RUIDONG

DEHUMIDIFIER UNIT



RUIDONG GROUP

www.ruidonggroup.com

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

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

Main business coverage:

1. Host series:

· Water cooled series: centrifugal cold (hot) water unit, screw type cold water unit, screw type water (ground) source cooling and heating unit, scroll type water (ground) source cooling and heating unit.

· Air cooled series: screw type cold (hot) water unit, modular type cold (hot) water unit, mini type cold (hot) water unit, VRV series unit.

· Packaged Unitary unit: constant temperature and humidity unit, air (water) cooled unitary unit, dehumidification unit.

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

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



ENTERPRISE PROFILE

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

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

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

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

CERTIFICATIONS

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























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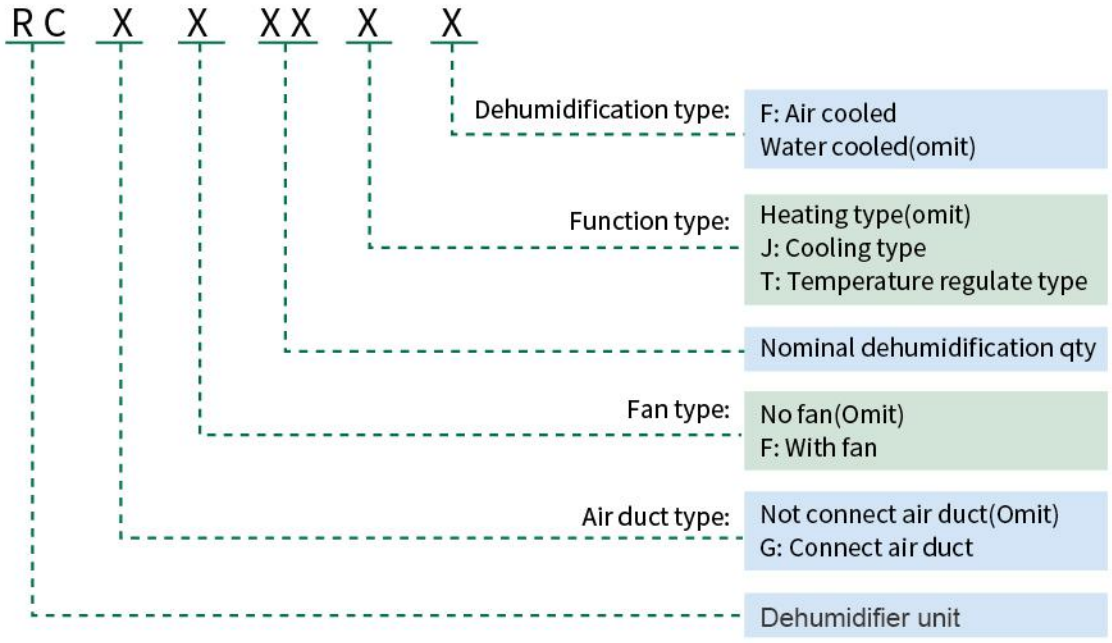
1.NAMING SCHEME



2. APPLICATION & CHARACTERISTIC

Dehumidifier adopts the principle of frozen dehumidification, and the moisture in the air is removed by refrigerating the air, and then heats the air to reducing the relative humidity of the air. Has a variety of types: heating type, cooling, temperature control. It is also possible to provide a dehumidifier such as low temperature, low wet type, new type, explosion-proof and anti-corrosion type.

This series dehumidifier has aesthetic, small size, low noise, automatic operation, etc., suitable for underground engineering, electronic, textile, food processing, computer room, library, granary, etc., to prevent instruments, instruments, computers, drugs We will blame the information, etc., due to the loss caused by the tide, rust, and mold.

Compressors and refrigeration accessories all use internationally renowned brands, reliable performance, stable operation, low noise, high efficiency, long life, and low failure rate.

Evaporator, condenser adopts copper tube-parallel fin heat exchangers, compact structure, high heat transfer efficiency.

The product has a running status display, temperature and humidity display, fault display. The unit has multiple safety protection functions, which can operate normally in different environments.

Multi-evaporator design, very good system matching problem when compressor changes. Human intelligent control, full range of functions.

3. BRIEF INTRODUCTION



3.1. Compressor

The unit consists of one or more compressors, which can meet the needs of different places.

The scroll compressor has few running parts, low noise, stable operation and long life. The compressor itself has good anti-liquid impact ability and is not easy to be damaged.



3.2. Heat exchanger

(1) Both the evaporator and condenser adopt anti-corrosive aluminum fin heat exchangers with copper tube jackets. (2) Copper pipe: high-efficiency internally threaded copper pipe.
(3) Aluminium fins: adopting double stamping and flanging technology and double corrugated sheet design, processed by mechanical tube expansion process, to ensure that the aluminum fins and copper tubes are tightly joined to obtain the best heat exchange effect.



3.3 Control device

Microcomputer control features:
(1) Ambient temperature: 15C to 65C, humidity: 5%~95%RH.
(2) The host computer and the control panel adopt a differential communication method with verification, and the passive acceptance and active inquiry methods are combined to make the host computer and the control panel maintain a high degree of consistency, so that the communication is stable and reliable.
(3) Through multi-level high and low frequency filtering, electromagnetic interference in complex electromagnetic environment can be effectively filtered.



3.4. Safety device

High and low pressure switch, filter drier, thermal expansion generation, overload protector, power protector.

● Note: The temperature of the air outlet of the heating type dehumidifier is higher than the temperature of the inlet air, so it is suitable for occasions where the temperature is not required.

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4. SPECIFICATION

RCF type dehumidifier unit-1

Unit model		RCF	5	10	15	20	25	30	40	50
Dehumidification qty		kg/h	5	10	15.6	20.8	25	31	41	49
Cooling capacity		kW	8.5	16.9	26.4	35.2	42.3	52.4	69.3	82.8
Input power		kW	2.2	3.9	6.3	9.0	10.6	12.5	17.3	20.7
Power			3N-380V-50Hz							
Refrigerant			R407C/R22							
Compressor type			Hermetic scroll							
Indoor unit	Air flow	m³/h	1500	3000	4000	6000	7000	9000	11000	13000
	ESP	Pa	50	50*/230	50*/230	50*/230	50*/230	50*/230	330	350
	Input power	kW	0.25*	0.4*/0.7	0.7*/1.5	0.8*/1.5	1.3*/2.2	1.3*/3	3	4
Unit dimension	L	mm	700	900	1300	1300	1700	1700	1900	1900
	W	mm	600	600	700	700	700	800	850	900
	H	mm	1900	1950*/1650	2150*/1850	2250*/1950	2250*/1950	2250*/1950	2250	2250
Unit weight		kg	110	190	280	370	440	630	720	870

Remarks:

1. Standard working condition: DB 27° C,WB 21.2° C
2. * means front air supply unit with louver

RCF type dehumidifier unit-2

Unit model		RCF	65	85	100	130	150	165	200
Dehumidification qty		kg/h	64	83.5	102	130	149	165	204
Cooling capacity		kW	108.2	141.1	172.4	221.0	256.3	283.8	344.8
Input power		kW	27.0	35.3	43.1	55.9	64.1	74.7	90.7
Power			3N-380V-50Hz						
Refrigerant			R407C/R22						
Compressor type			Hermetic scroll						
Indoor unit	Air flow	m^3/h	15000	19000	22000	26000	33000	3500	40000
	ESP	Pa	350	350	400	400	400	450	500
	Input power	kW	5.5	5.5	7.5	7.5	11	11	15
Unit dimension	L	mm	2000	2200	2200	2200	3400	3500	4000
	W	mm	1250	1500	1500	1700	1700	1700	1800
	H	mm	1900*	1900	2000	2000	2200	2200	2500
Unit weight		kg	1120	1350	1670	1880	2100	2360	2510

Remarks:

1. Standard working condition: DB 27° C,WB 21.2° C
2. * means front air supply unit with louver

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RCG type dehumidifier unit-1

Unit model		RCC	5	10	15	20	25	30	40	50
Dehumidification qty		kg/h	5	9.5	15.2	20	23.4	29.7	40	48
Air flow		m^3/h	1700	3000	4000	6000	7000	9000	12000	14000
Cooling capacity		kW	8.5	16.1	25.7	33.8	39.5	50.2	67.6	81.1
Input power		kW	2.2	3.3	5.2	6.9	8.1	10.2	13.8	16.6
Power			3N~380V 50Hz							
Refrigerant			R407C/R22							
Compressor type			Hermetic scroll							
Return air direction			Front							
Supply air direction			Back							
Unit dimension	L	mm	700	900	1300	1600	1600	1900	1900	2100
	W	mm	600	600	700	800	800	900	900	1000
	H	mm	1200	1400	1400	1700	1700	1900	1900	2000
Unit weight		kg	110	160	280	370	420	590	640	730

Remarks:

1. Standard working condition: DB 27° C,WB 21.2° C
2. * means front air supply unit with louver

RCG type dehumidifier unit-2

Unit model		RCC	60	75	90	100	120	135	150	200
Dehumidification qty		kg/h	60	75	90	100	120	135	150	200
Air flow		m^3/h	18000	22000	24000	26000	30000	32000	36000	48000
Cooling capacity		kW	101.4	126.8	152.1	169.0	202.8	228.2	253.5	338.0
Input power		kW	21.1	26.4	31.7	37.6	45.1	50.7	56.3	75.1
Power			3N-380V-50Hz							
Refrigerant			R407C/R22							
Compressor type			Hermetic scroll							
Return air direction			Front							
Supply air direction			Back							
Unit dimension	L	mm	2100	2300	2300	2700	2700	3500	4000	4000
	W	mm	1000	1000	1000	1300	1400	1400	1400	1400
	H	mm	2000	2100	2100	2200	2200	2400	2400	2400
Unit weight		kg	1080	1210	1380	1530	1760	1890	2010	2230

Remarks:

1. Standard working condition: DB 27° C,WB 21.2° C
2. * means front air supply unit with louver

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RCGF type dehumidifier unit

Unit model		RCGF	5	10	15	20	25	30	40	50
Dehumidification qty		kg/h	5	9.5	15.2	20	23.4	29.7	40	48
Input power		kW	2.59	4.28	7.79	9.38	11.28	15.58	18.86	22.22
Power			3N-380V-50HZ							
Refrigerant			R407C/R22							
Compressor type			Hermetic scroll							
Input power		kW	2.34	4	7.15	8.32	10	2×7.15	2×8.32	2×10
Fan	Air flow	m³/h	1200	1800	2800	2×2000	2×2200	2×2800	2×4000	2×4500
	ESP	Pa	30	30	100	100	100	100	120	120
	nput power	kW	0.25	0.28	0.64	2×0.54	2×0.64	2×0.64	2×1.1	2×1.1
Unit dimension	L	mm	980	980	1390	1390	1390	1890	1890	1890
	W	mm	670	670	670	670	670	850	850	850
	H	mm	1965	1965	1965	1965	1965	1965	1965	1965
Unit weight		kg	110	160	280	320	400	500	700	840

Remarks:

1. Standard working condition: DB 27° C,WB 21.2° C
2. * means front air supply unit with louver

RCFJF/RCFTF type dehumidifier unit-1

Unit model		RCFJ RCFT	5	10	15	20	25	30	40	50
Dehumidification qty		kg/h	5	10	15.5	21	25	31	41	49
Cooling capacity		kW	8.5	16.9	25.6	34.7	41.3	51.2	67.7	80.9
Input power		kW	2.1	3.9	6.1	8.5	10.3	12.2	16.9	20.2
Power			3N-380V-50Hz							
Refrigerant			R407C/R22							
Compressor type			Hermetic scroll							
Indoor unit	Air flow	m^3/h	1500	2500	4000	6000	7000	8500	10000	13000
	ESP	Pa	50	50*/230	50*/230	50*/230	50*/230	50*/230	330	350
	Input power	kW	0.25*	0.4*/0.7	0.7*/1.5	0.8*/1.5	1.3*/2.2	1.3*/3	3	4
Unit dimension	L	mm	700	900	1300	1300	1700	1700	1900	1900
	W	mm	600	600	700	700	700	700	850	950
	H	mm	1900*	1950*/1650	2150*/1850	2250*/1950	2250*/1950	2250*/1950	2250	2250
Unit weight		kg	110	190	280	370	440	630	720	870
Outdoor unit		SW	10	15	25	35	45	30	35	45
Quantity		台	1	1	1	1	1	2	2	2

Remarks:

1. Standard working condition: DB 27° C,WB 21.2° C
2. * means front air supply unit with louver

RCFJF/RCFTF type dehumidifier unit-2

Unit model		RCFJ RCFT	80	105	130	150	165	200
Dehumidification qty		kg/h	82	102	129	150	165	200
Cooling capacity		kW	131.2	158.1	201.2	240.0	264.0	320.0
Input power		kW	33.6	41.1	51.6	63.2	71.4	86.5
Power			3N-380V-50Hz					
Refrigerant			R407C/R22					
Compressor type			Hermetic scroll					
Indoor unit	Air flow	m^3/h	19000	22000	26000	33000	38000	45000
	ESP	Pa	350	400	400	500	500	600
	nput power	kW	4	5.5	7.5	9	11	15
Unit dimension	L	mm	2200	2200	2400	3000	3400	4000
	W	mm	1500	1500	1700	1700	1700	1700
	H	mm	1900	1900	2200	2200	2200	2500
Outdoor unit		SW	60	60	45	60	45	60
Quantity		台	2	3	4	4	4	5
Unit weight		kg	1070	1310	1630	1870	2010	2340

Remarks:

1. Standard working condition: DB 27° C,WB 21.2° C
2. * means front air supply unit with louver

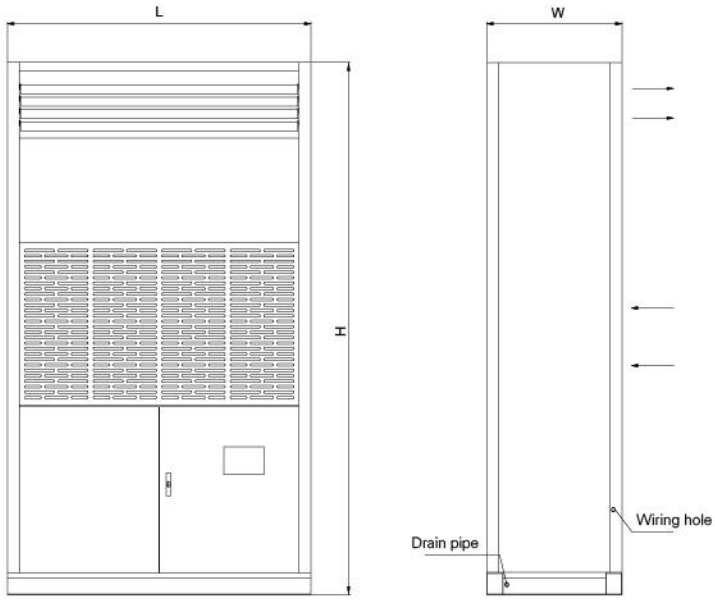
Outdoor unit specification

Items \ Model / Data			RCW–10N	RCW–15N	RCW–25N	RCW–35N	RCW–45N	RCW–60N
Motor power	kW		0.35	0.35	0.55	0.75	0.55 × 2	0.75 × 2
Quantity			1	1	1	1	2	2
Air flow	m³/h		9000	10500	12000	18000	24000	36000
Noise	db(A)		65	67	70	72	74	75
Heat exchanger			Copper pipe with aluminium fins					
Power			3N~380V~50Hz					
Connection pipes	Gas pipe	φ × δ (mm)	15.88 × 1	15.88 × 1	19.05 × 1.5	22.22 × 1.5	22.22 × 1.5	22.22 × 1.5
	Qty		1	1	1	1	1	1
	Liquid	φ × δ (mm)	9.52 × 1	12.7 × 1	15.88 × 1.5	19.05 × 1.5	19.05 × 1.5	19.05 × 1.5
	Qty		1	1	1	1	2	2
	Connection type		Threaded			Welded		
Unit dimension	L	mm	850	850	1000	1000	1800	1800
	W	mm	800	800	950	950	950	950
	H	mm	900	900	1220	1220	1220	1220
Unit weight		kg	150	180	210	280	310	320

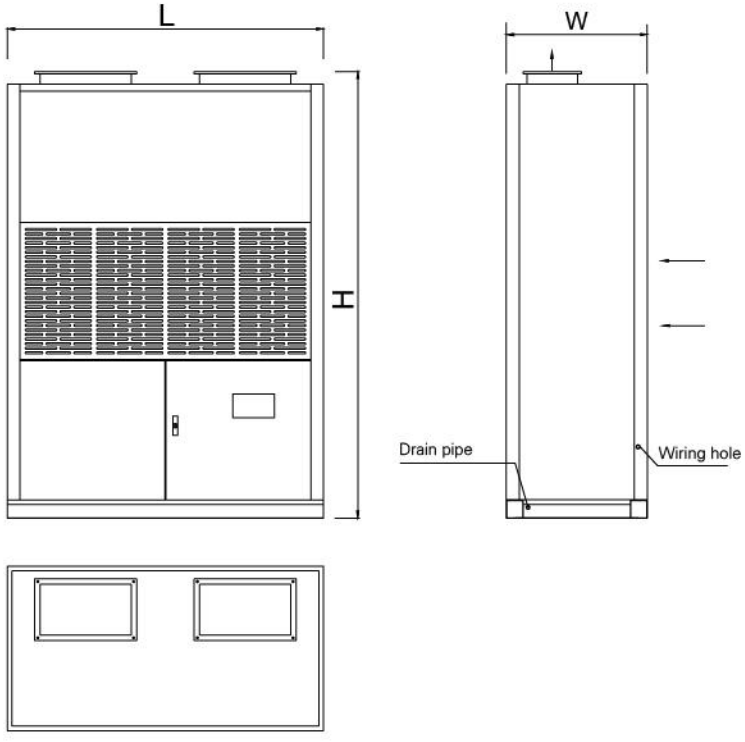
We reserve the right to modify the design,all data are subject to change without notice.

5.DIAGRAM

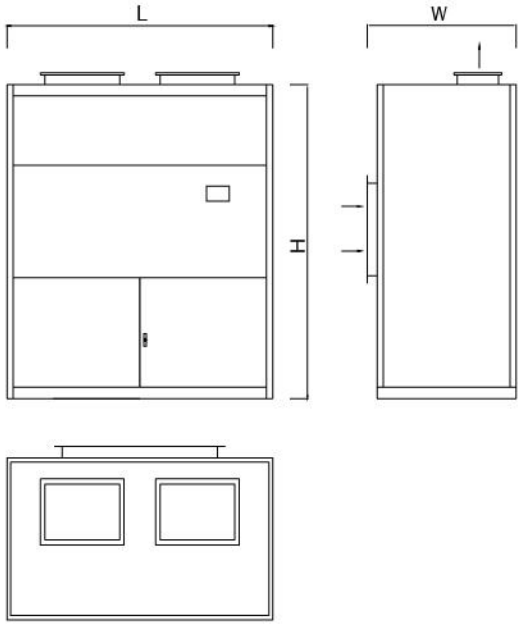
Front air supply type unit



Top air supply front air return type unit



Top air supply back air return type unit



6.INSTALLATION

● 6.1. The unit should be installed in a place with air circulation, and the distance from the surroundings is not less than 600cm. At the same time, avoid direct sunlight or close to other heat sources.

● 6.2. The unit should be placed on a firm and flat foundation to avoid vibration and noise.

● 6.3. The unit must have a dedicated power supply and the power supply voltage should be consistent with the requirements of the unit.

● 6.4. The humidity sensor of the unit is a precision component and should be kept away from corrosive gas and dust.
6.5. When moving or transporting the unit, the tilt angle of the machine must not exceed 45 degrees.

● 6.6. Conventional dehumidifiers do not have explosion-proof functions, so they are not allowed to be used in environments with flammable and explosive gases, dust, and chemicals.

● 6.7. Connect the drain pipe reliably to avoid leakage of condensed water.

7. MAINTENANCE

● 7.1. The filter screen should be cleaned regularly during the use of the dehumidifier.

● 7.2. Use a soft brush to remove the dust on the sensor to prevent the sensor from failing to display and control humidity.

● 7.3. When the dehumidifier is not used for a long time, the power supply should be disconnected.

● 7.4. Do not use volatile oil, thinner, detergent and other solvents to clean the shell of the unit to avoid damage to the machine.

TESTING CENTER



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

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

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

MAIN PROJECTS



High school building in Brazil



Presidential palace of Kazakhstan



Shanxi Dingxiang County People 's Court



Shanxi Yuncheng odd Star Technology Co., Ltd



Beijing Grand Oriental Hotel



Shanxi Linfen High Speed Rail Station



Beijing Sihui building materials city



Shanxi Tongmei Group Zhangze Power Puzhou Power Generation Branch

RUIDONG

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