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TECKA Water-cooled Screw Chiller Unit

1992 TECKA developed the first semi-closed double screw water chiller in China.

Technical benchmarks Setting industry standards



As a pioneer in the industry, TECKA participated in the preparation of a number of national standards for chillers, and established guidelines for the industry development.

"GB/T18430.1-2007 Industrial or commercial and similar application of water chiller (heat pump) units"

"GB19577-2015 Chiller energy efficiency limit value and energy efficiency grade"

"GB/T29363-2012 Vapor compression cycle chiller for nuclear power plant"

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Stable & Reliable



High efficiency
Energy saving



Environmental friendly
Low noise



Intelligent control

Stable & Reliable

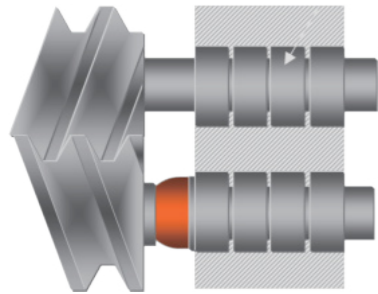
High efficiency double-screw compressor

Adopt world famous high-efficiency double screw compressor, 5:6 patented asymmetrical tooth shape, unique radial bearing component force and a-axis thrust balance drum design. Ensured the lower temperature rise of the motor, the wide operating range of the chiller, bear the larger compression ratio, and safe to use.



α-type balance drum design

The male rotor of the screw compressor uses an α-type balancing drum, which uses the elastic damping principle to balance the rotor's fine vibration to avoid rigid impact, reduce wear, protect the rotor and bearings, and greatly extend the compressor life.



Industrial PLC controller

The chiller unit adopts an industrial PLC controller with obvious advantages of high control accuracy, high temperature resistance, low temperature resistance, high humidity resistance, electromagnetic interference resistance, anti-decay, and others, to ensure that the chiller unit always has a reliable "brain".



18 security protection functions

100% reliable

The machine with 18 functions to protect the safety of people, buildings and equipment.

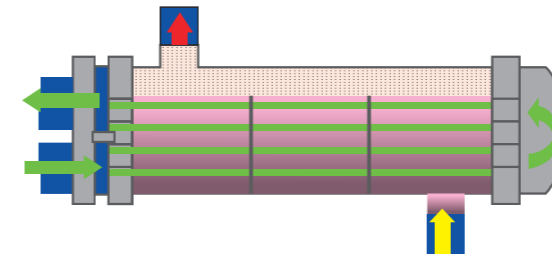
1. System high voltage protection
2. System low voltage protection
3. Unit high/low pressure differential protection
4. Power phase loss protection
5. Power phase sequence protection
6. Power overvoltage protection
7. Power undervoltage protection
8. Compressor motor overheat protection
9. Compressor oil temperature protection
10. Chilled water flow protection
11. Cooling water flow protection
12. Low water temperature protection
13. Compressor oil level protection
14. Compressor oil pressure differential protection
15. Compressor high exhaust temperature protection
16. Compressor protection against frequent start
17. Sensor failure protection
18. Fire fighting chain protection



High efficiency & Energy saving

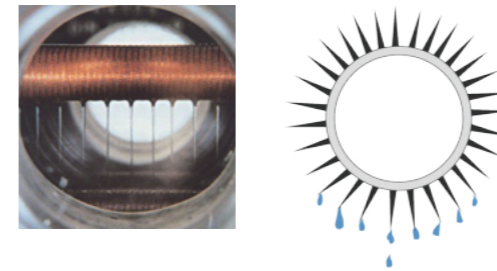
Flooded evaporation Efficient heat transfer

The chiller unit is equipped with a flooded type evaporator, the heat exchange tube is immersed in the refrigerant, the temperature distribution is uniform, and the heat exchange efficiency is high.



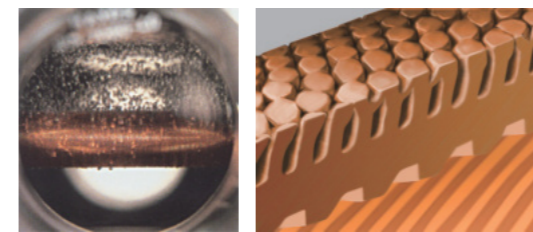
C-type enhanced heat exchange tube

The condenser adopts a C-type high-efficiency heat exchange basket. The needle-shaped end of the C-tube can pierce the liquid film formed by the refrigerant on the tube wall to enhance heat transfer and greatly improve the heat exchange efficiency of the condenser.



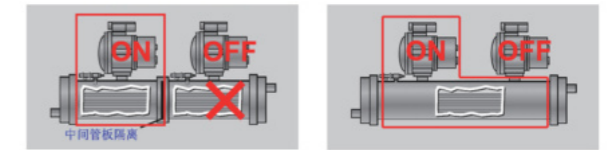
E₂C high efficiency heat exchange tube

The evaporator uses E₂C high-efficiency heat exchange tubes to increase the vaporization core and improve the boiling heat transfer efficiency.



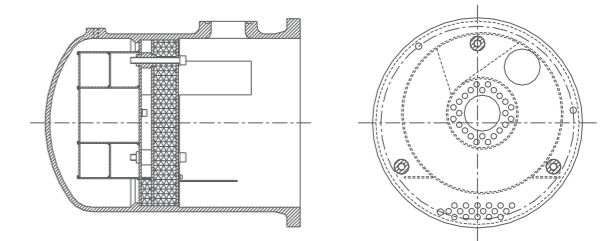
Redundant heat exchange dual system

The dual compressor chiller unit adopts a redundant heat exchange system that shares the evaporator and condenser, which effectively increases the heat exchange area of the chiller unit at partial load and greatly improves the energy efficiency ratio of the chiller unit at partial load.



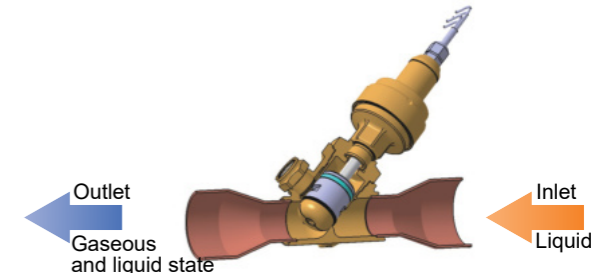
Heat exchange without oil film

The chiller unit adopts multi-stage oil separation technology, with efficiency higher than 99.9%, so that the heat exchanger is always in the state of heat exchange without oil film, and the heat exchange efficiency is effectively improved.



Liquid level precise adjustment

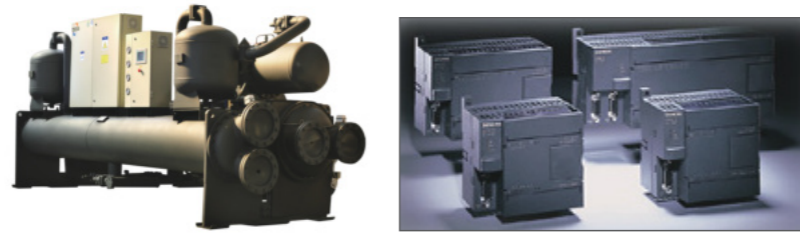
The electronic expansion valve could be accurately adjusted within the flow range of 10% to 100%. Especially in the flooded type chiller unit, the liquid level of the evaporator is accurately controlled to avoid overheating of the suction and ensure the efficient operation of the chiller unit in changing conditions.



Intelligent control

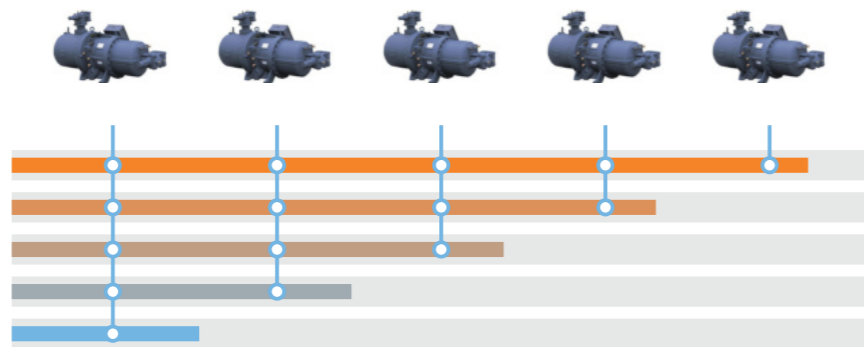
Industrial PLC controller

- The controller has the features of compact structure, good expansion, powerful command functions, etc., which can flexibly and efficiently form a PLC-PLC network and a microcomputer-PLC network.
- The control program is designed by TECKA to upgrade the software and expansion the function easily.



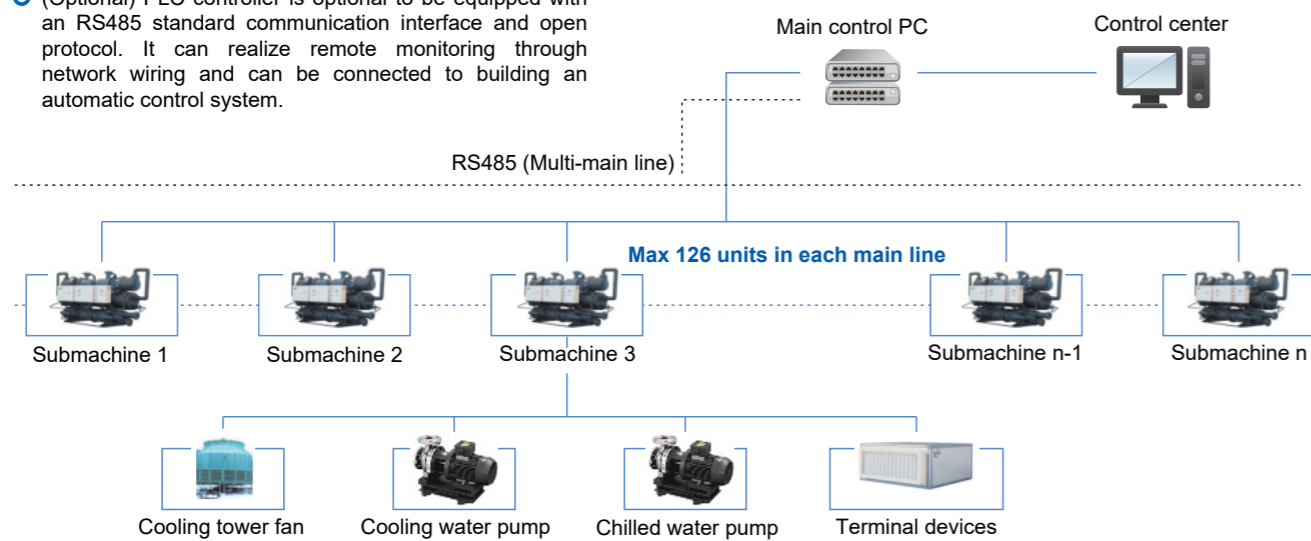
Intelligent operation with load regulation

- The controller calculates the number of operating chiller units and the partial load of the compressor according to the machine outlet temperature, and automatically adjusts the number of operating chiller units and the partial load of the compressor to make the chiller unit's cooling capacity match the air conditioning load of "Zero-Gap".



Remote monitoring

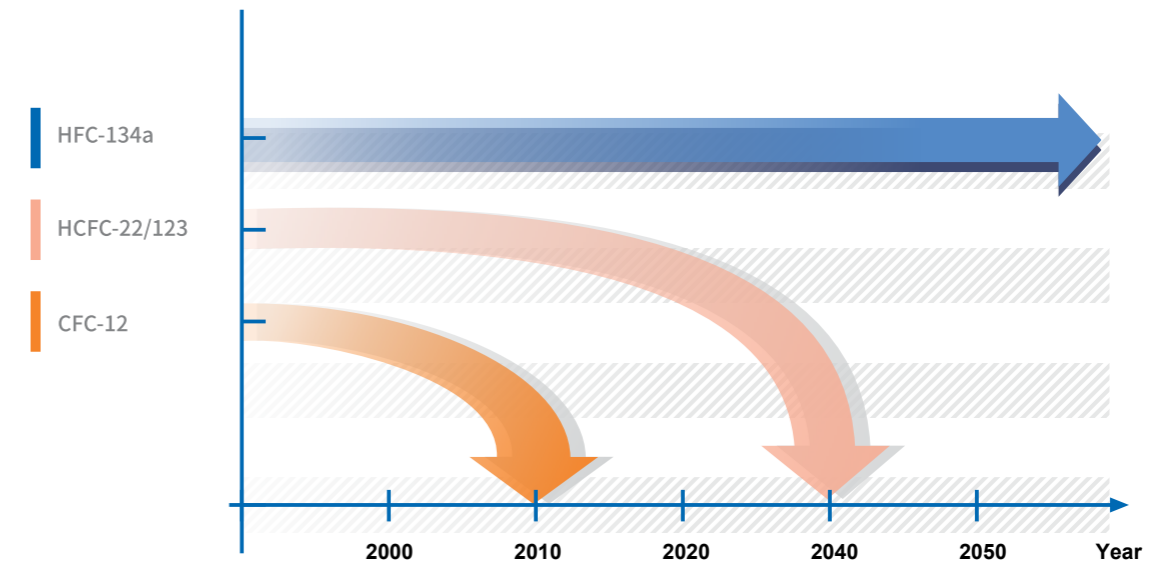
- (Optional) PLC controller is optional to be equipped with an RS485 standard communication interface and open protocol. It can realize remote monitoring through network wiring and can be connected to building an automatic control system.



Environmental friendly & Low noise

Environment-friendly refrigerant

- The chiller unit can use R134a environmentally friendly refrigerant.



Double shell design

- The highest noise part of the compressor is the oil separator which adopts a double-shell design, which not only effectively improves the oil separation effect, but also greatly reduces the aerodynamic noise of the chiller unit.



Model name

RSW - 030 - 1 B D L 2 1 U 0 0 A

- 1** RSW: TECKA water cooled screw chiller unit
2 Machine model
3 Compressor number
4 Refrigerant: A: R134a
5 Evaporator: D: Standard type F: High efficiency type
6 Structure: L: Vertical chiller unit W: Horizontal chiller unit
7 Chilled water outlet temperature range: 2: 5-15 C
8 Additional function: 1: Basic type 2: Partial heat recovery 3: Full heat recovery
 4: Ice cool storage with shared evaporator 5: Ice cool storage with non-shared evaporator
9 Control: U: Basic chiller unit R: With RS485 communication interface and Mod bus protocol
10 Alternate number: Standard chiller unit is 0
11 Alternate number: Standard chiller unit is 0
12 Design serial number: A

Capacity adjustment method

TECKA water-cooled chiller unit defaults to continuous capacity adjustment to achieve precise control of the water temperature and achieve optimal energy efficiency in operation.

The chiller capacity adjustment range is shown in the table on the right:

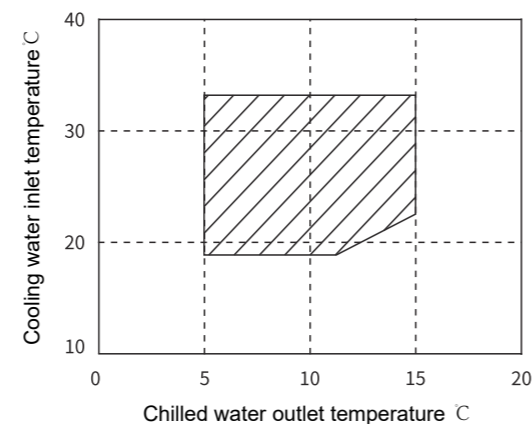
Compressor No.	Start	Capacity adjustment range
Single chiller unit	25%	25%~100%
Multi-chiller units	12.5%	12.5%~100%

Machine operating range

The operating range of the standard chiller unit is shown in the following picture. If the actual operating conditions are outside the following table, please provide the actual application conditions before ordering to carry out the special design for the actual operating conditions.

		Item	Cooling
Nominal condition	Water cooled type	Evaporator	Outlet water temperature 7
			Capacity 0.172
	Condenser	Inlet water temperature 30	
		Capacity 0.215	
Operating range	Chilled water	Inlet water temperature 10~20	
		Outlet water temperature 5~15	
	Cooling water	Inlet water temperature 19~33	
		Outlet water temperature 24~38	

- Temperature unit C • Capacity unit is based on heat exchange



Cooling water quality

The chiller unit is designed according to the provisions of GB/T18430.1-2007 Appendix D on the quality of cooling water in anti-corrosion and anti-scale. The specific water quality requirements are shown in the following table. When the actual cooling water quality cannot meet the requirements, special design is required according to the water quality to meet the long-term reliability and continuous high-efficiency requirements of the chiller unit.

Cooling water quality

Item	Datum value	Tendency	
		Corrosion	Fouling
pH(25 C)	6.5~8.0	O	O
Conductivity (25 C)	μS/cm	<800	O
Cl	mg(Cl)/L	<200	O
SO ₄ ²⁻	mg(SO ₄ ²⁻)/L	<200	O
Acid consumption (pH=4.8)	mg(CaCO ₃)/L	<100	O
Full hardness	mg(CaCO ₃)/L	<200	O
Fe	mg(Fe)/L	<1.0	O
S ²⁻	mg(S ²⁻)/L	Not allowed	O
NH ₄ ⁺	mg(NH ₄ ⁺)/L	<1.0	O
SiO ₂	mg(SiO ₂)/L	<50	O

- Note: O indicates the relevant factors of corrosion or fouling tendency.

When the cooling water quality has a tendency to corrode, the anti-corrosion level shall be determined according to the actual corrosiveness of the cooling water and the protection design shall be carried out. When the cooling water quality has a tendency to scale, it is necessary to design anti-scaling and determine the cleaning plan according to the actual situation of the cooling water. Therefore, please test the water quality before ordering the equipment and provide the test report.

Performance data

High efficiency R134a water-cooled chiller Single compressor

RSW-AFW21 series

Type	Item	Model	90-1AF	100-1AF	120-1AF	130-1AF	150-1AF	170-1AF	180-1AF	210-1AF	240-1AF
Rated cooling capacity	R134a	kW	307	350	413	463	531	589	633	741	848
		x10 ³ kcal/h	26.4	30.1	35.5	39.8	45.7	50.7	54.4	63.7	72.9
Cooling input power		kW	54.0	60.9	71.1	79.2	90.8	99.2	107.8	122.8	142.2
Condenser	Type		Horizontal shell and tube heat exchanger								
	Water capacity	m ³ /h	66.0	75.3	88.8	99.5	114.2	126.6	136.1	159.3	182.3
	Water pressure drop	kPa	68	65	69	71	67	75	72	74	76
	Inlet/Outlet pipe	DN	125	125	125	125	150	150	150	150	150
Evaporator	Type		Flooded type heat exchanger								
	Water capacity	m ³ /h	52.8	60.2	71.0	79.6	91.3	101.3	108.9	127.5	145.9
	Water pressure drop	kPa	46	50	50	50	52	50	54	51	56
	Inlet/Outlet pipe	DN	125	125	125	125	150	150	150	150	150
Weight	Shipping weight	kg	3420	3510	3540	3580	4930	5010	5020	5070	5350
	Operating weight	kg	3600	3710	3745	3800	5260	5360	5370	5450	5730
Dimensions	L	mm	2970	2970	2970	2970	3000	3000	3000	3000	3000
	W	mm	1380	1380	1380	1380	1610	1610	1610	1610	1610
	H	mm	1740	1740	1740	1740	2060	2060	2060	2060	2060
Partial heat recovery parameter	Cooling capacity	kW	313.1	357.0	421.3	472.3	541.6	600.8	645.7	755.8	865.0
	Machine input power	kW	52.9	59.7	69.6	77.6	89.0	97.2	105.6	120.3	139.4
	Heat recovery	kW	29.3	33.3	39.3	44.0	50.4	55.8	60.1	70.1	80.3
	Chilled water capacity	m ³ /h	53.9	61.4	72.5	81.2	93.2	103.3	111.1	130.0	148.8
	Chilled water pressure drop	kPa	48	52	52	52	54	52	56	53	58
	Hot water capacity	m ³ /h	5.0	5.7	6.8	7.6	8.7	9.6	10.3	12.1	13.8
	Hot water pressure drop	kPa	14	14	14	15	15	15	15	15	16
	Full heat recovery parameter	Cooling capacity	kW	245.6	280.0	330.4	370.4	424.8	471.2	506.4	592.8
Machine input power		kW	71.8	81.0	94.5	105.4	120.8	131.9	143.3	163.3	189.1
Heat recovery		kW	317.4	361.0	424.9	475.8	545.6	603.1	649.7	756.1	867.5
Chilled water capacity		m ³ /h	42.2	48.2	56.8	63.7	73.1	81.0	87.1	102.0	116.7
Chilled water pressure drop		kPa	29	32	32	32	33	32	35	33	36
Hot water capacity		m ³ /h	54.6	62.1	73.1	81.8	93.8	103.7	111.8	130.1	149.2
Hot water pressure drop		kPa	47	44	47	48	45	50	49	49	51
Power		Type	380V/3PH/50Hz (Please specify when ordering special voltage)								

Note:

- For more data of heat recovery chiller unit, please ask our company before ordering.
- The inlet and outlet temperature of the recovered hot water is 45/50 °C, and the cooling water capacity of partial heat recovery chiller units is equal to the standard water-cooled chiller.
- If the waterside pressure higher than 1.0MPa, please indicate when ordering.

Performance data

High efficiency R134a water-cooled chiller Double compressor

RSW-AFW21 series

Type	Item	Model	180-2AF	200-2AF	240-2AF	260-2AF	300-2AF	340-2AF	360-2AF	420-2AF	480-2AF	530-2AF	610-2AF	690-2AF
Rated cooling capacity	R134a	kW	614	700	825	926	1063	1179	1267	1482	1697	1869	2157	2413
		x10 ³ kcal/h	52.8	60.2	71.0	79.6	91.4	101.4	109.0	127.5	145.9	160.7	185.5	207.5
Cooling input power		kW	108.0	121.9	142.1	158.5	181.6	198.4	215.5	245.6	284.4	309.8	352.8	390.1
Condenser	Type		Horizontal shell and tube heat exchanger											
	Water capacity	m ³ /h	132.0	150.5	177.4	199.1	228.5	253.5	272.4	318.6	364.9	401.8	463.8	518.8
	Water pressure drop	kPa	64	66	67	69	68	65	66	63	85	89	86	90
	Inlet/Outlet pipe	DN	200	200	200	200	200	200	200	200	250	250	250	250
Evaporator	Type		Flooded type heat exchanger											
	Water capacity	m ³ /h	105.6	120.4	141.9	159.3	182.8	202.8	217.9	254.9	291.9	321.5	371.0	415.0
	Water pressure drop	kPa	45	44	45	46	50	47	47	44	76	78	77	83
	Inlet/Outlet pipe	DN	200	200	200	200	200	200	200	200	250	250	250	250
Weight	Shipping weight	kg	5490	5640	5700	5750	7970	8030	8170	8220	11010	11130	12450	12750
	Operating weight	kg	5920	6120	6240	6280	8630	8750	8930	9020	12210	12370	13820	14190
Dimensions	L	mm	4300	4300	4300	4300	4330	4330	4330	4330	4450	4450	4450	4450
	W	mm	1600	1600	1600	1600	1680	1680	1680	1680	1940	1940	1940	1940
	H	mm	2080	2080	2080	2080	2520	2520	2520	2520	2600	2600	2670	2670
Partial heat recovery parameter	Cooling capacity	kW	626.3	714.0	841.5	944.5	1084.3	1202.6	1292.3	1511.6	1730.9	1906.4	2200.1	2461.3
	Machine input power	kW	105.8	119.4	139.3	155.3	178.0	194.4	211.2	240.7	278.7	303.6	345.7	382.3
	Heat recovery	kW	58.6	66.7	78.5	88.0	101.0	111.8	120.3	140.2	160.8	176.8	203.7	227.5
	Chilled water capacity	m ³ /h	107.7	122.8	144.7	162.5	186.5	206.8	222.3	260.0	297.7	327.9	378.4	423.3
	Chilled water pressure drop	kPa	47	46	47	48	52	49	49	46	79	81	80	86
	Hot water capacity	m ³ /h	10.1	11.5	13.5	15.1	17.4	19.2	20.7	24.1	27.7	30.4	35.0	39.1
	Hot water pressure drop	kPa	24	25	25	26	26	26	27	27	27	28	31	32
	Full heat recovery parameter	Cooling capacity	kW	491.2	560.0	660.0	740.8	850.4	943.2	1013.6	1185.6	1357.6	1495.2	1725.6
Machine input power		kW	143.6	162.1	189.0	210.7	241.5	263.9	286.6	326.6	378.3	412.1	469.2	518.8
Heat recovery		kW	634.8	722.1	849.0	951.5	1091.9	1207.1	1300.2	1512.2	1735.9	1907.3	2194.8	2449.2
Chilled water capacity		m ³ /h	84.5	96.3	113.5	127.4	146.3	162.2	174.3	203.9	233.5	257.2	296.8	332.0
Chilled water pressure drop		kPa	29	28	29	29	32	30	30	28	49	50	49	53
Hot water capacity		m ³ /h	109.2	124.2	146.0	163.7	187.8	207.6	223.6	260.1	298.6	328.1	377.5	421.3
Hot water pressure drop		kPa	44	45	45	47	46	44	44	42	57	59	57	59
Power		Type	380V/3PH/50Hz (Please specify when ordering special voltage)											

Note:

- For more data of heat recovery chiller unit, please ask our company before ordering.
- The inlet and outlet temperature of the recovered hot water is 45/50 °C, and the cooling water capacity of partial heat recovery chiller units is equal to the standard water-cooled chiller.
- If the waterside pressure higher than 1.0MPa, please indicate when ordering.

Coefficient of correction for off-design condition

Coefficient of correction for cooling capacity in off-design condition

Twe	Twc														
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
5	1.038	1.028	1.017	1.004	0.994	0.983	0.972	0.959	0.948	0.937	0.926	0.912	0.900	0.889	0.877
6	1.073	1.063	1.052	1.046	1.035	1.024	1.013	1.006	0.995	0.983	0.971	0.964	0.952	0.940	0.927
7	1.110	1.099	1.088	1.081	1.070	1.058	1.052	1.040	1.028	1.021	1.009	1.000	0.987	0.975	0.962
8	1.143	1.132	1.121	1.109	1.103	1.091	1.079	1.072	1.060	1.047	1.035	1.027	1.014	1.001	0.988
9	1.179	1.172	1.160	1.148	1.136	1.129	1.117	1.105	1.096	1.083	1.070	1.062	1.049	1.036	1.022
10	1.217	1.207	1.197	1.187	1.176	1.165	1.154	1.144	1.132	1.120	1.109	1.097	1.085	1.074	1.062
11	1.253	1.243	1.233	1.223	1.212	1.201	1.190	1.179	1.168	1.156	1.145	1.133	1.121	1.109	1.096
12	-	1.279	1.269	1.258	1.247	1.236	1.224	1.213	1.201	1.190	1.178	1.165	1.153	1.140	1.128
13	-	-	1.307	1.296	1.285	1.273	1.262	1.250	1.238	1.225	1.213	1.201	1.188	1.175	1.162
14	-	-	-	1.336	1.325	1.313	1.301	1.289	1.276	1.264	1.251	1.238	1.225	1.212	1.199
15	-	-	-	-	1.364	1.352	1.340	1.327	1.314	1.302	1.288	1.275	1.262	1.248	1.234

1. This table is made on the basis of the water capacity between the evaporator inlet and outlet water temperature difference of 5 C and the condenser inlet and outlet water temperature difference of 5 C.
 2. Twe: Evaporator outlet temperature. Twc: Condenser inlet temperature.

Coefficient of correction for power in off-design condition

Twe	Twc														
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
5	0.807	0.820	0.835	0.848	0.863	0.878	0.894	0.907	0.924	0.941	0.958	0.973	0.991	1.009	1.027
6	0.815	0.830	0.844	0.858	0.873	0.889	0.905	0.920	0.937	0.954	0.971	0.987	1.006	1.024	1.043
7	0.822	0.836	0.851	0.867	0.882	0.898	0.914	0.930	0.947	0.963	0.982	1.000	1.018	1.037	1.056
8	0.830	0.844	0.859	0.875	0.890	0.906	0.922	0.938	0.955	0.973	0.991	1.008	1.026	1.046	1.065
9	0.835	0.850	0.865	0.881	0.897	0.912	0.929	0.946	0.963	0.982	1.000	1.017	1.037	1.055	1.074
10	0.841	0.857	0.872	0.888	0.905	0.921	0.938	0.954	0.973	0.991	1.009	1.029	1.048	1.068	1.088
11	0.848	0.863	0.879	0.895	0.912	0.929	0.946	0.963	0.982	1.001	1.019	1.039	1.058	1.079	1.100
12	-	0.871	0.887	0.903	0.920	0.937	0.955	0.973	0.992	1.010	1.030	1.049	1.070	1.089	1.111
13	-	-	0.895	0.912	0.929	0.946	0.965	0.983	1.001	1.021	1.040	1.059	1.080	1.101	1.122
14	-	-	-	0.918	0.935	0.953	0.971	0.990	1.009	1.027	1.048	1.068	1.088	1.110	1.132
15	-	-	-	-	0.943	0.961	0.979	0.999	1.018	1.038	1.057	1.078	1.100	1.120	1.142

1. This table is made on the basis of the water capacity between the evaporator inlet and outlet water temperature difference of 5 C and the condenser inlet and outlet water temperature difference of 5 C.
 2. Twe: Evaporator outlet temperature. Twc: Condenser inlet temperature.

Ice cool storage condition & Electrical data

High efficiency water cooled chiller R134a

Ice cool storage condition

Model	Item	R134a cooling capacity		Input power
		KW	x10 ⁴ kcal/h	KW
90-1AF		194.3	16.7	48.1
100-1AF		221.5	19.0	54.2
120-1AF		261.1	22.5	63.3
130-1AF		293.1	25.2	70.5
150-1AF		336.3	28.9	80.8
170-1AF		373.1	32.1	88.3
180-1AF		401.0	34.5	95.9
210-1AF		469.2	40.3	109.3
240-1AF		537.1	46.2	126.6
180-2AF		388.7	33.4	96.1
200-2AF		443.0	38.1	108.5
240-2AF		522.3	44.9	126.5
260-2AF		586.2	50.4	141.0
300-2AF		672.6	57.8	161.6
340-2AF		746.1	64.2	176.6
360-2AF		802.0	69.0	191.8
420-2AF		938.3	80.7	218.6
480-2AF		1074.2	92.4	253.1
530-2AF		1183.0	101.7	275.8
610-2AF		1365.3	117.4	314.0
690-2AF		1527.5	131.4	347.2

Note:
 Ice cool storage condition
 The chilled water uses 25% ethylene glycol solution, the chilled water outlet temperature is -5.6 C.
 The cooling water inlet temperature is 30 C, and the temperature difference is 5 C.

High efficiency water cooled chiller R134a

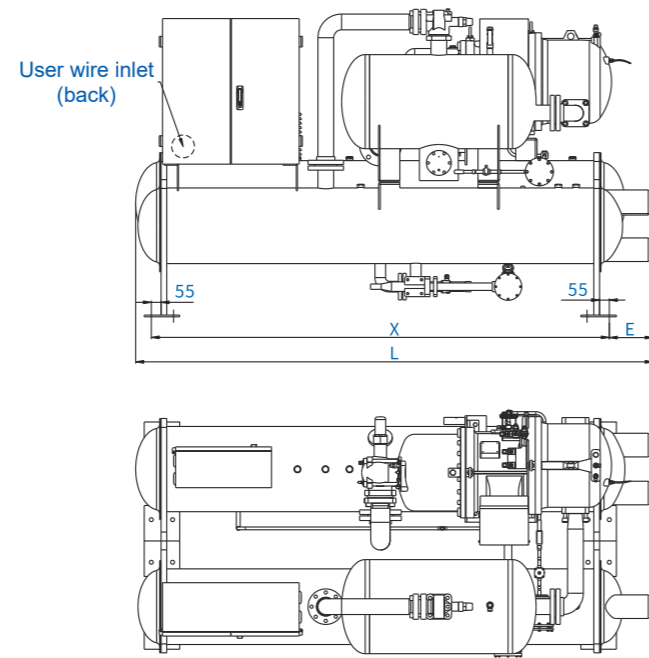
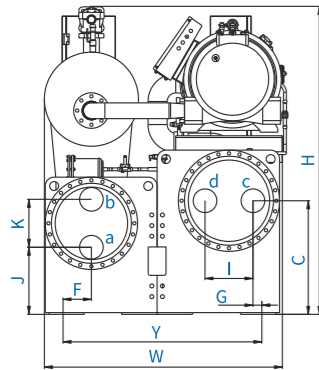
Electrical data

Model	Operating current (A)	Max operating current (A)
90-1AF	99	123
100-1AF	110	134
120-1AF	129	157
130-1AF	139	171
150-1AF	166	200
170-1AF	174	217
180-1AF	190	231
210-1AF	217	267
240-1AF	252	307
180-2AF	97*2	123*2
200-2AF	110*2	134*2
240-2AF	129*2	157*2
260-2AF	139*2	171*2
300-2AF	166*2	200*2
340-2AF	174*2	217*2
360-2AF	190*2	231*2
420-2AF	217*2	267*2
480-2AF	252*2	307*2
530-2AF	271*2	331*2
610-2AF	316*2	375*2
690-2AF	342*2	402*2

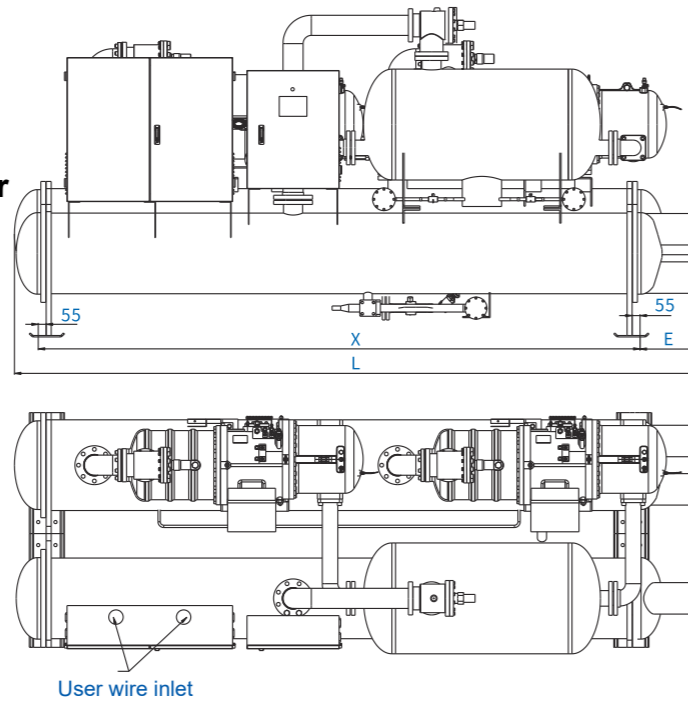
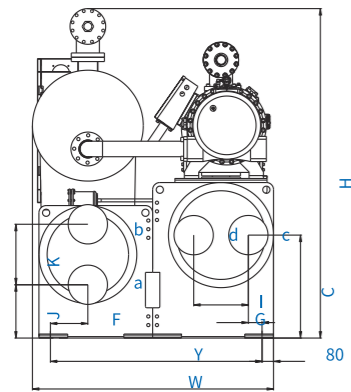
Note:
 1. The user should prepare the cable and air circuit breaker according to the field wiring situation, the ambient temperature, the maximum operating current provided in the above table, and the relevant local standards.
 2. The wire is selected according to the ambient temperature of 35 C.
 3. Users should prepare 1 power inlet for single compressor chiller unit and 2 power inlets for double compressor chiller unit.
 4. Refer to the local Copper Core Wire and Cable Ampacity Standards for the specifications of power cables.
 5. The wire diameter of the N-ground wire is generally smaller than the power wire by two or refer to the general five-core cable standard such as 3*70 + 2*35.
 6. The maximum operating current of full heat recovery chiller units is 1.25 times the maximum operating current of the above table.

Dimensions drawing

High efficiency water cooled chiller Single compressor



High efficiency water cooled chiller Double compressor



Connection table

No.	a	b	c	d
Name	Condenser inlet	Condenser outlet	Evaporator inlet	Evaporator outlet

Note:

- All the cooling water connections in the chiller (without additional functions) are arranged in the way of up-outlet and down-inlet.
- The inlet and outlet direction of chilled water could be changed before the production completed, it can't be changed after the production completed.

High efficiency water cooled chiller R134a

RSW-AFW21 series single compressor chiller unit

Unit (mm)

	L	W	H	X	Y	K	E	F	J	I	G	C
90-1AF	2970	1380	1740	2580	1120	270	250	160	378	270	50	640
100-1AF	2970	1380	1740	2580	1120	270	250	160	378	270	50	640
120-1AF	2970	1380	1740	2580	1120	270	250	160	378	270	50	640
130-1AF	2970	1380	1740	2580	1120	270	250	160	378	270	50	640
150-1AF	3000	1610	2060	2580	1235	310	300	162	410	310	12	680
170-1AF	3000	1610	2060	2580	1235	310	300	162	410	310	12	680
180-1AF	3000	1610	2060	2580	1235	310	300	162	410	310	12	680
210-1AF	3000	1610	2060	2580	1235	310	300	162	410	310	12	680
240-1AF	3000	1610	2060	2580	1235	310	300	162	410	310	12	680

RSW-AFW21 series double compressor chiller unit

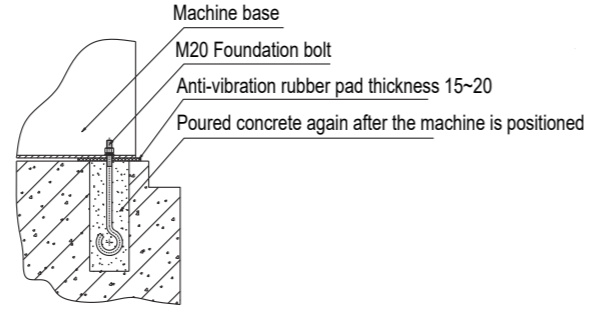
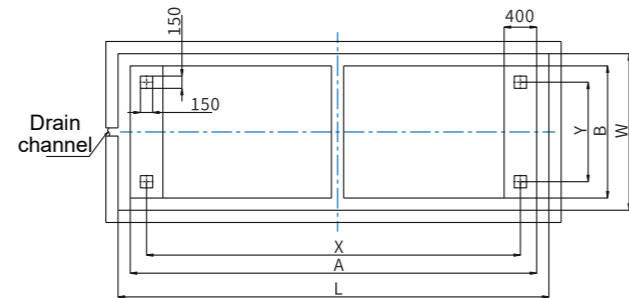
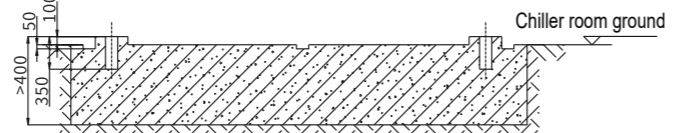
Unit (mm)

	L	W	H	X	Y	K	E	F	J	I	G	C
180-2AF	4300	1600	2080	3880	1285	310	300	187	410	310	37	380
200-2AF	4300	1600	2080	3880	1285	310	300	187	410	310	37	380
240-2AF	4300	1600	2080	3880	1285	310	300	187	410	310	37	380
260-2AF	4300	1600	2080	3880	1285	310	300	187	410	310	37	380
300-2AF	4330	1680	2520	3880	1450	360	300	237	435	360	129	730
340-2AF	4330	1680	2520	3880	1450	360	300	237	435	360	129	730
360-2AF	4330	1680	2520	3880	1450	360	300	237	435	360	129	730
420-2AF	4330	1680	2520	3880	1450	360	300	237	435	360	129	730
480-2AF	4450	1940	2600	3880	1750	420	350	309	450	420	149	785
530-2AF	4450	1940	2600	3880	1750	420	350	309	450	420	149	785
610-2AF	4450	1940	2670	3880	1750	420	350	309	450	420	149	785
690-2AF	4450	1940	2670	3880	1750	420	350	309	450	420	149	785

Foundation drawing

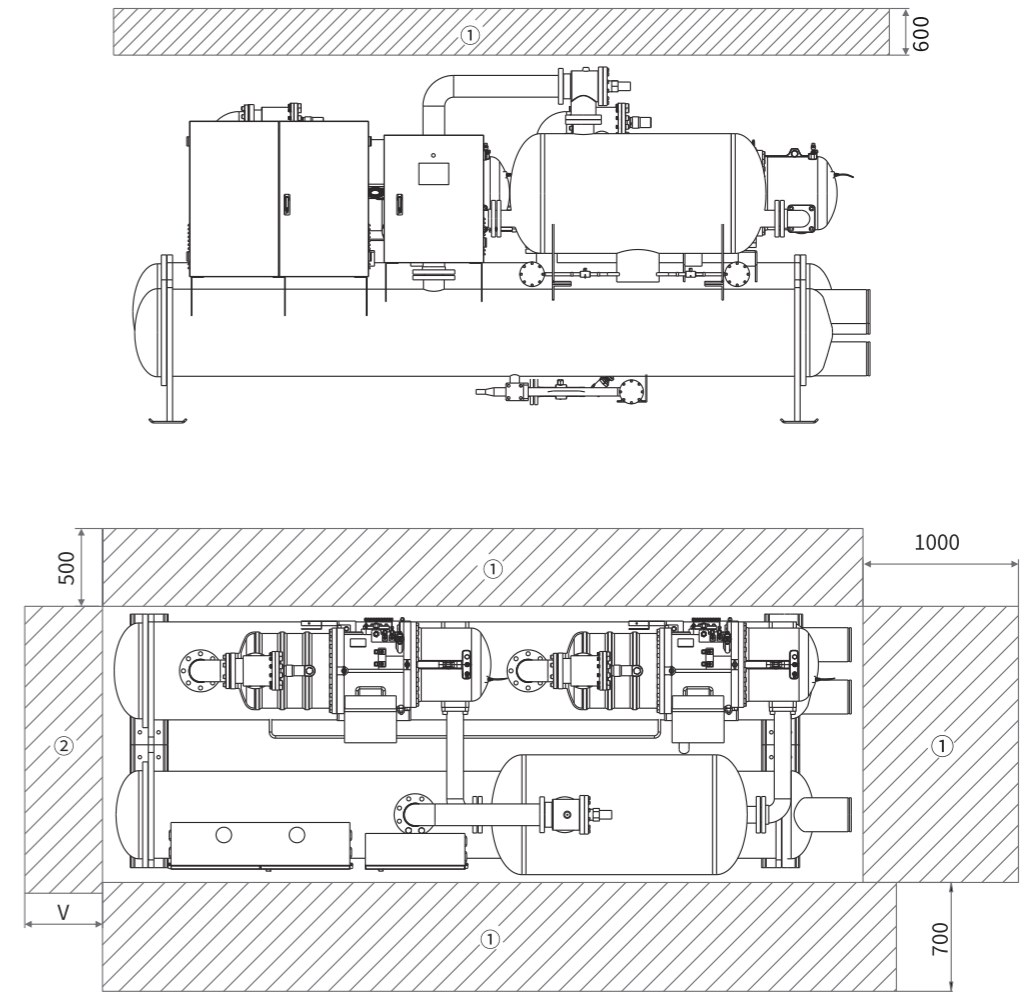
High efficiency R134a water cooled chiller
RSW-AFW 21series Unit (mm)

	X	Y	L	W	A	B
90-1AF	2580	1120	3280	1820	2980	1520
100-1AF	2580	1120	3280	1820	2980	1520
120-1AF	2580	1120	3280	1820	2980	1520
130-1AF	2580	1120	3280	1820	2980	1520
150-1AF	2580	1235	3280	1935	2980	1635
170-1AF	2580	1235	3280	1935	2980	1635
180-1AF	2580	1235	3280	1935	2980	1635
210-1AF	2580	1235	3280	1935	2980	1635
240-1AF	2580	1235	3280	1935	2980	1635
180-2AF	3880	1285	4580	1985	4280	1685
200-2AF	3880	1285	4580	1985	4280	1685
240-2AF	3880	1285	4580	1985	4280	1685
260-2AF	3880	1285	4580	1985	4280	1685
300-2AF	3880	1450	4580	2150	4280	1850
340-2AF	3880	1450	4580	2150	4280	1850
360-2AF	3880	1450	4580	2150	4280	1850
420-2AF	3880	1450	4580	2150	4280	1850
480-2AF	4610	2150	5310	2850	5010	2550
530-2AF	4610	2150	5310	2850	5010	2550
610-2AF	4610	2150	5310	2850	5010	2550
690-2AF	4610	2150	5310	2850	5010	2550



Machine reserved space

High efficiency water cooled chiller R134a

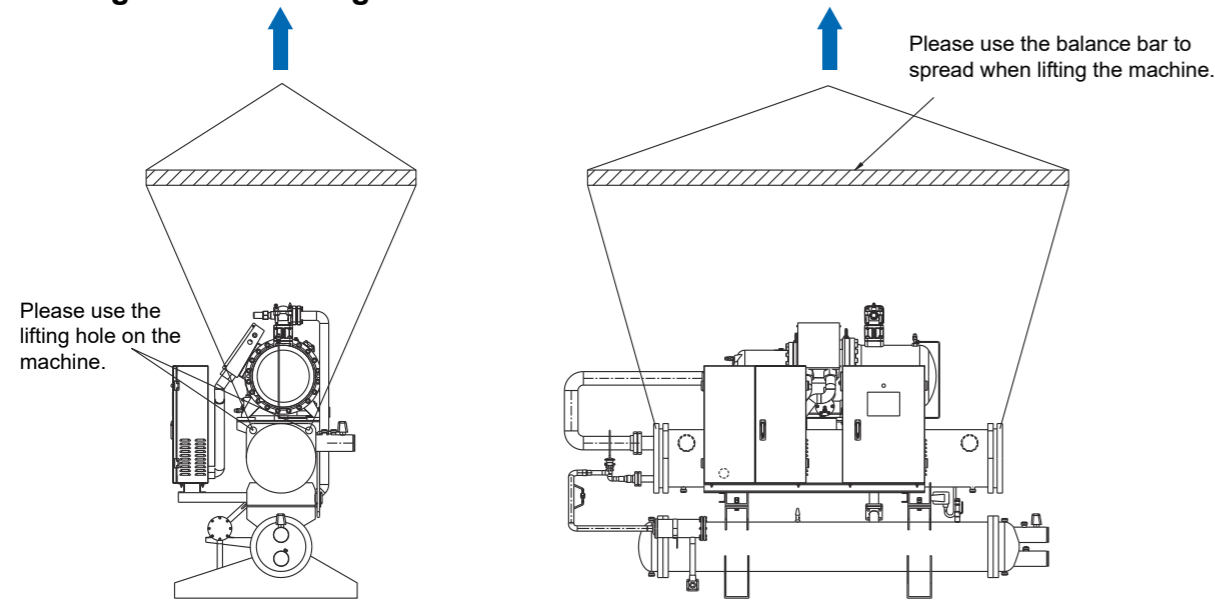


High efficiency R134a chiller

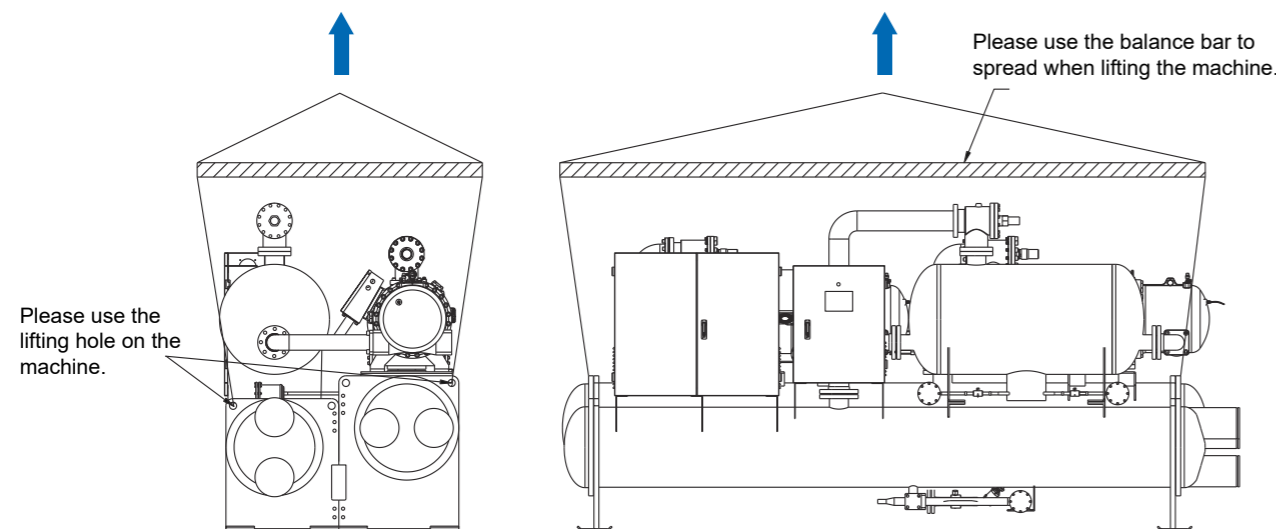
	Unit (mm)																				
Model	90-1AF	100-1AF	120-1AF	130-1AF	150-1AF	170-1AF	180-1AF	210-1AF	240-1AF	180-2AF	200-2AF	240-2AF	260-2AF	300-2AF	340-2AF	360-2AF	420-2AF	480-2AF	530-2AF	610-2AF	690-2AF
V	2800	2800	2800	2800	2800	2800	2800	2800	2800	4100	4100	4100	4100	4100	4100	4100	4100	4800	4800	4800	4800

Lifting schematic diagram

Basic water cooled chiller
Lifting schematic diagram



High efficiency water cooled chiller
Lifting schematic diagram



Machine installation introduction

- The chiller should be installed in the dedicated machine room. To facilitate equipment operation and maintenance, it should ensure that there is sufficient reserved space around and above the chiller unit. Also, pipes do not allow laying on the compressor.
- Good ventilation facilities should be provided in the machine room to ensure that the heat generated by the heat-generating components such as the compressor outlet, outlet pipe, and condenser shell can be discharged timely, and the temperature of the machine room should be maintained below 40 °C.
- Drainage measures with enough discharge capacity should be provided near the equipment, so the water in the system could be drained when the system is stopped or repaired.
- The chiller unit can be installed on a rigid base or concrete foundation that is not deformed. The foundation should be able to bear the weight of the chiller unit during operation. Level correction is required after the chiller is located on the foundation. The level deviation should be within 0.02%.
- The installation and insulation of the cooling water and chilled water pipes connected to the chiller unit should be designed and guided by professional engineers, and the corresponding provisions of the HVAC installation specifications should be strictly implemented.
- The external piping of the equipment should be effectively supported to avoid the internal piping seal being damaged by the external piping weight.
- The chilled water and cooling water pipelines should be installed with anti-shock soft joints, water filters, electronic descaling instruments, check valves, flow meters, exhaust valves, stop valves and others according to the specifications. The temperature and pressure gauge should also be installed on the pipeline to observed the chiller unit and the air conditioning system better.
- 60 mesh/inch² Y-type water filters should be installed on the chilled water and cooling water inlet pipes of the chiller unit. Equipment should be cleaned before it is put into use, and the impurities in the pipeline should be removed to avoid blockage of the equipment. In the pipeline cleaning, the equipment should be isolated from the system piping.
- The power supply and power capacity provided to the equipment should be sufficient. The power wire should be configured in strict accordance with the data provided in the equipment power wiring requirements. The equipment should be reliably grounded as required.
- The direction of the cooling water and chilled water inlet and outlet pipes of the chiller unit is shown in the drawing in the brochure. If you want to change it, please confirm with us and indicate it in the contract.

Water pipeline connection

