condenser and evaporator to reduce the vibration and avoid the unit bearing the weight of the pipes.
7. Install flow switch on the inlet pipe of condenser to ensure enough water during the running of the equipment.
8. Install cycle pump at the inlet of condenser and evaporator.
9. Must discharge the air in the pipe before start the equipment, avoid any damage.
10. Must discharge all water from condenser and evaporator if not use in winter, to avoid damage caused by frozen.

A. Installation Diagram- Cooling tower type



B. Installation Diagram- Underground water type



C. Installation Diagram- Underground piping loop

