

RUIDONG

WATER/GROUND SOURCE SCROLL
WATER CHILLER AND HEAT PUMP



RUIDONG GROUP

www.ruidonggroup.com



Ruidong Group Co., Ltd is one modern large-scale enterprise integrating design, production, sales and installation of central air-conditioning products.

Ruidong is located in Dezhou City, Shandong Province. The Beijing-Shanghai High-speed Railway and Beijing-Shanghai Expressway passing through the city, make Dezhou become a key coordinate of the national economic artery. The registered capital of the group is one hundred fifty five and a half million yuan, covering an area of 300,000 square meters and construction area of 180,000 square meters.

Main business coverage:

1. Host series:

- Water cooled series: centrifugal cold (hot) water unit, screw type cold water unit, screw type water (ground) source cooling and heating unit, scroll type water (ground) source cooling and heating unit.
- Air cooled series: screw type cold (hot) water unit, modular type cold (hot) water unit, mini type cold (hot) water unit, VRV series unit.
- Packaged Unitary unit: constant temperature and humidity unit, air (water) cooled unitary unit, dehumidification unit.

2. Direct expansion series: Rooftop packaged unit, ducted split unit.

3. Terminal series: Purification air handling unit, combined air handling unit, fresh air unit, fan coil unit series.



ENTERPRISE PROFILE

- 4. **Ventilation series:** Fire exhaust fan, roof fan, axial fan, diagonal fan, centrifugal fan, etc.
- 5. **Engine room equipment:** cyclone sand remover, water separator (separator), decontamination device, demineralized water device, plate heat exchange unit, constant pressure equipment, etc.
- 6. **Air conditioning accessories:** All kinds of fire valves, regulating valves, tuyere series.
- 7. **Other products:** Low-temperature industrial chillers, air-conditioning equipment for planting and breeding industries.

The R & D team composed of high-tech talents will continue to introduce new products, advanced production equipment and adopt the international ISO9001 quality management system as a strong guarantee for product quality. Precision testing equipment and rigorous testing methods are the fundamental insurance of quality and are timely and thoughtful. After-sales service solves the problems that may arise in use for you.

The company has established a complete sales and service system. Set up offices in 18 cities including Beijing, Tianjin, Shanghai, Xi'an, Shenyang, Chengdu and other cities to provide users with timely, efficient and high-quality pre-sales, sales and after-sales services.

Ruidong Air Conditioning wishes you: Cooling air for propitious summer, spring returns with warm air from Ruidong.

CERTIFICATIONS

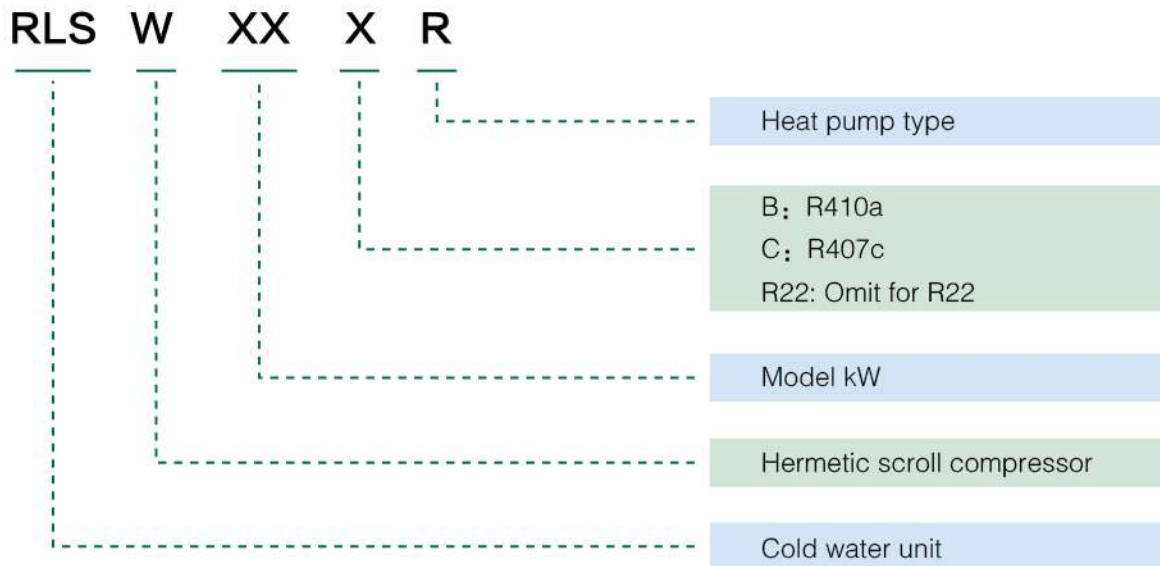
Ruidong group always takes "create first-class quality, offer sincere service" as the quality concept, builds customer-oriented quality management system, focuses on teamwork and insists on continuous innovation.



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1. NAMING SCHEME



2. BRIEF INTRODUCTION

The unit uses scroll compressors, and the system consists of one to four compressors. Cooperate with high-efficiency shell and tube/plate condenser, evaporator and control system. This series of units is suitable for central air-conditioning systems such as general houses, villas, small restaurants, shops, hotels, KTV, office and commercial buildings.

1. Compressor characteristics and components

The scroll compressor itself has excellent anti-liquid impact ability. After installing the oil heating device, it can effectively prevent the machine failure caused by insufficient oil-fluorine separation during operation.

2. High-efficiency shell and tube/plate evaporator and condenser, with high heat exchange efficiency.

3. Control system

Including starting device, overheating protection device and power supply protection. The microcomputer controller adopts well-known brand wide-temperature electrical components, which can operate reliably at an ambient temperature of -15°C to 65°C . It has perfect automatic control function, equipped with RS-232, RS-485 standard communication interface, which can realize remote control.

4. Control method

Microcomputer control features:

- (1) Control the chilled water host with the cold water return water or outlet water temperature.
- (2) When the load reaches the set stop value of the unit, it will automatically stop and start automatically.
- (3) LCD display screen.
- (4) Inlet and return water temperature display and setting, operating status, compressor operating time.
- (5) Accept remote start and stop signals.

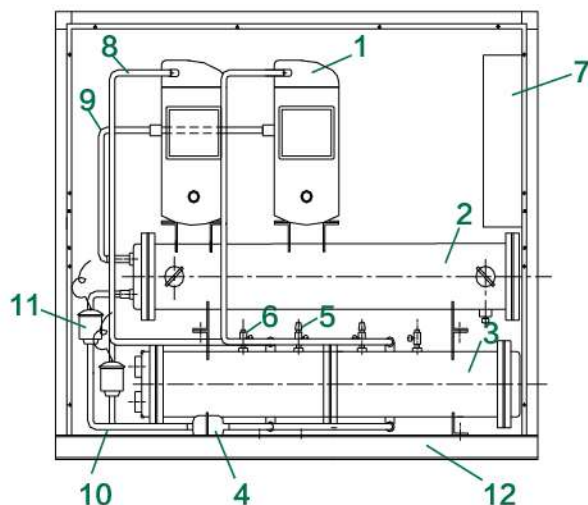
5. Safety facilities

- Safety valve
- High and low voltage switch
- Antifreeze temperature protection
- Oil heater
- Temperature control
- Pressure gauge
- Overload protector
- Power protector

6. Optional accessories

Built-in hydraulic module or separate hydraulic module

3. STRUCTURE DIAGRAM



No.	Parts
1	Compressor
2	Shell&tube type evaporator
3	Shell&tube type condenser
4	Dry filter
5	Vent valve
6	Safety valve
7	Control box
8	High-pressure pipe
9	Return gas pipe
10	Liquid pipe
11	Expansion valve
12	Base

4.SPECIFICATION

Water source working condition R407c(1)

Model	RLSW-(C)R	7	10	12	15	18	12	15	18	20	28	30	
Power supply		220V/50HZ					380V/50HZ						
Compressor qty		1											
Nominal cooling capacity	kW	8.3	10.3	12.2	15.2	18	12.2	15.2	18	19.5	27.7	29.7	
Input power of cooling	kW	1.8	2.2	2.6	3.2	3.4	2	2.8	3	3.4	5	5	
Nominal heating capacity	kW	9.4	12.4	14.2	17.8	20.1	12.4	17.8	20.1	21.4	29.7	31.7	
Input power of heating	kW	5.4	2.9	3.5	4.3	4.8	2.8	3.9	4.1	4.9	6.7	6.7	
Max. running current	A	15.5	17.5	21	27.1	30.5	7	9.1	9.6	11.7	15	15	
Cable diameter (copper wire distance ≤ 20 meters)	mm ²	2*4	2*4	2*4	2*6	2*6	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	
Compressor type		Hermetic scroll											
Starting mode		Direct											
Refrigerant		R22/R407C											
Refrigerant charge	kg	1.8	1.8	4.5	4.5	4.5	4.5	4.5	4.5	5	6	6	
Refrigerant control device		Thermostatic expansion valve											
Evaporator	Type	Plate type			Tube in tube type								
	Water pressure drop	kPa	70										
	Water pipe Dia.	DN	25	25	50	50	50	50	50	50	50	50	50
	Connection		Threaded connect										
	Chilled water flow	m ³ /h	1.4	1.8	2.1	2.6	3.1	2.1	2.6	3.1	3.4	4.8	5.1
	Well water flow	m ³ /h	0.9	1.1	1.3	1.6	1.9	1.3	1.6	1.9	2.0	2.9	3.1
Condenser type	Type	Plate type			Tube in tube type								
	Water pressure drop	kPa	70										
	Water pipe Dia.	DN	25	25	50	50	50	50	50	50	50	50	50
	Well water flow	m ³ /h	0.9	1.1	1.3	1.6	1.9	1.3	1.6	1.9	2.0	2.9	3.1
	Hot water flow	m ³ /h	1.4	1.8	2.1	2.6	3.1	2.1	2.6	3.1	3.4	4.8	5.1
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve											
Dimensions	L	1000	1000	1400	1400	1400	1400	1400	1400	1400	1400	1400	
	W	610	610	655	655	655	655	655	655	655	655	655	
	H	730	730	1100	1100	1100	1100	1100	1100	1100	1100	1100	
Net weight	kg	100	100	210	210	210	210	235	235	235	235	270	
Running weight	kg	120	120	248	248	248	248	280	280	280	280	325	
Noise	dB(A)	62	62	62	62	62	62	62	62	62	70	70	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12℃/7℃; ground water inlet/outlet water temperature: 18℃/29℃.
 Heating conditions: user side inlet/outlet water temperature: 40℃/-℃; ground water inlet/outlet water temperature: 15℃/-℃.

Water source working condition R407c(2)

Model RLSW-(C)R		35	40	70	80	100	120	160	200	240	
Power supply		380V/50HZ									
Compressor qty		1	2	2	3	3	4	5	6		
Nominal cooling capacity	kW	34.3	40.4	60	80.8	112.9	121.2	161.6	202	242.4	
Input power of cooling	kW	6	7.2	12	14.4	18	21.6	28.8	21.6	86.4	
Nominal heating capacity	kW	38.3	45.1	76.6	90.2	114.9	135.3	180.4	225.5	270.6	
Input power of heating	kW	8.2	9.8	16.4	19.6	24.6	29.4	39.2	58.8	58.8	
Max. running current	A	18.8	22.2	37.6	44.4	56.4	66.6	88.8	111	133.2	
Cable diameter (copper wire distance ≤ 20 meters)	mm ²	3*4+2*2.5	3*4+2*2.5	3*6+2*4	3*10+2*6	3*16+2*10	3*16+2*10	3*25+2*16	3*35+2*16	3*50+2*25	
Compressor type		Hermetic scroll									
Starting mode		Direct									
Refrigerant		R22/R407C									
Refrigerant charge	kg	6.5	6.5	13	13	20	20	26	32	40	
Refrigerant control device		Thermostatic expansion valve									
Evaporator	Type	Tube in tube type			Shell and tube type						
	Water pressure drop	kPa 70									
	Water pipe Dia.	DN 50	50	50	65	65	65	80	80	80	
	Connection	Threaded connect									
	Chilled water flow	m ³ /h	5.9	6.9	11.8	13.9	19.4	20.8	27.8	34.7	41.7
	Well water flow	m ³ /h	3.5	4.2	7.1	8.3	11.6	12.5	16.6	20.8	25.0
Condenser type	Type	Tube in tube type			Shell and tube type						
	Water pressure drop	kPa 70									
	Water pipe Dia.	DN 50	50	50	50	65	65	80	80	80	
	Well water flow	m ³ /h	3.5	4.2	7.1	8.3	11.6	12.5	16.6	20.8	25.0
	Hot water flow	m ³ /h	5.9	6.9	11.8	13.9	19.4	20.8	27.8	34.7	41.7
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve									
Dimensions	L	1400	1400	1800	1800	2400	2400	2400	2800	3200	
	w	655	655	700	700	800	800	950	950	950	
	H	1100	1100	1350	1350	1400	1400	1450	1450	1450	
Net weight	kg	270	285	410	495	680	690	920	1080	1220	
Running weight	kg	325	340	490	610	820	830	1050	1190	1480	
Noise	dB(A)	72	72	72	72	72	72	72	72	72	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12℃/7℃; ground water inlet/outlet water temperature: 18℃/29℃.
 Heating conditions: user side inlet/outlet water temperature: 40℃/-℃; ground water inlet/outlet water temperature: 15℃/-℃.

Water source working condition R410a(3)

Model RLSW-(B)R		7	10	12	15	18	12	15	18	20	28	30	
Power supply		220V/50HZ					380V/50HZ						
Compressor qty		1											
Nominal cooling capacity	kW	8.3	10.3	12.2	15.2	/	12.2	15.2	18	19.5	27.7	29.7	
Input power of cooling	kW	2	2	2.8	2.8	/	2.5	2.9	3.3	3.5	5	5.4	
Nominal heating capacity	kW	9.4	12.4	14.2	17.8	/	12.4	17.8	20.1	21.4	29.7	31.7	
Input power of heating	kW	2.7	2.7	3.7	3.7	/	3.4	3.9	4.5	4.7	6.8	7.3	
Max. running current	A	15.5	15.5	24.1	24.1	/	8	9.1	10.2	10.9	15.7	17	
Cable diameter (copper wire distance ≤ 20 meters)	mm ²	2*4	2*4	2*4	2*4	/	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	
Compressor type		Hermetic scroll											
Starting mode		Direct											
Refrigerant		R410A											
Refrigerant charge	kg	1.8	1.8	4.5	4.5	/	4.5	4.5	4.5	5	6	6	
Refrigerant control device		Thermostatic expansion valve											
Evaporator	Type	Plate type			Tube in tube type								
	Water pressure drop	70											
	Water pipe Dia.	DN 25	DN 25	DN 50	DN 50	/	DN 50	DN 50	DN 50	DN 50	DN 50	DN 50	
	Connection	Threaded connect											
	Chilled water flow	m ³ /h	1.4	1.8	2.1	2.6	/	2.1	2.6	3.1	3.4	4.8	5.1
	Well water flow	m ³ /h	0.9	1.1	1.3	1.6	/	1.3	1.6	1.9	2.0	2.9	3.1
Condenser type	Type	Plate type			Tube in tube type								
	Water pressure drop	70											
	Water pipe Dia.	DN 25	DN 25	DN 50	DN 50	/	DN 50	DN 50	DN 50	DN 50	DN 50	DN 50	
	Well water flow	m ³ /h	0.9	1.1	1.3	1.6	/	1.3	1.6	1.9	2.0	2.9	3.1
	Hot water flow	m ³ /h	1.4	1.8	2.1	2.6	/	2.1	2.6	3.1	3.4	4.8	5.1
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve											
Dimensions	L	1000	1000	1400	1400	/	1400	1400	1400	1400	1400	1400	
	W	610	610	655	655	/	655	655	655	655	655	655	
	H	730	730	1100	1100	/	1100	1100	1100	1100	1100	1100	
Net weight	kg	100	100	210	210	/	210	235	235	235	235	270	
Running weight	kg	120	120	248	248	/	248	280	280	280	280	325	
Noise	dB(A)	62	62	62	62	/	62	62	62	62	70	70	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12℃/7℃; ground water inlet/outlet water temperature: 18℃/29℃.
 Heating conditions: user side inlet/outlet water temperature: 40℃/-℃; ground water inlet/outlet water temperature: 15℃/-℃.

Water source working condition R410a(4)

Model RLSW-(B)R		35	40	70	80	100	120	160	200	240	280		
Power supply		380V/50HZ											
Compressor qty				2	2		3 3	4	5	6	2		
Nominal cooling capacity		kW	34.3	40.4	68.6	80.8	112.9	121.2	161.6	202	242.4	279.3	
Input power of cooling		kW	6.6	7.2	13.2	14.4	19.8	21.6	28.8	36	43.2	48.6	
Nominal heating capacity		kW	38.3	45.1	76.6	90.2	114.9	135.3	180.4	225.5	270.6	306	
Input power of heating		kW	8.4	9.8	16.8	19.6	25.2	29.4	39.2	49	58.8	64.5	
Max. running current		A	20	22.5	40	45	60	67.5	90	112.5	135	147	
Cable diameter (copper wire distance ≤ 20 meters)		mm ²	3*4+2*2.5	3*4+2*2.5	3*6+2*4	3*10+2*6	3*16+2*10	3*16+2*10	3*25+2*16	3*35+2*16	3*50+2*25	3*70+2*35	
Compressor type		Hermetic scroll											
Starting mode		Direct											
Refrigerant		R410A											
Refrigerant charge		kg	6.5	6.5	13	13	20	20	26	32	40	50	
Refrigerant control device		Thermostatic expansion valve											
Evaporator	Type		Tube in tube type				Shell and tube type						
	Water pressure drop		kPa 70										
	Water pipe Dia.		DN	50	50	50	65	65	65	80	80	80	80
	Connection		Threaded connect										
	Chilled water flow		m ³ /h	5.9	6.9	11.8	13.9	19.4	20.8	27.8	34.7	41.7	48.0
	Well water flow		m ³ /h	3.5	4.2	7.1	8.3	11.6	12.5	16.6	20.8	25.0	28.8
Condenser type	Type		Tube in tube type				Shell and tube type						
	Water pressure drop		kPa 70										
	Water pipe Dia.		DN	50	50	50	65	65	65	80	80	80	80
	Well water flow		m ³ /h	3.5	4.2	7.1	8.3	11.6	12.5	16.6	20.8	25.0	28.8
	Hot water flow		m ³ /h	5.9	6.9	11.8	13.9	19.4	20.8	27.8	34.7	41.7	48.0
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve											
Dimensions	L		1400	1400	1800	1800	2400	2400	2400	2800	3200	3000	
	W		655	655	700	700	800	800	950	950	950	950	
	H		1100	1100	1350	1350	1400	1400	1450	1450	1450	1750	
Net weight		kg	270	285	410	495	680	690	920	1080	1220	1420	
Running weight		kg	325	340	490	610	820	830	1050	1190	1480	1550	
Noise		dB(A)	72	72	72	72	72	72	72	72	72	72	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12℃/7℃; ground water inlet/outlet water temperature: 18℃/29℃.
 Heating conditions: user side inlet/outlet water temperature: 40℃/-℃; ground water inlet/outlet water temperature: 15℃/-℃.

Ground source working condition R407c(1)

Model	RLSW-(C)R	7	10	12	15	18	12	15	18	20	28	30	
Power supply		220V/50HZ					380V/50HZ						
Compressor qty		1											
Nominal cooling capacity	kW	8.3	10.3	12.2	15.2	18	12.2	15.2	18	19.5	27.7	29.7	
Input power of cooling	kW	1.8	2.2	2.6	3.2	3.4	2	2.8	3	3.4	5	5	
Nominal heating capacity	kW	9.4	12.4	14.2	17.8	20.1	12.4	17.8	20.1	21.4	29.7	31.7	
Input power of heating	kW	2.4	2.9	3.5	4.3	4.8	2.8	3.9	4.1	4.9	6.7	6.7	
Max. running current	A	15.5	17.5	21	27.1	30.5	7	9.1	9.6	11.7	15	15	
Cable diameter (copper wire distance ≤ 20 meters)	mm ²	2*4	2*4	2*4	2*6	2*6	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	
Compressor type		Hermetic scroll											
Starting mode		Direct											
Refrigerant		R22/R407C											
Refrigerant charge	kg	1.8	1.8	4.5	4.5	4.5	4.5	4.5	4.5	5	6	6	
Refrigerant control device		Thermostatic expansion valve											
Evaporator	Type	Plate type			Tube in tube type								
	Water pressure drop	kPa	70										
	Water pipe Dia.	DN	25	25	50	50	50	50	50	50	50	50	50
	Connection		Threaded connect										
	Chilled water flow	m ³ /h	1.4	1.8	2.1	2.6	3.1	2.1	2.6	3.1	3.4	4.8	5.1
	Well water flow	m ³ /h	1.9	2.3	2.8	3.45	4.1	2.8	3.5	4.1	2.0	2.9	6.7
Condenser type	Type	Plate type			Tube in tube type								
	Water pressure drop	kPa	70										
	Water pipe Dia.	DN	25	25	50	50	50	50	50	50	50	50	50
	Well water flow	m ³ /h	1.9	2.3	2.8	3.5	4.1	2.8	3.5	4.1	2.0	2.9	6.7
	Hot water flow	m ³ /h	1.4	1.8	2.1	2.6	3.1	2.1	2.6	3.1	3.4	4.8	5.1
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve											
Dimensions	L	1000	1000	1400	1400	1400	1400	1400	1400	1400	1400	1400	
	W	610	610	655	655	655	655	655	655	655	655	655	
	H	730	730	1100	1100	1100	1100	1100	1100	1100	1100	1100	
Net weight	kg	100	100	210	210	210	210	235	235	235	235	270	
Running weight	kg	120	120	248	248	248	248	280	280	280	280	325	
Noise	dB(A)	62	62	62	62	62	62	62	62	62	70	70	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12°C/7°C; ground water inlet/outlet water temperature: 25°C/29°C.
 Heating conditions: user side inlet/outlet water temperature: 40°C/-°C; ground water inlet/outlet water temperature: 10°C/-°C.

Ground source working condition R407c(2)

Model RLSW-(C)R		35	40	70	80	100	120	160	200	240	
Power supply		380V/50HZ									
Compressor qty		1		2	2	3	3	4	5	6	
Nominal cooling capacity	kW	34.3	40.4	68.6	80.8	112.9	121.2	161.6	202	242.4	
Input power of cooling	kW	6	7.2	12	14.4	18	21.6	28.8	21.6	86.4	
Nominal heating capacity	kW	38.3	45.1	76.6	90.2	114.9	135.3	180.4	225.5	270.6	
Input power of heating	kW	8.2	9.8	16.4	19.6	24.6	29.4	39.2	58.8	58.8	
Max. running current	A	18.8	22.2	37.6	44.4	56.4	66.6	88.8	111	133.2	
Cable diameter (copper wire distance ≤ 20 meters)	mm ²	3*4+2*2.5	3*4+2*2.5	3*6+2*4	3*10+2*6	3*16+2*10	3*16+2*10	3*25+2*16	3*35+2*16	3*50+2*25	
Compressor type		Hermetic scroll									
Starting mode		Direct									
Refrigerant		R22/R407C									
Refrigerant charge	kg	6.5	6.5	13	13	20	20	26	32	40	
Refrigerant control device		Thermostatic expansion valve									
Evaporator	Type	Tube in tube type			Shell and tube type						
	Water pressure drop	kPa 70									
	Water pipe Dia.	DN 50	50	50	65	65	65	80	80	80	
	Connection	Threaded connect			Threaded connect						
	Chilled water flow	m ³ /h	5.9	6.9	11.8	13.9	19.4	20.8	27.8	34.7	41.7
	Well water flow	m ³ /h	7.8	9.2	15.6	18.3	25.6	27.5	36.7	45.9	55.0
Condenser type	Type	Tube in tube type			Shell and tube type						
	Water pressure drop	kPa 70									
	Water pipe Dia.	DN 50	50	50	50	65	65	80	80	80	
	Well water flow	m ³ /h	7.8	9.2	15.6	18.3	25.6	27.5	36.7	45.9	55.0
	Hot water flow	m ³ /h	5.9	6.9	11.8	13.9	19.4	20.8	27.8	34.7	41.7
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve									
Dimensions	L	1400	1400	1800	1800	2400	2400	2400	2800	3200	
	w	655	655	700	700	800	800	950	950	950	
	H	1100	1100	1350	1350	1400	1400	1450	1450	1450	
Net weight	kg	270	285	410	495	680	690	920	1080	1220	
Running weight	kg	325	340	490	610	820	830	1050	1190	1480	
Noise	dB(A)	72	72	72	72	72	72	72	72	72	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12°C/7°C; ground water inlet/outlet water temperature: 25°C/29°C.
 Heating conditions: user side inlet/outlet water temperature: 40°C/-°C; ground water inlet/outlet water temperature: 10°C/-°C.

Ground source working condition R410a(3)

Model RLSW-(B)R		7	10	12	15	18	12	15	18	20	28	30	
Power supply		220V/50HZ					380V/50HZ						
Compressor qty		1											
Nominal cooling capacity	kW	8.3	10.3	12.2	15.2	/	12.2	15.2	18	19.5	27.7	29.7	
Input power of cooling	kW	2	2.5	2.8	3.5	/	2.5	2.9	3.3	3.5	5	5.4	
Nominal heating capacity	kW	9.4	12.4	14.2	17.8	/	12.4	17.8	20.1	21.4	29.7	31.7	
Input power of heating	kW	2.7	3.6	3.7	4.6	/	3.4	3.9	4.5	4.7	6.8	7.3	
Max. running current	A	15.5	15.5	24.1	24.1	/	8	9.1	10.2	10.9	15.7	17	
Cable diameter (copper wire distance ≤ 20 meters)	mm ²	2*4	2*4	2*4	2*4	/	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	
Compressor type		Hermetic scroll											
Starting mode		Direct											
Refrigerant		R410A											
Refrigerant charge	kg	1.8	1.8	4.5	4.5	/	4.5	4.5	4.5	5	6	6	
Refrigerant control device		Thermostatic expansion valve											
Evaporator	Type	Plate type				Tube in tube type							
	Water pressure drop	70											
	Water pipe Dia.	DN	25	25	50	50	/	50	50	50	50	50	50
	Connection	Threaded connect				Threaded connect							
	Chilled water flow	m ³ /h	1.4	1.8	2.1	2.6	/	2.1	2.6	3.1	3.4	4.8	5.1
	Well water flow	m ³ /h	1.9	2.3	2.8	3.5	/	2.8	3.5	4.1	4.4	6.3	6.7
Condenser type	Type	Plate type				Tube in tube type							
	Water pressure drop	70											
	Water pipe Dia.	DN	25	25	50	50	/	50	50	50	50	50	50
	Well water flow	m ³ /h	1.9	2.3	2.8	3.5	/	2.8	3.5	4.1	4.4	6.3	6.7
	Hot water flow	m ³ /h	1.4	1.8	2.1	2.6	/	2.1	2.6	3.1	3.4	4.8	5.1
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve											
Dimensions	L	1000	1000	1400	1400	/	1400	1400	1400	1400	1400	1400	
	W	610	610	655	655	/	655	655	655	655	655	655	
	H	730	730	1100	1100	/	1100	1100	1100	1100	1100	1100	
Net weight	kg	100	100	210	210	/	210	235	235	235	235	270	
Running weight	kg	120	120	248	248	/	248	280	280	280	280	325	
Noise	dB(A)	62	62	62	62	/	62	62	62	62	70	70	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12°C/7°C; ground water inlet/outlet water temperature: 25°C/29°C.
 Heating conditions: user side inlet/outlet water temperature: 40°C/-°C; ground water inlet/outlet water temperature: 10°C/-°C.

Ground source working condition R410a(4)

Model RLSW-(B)R		35	40	70	80	100	120	160	200	240	280		
Power supply		380V/50HZ											
Compressor qty		1		2	2	3	3	4	5	6	2		
Nominal cooling capacity		kW	34.3	40.4	68.6	80.8	112.9	121.2	161.6	202	242.4	279.3	
Input power of cooling		kW	6.6	7.2	13.2	14.4	19.8	21.6	28.8	36	43.2	48.6	
Nominal heating capacity		kW	38.3	45.1	76.6	90.2	114.9	135.3	180.4	225.5	270.6	306	
Input power of heating		kW	8.4	9.8	16.8	19.6	25.2	29.4	39.2	49	58.8	64.5	
Max. running current		A	20	22.5	40	45	60	67.5	90	112.5	135	147	
Cable diameter (copper wire distance ≤ 20 meters)		mm ²	3*4+2*2.5	3*4+2*2.5	3*6+2*4	3*10+2*6	3*16+2*10	3*16+2*10	3*25+2*16	3*35+2*16	3*50+2*25	3*70+2*35	
Compressor type		Hermetic scroll											
Starting mode		Direct											
Refrigerant		R410A											
Refrigerant charge		kg	6.5	6.5	13	13	20	20	26	32	40	50	
Refrigerant control device		Thermostatic expansion valve											
Evaporator	Type		Tube in tube type				Shell and tube type						
	Water pressure drop		kPa 70										
	Water pipe Dia.		DN	50	50	50	65	65	65	80	80	80	80
	Connection		Threaded connect										
	Chilled water flow		m ³ /h	5.9	6.9	11.8	13.9	19.4	20.8	27.8	34.7	41.7	48.0
	Well water flow		m ³ /h	7.8	9.2	15.6	18.3	25.6	27.5	36.7	45.9	55.0	63.4
Condenser type	Type		Tube in tube type				Shell and tube type						
	Water pressure drop		kPa 70										
	Water pipe Dia.		DN	50	50	50	65	65	65	80	80	80	80
	Well water flow		m ³ /h	7.8	9.2	15.6	18.3	25.6	27.5	36.7	45.9	55.0	63.4
	Hot water flow		m ³ /h	5.9	6.9	11.8	13.9	19.4	20.8	27.8	34.7	41.7	48.0
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve											
Dimensions	L		1400	1400	1800	1800	2400	2400	2400	2800	3200	3000	
	W		655	655	700	700	800	800	950	950	950	950	
	H		1100	1100	1350	1350	1400	1400	1450	1450	1450	1750	
Net weight		kg	270	285	410	495	680	690	920	1080	1220	1420	
Running weight		kg	325	340	490	610	820	830	1050	1190	1480	1550	
Noise		dB(A)	72	72	72	72	72	72	72	72	72	72	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12°C/7°C; ground water inlet/outlet water temperature: 25°C/29°C.
 Heating conditions: user side inlet/outlet water temperature: 40°C/-°C; ground water inlet/outlet water temperature: 10°C/-°C.

Cooling tower working condition R407c(1)

Model RLSW-(C)		7	10	12	15	18	12	15	18	20	28	30	
Power supply		220V/50HZ					380V/50HZ						
Compressor qty		1											
Nominal cooling capacity	kW	7.9	9.8	11.5	14.5	17.2	11.5	14.5	17.2	18.6	26.5	28.7	
Input power of cooling	kW	2	2.4	2.9	3.5	3.8	2.3	3.1	3.3	3.9	5.5	5.5	
Max.running current	A	15.5	17.5	21	27.1	30.5	7	9.1	9.6	11.7	15	15	
Cable diameter (copper wire distance < 20 meters)	mm ²	2*4	2*4	2*4	2*6	2*6	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	
Compressor type		Hermetic scroll											
Starting mode		Direct											
Refrigerant		R22/R407C											
Refrigerant charge	kg	1.8	1.8	4.5	4.5	4.5	4.5	4.5	4.5	5	6	6	
Refrigerant control device		Thermostatic expansion valve											
Evaporator	Type	Plate type			Tube in tube type								
	Water pressure drop	kPa	70										
	Water pipe Dia.	DN	25	25	50	50	50	50	50	50	50	50	50
	Connection	Threaded connect			Threaded connect								
	Water flow	m ³ /h	1.4	1.7	2.0	2.5	3.0	2.0	2.5	3.0	3.2	4.6	4.9
Condenser type	Type	Plate type			Tube in tube type								
	Water pressure drop	kPa	70										
	Water pipe Dia.	DN	25	25	50	50	50	50	50	50	50	50	50
	Water flow	m ³ /h	1.7	2.1	2.5	3.1	3.7	2.5	3.1	3.7	4.0	5.7	6.2
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve											
Unit type		Horizontal											
Dimensions	L	1000	1000	1400	1400	1400	1400	1400	1400	1400	1400	1400	
	w	610	610	655	655	655	655	655	655	655	655	655	
	H	730	730	1100	1100	1100	1100	1100	1100	1100	1100	1100	
Net weight	kg	100	100	210	210	210	210	235	235	235	235	270	
Running weight	kg	120	120	248	248	248	248	280	280	280	280	325	
Noise	dB(A)	62	62	62	62	62	62	62	62	62	70	70	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12°C/7°C; cooling water inlet/outlet temperature: 30°C/35°C.

Cooling tower working condition R407c(2)

Model	RLSW-(C)	35	40	70	80	100	120	160	200	240	
Power supply		380V/50HZ									
Compressor qty		1		2	2	3	3	4	5	6	
Nominal cooling capacity	kW	33.5	38.5	67	77	101.5	115.5	154	192.5	231	
Input power of cooling	kW	6.6	8	13.2	16	19.8	24	32	40	48	
Max. running current	A	18.8	22.2	37.6	44.4	56.4	66.6	88.8	111	133.2	
Cable diameter (copper wire distance < 20 meters)	mm ²	3*4+2*2.5	3*4+2*2.5	3*6+2*4	3*10+2*6	3*16+2*10	3*16+2*10	3*25+2*16	3*35+2*16	3*50+2*25	
Compressor type		Hermetic scroll									
Starting mode		Direct									
Refrigerant		R22/R407C									
Refrigerant charge	kg	6.5	6.5	13	13	20	20	26	32	40	
Refrigerant control device		Thermostatic expansion valve									
Evaporator	Type	Tube in tube type			Shell and tube type						
	Water pressure drop	kPa	70								
	Water pipe Dia.	DN	50	50	50	65	65	65	80	80	80
	Connection	Threaded connect			Threaded connect						
	Water flow	m ³ /h	5.8	6.6	11.5	13.2	17.5	19.9	26.5	33.1	39.7
Condenser type	Type	Tube in tube type			Shell and tube type						
	Water pressure drop	kPa	70								
	Water pipe Dia.	DN	50	50	50	65	65	65	80	80	80
	Water flow	m ³ /h	7.2	8.3	14.4	16.6	21.8	24.8	33.1	41.4	49.7
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve									
Unit type		Horizontal									
Dimensions	L	1400	1400	1800	1800	2400	2400	2400	2800	3200	
	W	655	655	700	700	800	800	950	950	950	
	H	1100	1100	1350	1350	1400	1400	1450	1450	1450	
Net weight	kg	270	285	410	495	680	690	920	1080	1220	
Running weight	kg	325	340	490	610	820	830	1050	1190	1480	
Noise	dB(A)	72	72	72	72	72	72	72	72	72	

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12°C/7°C; cooling water inlet/outlet temperature: 30°C/35°C.

Cooling tower working condition R410a(3)

Model RLSW-(B)		7	10	12	15	18	12	15	18	20	28	30
Power supply		220V/50HZ					380V/50HZ					
Compressor qty		1										
Nominal cooling capacity	kW	7.9	9.8	11.5	14.5	/	11.5	14.5	17.2	18.6	26.5	28.7
Input power of cooling	kW	2.1	2.1	3	3	/	2.7	3.1	3.6	3.9	5.5	5.9
Max. running current	A	15.5	15.5	24.1	24.1	/	8	9.1	10.2	10.9	15.7	17
Cable diameter (copper wire distance < 20 meters)	mm ²	2*4	2*4	2*4	2*4	/	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5	3*4+2*2.5
Compressor type		Hermetic scroll										
Starting mode		Direct										
Refrigerant		R410A										
Refrigerant charge	kg	1.8	1.8	4.5	4.5	/	4.5	4.5	4.5	5	6	6
Refrigerant control device		Thermostatic expansion valve										
Evaporator	Type	Tub in tub type			Shell and tube type							
	Water pressure drop	kPa										
	Water pipe Dia.	DN										
	Connection	Threaded connect			Threaded connect							
	Water flow	m ³ /h										
Condenser type	Type	Tub in tub type			Shell and tube type							
	Water pressure drop	kPa										
	Water pipe Dia.	DN										
	Water flow	m ³ /h										
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve										
Unit type		Horizontal										
Dimensions	L	1000	1000	1400	1400	/	1400	1400	1400	1400	1400	1400
	W	610	610	655	655	/	655	655	655	655	655	655
	H	730	730	1100	1100	/	1100	1100	1100	1100	1100	1100
Net weight	kg	100	100	210	210	/	210	235	235	235	235	270
Running weight	kg	120	120	248	248	/	248	280	280	280	280	325
Noise	dB(A)	62	62	62	62	/	62	62	62	62	70	70

Remarks

Cooling conditions: user side inlet/outlet water temperature: 12°C/7°C; cooling water inlet/outlet temperature: 30°C/35°C.

Cooling tower working condition R410a(4)

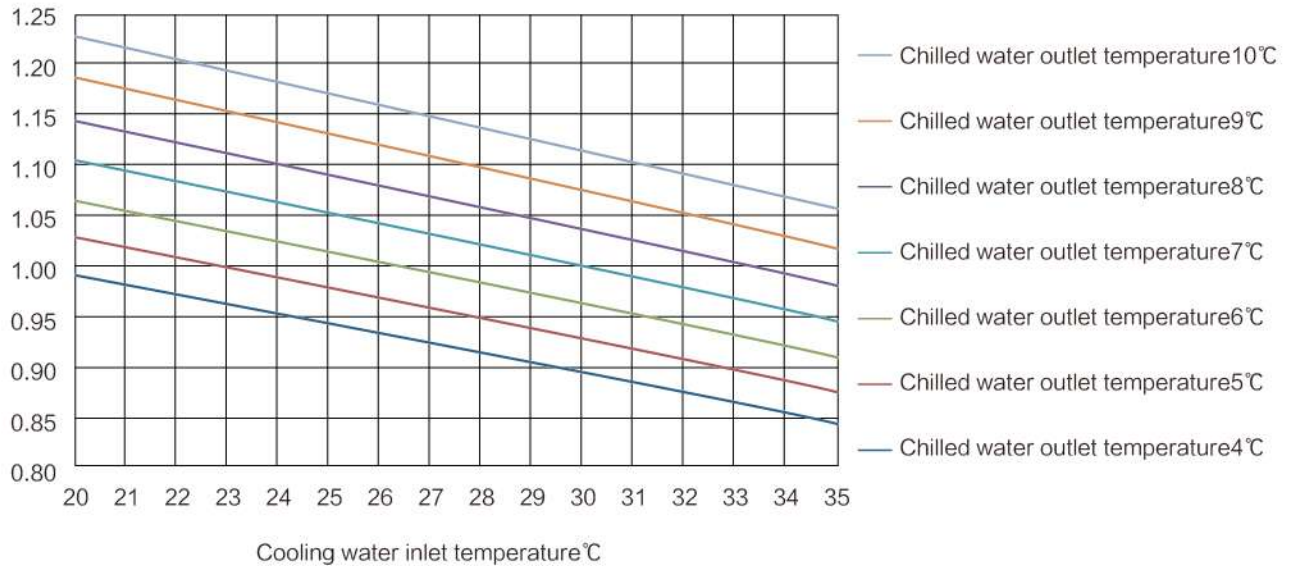
Model RLSW-(B)		35	40	70	80	100	120	160	200	240	280	
Power supply		380V/50HZ										
Compressor qty		1	2	2	3	3	4	5	6	2		
Nominal cooling capacity	kW	33.5	38.5	67	77	101.5	115.5	154	192.5	231	265	
Input power of cooling	kW	7	7.9	14	15.8	21	23.7	31.6	39.5	47.4	53.2	
Max. running current	A	20	22.5	40	45	60	67.5	90	112.5	135	147	
Cable diameter (copper wire distance ≤ 20 meters)	mm ²	3*4+2*2.5	3*4+2*2.5	3*6+2*4	3*10+2*6	3*16+2*10	3*16+2*10	3*25+2*16	3*35+2*16	3*50+2*25	3*70+2*35	
Compressor type		Hermetic scroll										
Starting mode		Direct										
Refrigerant		R410A										
Refrigerant charge	kg	6.5	6.5	13	13	20	20	26	32	40	50	
Refrigerant control device		Thermostatic expansion valve										
Evaporator	Type	Tube in tube type			Shell and tube type							
	Water pressure drop	kPa	70									
	Water pipe Dia.	DN	50	50	50	65	65	65	80	80	80	80
	Connection	Threaded connect			Threaded connect							
	Water flow	m ³ /h	5.8	6.6	11.5	13.2	17.5	19.9	26.5	33.1	39.7	45.6
Condenser type	Type	Tube in tube type			Shell and tube type							
	Water pressure drop	kPa	70									
	Water pipe Dia.	DN	50	50	50	65	65	65	80	80	80	80
	Water flow	m ³ /h	7.2	8.3	14.4	16.6	21.8	24.8	33.1	41.4	49.7	57.0
Protection device		High and low voltage protection, antifreeze protection, temperature control, reverse phase and phase loss protection, high and low voltage protection, high pressure exhaust temperature protection, built-in motor overheat protection, overcurrent protection, check valve, safety valve										
Unit type		Horizontal										
Dimensions	L	1400	1400	1800	1800	2400	2400	2400	2800	3200	3000	
	w	655	655	700	700	800	800	950	950	950	950	
	H	1100	1100	1350	1350	1400	1400	1450	1450	1450	1750	
Net weight	kg	270	285	410	495	680	690	920	1080	1220	1420	
Running weight	kg	325	340	490	610	820	830	1050	1190	1480	1550	
Noise	dB(A)	72	72	72	72	72	72	72	72	72	72	

Remarks

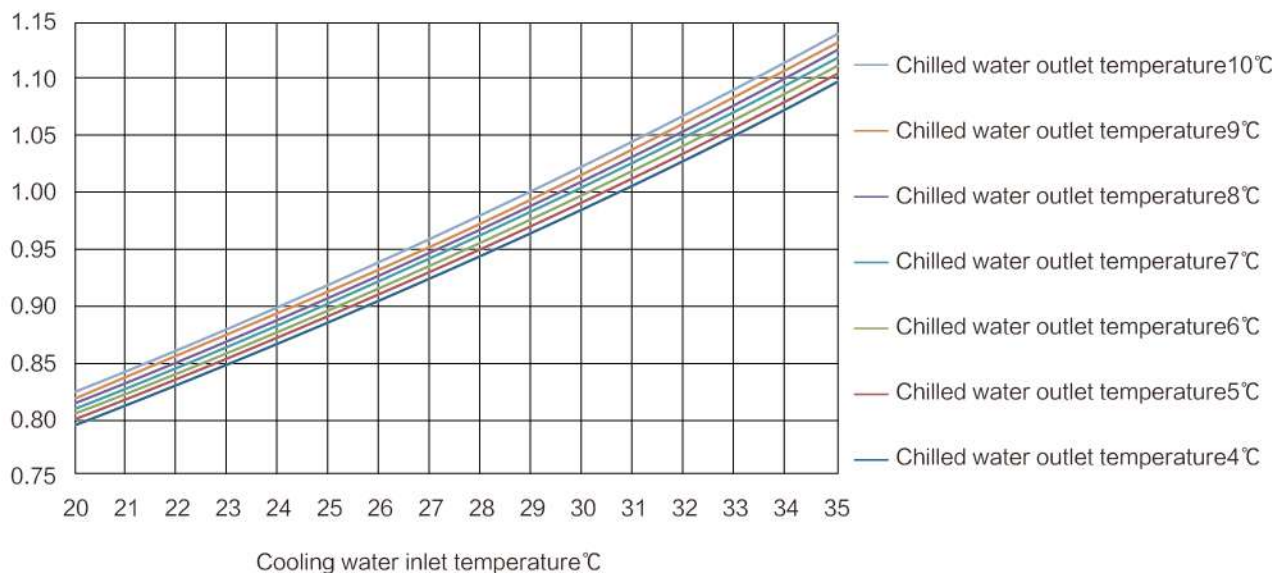
Cooling conditions: user side inlet/outlet water temperature: 12°C/7°C; cooling water inlet/outlet temperature: 30°C/35°C.

5. CORRECTION FACTOR

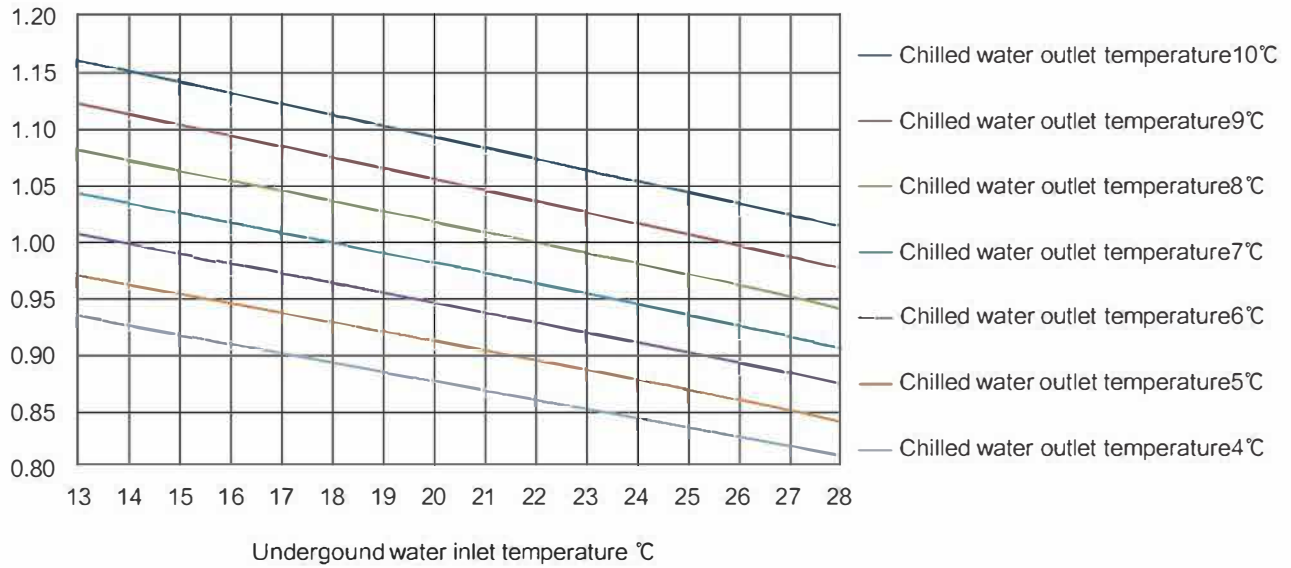
Correction factor curve of cooling capacity at cooling tower working condition



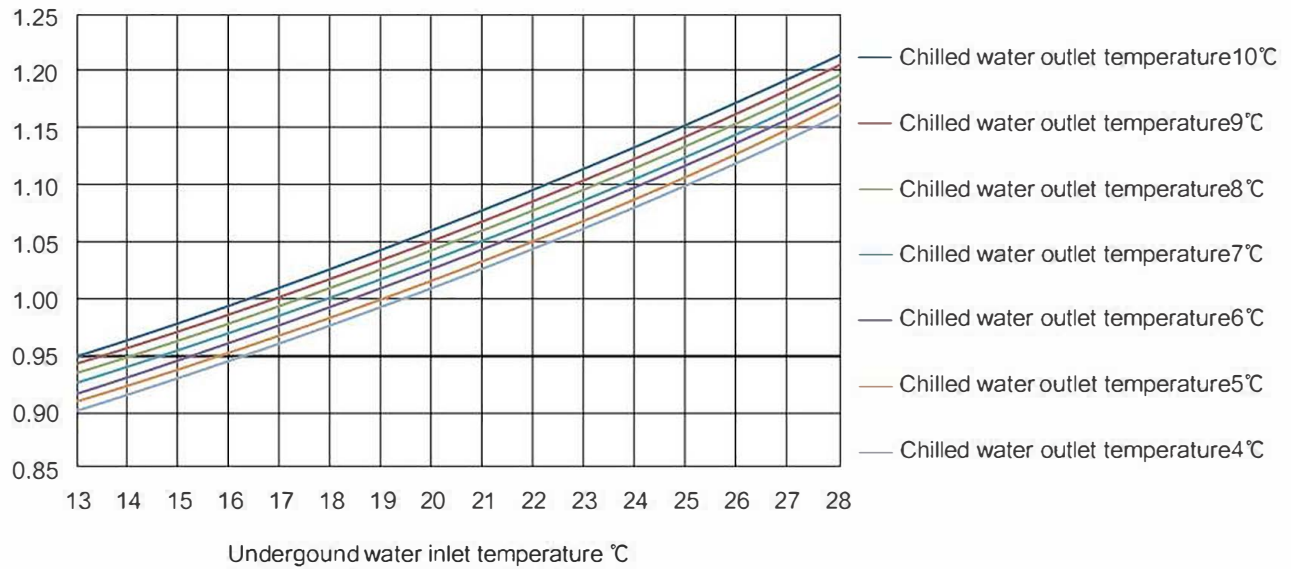
Correction factor curve of input power at cooling tower working condition



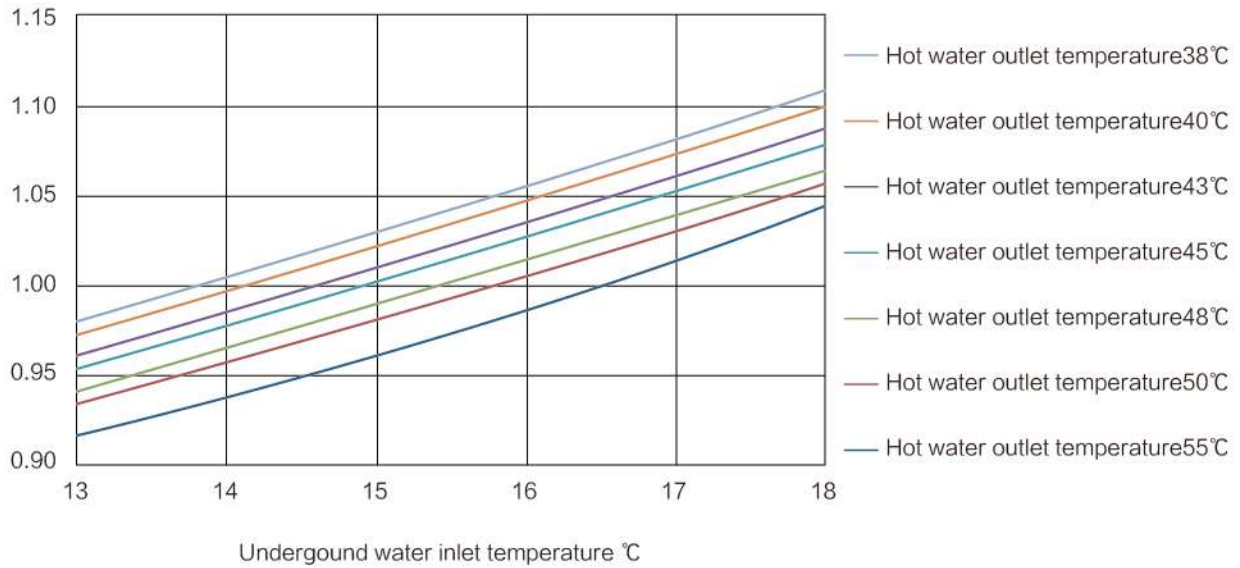
Correction factor curve of cooling capacity at underground water working condition(Cooling)



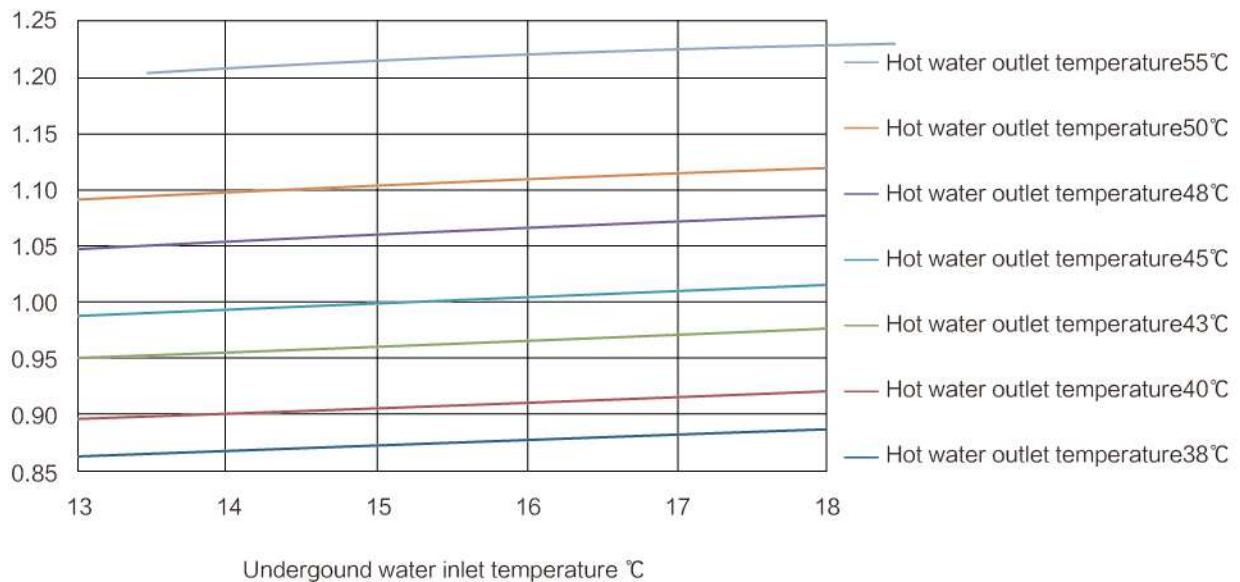
Correction factor curve of input power at underground water working condition



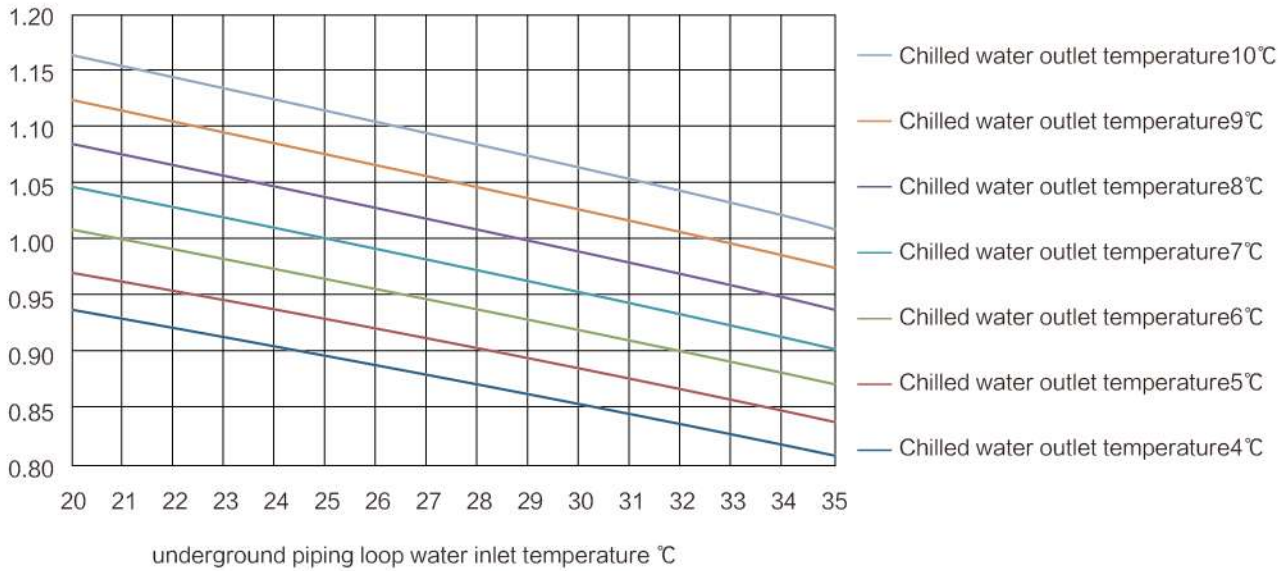
Correction factor curve of heating capacity at underground water working condition



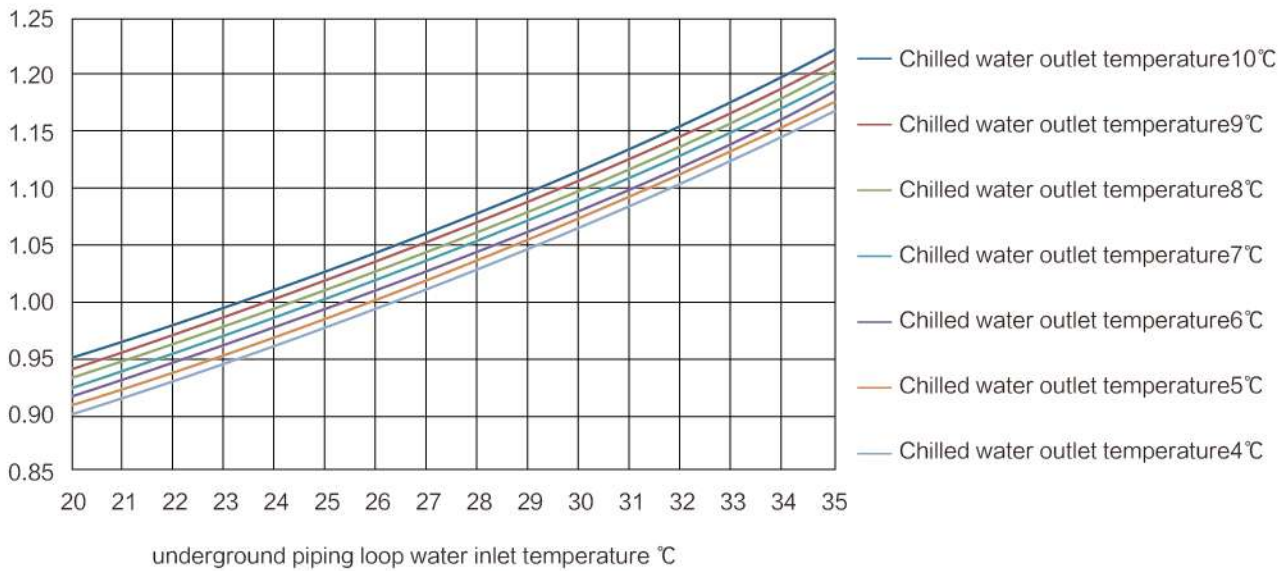
Correction factor curve of input power at underground water working condition(Heating)



Correction factor curve of cooling capacity at buried pipe type working condition

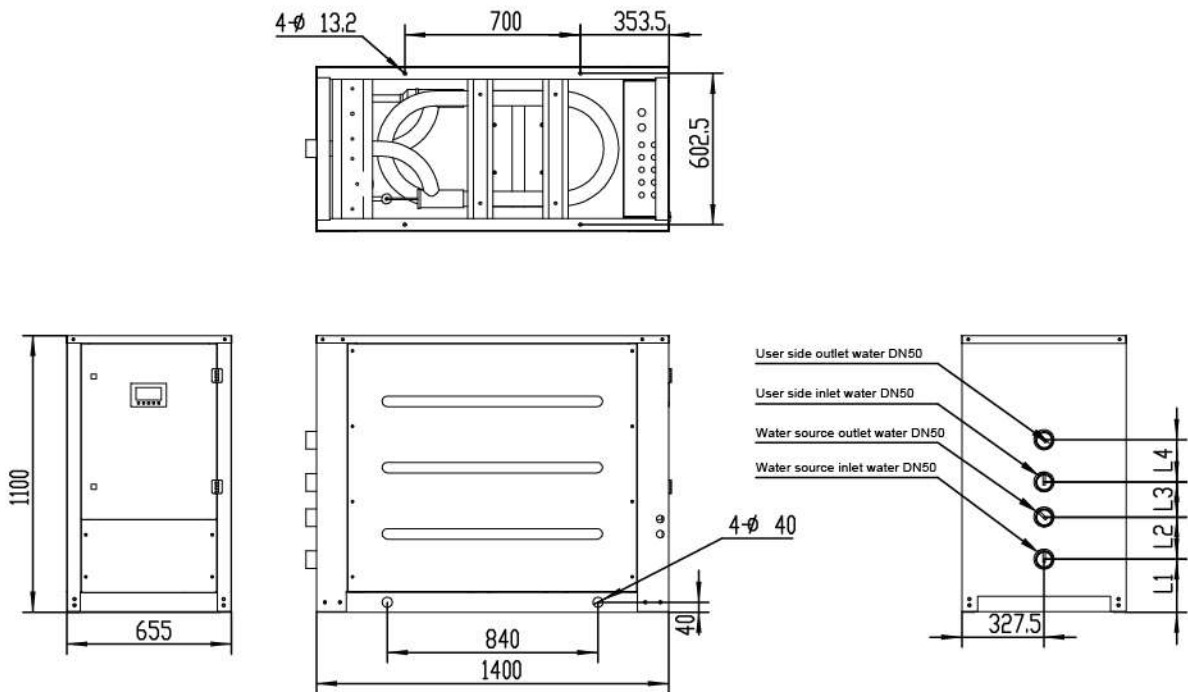


Correction factor curve of input power at buried pipe type working condition



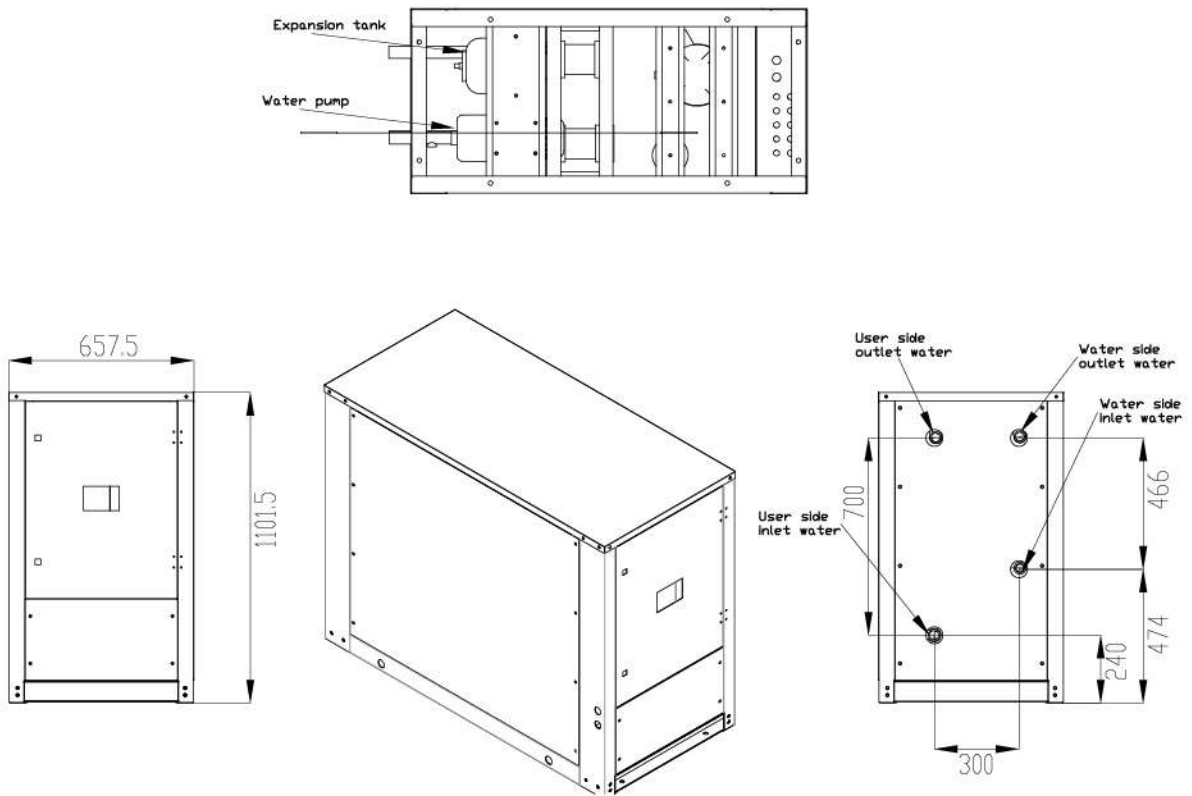
6. STRUCTURE DIAGRAM

Structure Diagram-Standard type



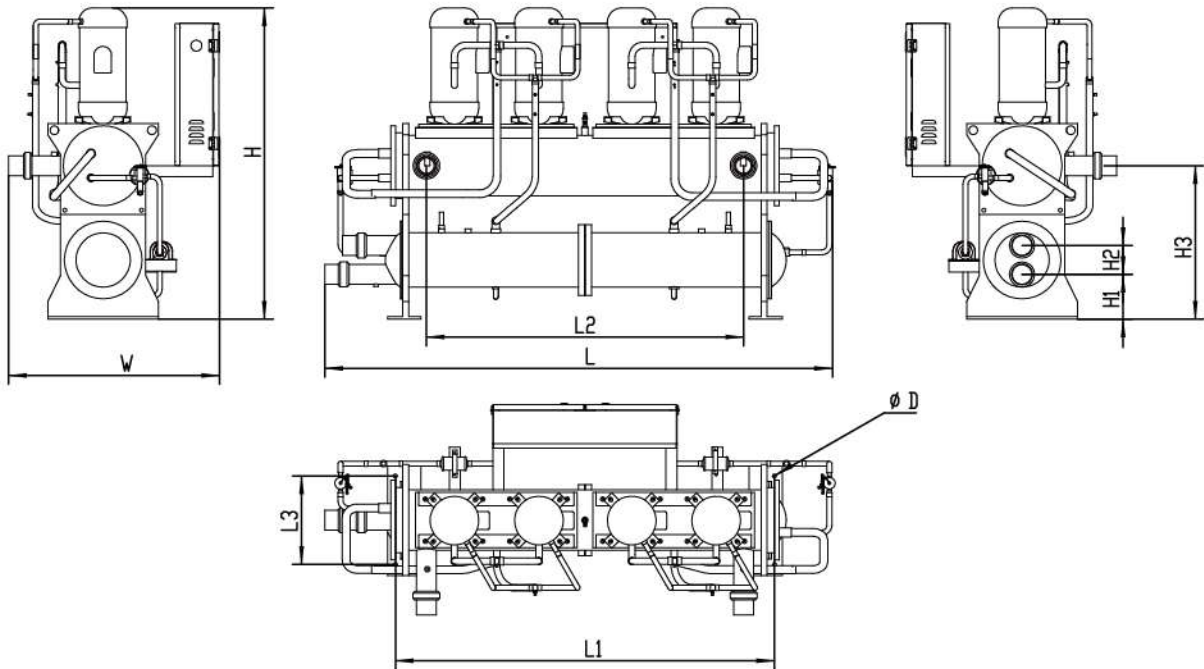
No.	Model	L1(mm)	L2(mm)	L3(mm)	L4(mm)
1	RLSW12(R)	212	168	140	168
2	RLSW15(R)	212	168	140	168
3	RLSW18(R)	212	168	140	168
4	RLSW20(R)	212	238	140	238
5	RLSW28(R)	212	238	140	238
6	RLSW30(R)	212	238	140	238
7	RLSW35(R)	212	238	140	238
8	RLSW40(R)	212	238	140	238

Structure Diagram-with built-in hydraulic module



No.	Model	L1(mm)	L2(mm)	L3(mm)	L4(mm)
1	RLSW12(R)	212	168	140	168
2	RLSW15(R)	212	168	140	168
3	RLSW18(R)	212	168	140	168
4	RLSW20(R)	212	238	140	238
5	RLSW28(R)	212	238	140	238
6	RLSW30(R)	212	238	140	238
7	RLSW35(R)	212	238	140	238
8	RLSW40(R)	212	238	140	238

Structure Diagram-3



No.	Model	H(mm)	H1(mm)	H2(mm)	H3(mm)	L(mm)	L1(mm)	L2(mm)	L3(mm)	W	øD(mm)
1	RLSW70(R)	1350	154	100	574	1800	1000	1200	400	700	18
2	RLSW80(R)	1350	182	120	650.5	1800	1000	1200	400	700	18
3	RLSW100(R)	1400	182	120	642	2400	1700	1422	400	800	18
4	RLSW120(R)	1400	182	120	642	2400	1700	1422	400	800	18
5	RLSW160(R)	1450	202	130	692	2400	1710	1430	400	950	18
6	RLSW200(R)	1450	202	130	692	2800	2113	1830	400	950	20
7	RLSW240(R)	1450	202	130	692	3200	2530	2250	400	950	20
8	RLSW260(R)	1750	210	140	753	3000	2250	2530	470	950	22

7.INSTALLATION DIAGRAM

Diagram 1-Cooling tower pipe type

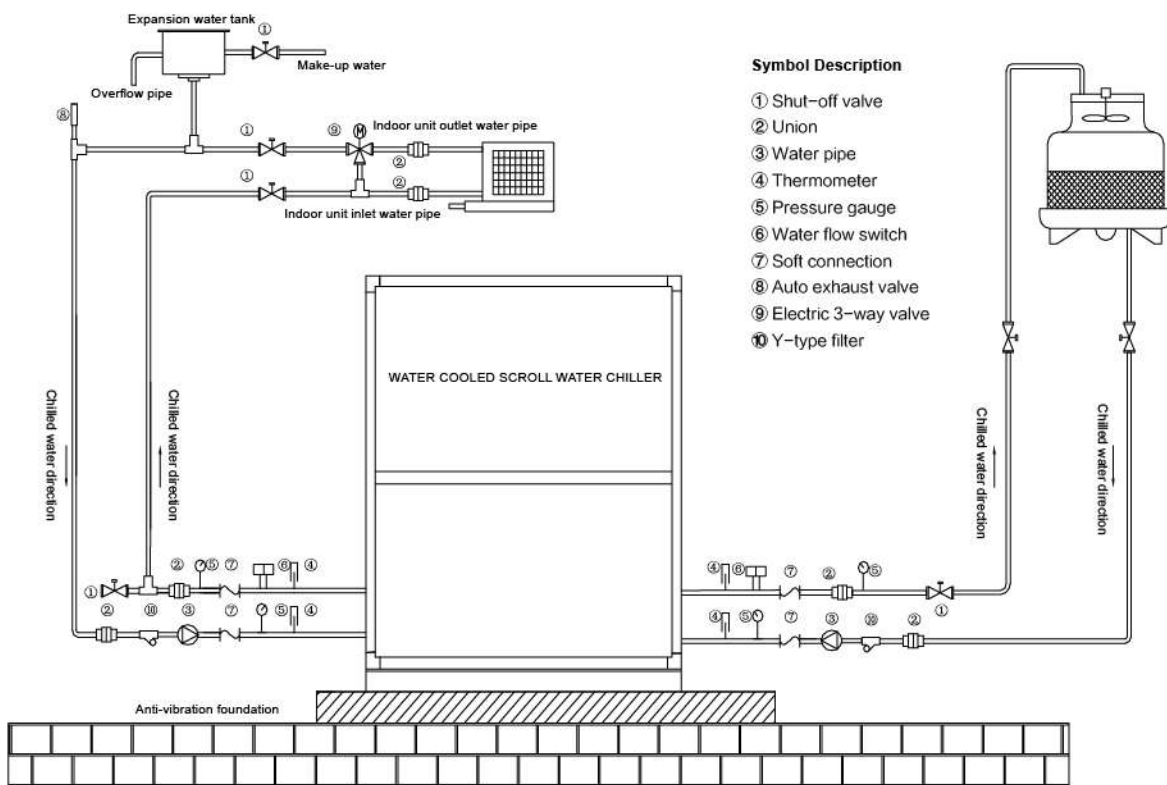
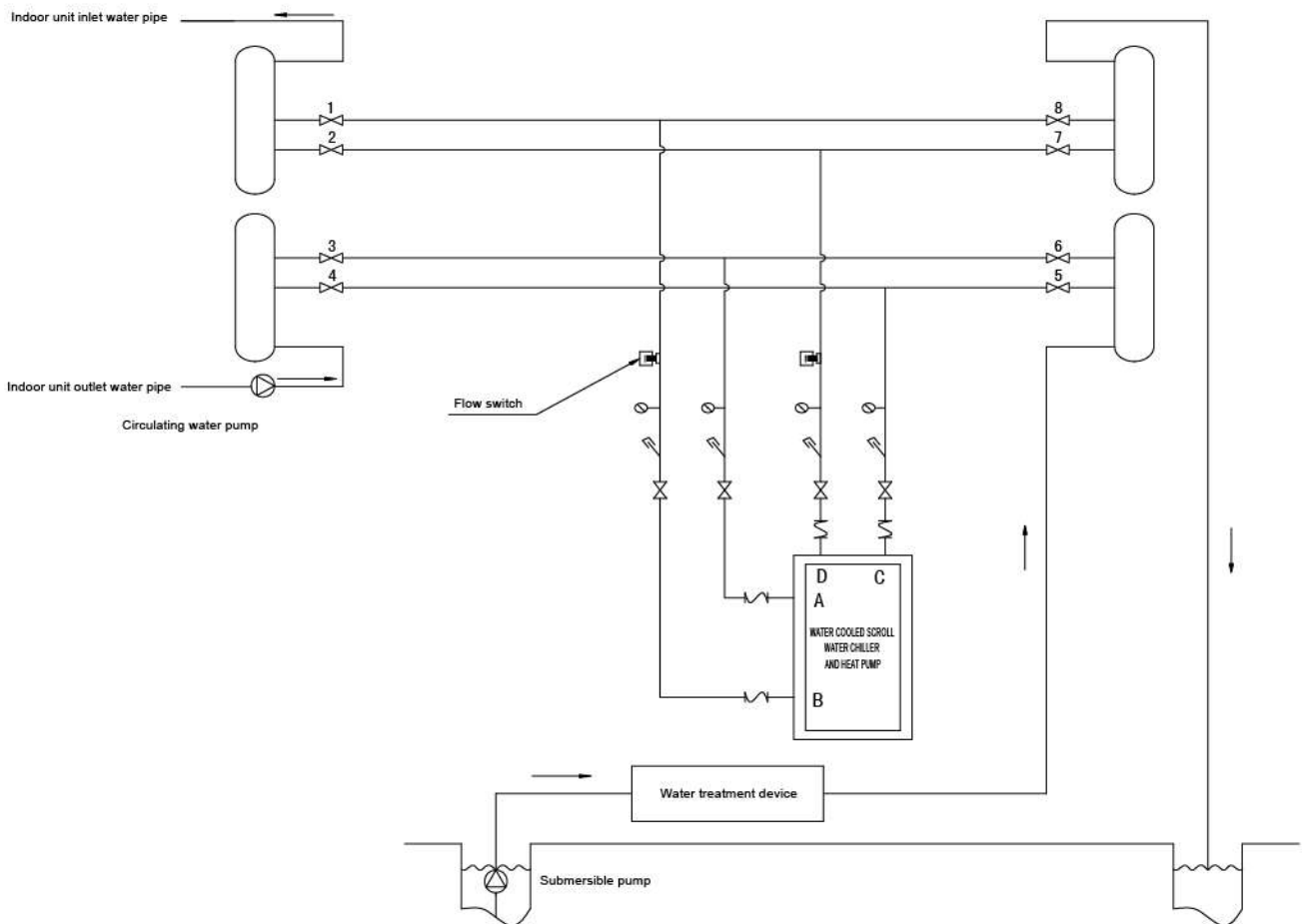


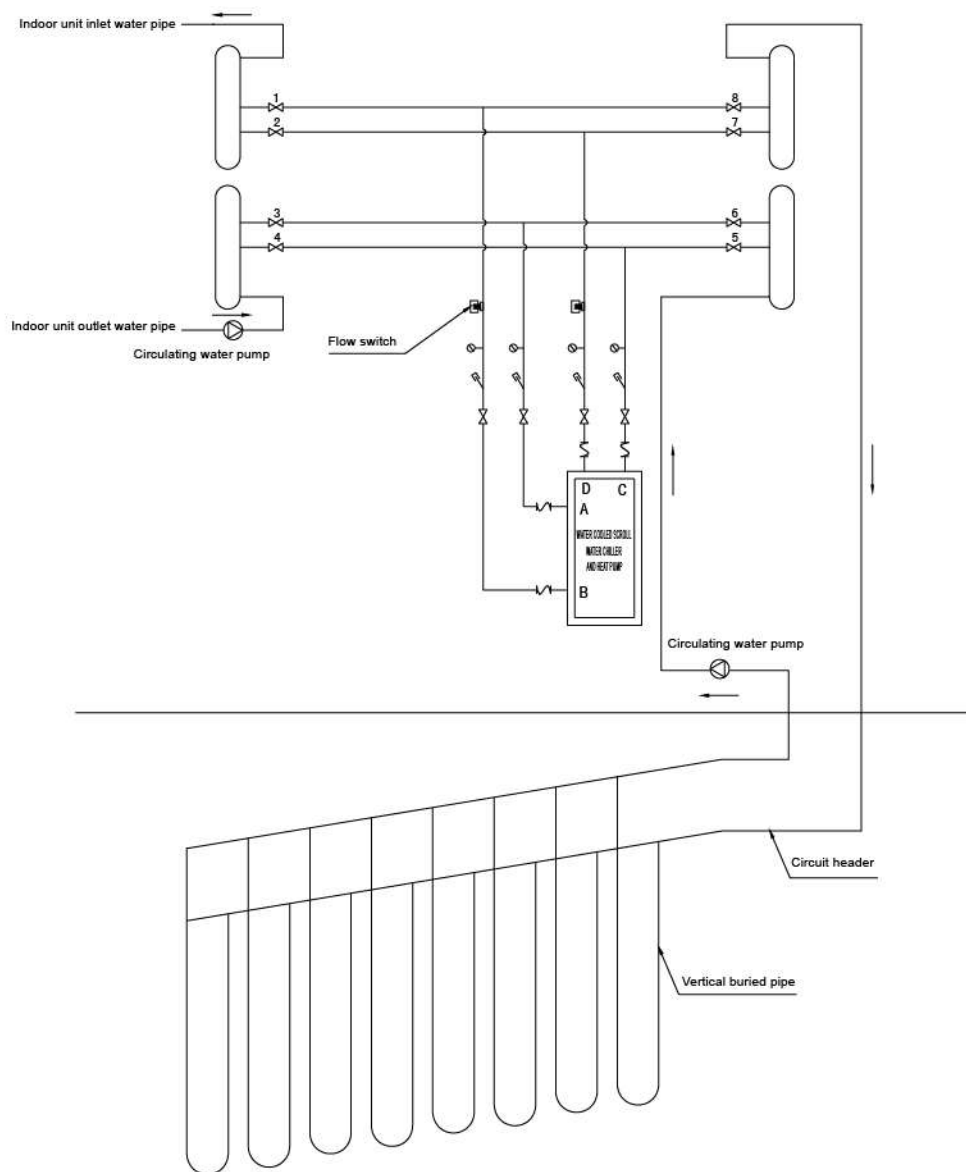
Diagram 2-Underground water type



Note:

Cold water inlet-A	Cold water outlet-B	Well water inlet-C	Well water outlet-D
Summer condition: 1.3.5.7Valve open		2.4.6.8Valve close	
Winter condition: 2.4.6.8Valve open		1.3.5.7Valve close	

Diagram 3-Buried pipe type



Note: Cold water inlet-A Cold water outlet-B Well water inlet-C Well water outlet-D
 Summer condition: 1.3.5.7Valve open 2.4.6.8Valve close
 Winter condition: 2.4.6.8Valve open 1.3.5.7Valve close

TESTING CENTER



Testing center covers an area of 6500 square meters; total investment of 50 million RMB, is the largest and most complete detection device in the north of China , the testing range is from household air conditioner to the centrifuge chillers.

Testing center adopt internationally renowned brand measuring instruments, including the United States Agilent data acquisition, Japan Yokogawa power meter, Saibi Ling platinum thermal resistance, to ensure the test accuracy.

Testing center can test multi-unit, air-cooled unit, fan coil unit, ceiling air handling unit, modular air handling unit, purifying air conditioning unit, water loop heat unit, air-cooled module chiller and air-cooled screw chiller.

MAIN PROJECTS



High school building in Brazil



Presidential palace of Kazakhstan



Shanxi Dingxiang County People's Court



Shanxi Yuncheng odd Star Technology Co., Ltd



Beijing Grand Oriental Hotel



Shanxi Linfen High Speed Rail Station



Beijing Sihui building materials city



Shanxi Tongmei Group Zhangze Power Puzhou Power Generation Branch



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Version number: 2021.04

The contents will be changed due to product updates without prior notice, please refer to the actual product.

This document has been proofread many times, but there may still be errors or omissions, please understand.