

# 一体式蒸发冷凝冷水机组

Integrated Evaporative Condensing Chiller



四海一家 舒适之道

World's A Family, Comfort Quality

浙江国祥股份有限公司  
ZHEJIANG KING CO.,LTD.

地址:浙江省绍兴市上虞区杭州湾上虞经济开发区康阳大道23号  
电话:0575-82058688 传真:0575-82058778  
网址:<http://www.ekingair.com>

服务热线: 4008260780

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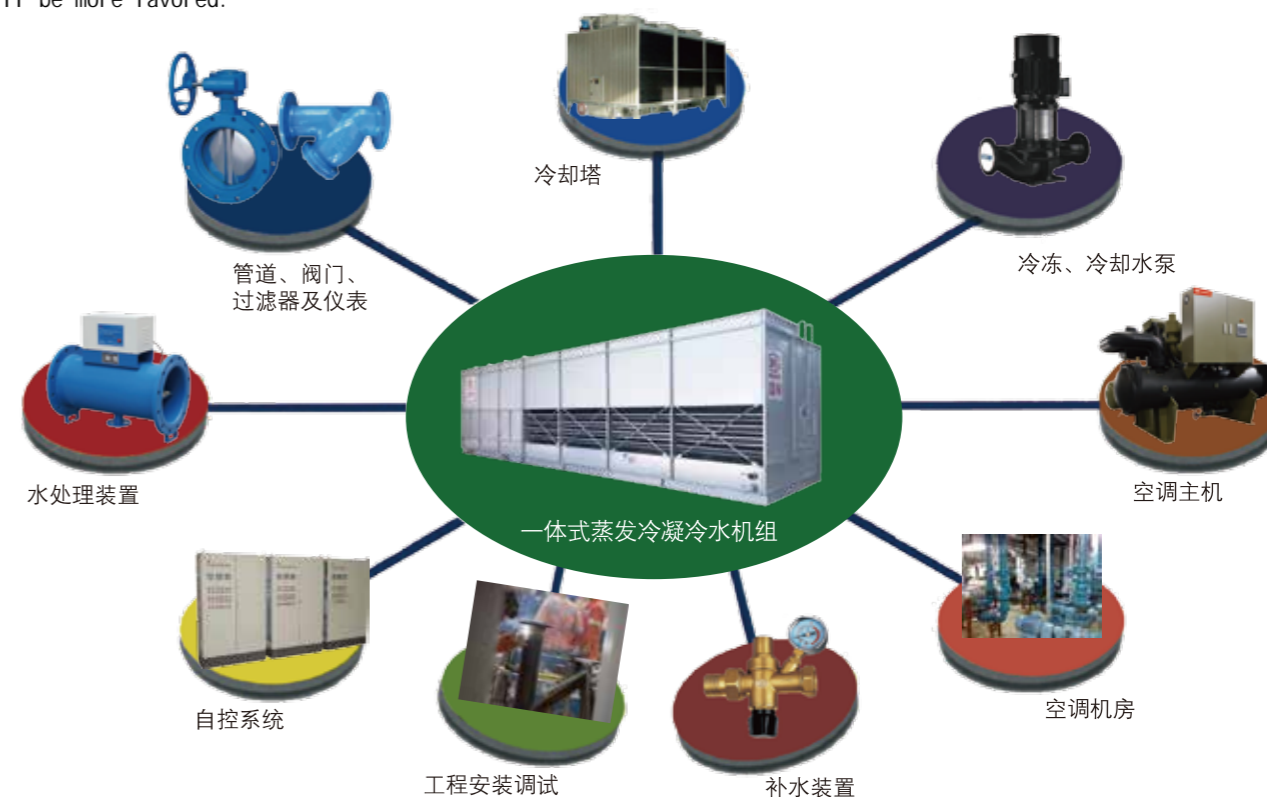
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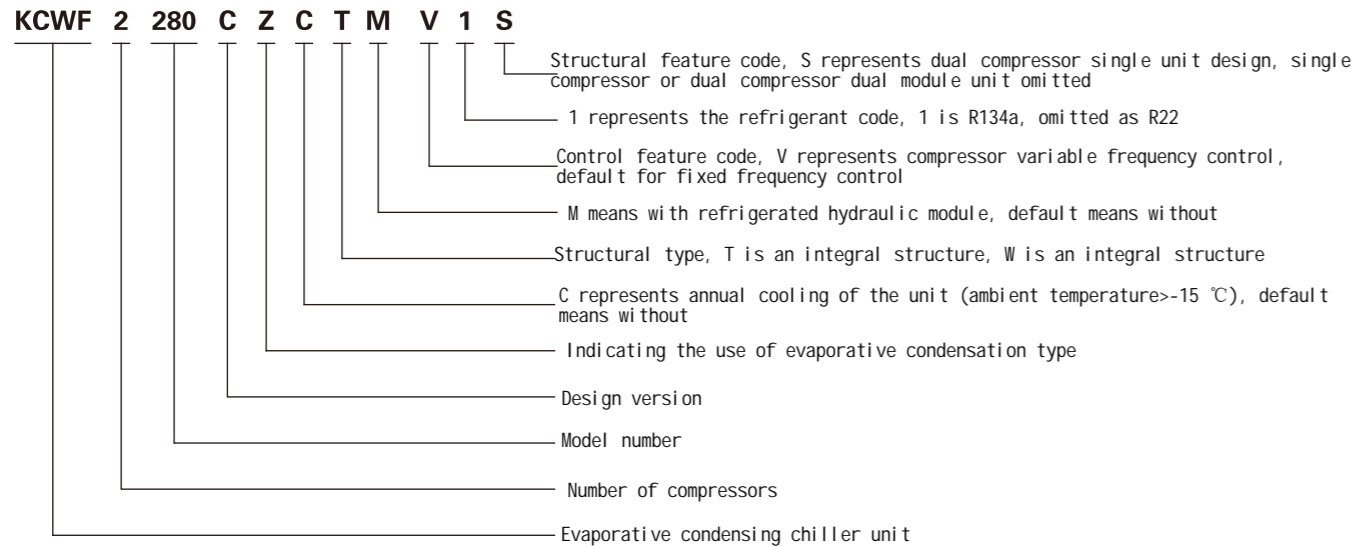
## 1 PRODUCT OVERVIEW

In today's world where energy is increasingly scarce, Kingair adheres to the future mission of continuously meeting customer needs, based on global environmental protection and improving energy utilization efficiency. On the basis of fully absorbing the latest development technologies in the field of refrigeration and air conditioning, Kingair has successfully launched a new generation of highly reliable integrated evaporative condensing chiller units. This product integrates many technological achievements of Guoxiang, such as high-efficiency evaporative condensing technology, high-efficiency full liquid evaporation technology, adaptive pressure differential oil supply and efficiency enhancement technology, evaporative refrigeration unit heat recovery technology, high-efficiency multi-stage oil separation technology, and so on. It is a perfect embodiment of Guoxiang's 50 years of technological accumulation.

The Kingair integrated evaporative condensing chiller unit is an efficient screw chiller unit with a built-in cooling source and a refrigeration hydraulic module. It integrates traditional water-cooled chillers, cooling towers, cooling water pumps, chilled water pumps, constant pressure water replenishment devices, and other functions. Customers only need to connect the chilled water pipes and power sources to operate efficiently. It is a machine room system placed inside the frame, which can directly replace the conventional air conditioning machine room and be placed outdoors as a new type of refrigeration system. This product can be widely used in central air conditioning engineering in places such as subways, hotels, schools, shopping malls, hospitals, etc. It can also be used in the process cooling process of industrial production departments such as pharmaceuticals, chemicals, power electronics, and precision instruments. With the implementation of national energy conservation and emission reduction policies, Guoxiang integrated evaporative condensing chiller units will be more favored.



## 2 MODEL SPECIFICATION



example explanation:

KCWF1200CZTMV - refers to a single compressor integrated evaporative condensing chiller unit with a refrigeration hydraulic module, with model number 200, design version C, and refrigerant R22. The compressor adopts variable frequency control. KCWF2280CZCT1- The model number is 280, the design version is C version, and the refrigerant is R134a. The dual compressor does not come with a refrigeration hydraulic module, and the unit adopts a dual module design for year-round refrigeration evaporative condensation chiller. KCWF2420CZCTMV-S - The model number is 420, the design version is C version, and the refrigerant is R22. It is a dual compressor integrated evaporative condensing chiller with a refrigeration hydraulic module. The unit adopts a single unit design, and the compressor adopts variable frequency control. For units operating at low temperatures with ambient temperatures ≤ -15 °C, specific selection can be made by contacting the local sales company of Kingair.

## 3 SCOPE OF OPERATION

Project	Chilled water		Ambient temperature
Nominal Cooling condition	Inlet water temperature °C	Outlet water temperature °C	Wet bulb temperature °C
	-	7	24
Safe operating range	Outlet water temperature °C	Inlet/outlet water temperature difference °C	Wet bulb temperature range °C
	4~15	3~9	15.5~32

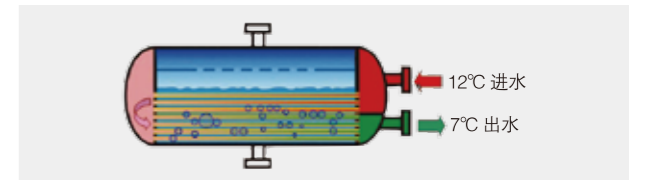
When the unit is used in the following environment, please contact Guoxiang Sales, and we will provide the optimal solution based on the unit's usage environment.

1. Altitude exceeding 1000m;
2. The ambient temperature in winter is below -15 °C;
3. High salt spray and corrosive gas environment.

## 4 PRODUCT FEATURES

### 1 ENERGY EFFICIENT

Full liquid evaporative cooling dedicated high-efficiency screw compressor: adopting the most advanced screw tooth design, high-precision processing technology, with a volumetric efficiency of up to 95%; The application of internationally renowned brand high-efficiency fluorine resistant motors ensures optimal efficiency under various operating conditions. Efficient full liquid evaporator: Using full liquid evaporation technology, the thermal efficiency is more than three times higher than traditional dry evaporators, and the refrigeration energy efficiency of the unit can be improved by 14%.

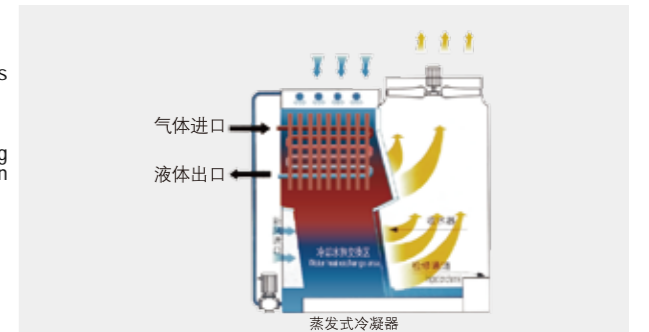


### Efficient evaporative condenser

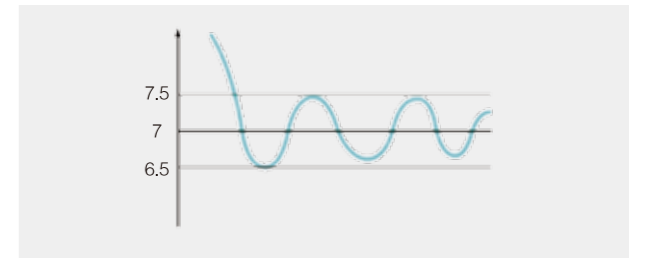
The condensation heat of the refrigerant is directly discharged to the outdoor air and water, without any intermediate heat exchange link in the cooling water system. The condensation temperature of the unit can be reduced by about 4 °C compared to traditional water-cooled units, and the refrigeration energy efficiency can be improved by 12%. At the same time, it can also save the need for cooling water pumps and significantly reduce input power consumption.

The circulating water spray system adopts a large flow anti clogging basket type nozzle to ensure continuous and uniform water distribution, allowing water, air, and refrigerant to fully exchange heat and ensuring excellent heat transfer performance of the condenser.

Adopting Feng Shui co directional mixed flow heat exchange technology and PVC packing combination cooling technology to achieve efficient condensation of refrigerant.



Self contained cooling source: The compressor is fully linked with the condenser fan and water pump, and automatically unloads or shuts down the condenser fan and water pump when partially loaded. This can effectively avoid the defect of the cooling water pump and cooling tower still operating at full load after the compressor of the water cooling system is unloaded and stopped, and the operating efficiency of the air conditioning system can be greatly improved.



Stepless energy control: The unit can use fuzzy control to monitor the refrigeration load in real time according to changes in the freezing water temperature, and adjust the compressor capacity infinitely to adapt to real-time load changes. The overall load efficiency is high and the water temperature control accuracy can reach ± 0.5 °C.

### 2 EXCELLENT QUALITY

High reliability compressor: The screw compressor has fewer operating components, and the internationally renowned brand's high-efficiency fluorine resistant motor is equipped with a built-in PTC electronic protection module. The main bearing adopts Swedish SKF rolling bearings, with a service life of up to 100000 hours. So far, hundreds of thousands of compressors have been operated around the world.



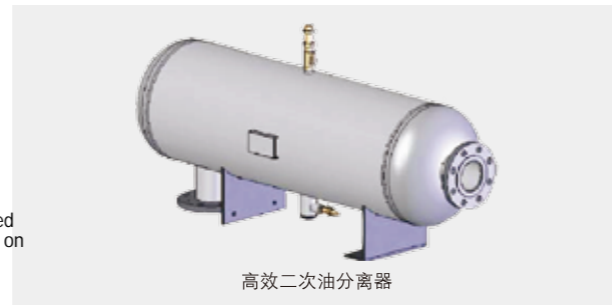
## 4 PRODUCT FEATURES

The unit undergoes strict air tightness and vacuum tests before leaving the factory to ensure that there are no leaks in the entire machine and its components; Rigorous performance, corrosion resistance, and durability testing ensure that any unit is a highly reliable product.

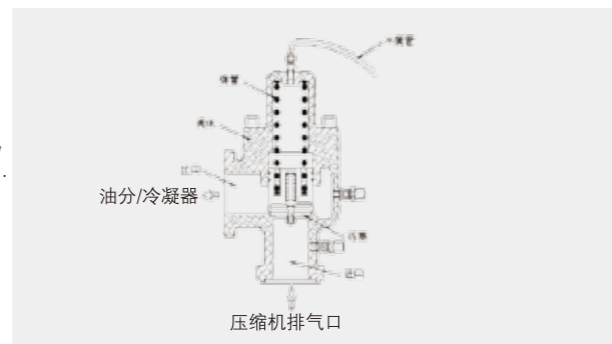


The frame and box plate of the evaporative condenser are made of high-quality aluminum zinc plated or stainless steel plate, which is one of the most corrosion-resistant plates today. Its service life is 3-6 times that of ordinary galvanized plate, and it has the advantages of strong thermal resistance, high heat resistance, and beautiful appearance. The overall hot-dip galvanizing treatment of the heat exchanger after welding enhances its anti-corrosion ability.

The cooling water side of the unit is equipped with an electronic descaling device, which can descale and sterilizing algae in the open circulating cooling water, improving the operating efficiency and reliability of the unit.



Reliable oil treatment system: The compressor is equipped with a patented design for efficient oil separation, an external mechanical and adsorption combination for efficient secondary oil separation, and a unique evaporator concentration and injection oil return technology to improve heat exchange efficiency while ensuring unit reliability.



Adaptive pressure differential oil supply and efficiency enhancement technology (optional): During low-temperature cooling in winter, the opening of the compressor exhaust pressure stabilizing valve is automatically adjusted to stabilize the female exhaust pressure at the required minimum limit value, thereby improving the operating efficiency of the unit while ensuring the required oil supply pressure differential.

## 3 EASY TO INSTALL

Adopting an integrated structural design, the compressor, evaporator, evaporative condenser, chilled water module (including chilled water pump, water filter, make-up valve), water treatment device, and control system are placed in a modular framework, with a compact structure and small footprint: Customers only need to connect the chilled water pipe and power supply to operate efficiently. The unit adopts a modular design, breaking it down into smaller parts for convenient transportation and on-site lifting. It can realize the networking operation of 3 single compressor module units of any size for a single unit.

## 4 QUIET OPERATION

A semi enclosed screw compressor adopts a double-layer shell structure, and the base is equipped with vibration damping pads for smooth and reliable operation with low noise;



The condenser adopts an evaporative cooling special aluminum alloy axial flow fan, with a forward leaning blade structure design: a streamlined inlet duct, low wind resistance, high air volume, low noise, and high efficiency.

## 5 INTELLIGENT CONTROL

Advanced Siemens PLC microcomputer controller;

10" touch screen operation, user-friendly dialogue interface, intuitive operation, truly realizing one click power on/off function;



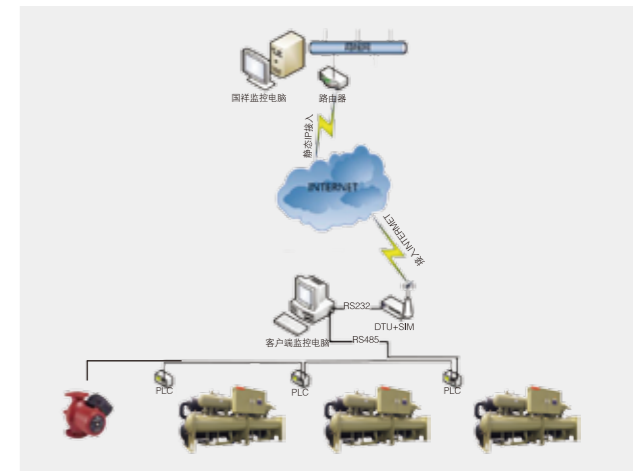
Stepless energy regulation, water temperature control accuracy up to  $\pm 0.5\text{ }^{\circ}\text{C}$ ;

Multiple control methods are available: dry contact, RS485 RTV serial communication, DP communication, etc;

Internet+APP service system:

WeChat follows the official account of "Wei Master Love Air Conditioner" to query the operating status and fault information of the unit. When the chilled water pump is linked with the unit for control, one click power on/off can be achieved on the APP;

Guoxiang has established a perfect Internet based remote monitoring system to provide customers with high-quality cloud services through the Internet network. Customers can connect the Guoxiang host to the Guoxiang global monitoring system through the Guoxiang intelligent data collection terminal, and have professional personnel assist in remote fault diagnosis and analysis, early warning of alarm faults, and ensure that the equipment operates in excellent condition.



## 5 TECHNICAL ADVANTAGE

### 1 INDEPENDENT INNOVATION

Kingair has been deeply researching evaporation and condensation technology for more than ten years, and has obtained multiple national invention patents. The technology is at the leading level in China.

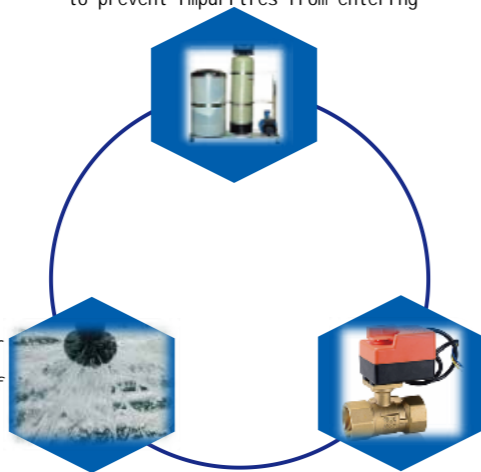


# 5 TECHNICAL ADVANTAGE

## 2 ALL-ROUND SCALE CONTROL

### Source control

Water replenishment side: optional soft water device to reduce hardness  
Air side: The inlet is equipped with a primary filter screen to prevent impurities from entering



### system design

Temperature control: effectively control the condensation temperature and circulating water temperature to maintain low values and avoid the formation of hard scale  
Uniform water distribution: Cooling water is evenly distributed on the heat exchange surface, eliminating dry spots and avoiding hard scale

### Control and maintenance

Automatic drainage: Control the concentration of calcium and magnesium ions in circulating water through automatic drainage

## 3 ALL-ROUND ANTICORROSION

### corrosion prevention

#### Material selection

Heat exchanger: choose SPCC high-quality carbon steel hot-dip galvanized or 304 stainless steel  
Water distributor: UPVC non-metallic material  
Water tank: Made of high-quality aluminum zinc plated plate or 304 stainless steel

#### Design process

The carbon steel components in contact with the spray water are treated with integral hot-dip galvanizing or 304 stainless steel material. The evaporative cooling frame is made of high-quality aluminum zinc plated or stainless steel plate, and the cut is treated with cold galvanizing coating. The service life is 3-6 times that of ordinary galvanized plate

#### Operation control

Reliable control logic prevents chloride ions from entering the circulating water system through the regeneration salt of soft water; The automatic drainage function can effectively control the concentration of chloride ions and prevent corrosion of the absolute heat exchanger

## 4 ECONOMIC COMPARISON

Application project analysis:

A certain project has a building air conditioning area of 7500m<sup>2</sup>, The cooling load index is 15w/m<sup>2</sup>, the cooling design load is 1125KW, the cooling operation is 180 days, with 10 hours of operation per day, the unit load factor is 0.75, and the industrial electricity price is calculated at 1.0 yuan/kW. h

Economic Benefit Analysis	Air cooled screw chiller unit	Water cooled screw chiller unit	Evaporative condensing chiller unit
Cooling capacity kW	1125	1125	1125
Environmental temperature °C	35DB/24WB	35DB/24WB	35DB/24WB
Compressor input power kW	325.2	198.3	185.2
Compressor energy efficiency ratio	3.46	5.67	6.07
Cooling fan power kW	28.8	15	12.0
Cooling water pump power kW	--	30	4.0
Total system power kW	354	243.3	201.2
System energy efficiency ratio kW/kW	3.18	4.62	5.59
Annual operating hours h	180 days x 10 hours=1800 hours		
Annual power consumption in kW h	477900	328455	271620
Annual operating cost (yuan)	477900	328455	271620
Cost savings during operation (yuan)	Evaporative condensing unit saves 477900-271620=206280 yuan compared to air-cooled unit Evaporative condensing unit saves 328455-271620=56835 yuan compared to water-cooled unit		

thus It can be seen;



Evaporative condensing chiller unit

Comparative advantage :

- ◆ Energy saving 40% -50%
- ◆ Smaller device size
- ◆ Reduce noise pollution



Air-cooled chiller

Comparative advantage :

- ◆ Energy saving 15% -25%
- ◆ Save more than 50% of water
- ◆ Eliminate the need for cooling towers
- ◆ Good system linkage, more energy-efficient



Water cooled chiller unit

# 6

## STANDARD SERIES PERFORMANCE PARAMETER TABLE (R22)

### 1

#### SINGLE COMPRESSOR

Model		KCWF-CZ(C)T(V)		1090	1105	1120	1130	1145	1165	1180
Cooling capacity	kW			338	397	428	465	508	576	623
	kcal/h			290680	341420	368080	399900	436880	495360	535780
Power supply		380V/3N~/50Hz								
complete machine	Input power	kW		64.7	75.3	82.0	92.7	102.1	107.8	116.0
	Operating current	A		115	134	145	165	181	196	205
	Performance coefficient			5.22	5.27	5.22	5.02	4.98	5.34	5.37
	IPLV			6.01	6.06	6.00	5.77	5.72	6.14	6.18
Compressor	Type		Semi closed screw compressor							
	Qty	Unit		1	1	1	1	1	1	1
	Startup type		Y-Δ							
	Energy regulation		25% ~ 100%							
	Input power	kW		59.2	68.7	75.4	84.5	93.9	99.6	107.8
Evaporator	Type		Efficient overflow evaporator							
	Water Flow	m³/h		58	68	74	80	87	99	107
	Water pressure	kPa		60	60	60	60	60	60	60
	Take over the pipe diameter	DN		100	100	100	100	125	125	125
	Working pressure on the water side	MPa		1.0						
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit		1	1	1	1	1	1	1
	Water replenishment amount	m³/h		0.66	0.77	0.83	0.91	1.00	1.12	1.21
Refrigerant	Type		R22							
Dimensions	L	mm		5650	5885	5885	6160	6160	6360	6760
	W	mm		2500	2500	2500	2500	2500	2500	2500
	H	mm		2950	2950	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg		6300	6500	6500	6900	7150	7700	7850
	Operating weight	kg		7700	8300	8300	9000	9300	10000	10200

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;  
 4. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 5. For specific project selection, please contact KingairSales.

### 1

#### SINGLE COMPRESSOR

Model		KCWF-CZ(C)T(V)		1200	1215	1235	1260	1280	1310	1320
Cooling capacity	kW			707	765	823	957	990	1082	1155
	kcal/h			608020	657900	707780	823020	851400	930520	993300
Power supply		380V/3N~/50Hz								
complete machine	Input power	kW		137.2	148.8	156.9	182.4	186.2	201.1	209.1
	Operating current	A		245	265	277	321	338	355	370
	Performance coefficient			5.15	5.14	5.25	5.25	5.32	5.38	5.52
	IPLV			5.93	5.91	6.03	6.03	6.11	6.19	6.35
Compressor	Type		Semi closed screw compressor							
	Qty	Unit		1	1	1	1	1	1	1
	Startup type		Y-Δ							
	Energy regulation		25% ~ 100%							
	Input power	kW		123.2	134.8	144.9	170.4	174.2	186.1	193.1
Evaporator	Type		Efficient overflow evaporator							
	Water flow	m³/h		122	132	142	165	170	186	199
	Water pressure	kPa		60	60	60	60	60	60	60
	Take over the pipe diameter	DN		125	125	150	150	150	150	200
	Working pressure on the water side	MPa		1.0						
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit		1	1	1	1	1	1	1
	Water replenishment amount	m³/h		1.37	1.49	1.60	1.87	1.93	2.10	2.23
Refrigerant	Type		R22							
Dimensions	L	mm		7260	7260	7560	8140	8140	8860	9020
	W	mm		2500	2500	2500	2500	2500	2500	2500
	H	mm		3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg		8800	9050	9650	10200	10300	11600	12000
	Operating weight	kg		12000	12250	13150	14200	14400	16500	16900

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;  
 4. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 5. For specific project selection, please contact KingairSales.

# 6

## STANDARD SERIES PERFORMANCE PARAMETER TABLE (R22)

### 2

#### DUAL COMPRESSOR MODULE

Model		KCWF-CZ(C)T(V)	2180	2210	2240	2260	2290	2330	2360	
Cooling capacity	kW		676	794	856	930	1016	1152	1246	
	kcal/h		581360	682840	736160	799800	873760	990720	1071560	
Power supply			380V/3N ~ /50Hz							
complete machine	Input Power	kW	129.4	150.6	164.0	185.4	204.2	215.6	232.0	
	Operating current	A	229	267	290	329	361	392	409	
	Performance coefficient			5.22	5.27	5.22	5.02	4.98	5.34	5.37
	IPLV			6.01	6.06	6.00	5.77	5.72	6.14	6.18
compressor	Type		Semi closed screw compressor							
	Qty	Unit	2	2	2	2	2	2	2	
	Startup type		Y-Δ							
	Energy regulation		12.5% ~ 100%							
	Input power	kW	118.4	137.4	150.8	169.0	187.8	199.2	215.6	
	Type		Efficient overflow evaporator							
evaporator	Water Flow	m³/h	116	137	147	160	175	198	214	
	Water pressure	kPa	60	60	60	60	60	60	60	
	Take over the pipe diameter	DN	100*2 Sets	100*2Sets	100*2Sets	100*2 Sets	125*2 Sets	125*2 Sets	125*2Sets	
	Working pressure on the water side	MPa	1.0							
condenser	Type		Efficient evaporative condenser							
	Qty	Unit	2	2	2	2	2	2	2	
	Water replenishment amount	m³/h	1.32	1.54	1.67	1.82	1.99	2.24	2.42	
Refrigerant	Type		R22							
	L	mm	12500	12970	12970	13520	13520	13920	14720	
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500	
	H	mm	2950	2950	2950	2950	2950	2950	2950	
Unit weight	Shipping Weight	kg	12600	13000	13000	13800	14300	15400	15700	
	Operating weight	kg	15400	16600	16600	18000	18600	20000	20400	

#### Note:

- The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C; 2. The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;
- The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;
- The unit adopts a combination design of two independent basic modules;
- Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;
- For specific project selection, please contact Kingair Sales.

### 2

#### DUAL COMPRESSOR MODULE

Model		KCWF-CZ(C)T(V)	2400	2430	2470	2520	2560	2620	2640	
Cooling capacity	kW		1414	1530	1646	1914	1980	2164	2310	
	kcal/h		1216040	1315800	1415560	1646040	1702800	1861040	1986600	
Power supply			380V/3N ~ /50Hz							
complete machine	Input Power	kW	274.4	297.6	313.8	364.8	372.4	402.2	418.2	
	Operating current	A	490	530	555	643	676	711	739	
	Performance coefficient			5.15	5.14	5.25	5.25	5.32	5.38	5.52
	IPLV			5.93	5.91	6.03	6.03	6.11	6.19	6.35
compressor	Type		Semi closed screw compressor							
	Qty	Unit	2	2	2	2	2	2	2	
	Startup type		Y-Δ							
	Energy regulation		12.5% ~ 100%							
	Input Power	kW	246.4	269.6	289.8	340.8	348.4	372.2	386.2	
	Type		Efficient overflow evaporator							
evaporator	Water Flow	m³/h	243	263	283	329	341	372	397	
	Water pressure	kPa	60	60	60	60	60	60	60	
	Take over the pipe diameter	DN	125*2Sets	125*2 Sets	150*2 Sets	150*2 Sets	150*2 Sets	150*2 Sets	200*2组	
	Working pressure on the water side	MPa	1.0							
condenser	Type		Efficient evaporative condenser							
	Qty	Unit	2	2	2	2	2	2	2	
	Water replenishment amount	m³/h	2.75	2.98	3.21	3.73	3.85	4.20	4.46	
Refrigerant	Type		R22							
	L	mm	15720	15720	16320	17480	17480	18920	19240	
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500	
	H	mm	3010	3010	2950	2950	2950	2950	2950	
Unit weight	Shipping Weight	kg	17600	18100	19300	20400	20600	23200	24000	
	Operating weight	kg	24000	24500	26300	28400	28800	33000	33800	

#### Note:

- The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C; 2. The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;
- The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;
- The unit adopts a combination design of two independent basic modules;
- Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;
- For specific project selection, please contact Kingair Sales.

# 6

## STANDARD SERIES PERFORMANCE PARAMETER TABLE (R22)

### 3

#### DOUBLE COMPRESSOR MACHINE

Model KCWF-CZ(C)T(V)-S		2180	2210	2240	2260	2290	2330	2360	
Cooling capacity	kW	676	794	856	930	1016	1152	1246	
	kcal/h	581360	682840	736160	799800	873760	990720	1071560	
Power Supply		380V/3N~/50Hz							
complete machine	Input power	kW	129.4	150.6	164.0	185.4	204.2	215.6	232.0
	Operating current	A	229	267	290	329	361	392	409
	Performance coefficient		5.22	5.27	5.22	5.02	4.98	5.34	5.37
	IPLV		6.01	6.06	6.00	5.77	5.72	6.14	6.18
Compressor	Type		Efficient overflow evaporator						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input power	kW	118.4	137.4	150.8	169.0	187.8	199.2	215.6
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m³/h	116	137	147	160	175	198	214
	Water pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	125	150	150	150	150	200	200
	Working pressure on the water side	MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
	Water replenishment amount	m³/h	1.32	1.54	1.67	1.82	1.99	2.24	2.42
Refrigerant	Type		R22						
Dimensions	L	mm	9200	9670	9670	10220	10420	10820	11620
	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	2950	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	10600	11300	11300	12100	12700	13200	13400
	Operating weight	kg	13400	14900	14900	16300	17000	17800	18100

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C; 2. The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;  
 4. The unit adopts a combination design of two independent basic modules;  
 5. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 6. For specific project selection, please contact Kingair Sales.

### 3

#### DOUBLE COMPRESSOR MACHINE

Model KCWF-CZ(C)T(V)-S		2400	2430	2470	2520	2560	2620	2640	
Cooling capacity	kW	1414	1530	1646	1914	1980	2164	2310	
	kcal/h	1216040	1315800	1415560	1646040	1702800	1861040	1986600	
Power supply		380V/3N~/50Hz							
Complete machine	Input power	kW	274.4	297.6	313.8	364.8	372.4	402.2	418.2
	Operating current	A	490	530	555	643	676	711	739
	Performance coefficient		5.15	5.14	5.25	5.25	5.32	5.38	5.52
	IPLV		5.93	5.91	6.03	6.03	6.11	6.19	6.35
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input power	kW	246.4	269.6	289.8	340.8	348.4	372.2	386.2
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m³/h	243	263	283	329	341	372	397
	Water pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	200	200	200	200	200	200	250
	Working pressure on the water side	MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
	Water replenishment amount	m³/h	2.75	2.98	3.21	3.73	3.85	4.20	4.46
Refrigerant	Type		R22						
Dimensions	L	mm	12620	12620	13220	14380	14380	15820	16320
	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	14700	15400	15600	16400	16700	17300	19600
	Operating weight	kg	21100	21800	22600	24400	24900	25530	29400

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C; 2. The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;  
 4. The unit adopts a combination design of two independent basic modules;  
 5. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 6. For specific project selection, please contact Kingair Sales.

# 7

## STANDARD SERIES PERFORMANCE PARAMETER TABLE (R134a)

### 1

#### SINGLE COMPRESSOR

Model KCWF-CZ(C)T(V)1		1085	1100	1110	1120	1130	1140	1155	1175	
Cooling capacity	kW	301	346	391	423	459	495	538	630	
	kcal/h	258860	297560	336260	363780	394740	425700	462680	541800	
Power Supply		380V/3N~/50Hz								
Complete machine	Input power	kW	60.1	68.9	74.5	79.8	87.6	93.3	102.0	117.3
	Operating current	A	106	122	133	141	156	166	181	207
	Performance coefficient		5.01	5.02	5.25	5.30	5.24	5.31	5.27	5.37
	IPLV		5.76	5.78	6.04	6.10	6.03	6.10	6.07	6.18
Compressor	Type		Semi closed screw compressor							
	Qty	Unit	1	1	1	1	1	1	1	1
	Startup type		Y-Δ							
	Energy regulation		25% ~ 100%							
	Input power	kW	55.6	63.4	67.5	73.2	79.4	85.1	93.8	109.1
Evaporator	Type		Efficient overflow evaporator							
	Water Flow	m <sup>3</sup> /h	52	60	67	73	79	85	93	108
	Water pressure	kPa	60	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	100	100	100	100	100	125	125	125
Working pressure on the water side	MPa	1.0								
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit	1	1	1	1	1	1	1	
	Water replenishment amount	m <sup>3</sup> /h	0.59	0.68	0.76	0.82	0.89	0.96	1.05	1.22
Refrigerant	Type		R134a							
Dimensions	L	mm	5440	5650	5650	5885	6160	6160	6360	6760
	W	mm	2500	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	6300	6500	6600	6700	7100	7500	7950	8300
	Operating weight	kg	6700	8300	8500	8600	9200	9600	10100	11000

#### Note:

- The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;
- The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;
- The comprehensive performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;
- Condenser connection pipe diameter: inlet DN25, overflow DN65, drain DN50;
- For specific project selection, please contact Kingair Sales.

### 1

#### SINGLE COMPRESSOR

Model KCWF-CZ(C)T(V)1		1190	1210	1230	1250	1280	1310	1330	
Cooling capacity	kW	675	739	819	871	1023	1125	1167	
	kcal/h	580500	635540	704340	749060	879280	967500	1003620	
Power Supply		380V/3N~/50Hz							
Complete machine	Input power	kW	131	139.2	149.0	161.3	182.7	201.2	211.8
	Operating current	A	234	253	264	292	322	356	374
	Performance coefficient		5.15	5.31	5.50	5.40	5.60	5.59	5.51
	IPLV		5.93	6.11	6.32	6.21	6.44	6.43	6.34
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	1	1	1	1	1	1	1
	Startup type		Y-Δ						
	Energy regulation		25% ~ 100%						
	Input power	kW	117.0	125.2	137.0	149.3	170.7	185.2	195.8
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m <sup>3</sup> /h	116	127	141	150	176	194	201
	Water pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	125	150	150	150	150	200	200
Working pressure on the water side	MPa	1.0							
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	1	1	1	1	1	1	1
	Water replenishment amount	m <sup>3</sup> /h	1.31	1.43	1.58	1.69	1.98	2.17	2.26
Refrigerant	Type		R134a						
Dimensions	L	mm	7260	7260	7560	7560	8140	9020	9020
	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	8900	9350	9700	9850	11000	12300	12400
	Operating weight	kg	12100	12550	13000	13400	15100	17100	17400

#### Note:

- The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;
- The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;
- The comprehensive performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;
- Condenser connection pipe diameter: inlet DN25, overflow DN65, drain DN50;
- For specific project selection, please contact Kingair Sales.

# 7

## STANDARD SERIES PERFORMANCE PARAMETER TABLE (R134a)

### 2

#### DUAL COMPRESSOR MODULE

Model KCWF-CZ(C)T(V)1		2170	2200	2220	2240	2260	2280	2310	2350	
Cooling capacity	kW	602	692	782	846	918	990	1076	1260	
	kcal/h	517720	595120	672520	727560	789480	851400	925360	1083600	
Power Supply		380V/3N~/50Hz								
Complete machine	Input power	kW	120.2	137.8	149.0	159.6	175.2	186.6	204.0	234.6
	Operating current	A	212	244	265	283	312	331	361	414
	Performance coefficient		5.01	5.02	5.25	5.30	5.24	5.31	5.27	5.37
	IPLV		5.76	5.78	6.04	6.10	6.03	6.10	6.07	6.18
Compressor	Type		Semi closed screw compressor							
	Qty	Unit	2	2	2	2	2	2	2	2
	Startup type		Y-Δ							
	Energy regulation		12.5% ~ 100%							
	Input power	kW	111.2	126.8	135.0	146.4	158.8	170.2	187.6	218.2
	Evaporator	Type		Efficient overflow evaporator						
Water Flow		m <sup>3</sup> /h	104	119	135	146	158	170	185	217
Water pressure		kPa	60	60	60	60	60	60	60	60
Take over the pipe diameter		DN	100*2	100*2	100*2	100*2	100*2	125*2	125*2	125*2
Working pressure on the water side		MPa	1.0							
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit	2	2	2	2	2	2	2	2
	Water replenishment amount	m <sup>3</sup> /h	1.18	1.36	1.52	1.64	1.78	1.92	2.09	2.45
Refrigerant	Type		R134a							
	L	mm	12080	12500	12500	12970	13520	13520	13920	14720
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	12600	13000	13200	13400	14200	15000	15900	16600
	Operating weight	kg	15400	16600	17000	17200	18400	19200	20200	22000

Note:

- The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;
- The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;
- The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;
- The unit adopts a combination design of two independent basic modules;
- Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;
- For specific project selection, please contact Kingair Sales.

### 2 双压缩机模块

#### DUAL COMPRESSOR MODULE

型号KCWF-CZ(C)T(V)1		2380	2420	2460	2500	2560	2620	2660	
Cooling capacity	kW	1350	1478	1638	1742	2046	2250	2334	
	kcal/h	1161000	1271080	1408680	1498120	1759560	1935000	2007240	
Power Supply		380V/3N~/50Hz							
Complete machine	Input power	kW	262.0	278.4	298.0	322.6	365.4	402.4	423.6
	Operating current	A	468	506	528	584	644	712	749
	Performance coefficient		5.15	5.31	5.50	5.40	5.60	5.59	5.51
	IPLV		5.93	6.11	6.32	6.21	6.44	6.43	6.34
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input power	kW	234.0	250.4	274.0	298.6	341.4	370.4	391.6
	Evaporator	Type		Efficient overflow evaporator					
Water Flow		m <sup>3</sup> /h	232	254	282	300	352	387	401
Water pressure		kPa	60	60	60	60	60	60	60
Take over the pipe diameter		DN	125*2	150*2	150*2	150*2	150*2	200*2	200*2
Working pressure on the water side		MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
	Water replenishment amount	m <sup>3</sup> /h	2.62	2.86	3.17	3.38	3.95	4.34	4.51
Refrigerant	Type		R134a						
	L	mm	15720	15720	16320	16320	17480	19240	19240
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	17800	18700	19400	19700	22000	24600	24800
	Operating weight	kg	24200	25100	26000	26800	30200	34200	34800

Note:

- The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;
- The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;
- The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;
- The unit adopts a combination design of two independent basic modules;
- Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;
- For specific project selection, please contact Kingair Sales.

# 7

## STANDARD SERIES PERFORMANCE PARAMETER TABLE (R134a)

### 3

#### DOUBLE COMPRESSOR MACHINE

Model KCWF-CZ(C)T(V)1-S		2170	2200	2220	2240	2260	2280	2310	2350	
Cooling capacity	kW	602	692	782	846	918	990	1076	1260	
	kcal/h	517720	595120	672520	727560	789480	851400	925360	1083600	
Power Supply		380V/3N~/50Hz								
complete machine	Input power	kW	120.2	137.8	149.0	159.6	175.2	186.6	204.0	234.6
	Operating current	A	212	244	265	283	312	331	361	414
	Performance coefficient		5.01	5.02	5.25	5.30	5.24	5.31	5.27	5.37
	IPLV		5.76	5.78	6.04	6.10	6.03	6.10	6.07	6.18
Compressor	Type		Semi closed screw compressor							
	Qty	Unit	2	2	2	2	2	2	2	2
	Startup type		Y-Δ							
	Energy regulation		12.5% ~ 100%							
	Input power	kW	111.2	126.8	135.0	146.4	158.8	170.2	187.6	218.2
	Evaporator	Type		Efficient overflow evaporator						
Water Flow		m³/h	104	119	135	146	158	170	185	217
Water pressure		kPa	65	65	65	65	65	65	65	65
Take over the pipe diameter		DN	125	125	150	150	150	150	150	200
Working pressure on the water side		MPa	1.0							
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit	2	2	2	2	2	2	2	2
	Water replenishment amount	m³/h	1.18	1.36	1.52	1.64	1.78	1.92	2.09	2.45
Refrigerant	Type		R134a							
Dimensions	L	mm	8780	9200	9200	9670	10220	10420	10820	11620
	W	mm	2500	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	10400	10700	11000	11200	12200	13000	13200	13800
	Operating weight	kg	13200	14300	14800	15000	16400	17200	17500	19200

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;  
 4. The unit adopts a combination design of two independent basic modules;  
 5. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 6. For specific project selection, please contact Kingair Sales.

### 3

#### DOUBLE COMPRESSOR MACHINE

Model KCWF-CZ(C)T(V)1-S		2380	2420	2460	2500	2560	2620	2660	
Cooling capacity	kW	1350	1478	1638	1742	2046	2250	2334	
	kcal/h	1161000	1271080	1408680	1498120	1759560	1935000	2007240	
Power Supply		380V/3N~/50Hz							
complete machine	Input power	kW	262.0	278.4	298.0	322.6	365.4	402.4	423.6
	Operating current	A	468	506	528	584	644	712	749
	Performance coefficient		5.15	5.31	5.50	5.40	5.60	5.59	5.51
	IPLV		5.93	6.11	6.32	6.21	6.44	6.43	6.34
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input power	kW	234.0	250.4	274.0	298.6	341.4	370.4	391.6
	Evaporator	Type		Efficient overflow evaporator					
Water Flow		m³/h	232	254	282	300	352	387	401
Water pressure		kPa	65	65	65	65	65	65	65
Water pressure		DN	200	200	200	200	200	250	250
Working pressure on the water side		MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
		m³/h	2.62	2.86	3.17	3.38	3.95	4.34	4.51
Refrigerant	Type		R134a						
Dimensions	L	mm	12620	12620	13220	13220	14880	16640	16640
	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	14700	15200	15600	15900	17600	19900	20200
	Operating weight	kg	21100	21600	22200	23000	25800	29500	30200

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, and condenser water pump;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the input power of the unit;  
 4. The unit adopts a combination design of two independent basic modules;  
 5. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 6. For specific project selection, please contact Kingair Sales.

# 8

## PERFORMANCE PARAMETER TABLE OF SERIES WITH HYDRAULIC MODULES (R22)

### 1

#### SINGLE COMPRESSOR

Model		KCWF-CZ(C)TM(V)		1090	1105	1120	1130	1145	1165	1180
Cooling capacity	kW			338	397	428	465	508	576	623
	kcal/h			290680	341420	368080	399900	436880	495360	535780
Cooling capacity		380V/3N~/50Hz								
Complete machine	Input power	kW	74.3	85.6	93.1	104.4	114.4	121.1	131.0	
	Operating current	A	136	156	170	190	208	225	238	
	Performance coefficient		5.22	5.27	5.22	5.02	4.98	5.34	5.37	
	IPLV		6.01	6.06	6.00	5.77	5.72	6.14	6.18	
Compressor	Type		Semi closed screw compressor							
	Qty	Unit	1	1	1	1	1	1	1	
	Startup type		Y-Δ							
	Energy regulation		25% ~ 100%							
	Input power	kW	59.2	68.7	75.4	84.5	93.9	99.6	107.8	
Evaporator	Type		Efficient overflow evaporator							
	Water Flow	m³/h	58	68	74	80	87	99	107	
	Water pressure	kPa	60	60	60	60	60	60	60	
	Take over the pipe diameter	DN	100	100	100	100	125	125	125	
	Working pressure on the water side	MPa	1.0							
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit	1	1	1	1	1	1	1	
	Water replenishment amount	m³/h	0.66	0.77	0.83	0.91	1.00	1.12	1.21	
Hydraulic module	Number of water pumps	Unit	1	1	1	1	1	1	1	
	Input power	kW	9.6	10.3	11.1	11.7	12.3	13.3	15.0	
	External lift	m	26	24	27	27	26	25	26	
	External lift	L	100	100	100	100	150	150	150	
Refrigerant	Type		R22							
	L	mm	5650	5885	5885	6160	6160	6360	6760	
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500	
	H	mm	2950	2950	2950	2950	2950	2950	2950	
	Unit weight	Shipping Weight	kg	6400	6700	6700	7100	7350	7900	8050
	Operating weight	kg	7800	8500	8500	9200	9500	10200	10400	

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the difference between the cooling capacity of the unit and the input power of the unit minus the input power of the hydraulic module;  
 4. The input power of the hydraulic module refers to the input power of the water pump motor at the flow head in the table above;  
 5. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 6. For specific project selection, please contact Kingair Sales.

### 1

#### SINGLE COMPRESSOR

Model		KCWF-CZ(C)TM(V)		1200	1215	1235	1260	1280	1310	1320
Cooling capacity	kW			707	765	823	957	990	1082	1155
	kcal/h			608020	657900	707780	823020	851400	930520	993300
Power Supply		380V/3N~/50Hz								
Complete machine	Input Power	kW	153.4	165.8	174.7	201.9	210.3	226.5	235.9	
	Operating current	A	281	302	317	364	391	411	429	
	Performance coefficient		5.15	5.14	5.25	5.25	5.32	5.38	5.52	
	IPLV		5.93	5.91	6.03	6.03	6.11	6.19	6.35	
Compressor	Type		Semi closed screw compressor							
	Qty	Unit	1	1	1	1	1	1	1	
	Startup type		Y-Δ							
	Energy regulation		25% ~ 100%							
	Input power	kW	123.2	134.8	144.9	170.4	174.2	186.1	193.1	
Evaporator	Type		Efficient overflow evaporator							
	Water Flow	m³/h	122	132	142	165	170	186	199	
	Water pressure	kPa	60	60	60	60	60	60	60	
	Take over the pipe diameter	DN	125	125	150	150	150	150	200	
	Working pressure on the water side	MPa	1.0							
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit	1	1	1	1	1	1	1	
	Water replenishment amount	m³/h	1.37	1.49	1.60	1.87	1.93	2.10	2.23	
Hydraulic module	Number of water pumps	Unit	1	1	1	1	1	1	1	
	Input power	kW	16.2	17.0	17.8	19.5	24.1	25.4	26.8	
	External lift	m	26	26	25	24	26	26	25	
	External lift	L	150	150	200	200	200	200	300	
Refrigerant	Type		R22							
	L	mm	7260	7260	7560	8140	8140	8860	9020	
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500	
	H	mm	3010	3010	2950	2950	2950	2950	2950	
	Unit weight	Shipping Weight	kg	9000	9400	10000	10600	10750	12000	12400
	Operating weight	kg	12200	12600	13500	14600	14800	16900	17300	

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the difference between the cooling capacity of the unit and the input power of the unit minus the input power of the hydraulic module;  
 4. The input power of the hydraulic module refers to the input power of the water pump motor at the flow head in the table above;  
 5. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 6. For specific project selection, please contact Kingair Sales.

# 8

## PERFORMANCE PARAMETER TABLE OF SERIES WITH HYDRAULIC MODULES (R22)

### 2

#### DUAL COMPRESSOR MODULE

Model	KCWF-CZ(C)TM(V)	2180	2210	2240	2260	2290	2330	2360	
Cooling capacity	kW	676	794	856	930	1016	1152	1246	
	kcal/h	581360	682840	736160	799800	873760	990720	1071560	
Power Supply		380V/3N~/50Hz							
Complete machine	Input power	kW	148.6	171.2	186.2	208.8	228.8	242.2	262.0
	Operating current	A	272	312	339	381	416	450	475
	Performance coefficient		5.22	5.27	5.22	5.02	4.98	5.34	5.37
	IPLV		6.01	6.06	6.00	5.77	5.72	6.14	6.18
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input power	kW	118.4	137.4	150.8	169.0	187.8	199.2	215.6
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m <sup>3</sup> /h	116	137	147	160	175	198	214
	Water pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	100*2	100*2	100*2	100*2	125*2	125*2	125*2
	Working pressure on the water side	MPa	1.0						
Condenser	Type		Efficient overflow evaporator						
	Qty	Unit	2	2	2	2	2	2	2
	Water replenishment amount	m <sup>3</sup> /h	1.32	1.54	1.67	1.82	1.99	2.24	2.42
	Number of water pumps	Unit	2	2	2	2	2	2	2
Hydraulic module	Input power	kW	19.2	20.6	22.2	23.4	24.6	26.6	30.0
	External lift	m	26	24	27	27	26	25	26
	Expansion tank capacity	L	200	200	200	200	300	300	300
Refrigerant	Type		R22						
	L	mm	12500	12970	12970	13520	13520	13920	14720
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	2950	2950	2950	2950	2950	2950
	Unit weight	Shipping Weight	kg	12800	13400	13400	14200	14700	15800
Operating weight		kg	15600	17000	17000	18400	19000	20400	20800

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;  
 4. The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;  
 5. The unit adopts a combination design of two independent basic modules, with each module unit configured with a hydraulic module;  
 6. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 7. For specific project selection, please contact Kingair Sales.

### 2

#### DUAL COMPRESSOR MODULE

Model	KCWF-CZ(C)TM(V)	2400	2430	2470	2520	2560	2620	2640	
Cooling capacity	kW	1414	1530	1646	1914	1980	2164	2310	
	kcal/h	1216040	1315800	1415560	1646040	1702800	1861040	1986600	
Power Supply		380V/3N~/50Hz							
Complete machine	Input power	kW	306.8	331.6	349.4	403.8	420.6	453.0	471.8
	Operating current	A	561	605	633	728	782	823	857
	Performance coefficient		5.15	5.14	5.25	5.25	5.32	5.38	5.52
	IPLV		5.93	5.91	6.03	6.03	6.11	6.19	6.35
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input Power	kW	246.4	269.6	289.8	340.8	348.4	372.2	386.2
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m <sup>3</sup> /h	243	263	283	329	341	372	397
	Water pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	125*2	125*2	150*2	150*2	150*2	150*2	200*2
	Working pressure on the water side	MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
	Water replenishment amount	m <sup>3</sup> /h	2.75	2.98	3.21	3.73	3.86	4.20	4.46
	Number of water pumps	Unit	2	2	2	2	2	2	2
Hydraulic module	Input power	kW	32.4	34.0	35.6	39.0	48.2	50.8	53.6
	External lift	m	26	26	25	24	26	26	25
	Expansion tank capacity	L	300	300	400	400	400	400	600
Refrigerant	Type		R22						
	L	mm	15720	15720	16320	17480	17480	18920	19240
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
	Unit weight	Shipping Weight	kg	18000	18800	20000	21200	21500	24000
Operating weight		kg	24400	25200	27000	29200	29600	33800	34600

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;  
 4. The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;  
 5. The unit adopts a combination design of two independent basic modules, with each module unit configured with a hydraulic module;  
 6. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 7. For specific project selection, please contact Kingair Sales.

# 8

## PERFORMANCE PARAMETER TABLE OF SERIES WITH HYDRAULIC MODULES (R22)

### 3

#### DOUBLE COMPRESSOR MACHINE

Model KCWF-CZ(C)TM(V)-S		2180	2210	2240	2260	2290	2330	2360	
Cooling capacity	kW	676	794	856	930	1016	1152	1246	
	kcal/h	581360	682840	736160	799800	873760	990720	1071560	
Power Supply		380V/3N~/50Hz							
Complete machine	Input power	kW	143.6	168.0	182.7	205.3	225.4	242.7	260.4
	Operating current	A	261	305	331	373	408	452	472
	Performance coefficient		5.22	5.27	5.22	5.02	4.98	5.34	5.37
	IPLV		6.01	6.06	6.00	5.77	5.72	6.14	6.18
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input Power	kW	118.4	137.4	150.8	169.0	187.8	199.2	215.6
Evaporator	Type		Efficient overflow evaporator						
	Water flow	m³/h	116	137	147	160	175	198	214
	Water pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	125	150	150	150	150	200	200
	Working pressure on the water side	MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
	Water replenishment amount	m³/h	1.32	1.54	1.67	1.82	1.99	2.24	2.42
Hydraulic module	Number of water pumps	Unit	2	2	2	2	2	2	2
	Input power	kW	14.2	17.4	18.7	19.9	21.2	27.1	28.4
	External lift	m	23	25	24	23	21	24	23
	Expansion tank capacity	L	100	100	100	100	150	150	150
Refrigerant	Type		R22						
	L	mm	11500	11970	11970	12520	12720	13120	13920
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	2950	2950	2950	2950	2950	2950
	Unit weight	Shipping Weight	kg	11000	11700	11800	12700	13300	13800
Operating weight		kg	13800	15300	15400	16900	17600	18400	18700

Note: 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, wet bulb temperature of 24 °C.  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;  
 4. The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;  
 5. The unit adopts a complete machine design;  
 6. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 7. For specific project selection, please contact Kingair Sales.

### 3

#### DOUBLE COMPRESSOR MACHINE

Model KCWF-CZ(C)TM(V)-S		2400	2430	2470	2520	2560	2620	2640	
Cooling capacity	kW	1414	1530	1646	1914	1980	2164	2310	
	kcal/h	1216040	1315800	1415560	1646040	1702800	1861040	1986600	
Power Supply		380V/3N~/50Hz							
Complete machine	Input power	kW	307.4	331.5	350.1	402.8	416.7	449.1	465.8
	Operating current	A	562	604	635	726	773	814	844
	Performance coefficient		5.15	5.14	5.25	5.25	5.32	5.38	5.52
	IPLV		5.93	5.91	6.03	6.03	6.11	6.19	6.35
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input Power	kW	246.4	269.6	289.8	340.8	348.4	372.2	386.2
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m³/h	243	263	283	329	341	372	397
	Water Pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	200	200	200	200	200	250	250
	Working pressure on the water side	MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
	Water replenishment amount	m³/h	2.75	2.98	3.21	3.73	3.86	4.20	4.46
Hydraulic module	Number of water pumps	Unit	2	2	2	2	2	2	2
	Input power	kW	33.0	33.9	36.3	38.0	44.3	46.9	47.6
	External lift	m	24	23	23	21	25	24	23
	Expansion tank capacity	L	150	150	200	200	200	300	300
Refrigerant	Type		R22						
	L	mm	14920	14920	15520	16680	16680	18120	18620
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
	Unit weight	Shipping Weight	kg	15300	16300	16500	17300	17800	19120
Operating weight		kg	21700	22700	23500	25300	25900	28120	30500

Note: 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, wet bulb temperature of 24 °C.  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;  
 4. The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;  
 5. The unit adopts a complete machine design;  
 6. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 7. For specific project selection, please contact Kingair Sales.

# 9

## PERFORMANCE PARAMETER TABLE OF SERIES WITH HYDRAULIC MODULES (R134A)

### 1

#### SINGLE COMPRESSOR

Model KCWF-CZ(C)TM(V)1		1085	1100	1110	1120	1130	1140	1155	1175	
Cooling capacity	kW	301	346	391	423	459	495	538	630	
	kcal/h	258860	297560	336260	363780	394740	425700	462680	541800	
Power supply		380V/3N~/50Hz								
Complete machine	Input power	kW	67.1	78.5	84.3	89.7	99.1	105.3	114.7	132.4
	Operating current	A	122	143	154	163	181	192	209	240
	Performance coefficient		5.01	5.02	5.25	5.30	5.24	5.31	5.27	5.37
	IPLV		5.76	5.78	6.04	6.10	6.03	6.10	6.07	6.18
Compressor	Type		Semi closed screw compressor							
	Qty	Unit	1	1	1	1	1	1	1	1
	Startup type		Y-Δ							
	Energy regulation		25% ~ 100%							
	Input power	kW	55.6	63.4	67.5	73.2	79.4	85.1	93.8	109.1
Evaporator	Type		Efficient overflow evaporator							
	Water Flow	m <sup>3</sup> /h	52	60	67	73	79	85	93	108
	Water pressure	kPa	60	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	100	100	100	100	100	125	125	125
	Working pressure on the water side	MPa	1.0							
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit	1	1	1	1	1	1	1	1
	Water replenishment amount	m <sup>3</sup> /h	0.59	0.68	0.76	0.82	0.89	0.96	1.05	1.22
Hydraulic module	Number of water pumps	台	1	1	1	1	1	1	1	1
	Input power	kW	7.0	9.6	9.8	9.9	11.5	12.0	12.7	15.1
	External lift	m	25	26	25	24	27	26	26	26
	Expansion tank capacity	L	100	100	100	100	100	150	150	150
Refrigerant	Type		R134a							
	L	mm	5440	5650	5650	5885	6160	6160	6360	6760
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	3010	3010	2950	2950	2950	2950	2950
	Unit weight	Shipping Weight	kg	6400	6700	6800	6900	7300	7700	8150
Operating weight		kg	7800	8500	8700	8800	9400	9800	10300	11200

Note:

- The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;
- The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;
- The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;
- The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;
- Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;
- For specific project selection, please contact Kingair Sales.

### 1

#### SINGLE COMPRESSOR

Model KCWF-CZ(C)TM(V)1		1190	1210	1230	1250	1280	1310	1330	
Cooling capacity	kW	675	739	819	871	1023	1125	1167	
	kcal/h	580500	635540	704340	749060	879780	967500	1003620	
Power Supply		380V/3N~/50Hz							
Complete machine	Input power	kW	146.9	155.8	166.3	179.4	206.8	226.7	237.8
	Input power	A	269	290	302	332	375	412	432
	Performance coefficient		5.15	5.31	5.50	5.40	5.60	5.59	5.51
	IPLV		5.93	6.11	6.32	6.21	6.44	6.43	6.34
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	1	1	1	1	1	1	1
	Startup type		Y-Δ						
	Energy regulation		25% ~ 100%						
	Input power	kW	117.0	125.2	137.0	149.3	170.7	185.2	195.8
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m <sup>3</sup> /h	116	127	141	150	176	194	201
	Water pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	125	150	150	150	150	200	200
	Working pressure on the water side	MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	1	1	1	1	1	1	1
	Water replenishment amount	m <sup>3</sup> /h	1.31	1.43	1.58	1.69	1.98	2.17	2.26
Hydraulic module	Number of water pumps	Unit	1	1	1	1	1	1	1
	Input power	kW	15.9	16.6	17.3	18.1	24.1	25.5	26.0
	External lift	m	26	26	26	25	26	26	25
	Expansion tank capacity	L	150	200	200	200	200	300	300
Refrigerant	Type		R134a						
	L	mm	7260	7260	7560	7560	8140	9020	9020
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
	Unit weight	Shipping Weight	kg	9100	9700	10000	10200	11400	12700
Operating weight		kg	12300	12900	13300	13700	15500	17500	17800

Note:

- The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;
- The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;
- The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;
- The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;
- Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;
- For specific project selection, please contact Kingair Sales.

# 9

## PERFORMANCE PARAMETER TABLE OF SERIES WITH HYDRAULIC MODULES (R134A)

### 2

#### DUAL COMPRESSOR MODULE

Model	KCWF-CZ(C)TM(V)1		2170	2200	2220	2240	2260	2280	2310	2350
Cooling capacity	kW		602	692	782	846	918	990	1076	1260
	kcal/h		517720	595120	672520	727560	789480	851400	925360	1083600
Power Supply			380V/3N~/50Hz							
Complete machine	Input power	kW	134.2	157.0	168.6	179.4	198.2	210.6	229.4	264.8
	Operating current	A	243	286	308	326	362	384	417	480
	Performance coefficient		5.01	5.02	5.25	5.30	5.24	5.31	5.27	5.37
	IPLV		5.76	5.78	6.04	6.10	6.03	6.10	6.07	6.18
Compressor	Type		Semi closed screw compressor							
	Qty	Unit	2	2	2	2	2	2	2	2
	Startup type		Y-Δ							
	Energy regulation		12.5% ~ 100%							
	Input power	kW	111.2	126.8	135.0	146.4	158.8	170.2	187.6	218.2
Evaporator	Type		Efficient overflow evaporator							
	Water Flow	m³/h	104	119	135	146	158	170	185	217
	Water pressure	kPa	60	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	100*2Sets	100*2Sets	100*2Sets	100*2Sets	100*2Sets	125*2Sets	125*2Sets	125*2Sets
	Working pressure on the water side	MPa	1.0							
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit	2	2	2	2	2	2	2	2
	Water replenishment amount	m³/h	1.18	1.36	1.52	1.64	1.78	1.92	2.09	2.45
	Number of water pumps	Unit	2	2	2	2	2	2	2	2
Hydraulic module	Input power	kW	14.0	19.2	19.6	19.8	23.0	24.0	25.4	30.2
	External lift	m	25	26	25	24	27	26	26	26
	Expansion tank capacity	L	200	200	200	200	200	300	300	300
Refrigerant	Type		R134a							
	L	mm	12080	12500	12500	12970	13520	13520	13920	14720
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	3010	3010	2950	2950	2950	2950	2950
	Unit weight	Shipping Weight	kg	12800	13400	13600	13800	14600	15400	16300
Operating weight		kg	15600	17000	17400	17600	18800	19600	20600	22400

Note: 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;  
 4. The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;  
 5. The unit adopts a combination design of two independent basic modules, with each block unit configured with a hydraulic module;  
 6. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 7. For specific project selection, please contact Kingair Sales.

### 2

#### DUAL COMPRESSOR MODULE

Model	KCWF-CZ(C)TM(V)1		2380	2420	2460	2500	2560	2620	2660
Cooling capacity	kW		1350	1478	1638	1742	2046	2250	2334
	kcal/h		1161000	1271080	1408680	1498120	1759560	1935000	2007240
Power Supply			380V/3N~/50Hz						
Complete machine	Input power	kW	293.8	311.6	322.6	358.8	413.6	453.4	475.6
	Operating current	A	538	579	604	664	750	824	863
	Performance coefficient		5.15	5.31	5.50	5.40	5.60	5.59	5.51
	IPLV		5.93	6.11	6.32	6.21	6.44	6.43	6.34
Compressor	Type		Semi closed screw compressor						
	Qty	Unit	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5% ~ 100%						
	Input power	kW	234.0	250.4	274.0	298.6	341.4	370.4	391.6
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m³/h	232	254	282	300	352	387	401
	Water pressure	kPa	60	60	60	60	60	60	60
	Take over the pipe diameter	DN	125*2	150*2	150*2	150*2	150*2	200*2	200*2
	Working pressure on the water side	MPa	1.0						
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
	Water replenishment amount	m³/h	2.62	2.86	3.17	3.38	3.95	4.34	4.51
	Number of water pumps	Unit	2	2	2	2	2	2	2
Hydraulic module	Input power	kW	31.8	33.2	34.6	36.2	48.2	51.0	52.0
	External lift	m	26	26	26	25	26	26	25
	Expansion tank capacity	L	300	400	400	400	400	600	600
Refrigerant	Type		R134a						
	L	mm	15720	15720	16320	16320	17480	19240	19240
Dimensions	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
	Unit weight	Shipping Weight	kg	18200	19400	20100	20400	22800	25400
Operating weight		kg	24600	25800	26700	27400	31000	35000	35600

Note: 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;  
 4. The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;  
 5. The unit adopts a combination design of two independent basic modules, with each block unit configured with a hydraulic module;  
 6. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 7. For specific project selection, please contact Kingair Sales.

# 9

## PERFORMANCE PARAMETER TABLE OF SERIES WITH HYDRAULIC MODULES (R134A)

### 3

#### DOUBLE COMPRESSOR MACHINE

Model		KCWF-CZ(C)TM(V)1-S	2170	2200	2220	2240	2260	2280	2310	2350
Cooling capacity	kW		602	692	782	846	918	990	1076	1260
	kcal/h		517720	595120	672520	727560	789480	851400	925360	1083600
Power supply			380V/3N~/50Hz							
Unit	Input power	kW	133.8	153.0	166.5	178.2	195.0	207.3	230.3	262.7
	Operating current	A	242	277	304	324	355	377	419	476
	Performance coefficient		5.01	5.02	5.25	5.30	5.24	5.31	5.27	5.37
	IPLV		5.76	5.78	6.04	6.10	6.03	6.10	6.07	6.18
Compressor	Type		Semi closed screw compressor							
	Qty	台	2	2	2	2	2	2	2	2
	Startup type		Y-Δ							
	Energy regulation		12.5%~100%							
	Input power	kW	111.2	126.8	135.0	146.4	158.8	170.2	187.6	218.2
Evaporator	Type		Efficient overflow evaporator							
	Water flow	m³/h	104	119	135	146	158	170	185	217
	Water pressure	kPa	65	65	65	65	65	65	65	65
	Take over the pipe diameter	DN	125	125	150	150	150	150	150	200
Working pressure on the water side	MPa	1.0								
Condenser	Type		Efficient evaporative condenser							
	Qty	Unit	2	2	2	2	2	2	2	2
Hydraulic module	Water replenishment amount	m³/h	1.18	1.36	1.52	1.64	1.78	1.92	2.09	2.45
	Number of water pumps	Unit	2	2	2	2	2	2	2	2
	Input power	kW	13.6	15.2	17.5	18.6	19.8	20.7	26.3	28.1
	External lift	m	23	21	25	24	23	22	25	23
Expansion tank capacity	L	100	100	100	100	100	150	150	150	
Refrigerant	Type		R134a							
Dimensions	L	mm	11080	11500	11500	11970	12520	12720	13120	13920
	W	mm	2500	2500	2500	2500	2500	2500	2500	2500
	H	mm	2950	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	10700	11200	11500	11700	12800	13600	13800	14400
	Operating weight	kg	13500	14800	15300	15500	17000	17800	18100	19800

Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;  
 4. The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above; 5. The unit adopts a complete machine design;  
 6. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;;  
 7. For specific project selection, please contact Kingair Sales.

### 3

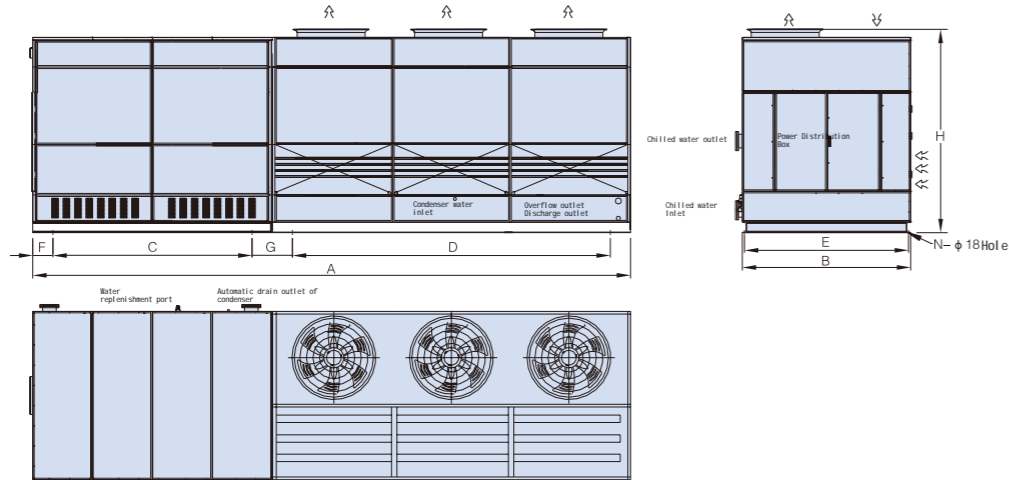
#### DOUBLE COMPRESSOR MACHINE

Model		KCWF-CZ(C)TM(V)1-S	2380	2420	2460	2500	2560	2620	2660
Cooling capacity	kW		1350	1478	1638	1742	2046	2250	2334
	kcal/h		1161000	1271080	1408680	1498120	1759560	1935000	2007240
Power supply			380V/3N~/50Hz						
complete machine	Input power	kW	294.5	313.2	334.3	359.8	409.7	449.3	472.9
	Operating current	A	540	583	608	666	741	815	857
	Performance coefficient		5.15	5.31	5.50	5.40	5.60	5.59	5.51
	IPLV		5.93	6.11	6.32	6.21	6.44	6.43	6.34
Compressor	Type		Semi closed screw compressor						
	Qty	台	2	2	2	2	2	2	2
	Startup type		Y-Δ						
	Energy regulation		12.5%~100%						
	Input power	kW	234.0	250.4	274.0	298.6	341.4	370.4	391.6
Evaporator	Type		Efficient overflow evaporator						
	Water Flow	m³/h	232	254	282	300	352	387	401
	Water pressure	kPa	65	65	65	65	65	65	65
	Take over the pipe diameter	DN	200	200	200	200	200	250	250
Working pressure on the water side	MPa	1.0							
Condenser	Type		Efficient evaporative condenser						
	Qty	Unit	2	2	2	2	2	2	2
Hydraulic module	Water replenishment amount	m³/h	2.62	2.86	3.17	3.38	3.95	4.34	4.51
	Number of water pumps	Unit	2	2	2	2	2	2	2
	Input power	kW	32.5	34.8	36.3	37.2	44.3	46.9	49.3
	External lift	m	24	24	23	22	25	24	23
Expansion tank capacity	L	150	200	200	200	200	300	300	
Refrigerant	Type		R134a						
Dimensions	L	mm	14920	14920	15520	15520	17180	18940	18940
	W	mm	2500	2500	2500	2500	2500	2500	2500
	H	mm	3010	3010	2950	2950	2950	2950	2950
Unit weight	Shipping Weight	kg	15300	16100	16500	16800	18700	21000	21300
	Operating weight	kg	21700	22500	22100	23900	26900	30600	31300

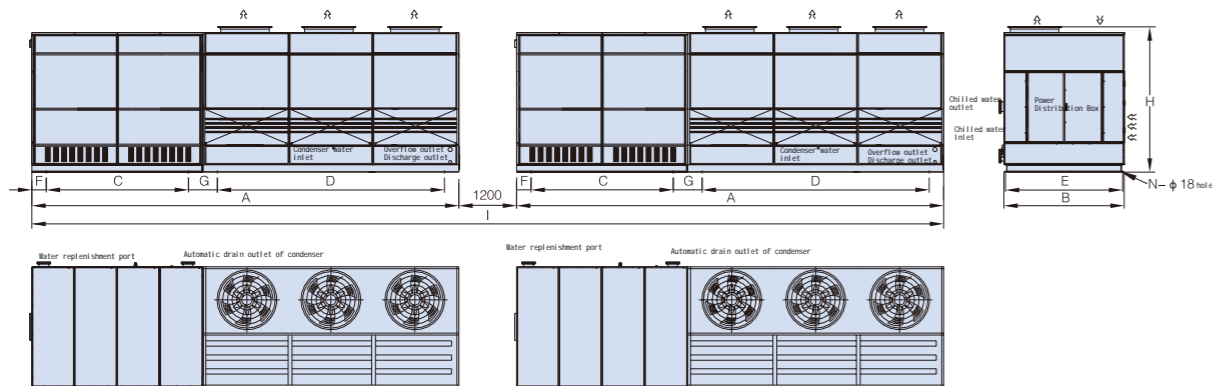
Note:  
 1. The performance parameters in the table correspond to operating conditions: chilled water outlet temperature of 7 °C, condenser inlet dry bulb temperature of 35 °C, and wet bulb temperature of 24 °C;  
 2. The input power of the whole machine includes the power of the compressor, condenser fan, condenser water pump, and hydraulic module;  
 3. The overall performance coefficient refers to the ratio of the cooling capacity of the unit to the difference between the input power of the hydraulic module and the input power of the unit;  
 4. The input power of the hydraulic module refers to the input power of the pump motor at the flow head shown in the table above;  
 5. The unit adopts a complete machine design;  
 6. Condenser connecting pipe diameter: water inlet DN25, overflow outlet DN65, drain outlet DN50;  
 7. For specific project selection, please contact Kingair Sales.

# 10 OUTLINE DIMENSION DRAWING

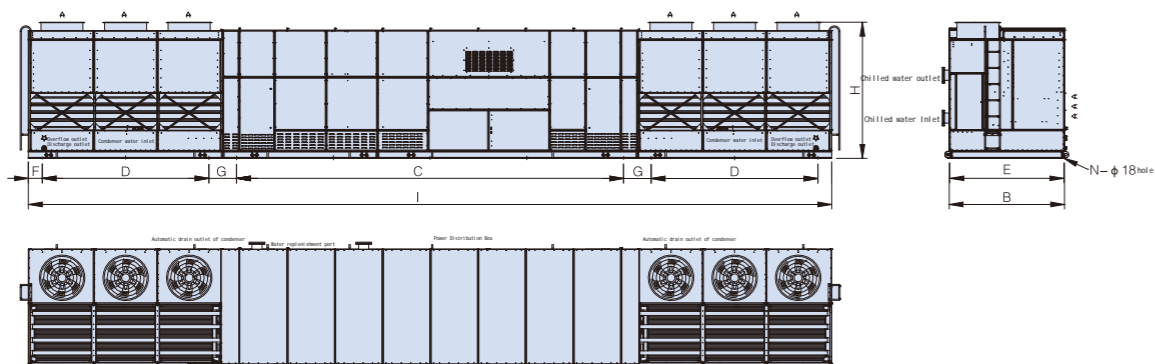
## 1 SINGLE MACHINE SHAPE AND SIZE DIAGRAM



## 2 OUTLINE DIMENSION DRAWING OF DUAL MACHINE (MODULE)



## 3 OUTLINE DIMENSION DRAWING OF DUAL MACHINE (COMPLETE MACHINE)



# 11 EXTERNAL DIMENSION TABLE

## 1 OUTLINE DIMENSION TABLE (R22)

	Unit model		A (mm)	B (mm)	H (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	N	I (mm)
	Standard series	with hydraulic module series										
Single compressor	KCWF1090CZ(C)T(V)	KCWF1090CZ(C)TM(V)	5650	2500	2950	1650*2=3300	1150*1=1150	2460	300	600	10	-
	KCWF1105CZ(C)T(V)	KCWF1105CZ(C)TM(V)	5885	2500	2950	1650*2=3300	690*2=1380	2460	300	600	12	-
	KCWF1120CZ(C)T(V)	KCWF1120CZ(C)TM(V)	5885	2500	2950	1650*2=3300	690*2=1380	2460	300	600	12	-
	KCWF1130CZ(C)T(V)	KCWF1130CZ(C)TM(V)	6160	2500	2950	1650*2=3300	830*2=1660	2460	300	600	12	-
	KCWF1145CZ(C)T(V)	KCWF1145CZ(C)TM(V)	6160	2500	2950	1650*2=3300	830*2=1660	2460	300	600	12	-
	KCWF1165CZ(C)T(V)	KCWF1165CZ(C)TM(V)	6360	2500	2950	1650*2=3300	930*2=1860	2460	300	600	12	-
	KCWF1180CZ(C)T(V)	KCWF1180CZ(C)TM(V)	6760	2500	2950	1650*2=3300	1130*2=2260	2460	300	600	12	-
	KCWF1200CZ(C)T(V)	KCWF1200CZ(C)TM(V)	7260	2500	3010	1650*2=3300	1380*2=2760	2460	300	600	12	-
	KCWF1215CZ(C)T(V)	KCWF1215CZ(C)TM(V)	7260	2500	3010	1650*2=3300	1380*2=2760	2460	300	600	12	-
	KCWF1235CZ(C)T(V)	KCWF1235CZ(C)TM(V)	7560	2500	2950	1650*2=3300	1530*2=3060	2460	300	600	12	-
	KCWF1260CZ(C)T(V)	KCWF1260CZ(C)TM(V)	8140	2500	2950	1650*2=3300	1820*2=3640	2460	300	600	12	-
	KCWF1280CZ(C)T(V)	KCWF1280CZ(C)TM(V)	8140	2500	2950	1650*2=3300	1820*2=3640	2460	300	600	12	-
	KCWF1310CZ(C)T(V)	KCWF1310CZ(C)TM(V)	8860	2500	2950	1650*2=3300	1450*3=4350	2460	300	600	14	-
KCWF1320CZ(C)T(V)	KCWF1320CZ(C)TM(V)	9020	2500	2950	1650*2=3300	1500*3=4500	2460	300	600	14	-	
Dual compressor module	KCWF2180CZ(C)T(V)	KCWF2180CZ(C)TM(V)	5650	2500	2950	1650*2=3300	1150*1=1150	2460	300	600	20	12500
	KCWF2210CZ(C)T(V)	KCWF2210CZ(C)TM(V)	5885	2500	2950	1650*2=3300	690*2=1380	2460	300	600	24	12970
	KCWF2240CZ(C)T(V)	KCWF2240CZ(C)TM(V)	5885	2500	2950	1650*2=3300	690*2=1380	2460	300	600	24	12970
	KCWF2260CZ(C)T(V)	KCWF2260CZ(C)TM(V)	6160	2500	2950	1650*2=3300	830*2=1660	2460	300	600	24	13520
	KCWF2290CZ(C)T(V)	KCWF2290CZ(C)TM(V)	6160	2500	2950	1650*2=3300	830*2=1660	2460	300	600	24	13520
	KCWF2330CZ(C)T(V)	KCWF2330CZ(C)TM(V)	6360	2500	2950	1650*2=3300	930*2=1860	2460	300	600	24	13920
	KCWF2360CZ(C)T(V)	KCWF2360CZ(C)TM(V)	6760	2500	2950	1650*2=3300	1130*2=2260	2460	300	600	24	14720
	KCWF2400CZ(C)T(V)	KCWF2400CZ(C)TM(V)	7260	2500	3010	1650*2=3300	1380*2=2760	2460	300	600	24	15720
	KCWF2430CZ(C)T(V)	KCWF2430CZ(C)TM(V)	7260	2500	3010	1650*2=3300	1380*2=2760	2460	300	600	24	15720
	KCWF2470CZ(C)T(V)	KCWF2470CZ(C)TM(V)	7560	2500	2950	1650*2=3300	1530*2=3060	2460	300	600	24	16320
	KCWF2520CZ(C)T(V)	KCWF2520CZ(C)TM(V)	8140	2500	2950	1650*2=3300	1820*2=3640	2460	300	600	24	17480
	KCWF2560CZ(C)T(V)	KCWF2560CZ(C)TM(V)	8140	2500	2950	1650*2=3300	1820*2=3640	2460	300	600	24	17480
	KCWF2620CZ(C)T(V)	KCWF2620CZ(C)TM(V)	8860	2500	2950	1650*2=3300	1450*3=4350	2460	300	600	28	18920
KCWF2640CZ(C)T(V)	KCWF2640CZ(C)TM(V)	9020	2500	2950	1650*2=3300	1500*3=4500	2460	300	600	28	19240	
Dual compressor unit	KCWF2180CZ(C)T(V)-S	-	-	2500	2950	1700*3=5100	1150*1=1150	2460	300	600	20	9200
	KCWF2210CZ(C)T(V)-S	-	-	2500	2950	1700*3=5100	690*2=1380	2460	300	600	24	9670
	KCWF2240CZ(C)T(V)-S	-	-	2500	2950	1700*3=5100	690*2=1380	2460	300	600	24	9670
	KCWF2260CZ(C)T(V)-S	-	-	2500	2950	1700*3=5100	830*2=1660	2460	300	600	24	10220
	KCWF2290CZ(C)T(V)-S	-	-	2500	2950	1325*4=5300	830*2=1660	2460	300	600	24	10420
	KCWF2330CZ(C)T(V)-S	-	-	2500	2950	1325*4=5300	930*2=1860	2460	300	600	24	10820
	KCWF2360CZ(C)T(V)-S	-	-	2500	2950	1325*4=5300	1130*2=2260	2460	300	600	24	11620
	KCWF2400CZ(C)T(V)-S	-	-	2500	3010	1325*4=5300	1380*2=2760	2460	300	600	24	12620
	KCWF2430CZ(C)T(V)-S	-	-	2500	3010	1325*4=5300	1380*2=2760	2460	300	600	24	12620
	KCWF2470CZ(C)T(V)-S	-	-	2500	2950	1325*4=5300	1530*2=3060	2460	300	600	24	13220
	KCWF2520CZ(C)T(V)-S	-	-	2500	2950	1325*4=5300	1820*2=3640	2460	300	600	24	14380
	KCWF2560CZ(C)T(V)-S	-	-	2500	2950	1325*4=5300	1820*2=3640	2460	300	600	24	14380

# 11

## EXTERNAL DIMENSION TABLE

	Unit model		A (mm)	B (mm)	H (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	N	I (mm)
	Standard series	with hydraulic module series										
Dual compressor unit	KCWF2620CZ(C)T(V)-S	-	2500	2950	1370*4=5480	1450*3=4350	2460	300	600	24	15820	
	KCWF2640CZ(C)T(V)-S	-	2500	2950	1370*4=5480	1500*3=4500	2460	300	600	28	16320	
	-	KCWF2180CZ(C)TM(V)-S	2500	2950	1480*5=7400	1150*1=1150	2460	300	600	20	11500	
	-	KCWF2210CZ(C)TM(V)-S	2500	2950	1480*5=7400	690*2=1380	2460	300	600	24	11970	
	-	KCWF2240CZ(C)TM(V)-S	2500	2950	1480*5=7400	690*2=1380	2460	300	600	24	11970	
	-	KCWF2260CZ(C)TM(V)-S	2500	2950	1480*5=7400	830*2=1660	2460	300	600	24	12520	
	-	KCWF2290CZ(C)TM(V)-S	2500	2950	1520*5=7600	830*2=1660	2460	300	600	24	12720	
	-	KCWF2330CZ(C)TM(V)-S	2500	2950	1520*5=7600	930*2=1860	2460	300	600	24	13120	
	-	KCWF2360CZ(C)TM(V)-S	2500	2950	1520*5=7600	1130*2=2260	2460	300	600	24	13920	
	-	KCWF2400CZ(C)TM(V)-S	2500	3010	1520*5=7600	1380*2=2760	2460	300	600	24	14920	
	-	KCWF2430CZ(C)TM(V)-S	2500	3010	1520*5=7600	1380*2=2760	2460	300	600	24	14920	
	-	KCWF2470CZ(C)TM(V)-S	2500	2950	1520*5=7600	1530*2=3060	2460	300	600	24	15520	
	-	KCWF2520CZ(C)TM(V)-S	2500	2950	1520*5=7600	1820*2=3640	2460	300	600	24	16680	
	-	KCWF2560CZ(C)TM(V)-S	2500	2950	1520*5=7600	1820*2=3640	2460	300	600	24	16680	
	-	KCWF2620CZ(C)TM(V)-S	2500	2950	1556*5=7780	1450*3=4350	2460	300	600	24	18120	
	-	KCWF2640CZ(C)TM(V)-S	2500	2950	1556*5=7780	1500*3=4500	2460	300	600	28	18620	

## 2

### OUTLINE DIMENSION TABLE (R134A)

	Unit model		A (mm)	B (mm)	H (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	N	I (mm)	
	Standard series	with hydraulic module series											
Single compressor	KCWF1085CZ(C)T(V)1	KCWF1085CZ(C)TM(V)1	5440	2500	2950	1650*2=3300	940*1=940	2460	300	600	10	-	
	KCWF1100CZ(C)T(V)1	KCWF1100CZ(C)TM(V)1	5650	2500	3010	1650*2=3300	1150*1=1150	2460	300	600	10	-	
	KCWF1110CZ(C)T(V)1	KCWF1110CZ(C)TM(V)1	5650	2500	3010	1650*2=3300	1150*1=1150	2460	300	600	10	-	
	KCWF1120CZ(C)T(V)1	KCWF1120CZ(C)TM(V)1	5885	2500	2950	1650*2=3300	690*2=1380	2460	300	600	12	-	
	KCWF1130CZ(C)T(V)1	KCWF1130CZ(C)TM(V)1	6160	2500	2950	1650*2=3300	830*2=1660	2460	300	600	12	-	
	KCWF1140CZ(C)T(V)1	KCWF1140CZ(C)TM(V)1	6160	2500	2950	1650*2=3300	830*2=1660	2460	300	600	12	-	
	KCWF1155CZ(C)T(V)1	KCWF1155CZ(C)TM(V)1	6360	2500	2950	1650*2=3300	930*2=1860	2460	300	600	12	-	
	KCWF1175CZ(C)T(V)1	KCWF1175CZ(C)TM(V)1	6760	2500	2950	1650*2=3300	1130*2=2260	2460	300	600	12	-	
	KCWF1190CZ(C)T(V)1	KCWF1190CZ(C)TM(V)1	7260	2500	3010	1650*2=3300	1380*2=2760	2460	300	600	12	-	
	KCWF1210CZ(C)T(V)1	KCWF1210CZ(C)TM(V)1	7260	2500	3010	1650*2=3300	1380*2=2760	2460	300	600	12	-	
	KCWF1230CZ(C)T(V)1	KCWF1230CZ(C)TM(V)1	7560	2500	2950	1650*2=3300	1530*2=3060	2460	300	600	12	-	
	KCWF1250CZ(C)T(V)1	KCWF1250CZ(C)TM(V)1	7560	2500	2950	1650*2=3300	1530*2=3060	2460	300	600	12	-	
	KCWF1280CZ(C)T(V)1	KCWF1280CZ(C)TM(V)1	8140	2500	2950	1650*2=3300	1820*2=3640	2460	300	600	12	-	
	KCWF1310CZ(C)T(V)1	KCWF1310CZ(C)TM(V)1	9020	2500	2950	1650*2=3300	1500*3=4500	2460	300	600	14	-	
	KCWF1330CZ(C)T(V)1	KCWF1330CZ(C)TM(V)1	9020	2500	2950	1650*2=3300	1500*3=4500	2460	300	600	14	-	
	Dual compressor module	KCWF2170CZ(C)T(V)1	KCWF2170CZ(C)TM(V)1	5440	2500	2950	1650*2=3300	940*1=940	2460	300	600	20	12080
		KCWF2200CZ(C)T(V)1	KCWF2200CZ(C)TM(V)1	5650	2500	3010	1650*2=3300	1150*1=1150	2460	300	600	20	12500
		KCWF2220CZ(C)T(V)1	KCWF2220CZ(C)TM(V)1	5650	2500	3010	1650*2=3300	1150*1=1150	2460	300	600	20	12500
KCWF2240CZ(C)T(V)1		KCWF2240CZ(C)TM(V)1	5885	2500	2950	1650*2=3300	690*2=1380	2460	300	600	24	12970	
KCWF2260CZ(C)T(V)1		KCWF2260CZ(C)TM(V)1	6160	2500	2950	1650*2=3300	830*2=1660	2460	300	600	24	13520	

	Unit model		A (mm)	B (mm)	H (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	N	I (mm)
	Standard series	with hydraulic module series										
Dual compressor module	KCWF2280CZ(C)T(V)1	KCWF2280CZ(C)TM(V)1	6160	2500	2950	1650*2=3300	830*2=1660	2460	300	600	24	13520
	KCWF2310CZ(C)T(V)1	KCWF2310CZ(C)TM(V)1	6360	2500	2950	1650*2=3300	930*2=1860	2460	300	600	24	13920
	KCWF2350CZ(C)T(V)1	KCWF2350CZ(C)TM(V)1	6760	2500	2950	1650*2=3300	1130*2=2260	2460	300	600	24	14720
	KCWF2380CZ(C)T(V)1	KCWF2380CZ(C)TM(V)1	7260	2500	3010	1650*2=3300	1380*2=2760	2460	300	600	24	15720
	KCWF2420CZ(C)T(V)1	KCWF2420CZ(C)TM(V)1	7260	2500	3010	1650*2=3300	1380*2=2760	2460	300	600	24	15720
	KCWF2460CZ(C)T(V)1	KCWF2460CZ(C)TM(V)1	7560	2500	2950	1650*2=3300	1530*2=3060	2460	300	600	24	16320
	KCWF2500CZ(C)T(V)1	KCWF2500CZ(C)TM(V)1	7560	2500	2950	1650*2=3300	1530*2=3060	2460	300	600	24	16320
	KCWF2560CZ(C)T(V)1	KCWF2560CZ(C)TM(V)1	8140	2500	2950	1650*2=3300	1820*2=3640	2460	300	600	24	17480
	KCWF2620CZ(C)T(V)1	KCWF2620CZ(C)TM(V)1	9020	2500	2950	1650*2=3300	1500*3=4500	2460	300	600	28	19240
	KCWF2660CZ(C)T(V)1	KCWF2660CZ(C)TM(V)1	9020	2500	2950	1650*2=3300	1500*3=4500	2460	300	600	28	19240
	KCWF2170CZ(C)T(V)1-S	-	2500	2950	1700*3=5100	940*1=940	2460	300	600	20	8780	
	KCWF2200CZ(C)T(V)1-S	-	2500	3010	1700*3=5100	1150*1=1150	2460	300	600	20	9200	
	KCWF2220CZ(C)T(V)1-S	-	2500	3010	1700*3=5100	1150*1=1150	2460	300	600	20	9200	
	KCWF2240CZ(C)T(V)1-S	-	2500	2950	1700*3=5100	690*2=1380	2460	300	600	24	9670	
	KCWF2260CZ(C)T(V)1-S	-	2500	2950	1700*3=5100	830*2=1660	2460	300	600	24	10220	
	KCWF2280CZ(C)T(V)1-S	-	2500	2950	1325*4=5300	830*2=1660	2460	300	600	24	10420	
	KCWF2310CZ(C)T(V)1-S	-	2500	2950	1325*4=5300	930*2=1860	2460	300	600	24	10820	
	KCWF2350CZ(C)T(V)1-S	-	2500	2950	1325*4=5300	1130*2=2260	2460	300	600	24	11620	
	KCWF2380CZ(C)T(V)1-S	-	2500	3010	1325*4=5300	1380*2=2760	2460	300	600	24	12620	
	KCWF2420CZ(C)T(V)1-S	-	2500	3010	1325*4=5300	1380*2=2760	2460	300	600	24	12620	
	KCWF2460CZ(C)T(V)1-S	-	2500	2950	1325*4=5300	1530*2=3060	2460	300	600	24	13220	
	KCWF2500CZ(C)T(V)1-S	-	2500	2950	1325*4=5300	1530*2=3060	2460	300	600	24	13220	
	KCWF2560CZ(C)T(V)1-S	-	2500	2950	1450*4=5800	1820*2=3640	2460	300	600	24	14880	
	KCWF2620CZ(C)T(V)1-S	-	2500	2950	1450*4=5800	1500*3=4500	2460	300	600	28	16640	
KCWF2660CZ(C)T(V)1-S	-	2500	2950	1450*4=5800	1500*3=4500	2460	300	600	28	16640		
-	KCWF2170CZ(C)TM(V)1-S	2500	2950	1480*5=7400	940*1=940	2460	300	600	20	11080		
-	KCWF2200CZ(C)TM(V)1-S	2500	3010	1480*5=7400	1150*1=1150	2460	300	600	20	11500		
-	KCWF2220CZ(C)TM(V)1-S	2500	3010	1480*5=7400	1150*1=1150	2460	300	600	20	11500		
-	KCWF2240CZ(C)TM(V)1-S	2500	2950	1480*5=7400	690*2=1380	2460	300	600	24	11970		
-	KCWF2260CZ(C)TM(V)1-S	2500	2950	1480*5=7400	830*2=1660	2460	300	600	24	12520		
-	KCWF2280CZ(C)TM(V)1-S	2500	2950	1520*5=7600	830*2=1660	2460	300	600	24	12720		
-	KCWF2310CZ(C)TM(V)1-S	2500	2950	1520*5=7600	930*2=1860	2460	300	600	24	13120		
-	KCWF2350CZ(C)TM(V)1-S	2500	2950	1520*5=7600	1130*2=2260	2460	300	600	24	13920		
-	KCWF2380CZ(C)TM(V)1-S	2500	3010	1520*5=7600	1380*2=2760	2460	300	600	24	14920		
-	KCWF2420CZ(C)TM(V)1-S	2500	3010	1520*5=7600	1380*2=2760	2460	300	600	24	14920		
-	KCWF2460CZ(C)TM(V)1-S	2500	2950	1520*5=7600	1530*2=3060	2460	300	600	24	15520		
-	KCWF2500CZ(C)TM(V)1-S	2500	2950	1520*5=7600	1530*2=3060	2460	300	600	24	15520		
-	KCWF2560CZ(C)TM(V)1-S	2500	2950	1620*5=8100	1820*2=3640	2460	300	600	24	17180		
-	KCWF2620CZ(C)TM(V)1-S	2500	2950	1620*5=8100	1500*3=4500	2460	300	600	28	18940		
-	KCWF2660CZ(C)TM(V)1-S	2500	2950	1620*5=8100	1500*3=4500	2460	300	600	28	18940		

# 12

## TABLE OF PERFORMANCE CORRECTION COEFFICIENT FOR VARIABLE WORKING CONDITIONS

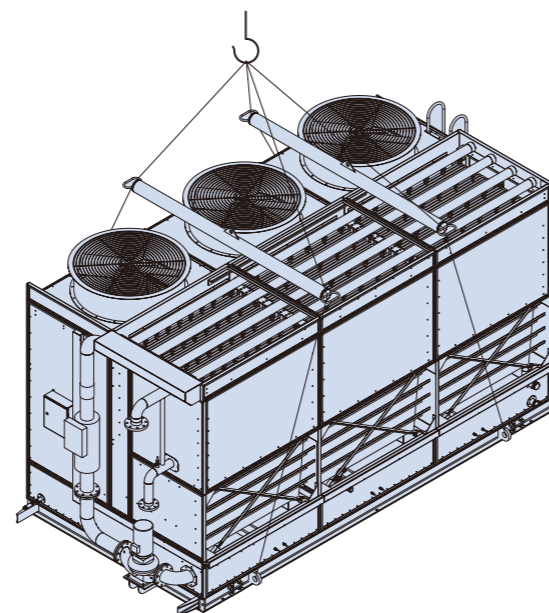
Enter WB temperature	Temperature of chilled water outlet											
	5		7		9		11		13		15	
	Cooling capacity	Power	Cooling capacity	Power	Cooling capacity	Power	Cooling capacity	Power	Cooling capacity	Power	Cooling capacity	Power
16	0.99	0.89	1.05	0.90	1.10	0.94	1.17	0.95	1.24	0.97	1.31	0.99
18	0.98	0.91	1.04	0.92	1.09	0.96	1.16	0.98	1.22	1.00	1.30	1.01
20	0.96	0.93	1.03	0.94	1.08	0.98	1.14	1.01	1.21	1.02	1.28	1.04
22	0.95	0.96	1.01	0.97	1.06	1.00	1.12	1.03	1.19	1.04	1.27	1.06
24	0.94	0.98	1.00	1.00	1.05	1.02	1.11	1.05	1.18	1.07	1.25	1.08
26	0.93	1.00	0.99	1.02	1.04	1.05	1.10	1.07	1.16	1.10	1.23	1.12
28	0.91	1.02	0.97	1.05	1.02	1.07	1.08	1.10	1.14	1.13	1.21	1.15
30	0.90	1.05	0.95	1.08	1.01	1.10	1.06	1.13	1.12	1.16	1.19	1.18
32	0.88	1.08	0.93	1.11	0.99	1.13	1.05	1.16	1.11	1.18	1.17	1.20

Note: When the unit operates under variable conditions, the cooling capacity is calculated by multiplying the nominal cooling capacity in the performance parameter table by the cooling capacity correction factor in the table above; The input power of the compressor is the nominal input power in the performance parameter table multiplied by the correction factor in the table above; 2. The power of the unit fan and water pump does not vary with the inlet wet bulb temperature and the outlet temperature of the frozen water. The nominal power consumption of the entire machine should be calculated based on the input power of the compressor in the table above, plus the power of the evaporative condenser fan and cooling circulating water pump. For units with hydraulic modules, the power of the chilled water pump should also be added.

# 13

## UNIT HOISTING AND HANDLING

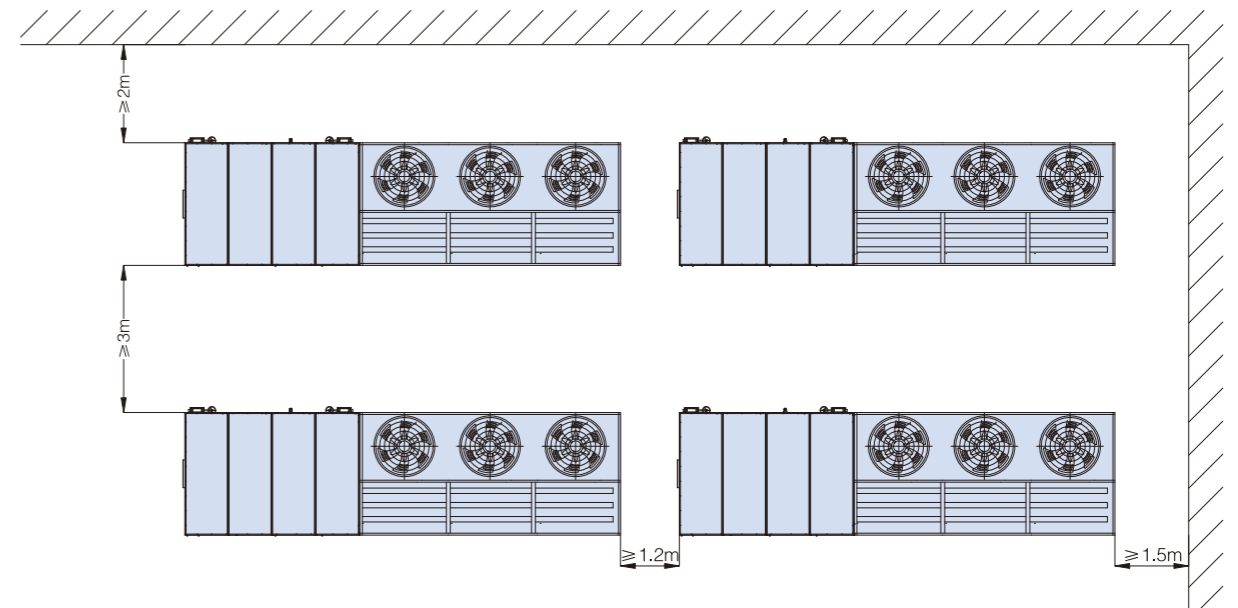
- before lifting, it is necessary to understand the lifting dimensions, weight, and lifting height of the unit, and use lifting equipment with appropriate load-bearing capacity for lifting. The lifting speed should be limited to the permitted range, and risky operations or overloading are not allowed. The lifting and landing must be smooth to avoid excessive impact.
- There are dedicated lifting holes on the base of the unit, and the unit should be lifted using specialized lifting equipment fixed on the lifting ears. It is prohibited to use forklifts to move the unit.
- Before hoisting the unit, strictly check whether all lifting equipment is intact and whether the fixing method is reliable. During the handling and lifting of the unit, the unit should be kept balanced and shaking is strictly prohibited. During the lifting and handling process, the unit must not be damaged, especially the refrigeration system components, pipelines, and panel frames must not be bumped. When lifting, the lifting support beam should be used for lifting, and when moving the unit into position, dragging or rolling should be used as much as possible. The force bearing part can only be at the base of the unit.
- Considering the feasibility of unit hoisting and handling, some models are shipped in sections (compression evaporation section, condenser section) and assembled on site.



# 14

## INSTALLATION REQUIREMENTS

- The unit can be installed in well ventilated places such as roofs, balconies, and floors.
- There should be sufficient space around the unit for operation and maintenance purposes, while ensuring that the installation location of the unit has suitable ambient temperature and good ventilation conditions to ensure smooth airflow of the evaporative condenser. The installation space requirements are shown in the "Unit Installation Space Diagram" below.
- There should be no obstacles on the top of the air outlet of the unit to avoid airflow short circuits that may affect the performance of the unit.
- There should be no strong heat sources, corrosive gases, flammable gases or other influencing factors around the unit, and the impact of dust, oil fumes, smoke and fallen leaves on the unit should be avoided. There should be drainage ditches and floor drains around the installation foundation of the unit to facilitate the discharge of sewage during the operation and maintenance of the unit. The inclination of the unit after installation shall not exceed 0.2% of the inclination in the corresponding direction.



Schematic diagram of installation space for the unit

# 15

## INSTALLATION FOUNDATION

- The unit should be installed on a sturdy, flat, and horizontal reinforced concrete foundation or steel structure foundation. It is required that the foundation can withstand the operating weight of the unit and additional pipeline loads. If necessary, a professional design unit should be consulted for design.
- When selecting floor installation for the unit, it is recommended to consult with the building designer before installation to ensure that the building can withstand the foundation, unit operating weight, and additional pipeline loads. The unit is divided into two parts: the compressor evaporation section and the condenser section. When installing shock absorbers, an integral channel steel base should be added between the unit and the foundation, and shock absorbers should be placed between the integral channel steel base and the foundation.
- The reserved installation aperture for the base of the unit is 18. When making the foundation, anchor pits for anchor bolts should be reserved. After the unit is in place, concrete should be poured again, and the anchor bolts should be provided by the customer. The basic installation surface should be ensured to be level, and the overall inclination in the length and width directions should not exceed 0.2%. The following three typical installation foundation diagrams are provided for reference. The letter dimensions of the drawings refer to the corresponding data in the unit external dimension table. Please determine the specific production according to the actual situation on site.

# 15 INSTALLATION FOUNDATION

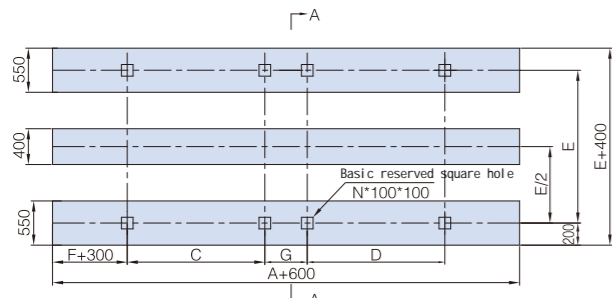


Figure 1 Single machine installation foundation diagram

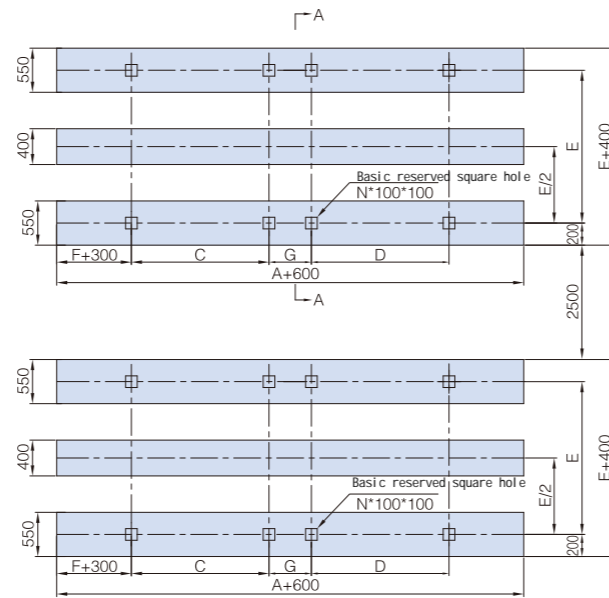
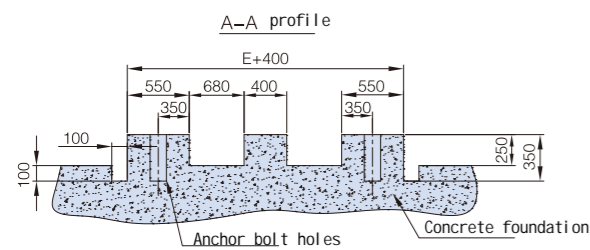


Figure 2 Installation Foundation Diagram of Dual Machine Module (Horizontal)

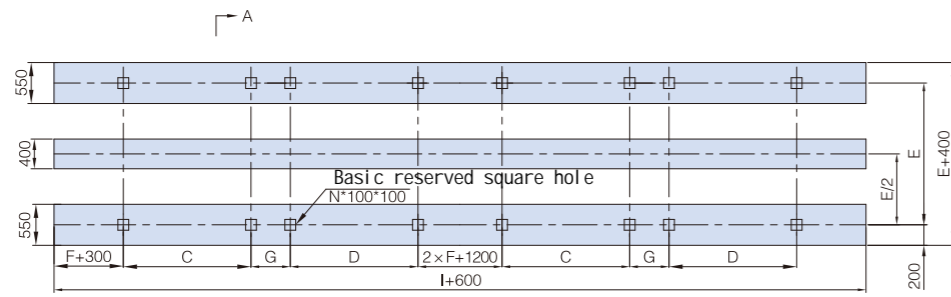


Figure 3 Installation foundation diagram of dual machine module (vertical arrangement)

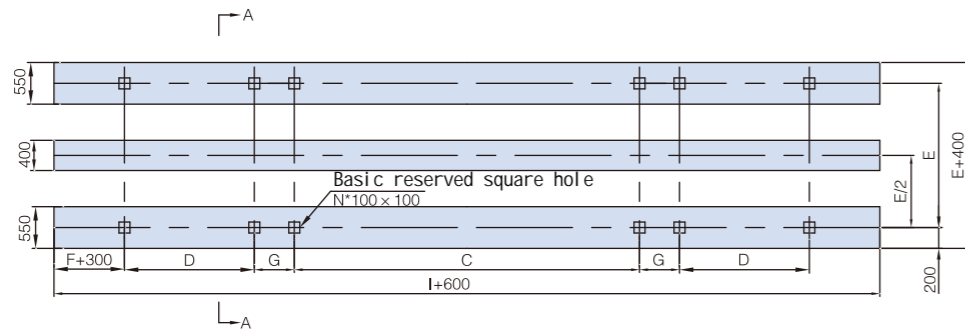


Figure 4: Basic Installation Diagram for the Dual Machine Unit

# 16 WATER SYSTEM PIPING

## 1 PIPING OF CHILLED WATER SYSTEM

Please select the specific schematic diagram of the chilled water pipe piping based on whether the unit is ordered with a hydraulic module (see Figure A and Figure B for details). This schematic diagram only provides basic piping suggestions for a certain model, please improve it according to the specific system application.

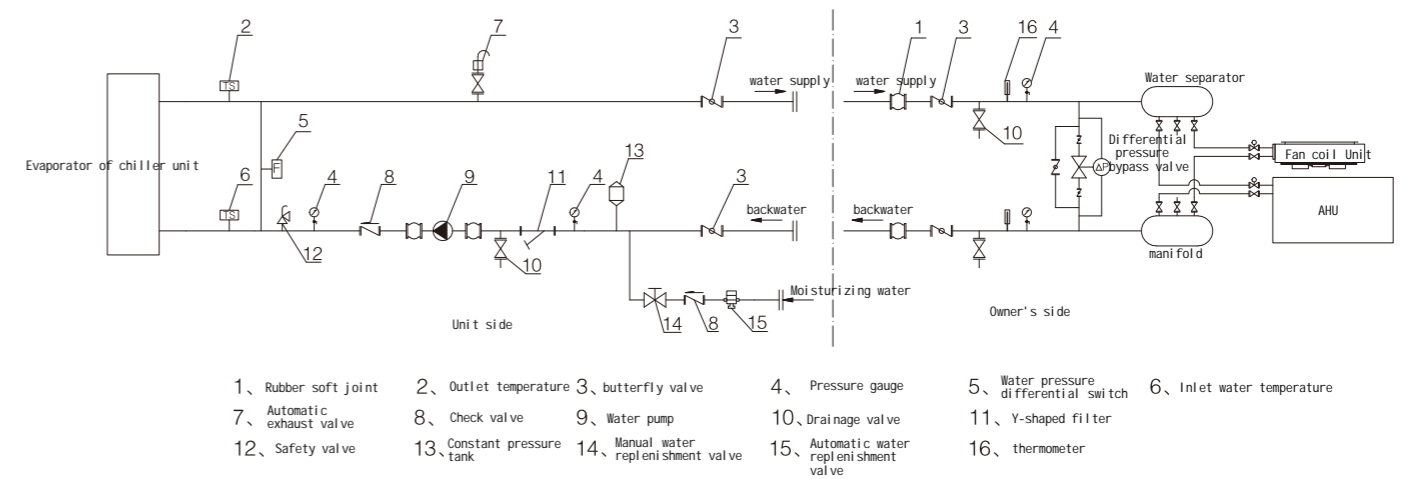


Figure A Schematic diagram of piping for hydraulic module unit

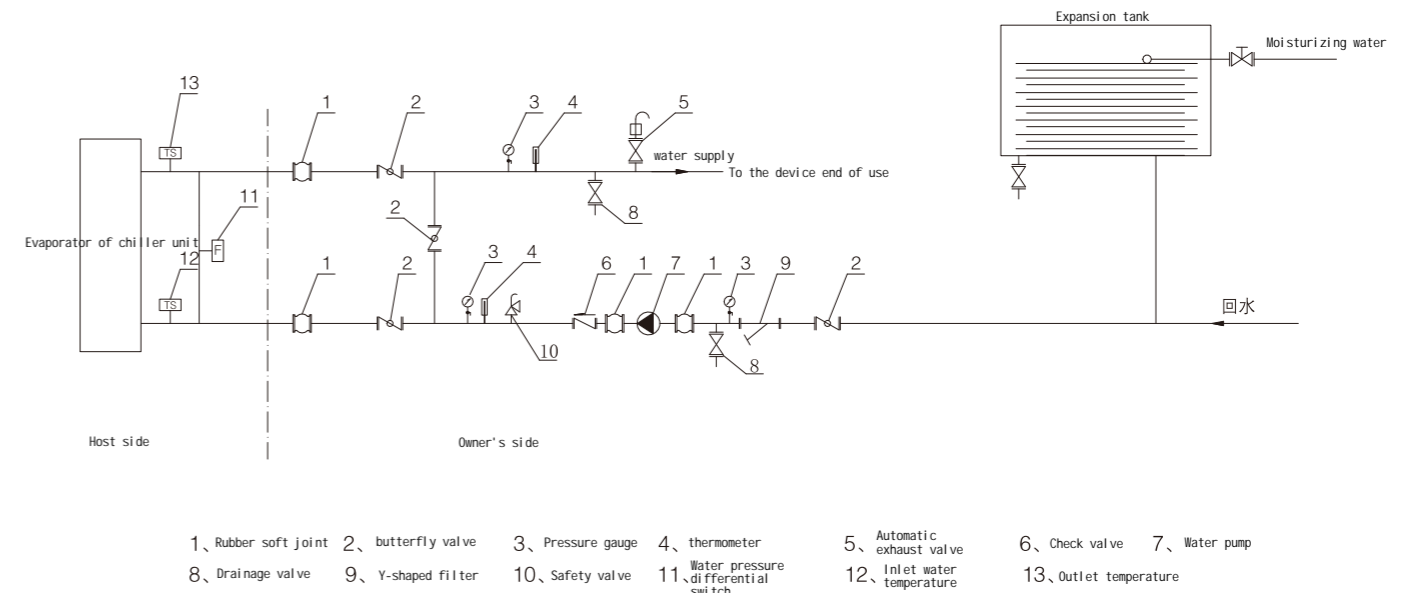


Figure B Schematic diagram of piping for non hydraulic module unit

- The external head in the parameters of the self-contained hydraulic module unit is the capital head obtained by deducting the internal water pressure loss from the total head of the water pump. The water side resistance of the end equipment and piping on the customer side should not exceed the external head.
- The customer should design an electric two-way valve at the end and install a pressure differential bypass valve between the supply and return water main or the water collector.
- Please install shock-absorbing hoses at the inlet and outlet of the water pipes to reduce the transmission of vibration and noise from the machine. At the same time, the water pipes should be properly fixed and their weight should not be borne by the unit.

## 16 WATER SYSTEM PIPING

- It is advisable to install maintenance valves and drainage valves near the inlet and outlet of the external pipeline to facilitate inspection and maintenance during daily operation. The chilled water pump should be installed on the inlet side of the evaporator. When the unit is in operation, the chilled water flow rate should not be less than 50% of the rated water flow rate to prevent accidents. When two or more units are used in parallel, in order to maintain the same cold water flow rate of each heat exchanger and prevent bias flow, it is required that the pipeline be designed with the same program, and if necessary, a balance valve should be installed.
- To prevent air from being trapped inside the pipes, automatic exhaust valves should be installed at the highest and local heights of the water system piping, and the piping of the water system should be tilted upwards at a 1/250 angle.
- For the convenience of system drainage, drainage valves should be installed at the lowest point of the water system piping and near the bottom of the horizontal pipe section of the unit. The inlet and outlet pipes and valves of the unit should be properly insulated to avoid loss of cooling capacity and condensation. The unit adopts an automatic water replenishment valve for replenishment, and the replenishment port of the air conditioning water system is set on the suction side of the chilled water pump. The pressure of the external replenishment pipe network should be 0.3 bar higher than the minimum set pressure difference of the replenishment valve. When the unit is placed on the roof or multiple units use the same pipeline for water replenishment, it is necessary to verify the diameter and pressure of the water replenishment. If the water replenishment pressure requirements cannot be met, a water replenishment pump should be installed with a head that ensures that the water replenishment pressure is 30-50kPa higher than the pressure at the water replenishment point. It is recommended that the flow rate of the water replenishment pump be 5-10% of the total system capacity.
- Multi head units without hydraulic modules are used in industrial projects controlled by outlet water temperature. When the required outlet water temperature is below 6 °C, an electric butterfly valve must be installed on the corresponding chilled water branch of each module. Each module is equipped with the control contact (220V) of the electric butterfly valve as standard, and the valve is purchased by the customer or provided by Kingair.
- The air conditioning water system should adopt a closed cycle system. When the hardness of the makeup water is high, it is recommended to soften the makeup water.

## 2 EVAPORATIVE CONDENSER PIPING

- The diameter of the cooling circulating water replenishment pipe for the helical condenser should be configured according to the recommended sample value. When the unit is placed on the roof and the replenishment pressure is insufficient, it is recommended to set up a replenishment water pump to meet the condenser replenishment requirements.
- The water quality of the cooling cycle makeup water must meet the requirements of the relevant indicators of "water quality management". When the indicators exceed the standard, it is recommended to carry out softening treatment, but real-time monitoring of the makeup water is necessary to prohibit the chloride ions of regenerated salt from entering the cooling water circulation system.
- The overflow pipe and drain pipe of the evaporative condenser are designed with threaded interfaces. It is recommended that customers connect the pipes to the drainage ditch.

## 17 WINTER RUNNING AND ANTIFREEZE OF EVAPORATIVE CONDENSING CHILLER

- When the cooling season ends or the maximum temperature during shutdown may be below 2 °C, the water in the evaporator, chilled water system pipeline, and condenser circulating water tank of the unit should be completely drained immediately to prevent freezing damage;
- The operating environment temperature of conventional units shall not exceed the safe operating range of the unit. When the ambient temperature is below the safe operating range and refrigeration operation is required, the selection should be made for year-round refrigeration units:
- When the refrigeration unit is used in winter, do not cut off the power supply of the unit when it is stopped, and set the unit to automatic anti freezing operation mode. At the same time, ensure that the circulation of the chilled water system remains unobstructed. The unit will automatically operate the water pump according to the ambient temperature and chilled water temperature:
- When used in ambient temperatures below 2 °C, antifreeze should be added to the chilled water system while avoiding corrosion of the unit by the antifreeze; For other precautions, please refer to the operating manual and unit label instructions.

## 18 WATER QUALITY MANAGEMENT

- Poor water quality can easily lead to a decrease in heat transfer efficiency of heat exchangers and a decline in unit performance, and may even cause damage to the unit due to corrosion. The chilled water system is a closed cycle system, and it is recommended to use soft water.
- The unit should regularly sample and analyze the circulating water during operation, and the chilled water and cooling circulating water should meet the requirements in the table below. Our company does not promise that the unit can use improperly treated or untreated substandard water, and the use of saltwater is strictly prohibited.
- To reduce the adverse effects of evaporation concentration, the cooling circulating water of the evaporative condenser should be discharged regularly and replaced at least once every two weeks.

### 1 WATER QUALITY REQUIREMENTS FOR FROZEN WATER

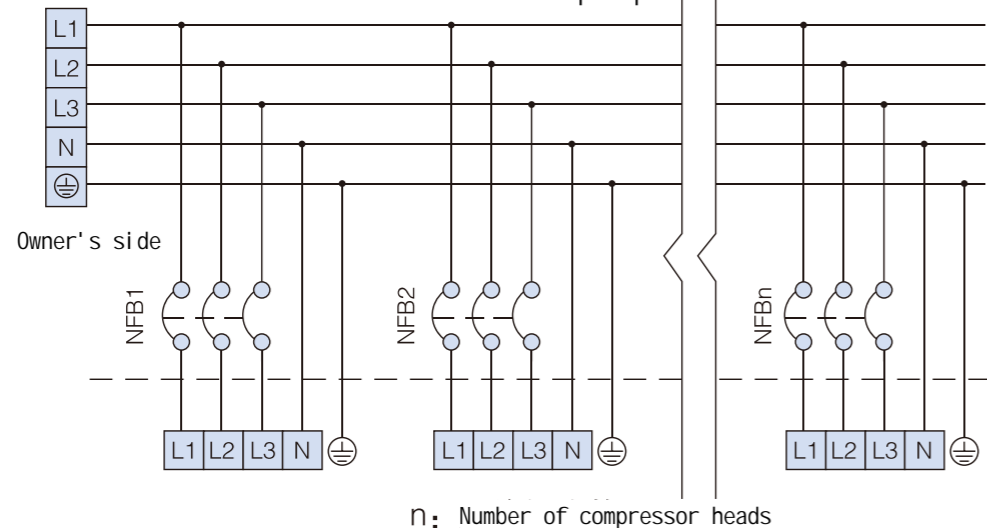
Project	Supplement water	Refrigerated circulating water
PH (25°C)	6.5-8.0	6.5-8.0
conductivity (25°C) (μs/cm)	<200	<800
Chloride ion (mg CL-/L)	<50	<200
Sulfate ion (mg SO <sub>4</sub> <sup>2-</sup> /L)	<50	<200
Acid consumption(PH4.8) (mg CaCO <sub>3</sub> /L)	<50	<100
Total hardness (mg CaCO <sub>3</sub> /L)	<70	<200
Fe (mg Fe/L)	<0.3	<1.0
Sulfur ion (mg S <sup>2-</sup> /L)	Cannot be detected	Cannot be detected
Ammonium ion (mg NH <sub>4</sub> <sup>+</sup> /L)	<1.0	<1.0
silicon dioxide (mg SiO <sub>2</sub> /L)	<30	<50

### 2 WATER QUALITY REQUIREMENTS FOR EVAPORATIVE CONDENSER COOLING WATER

Project	Supplement water	Refrigerated circulating water
PH (25°C)	6.5-8.0	6.5-8.2
Turbidity NTH	≤3	≤10
Conductivity (25°C) (μs/cm)	≤300	≤800
Total hardness (mg CaCO <sub>3</sub> /L)	≤300	≤600
Total alkalinity (mg CaCO <sub>3</sub> /L)	≤200	≤600
Chloride ion (mg CL-/L)	≤50	≤200
Fe (mg Fe/L)	≤0.3	≤1.0
Sulfate ion (mg SO <sub>4</sub> <sup>2-</sup> /L)	≤50	≤200
Ionic silica SiO <sub>2</sub> (mg(SiO <sub>2</sub> )/L)	≤30	≤50
Ammonia nitrogen (mg /L)	≤5	≤10
CODcr (mg /L)	≤30	≤100
Total colony count CFU/mL	-	-
Total number of heterotrophic bacteria (pcs/mL)	-	≤1 × 10 <sup>5</sup>
Phosphate (mg P/L)	-	≤1.0
Organic phosphorus (mg /L)	-	≤0.5
Petroleum category (mg/L)	-	≤10

# 19 ELECTRICAL WIRING

- The power supply voltage must be stable during the operation of the unit, taking into account all voltage drop factors. The operating voltage of the unit should be kept within +10% of the rated value. High or low voltage can have adverse effects on the unit.
- The voltage difference between phases should not exceed +2% of the rated value, and the difference between the highest and lowest phase currents should be less than 3% of the rated value to avoid overheating of the compressor.
- The power frequency should be kept within  $\pm 2\%$  of the rated value.
- The minimum starting voltage of the unit must be maintained at 85% or above of the rated value.
- When the power cord is too long, it can also cause the compressor to fail to start. Therefore, the length of the power cord must ensure that the voltage difference between the end and tail of the power cord during operation is less than 2% of the rated value. If the length cannot be shortened, the power cord must be thickened. The wiring between the power supply and the unit must be strictly constructed in accordance with electrical regulations and standards, and the insulation should be good. After the unit is wired, the insulation between the electrical accessory terminals and the machine body should be measured with a 500V high resistance meter, and the insulation resistance should be at least 5MΩ or more.
- To protect human safety and avoid the risk of electric shock in case of body leakage, the unit casing should have a good and reliable grounding protection device to prevent electric shock accidents. Construction must strictly follow the requirements of electrical regulations.
- The machine wiring adopts a three-phase five wire system, and only copper wires are allowed to be used.
- All on-site wiring and component installations must be operated by certified electricians.
- The grounding of the unit must comply with relevant local and national regulations.
- Low voltage (<30V) control circuits and wires greater than 30V shall not be threaded in the same conduit.
- The wire connection must be firm, otherwise it may cause consequences such as overheating, electric shock, or fire at the contact point, but excessive force should not be applied on the terminal block. Wrap the wires properly and do not loosen the protective layer and other related components.
- In order to reduce the harm to electrical equipment such as transformers and wiring in the event of a short circuit accident on the line, and to facilitate independent control of the start and stop of each compressor, each compressor needs to be equipped with a set of independent power supply lines and non fuse circuit breakers (NFBs) (as shown in the figure below), with a capacity selected at 1.8 times the rated current of each compressor. All compressors use Y - starting (soft starter can be selected according to customer requirements).
- The host should be equipped with an independent transformer, and its rated capacity should be calculated based on the sum of 1.6 to 1.8 times the rated input power of each host.



# 20 UNIT WIRING SUGGESTION

## 1 STANDARD SERIES (R22)

Model	Max power (kw)	Maximum current (A)	suggest wiring Diameter (mm <sup>2</sup> )	Model	Max Power (Kw)	Maximum current (A)	1# Module or system suggest wiring diameter (mm <sup>2</sup> )	2# Module or system suggest wiring diameter (mm <sup>2</sup> )
KCWF1090CZ(C)T(V)	110	195	120	KCWF2180CZ(C)T(V)-(S)	220	390	120	120
KCWF1105CZ(C)T(V)	125	220	150	KCWF2210CZ(C)T(V)-(S)	251	441	150	150
KCWF1120CZ(C)T(V)	133	233	150	KCWF2240CZ(C)T(V)-(S)	267	467	150	150
KCWF1130CZ(C)T(V)	153	269	185	KCWF2260CZ(C)T(V)-(S)	306	538	185	185
KCWF1145CZ(C)T(V)	171	302	240	KCWF2290CZ(C)T(V)-(S)	342	604	240	240
KCWF1165CZ(C)T(V)	173	306	240	KCWF2330CZ(C)T(V)-(S)	347	612	240	240
KCWF1180CZ(C)T(V)	187	328	300	KCWF2360CZ(C)T(V)-(S)	374	656	300	300
KCWF1200CZ(C)T(V)	220	385	2*150	KCWF2400CZ(C)T(V)-(S)	440	771	2*150	2*150
KCWF1215CZ(C)T(V)	240	422	2*150	KCWF2430CZ(C)T(V)-(S)	479	844	2*150	2*150
KCWF1235CZ(C)T(V)	253	446	2*185	KCWF2470CZ(C)T(V)-(S)	507	891	2*185	2*185
KCWF1260CZ(C)T(V)	272	481	2*240	KCWF2520CZ(C)T(V)-(S)	544	962	2*240	2*240
KCWF1280CZ(C)T(V)	278	489	2*240	KCWF2560CZ(C)T(V)-(S)	555	979	2*240	2*240
KCWF1310CZ(C)T(V)	311	548	2*240	KCWF2620CZ(C)T(V)-(S)	622	1096	2*240	2*240
KCWF1320CZ(C)T(V)	334	585	2*300	KCWF2640CZ(C)T(V)-(S)	667	1169	2*300	2*300

## 2 STANDARD SERIES (R134A)

Model	Max Power (Kw)	Maximum current (A)	suggest wiring Diameter (mm <sup>2</sup> )	Model	Max Power (Kw)	Maximum current (A)	1# Module or system suggest wiring diameter (mm <sup>2</sup> )	2# Module or system suggest wiring diameter (mm <sup>2</sup> )
KCWF1085CZ(C)T(V)1	102	181	95	KCWF2170CZ(C)T(V)1-(S)	203	362	95	95
KCWF1100CZ(C)T(V)1	117	206	120	KCWF2200CZ(C)T(V)1-(S)	234	412	120	120
KCWF1110CZ(C)T(V)1	125	220	150	KCWF2220CZ(C)T(V)1-(S)	250	440	150	150
KCWF1120CZ(C)T(V)1	131	232	150	KCWF2240CZ(C)T(V)1-(S)	263	463	150	150
KCWF1130CZ(C)T(V)1	145	255	185	KCWF2260CZ(C)T(V)1-(S)	290	510	185	185
KCWF1140CZ(C)T(V)1	155	274	185	KCWF2280CZ(C)T(V)1-(S)	310	548	185	185
KCWF1155CZ(C)T(V)1	169	299	240	KCWF2310CZ(C)T(V)1-(S)	339	598	240	240
KCWF1175CZ(C)T(V)1	192	336	300	KCWF2350CZ(C)T(V)1-(S)	383	673	300	300
KCWF1190CZ(C)T(V)1	208	365	300	KCWF2380CZ(C)T(V)1-(S)	417	729	300	300
KCWF1210CZ(C)T(V)1	226	398	2*150	KCWF2420CZ(C)T(V)1-(S)	451	797	2*150	2*150
KCWF1230CZ(C)T(V)1	233	411	2*150	KCWF2460CZ(C)T(V)1-(S)	467	822	2*150	2*150
KCWF1250CZ(C)T(V)1	251	439	2*185	KCWF2500CZ(C)T(V)1-(S)	501	879	2*185	2*185
KCWF1280CZ(C)T(V)1	285	504	2*240	KCWF2560CZ(C)T(V)1-(S)	570	1008	2*240	2*240
KCWF1310CZ(C)T(V)1	318	560	2*300	KCWF2620CZ(C)T(V)1-(S)	637	1120	2*300	2*300
KCWF1330CZ(C)T(V)1	336	594	2*300	KCWF2660CZ(C)T(V)1-(S)	673	1187	2*300	2*300

# 20 UNIT WIRING SUGGESTION

## 3 SERIES UNIT WITH HYDRAULIC MODULE (R22)

Model	Max power (kw)	Maximum current (A)	suggest wiring Diameter (mm)	Model	Max power (kw)	Maximum current (A)	1# Module or system suggest wiring diameter (mm <sup>2</sup> )	2# Module or system suggest wiring diameter (mm <sup>2</sup> )
KCWF1090CZ(C)TM(V)	128	227	150	KCWF2180CZ(C)TM(V)-(S)	256	453	150	150
KCWF1105CZ(C)TM(V)	146	252	185	KCWF2210CZ(C)TM(V)-(S)	293	505	185	185
KCWF1120CZ(C)TM(V)	154	266	185	KCWF2240CZ(C)TM(V)-(S)	309	531	185	185
KCWF1130CZ(C)TM(V)	176	295	240	KCWF2260CZ(C)TM(V)-(S)	351	591	240	240
KCWF1145CZ(C)TM(V)	193	339	240	KCWF2290CZ(C)TM(V)-(S)	385	678	240	240
KCWF1165CZ(C)TM(V)	196	344	300	KCWF2330CZ(C)TM(V)-(S)	391	688	300	300
KCWF1180CZ(C)TM(V)	211	365	300	KCWF2360CZ(C)TM(V)-(S)	423	730	300	300
KCWF1200CZ(C)TM(V)	244	422	2*150	KCWF2400CZ(C)TM(V)-(S)	488	844	2*150	2*150
KCWF1215CZ(C)TM(V)	269	472	2*185	KCWF2430CZ(C)TM(V)-(S)	538	944	2*185	2*185
KCWF1235CZ(C)TM(V)	283	496	2*240	KCWF2470CZ(C)TM(V)-(S)	566	992	2*240	2*240
KCWF1260CZ(C)TM(V)	301	543	2*240	KCWF2520CZ(C)TM(V)-(S)	601	1085	2*240	2*240
KCWF1280CZ(C)TM(V)	317	556	2*240	KCWF2560CZ(C)TM(V)-(S)	635	1112	2*240	2*240
KCWF1310CZ(C)TM(V)	355	617	2*300	KCWF2620CZ(C)TM(V)-(S)	709	1234	2*300	2*300
KCWF1320CZ(C)TM(V)	375	653	2*300	KCWF2640CZ(C)TM(V)-(S)	750	1306	2*300	2*300

## 4 SERIES UNIT WITH HYDRAULIC MODULE (R134A)

Model	Max power (kw)	Maximum current (A)	suggest wiring Diameter (mm)	Model	Max power (kw)	Maximum current (A)	1# Module or system suggest wiring diameter (mm <sup>2</sup> )	2# Module or system suggest wiring diameter (mm <sup>2</sup> )
KCWF1085CZ(C)TM(V)1	114	204	120	KCWF2170CZ(C)TM(V)1-(S)	408	120	120	120
KCWF1100CZ(C)TM(V)1	136	235	150	KCWF2200CZ(C)TM(V)1-(S)	469	150	150	150
KCWF1110CZ(C)TM(V)1	145	250	185	KCWF2220CZ(C)TM(V)1-(S)	499	185	185	185
KCWF1120CZ(C)TM(V)1	151	261	185	KCWF2240CZ(C)TM(V)1-(S)	521	185	185	185
KCWF1130CZ(C)TM(V)1	167	280	185	KCWF2260CZ(C)TM(V)1-(S)	560	185	185	185
KCWF1140CZ(C)TM(V)1	176	310	240	KCWF2280CZ(C)TM(V)1-(S)	620	240	240	240
KCWF1155CZ(C)TM(V)1	191	335	240	KCWF2310CZ(C)TM(V)1-(S)	671	240	240	240
KCWF1175CZ(C)TM(V)1	216	373	300	KCWF2350CZ(C)TM(V)1-(S)	747	300	300	300
KCWF1190CZ(C)TM(V)1	233	401	2*150	KCWF2380CZ(C)TM(V)1-(S)	802	2*150	2*150	2*150
KCWF1210CZ(C)TM(V)1	255	448	2*185	KCWF2420CZ(C)TM(V)1-(S)	897	2*185	2*185	2*185
KCWF1230CZ(C)TM(V)1	262	460	2*185	KCWF2460CZ(C)TM(V)1-(S)	920	2*185	2*185	2*185
KCWF1250CZ(C)TM(V)1	279	488	2*240	KCWF2500CZ(C)TM(V)1-(S)	976	2*240	2*240	2*240
KCWF1280CZ(C)TM(V)1	325	571	2*300	KCWF2560CZ(C)TM(V)1-(S)	1141	2*300	2*300	2*300
KCWF1310CZ(C)TM(V)1	357	625	2*300	KCWF2620CZ(C)TM(V)1-(S)	1249	2*300	2*300	2*300
KCWF1330CZ(C)TM(V)1	376	673	3*240	KCWF2660CZ(C)TM(V)1-(S)	1346	3*240	3*240	3*240

# 21 STANDARD SUPPLY DETAILS

## 1 STANDARD PERFORMANCE PARAMETERS

The standard design working condition of Kingair integrated evaporative condensation chiller is chilled water outlet temperature 7°C, evaporative condenser inlet air dry bulb temperature 35°C, wet bulb temperature 24°C; the dirt coefficient of evaporator water side is 0.044(m.<sup>2</sup>C/kW); The atmospheric pressure is 101KPa; The cold medium is R22/R134a. When operating under different conditions, the performance parameters of the unit will change, please contact the sales department of the company for details.

## 2 STANDARD DELIVERY INSTRUCTIONS

When the unit is delivered, the compressor, evaporator, condenser, oil separator, control cabinet, liquid reservoir, throttle valve and other refrigerated parts, water pressure difference switch, pipeline accessories and other parts have been assembled in the compressed evaporation section and evaporation condenser, and the factory test is completed after the shipment, the unit has completed the refrigerant oil and refrigerant charging, and the water pressure difference switch is built in. The company can provide rubber shock cushion according to user's demand;

## 3 SPARE PARTS LIST

The standard unit does not contain spare parts before delivery. If customers need, the company can provide the following spare parts for the unit: freezing oil, drying ball, oil filter, refrigerant.