RUIDONG

ROOFTOP PACKAGED UNIT

RUIDONG GROUP

www.ruidonggroup.com

RUIDONG

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.

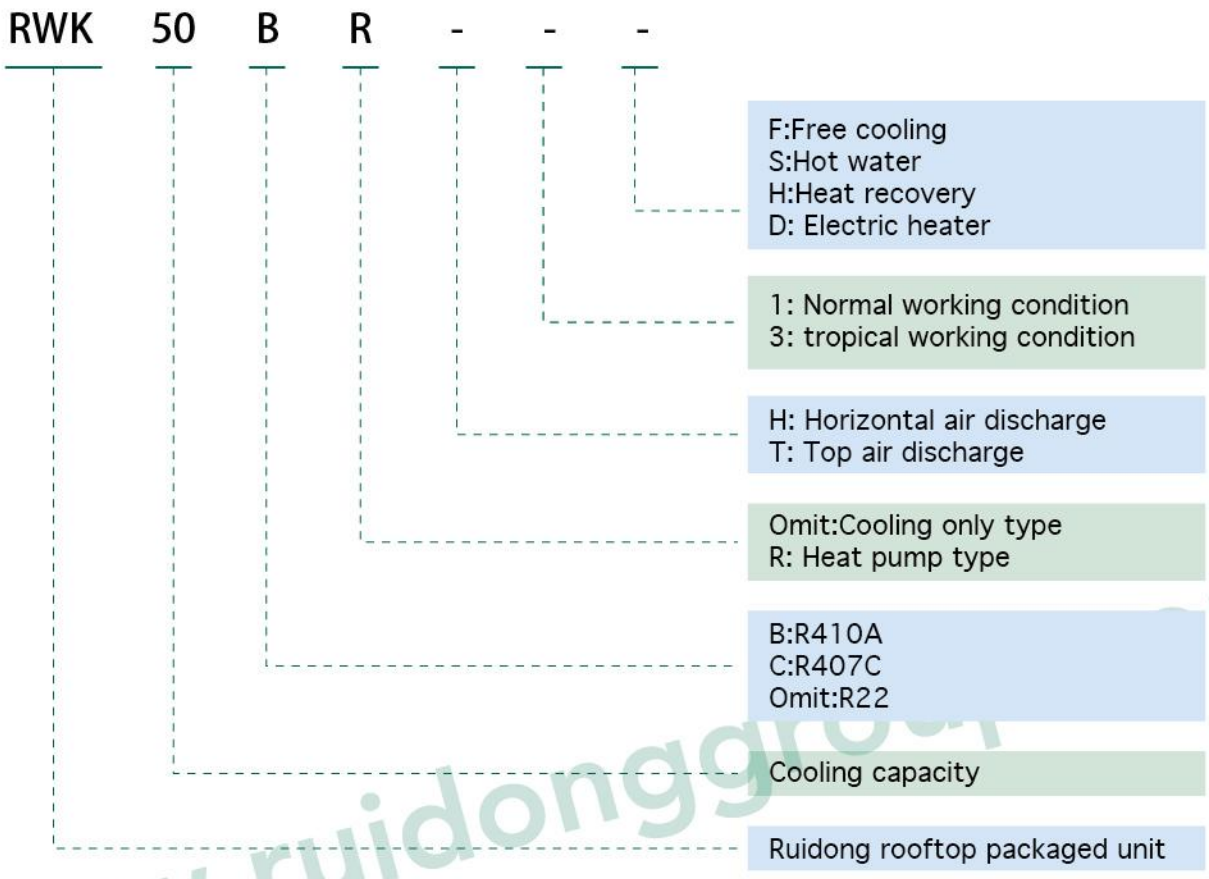
Ruidong Air Conditioning wishes you: Cooling air for propitious summer, spring returns with warm air from Ruidong.

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.

CONTENTS

1. NAMING SCHEME



2. BRIEF INTRODUCTIO

Rooftop packaged unit is a kind of integral air-conditioning equipment with its own cold (heat) source and air cooling. Its refrigeration, heating, humidification, air supply, air purification, electrical control, etc. are all assembled in one structure. Rooftop packaged unit can be divided into various types according to different functions: cooling only type, heat pump type, electric heating type, constant temperature and humidity type, and purifying type.

The heating methods include: heat pump heating, electric heating, steam heating, hot water heating, gas heating, etc.;

Th humidification methods include: electrode humidification, dry steam humidification, electric heating humidification, high-pressure micro mist humidification, wet film humidification, etc.

The unit can add flow-sharing section, medium-efficiency filter section, muffler section, air outlet section, etc. as required.

Rooftop packaged unit composed of the condenser and the refrigerant expansion direct evaporator, does not need cooling water and cooling water system, saves the cooling tower, water pump and corresponding pipelines, and some electronic control devices. It is widely used for inconvenient installation of water circuits. It is widely used to adjust the temperature, humidity, cleanliness and other parameters of large and medium-sized workshops and workshops in inconvenient water system installation and water resource shortage areas.
The direct expansion air-conditioning unit itself has its own compressor. Because the liquid refrigerant in its refrigeration system is directly evaporated (expanded) in the evaporator coil to absorb heat and cool the air outside the coil, it becomes a direct expansion type.

As the rooftop packaged unit is directly installed on the top of the building, the structure and surface treatment of the unit take into account corrosion, sun protection, and rain protection. The unit can be installed on the roof or on an outdoor platform.

Because the unit adopts air cooling, no cooling water system is required, so it is easier to install than water chillers, and is especially suitable for areas with scarce water sources. Due to the overall structure, the length of the refrigeration system pipeline is greatly shortened, thereby greatly improving the reliability of the system. Because the whole machine is installed outside the house, it does not occupy valuable indoor space, and there is no noise during indoor operation.

Main Features

1. Various products and wide application
The series of Rooftop units include many different specifications which can completely meet the demand of home and commercial places and offer you a comfortable and pleasant environment.

2. Complete air system, simple and hygiene, less components, easy maintenance. The flexible and concise design makes the maintenance very simple. Disassembling several bolts from any side of the unit can repair any part of the unit.

3. Microcomputer intelligent controller can reach four control modes: cooling, dehumidifying, and ventilation. It also has the functions of timing on-off and failure display.

LCD controller

4.Optional single-skin unit panel and double-skin unit panel

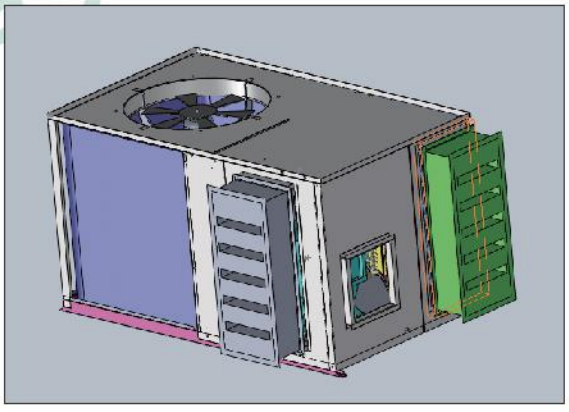
Optional installation accessories

- **Air valve**
- **Air duct**
- **Air grill**

Optional free cooling

Free cooling logic:

1. When it's heating, the fresh air damper is closed, and return air damper is 100% open;



2. When it's cooling:

a. When indoor room temperature (temperature set) – outdoor temperature ≥ 4°Cfresh air damper is 100% open, and return air damper is 100% closed, only the evaporator fan is running to blow air into room;

b. When 0°C≤ indoor room temperature (temperature set) – outdoor temperature< 4°C both fresh air damper and return air damper are closed, and the unit is not running;

c. When indoor room temperature (temperature set) – outdoor temperature <0°Cthe return air damper is 100% open, and fresh air damper is 100% closed, then the compressor,condensing fan and evaporator fan will work normally to blow cool air into room.

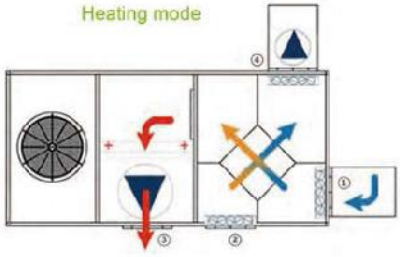
Optional heat recovery

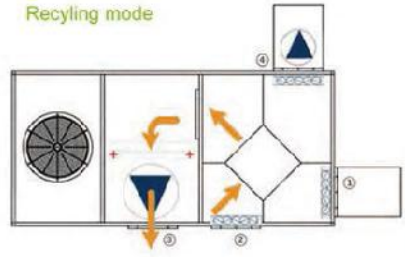
Improvement of indoor air quality is one of the major missions of air conditioner equipment. To introduce the ambient fresh air into the building is an ecological and effective solution which is mandatory to control indoor CO2 level and comfort. Air to air HR system offers a parfait energy recovery solution by absorbing heat from the exhaust air in order to pre-treat the fresh air to achieve at the same time:

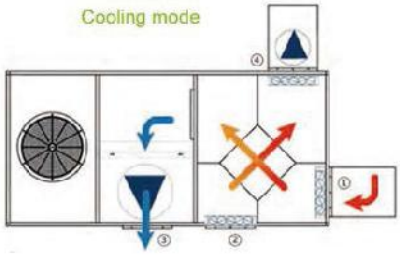
- A high performance of the improvement of indoor air quality and comfort.
- A economical operation for remarkable energy saving.

Two types of HR equipment are available according to the project requirement: Plate heat exchanger or Wheel heat exchanger. Although the use of the HR system maybe increase some of energy consumption of fans, but the benefit of energy saving will be certainty greater than that. The test data prove that the performance of heat recovery can be up to 70% for recovery efficiency and 100% for volume of exhaust air.
The HR system is now widely applied in residential, commercial, industrial applications. Practically, applications which demand the higher quality air and fresh air rate are strongly recommended.

Plate heat recovery

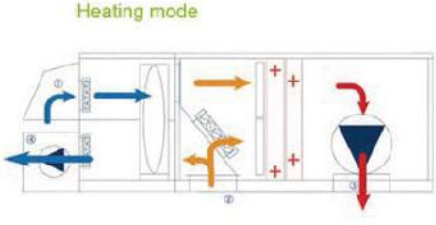


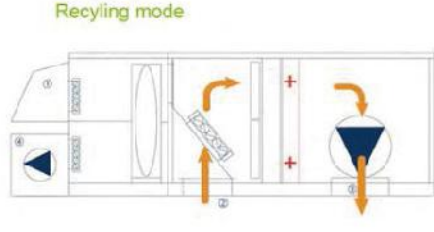


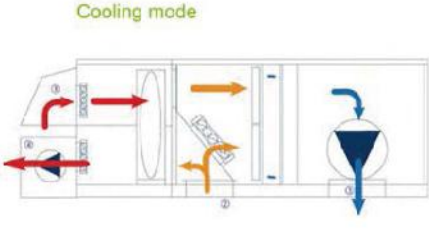


1. Fresh air
2. Return air
3. Supply air
4. Exhaust air

Wheel heat recovery







1. Fresh air
2. Return air
3. Supply air
4. Exhaust air

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3. SPECIFICATION

Model			RWK18(B)R	RWK28(B)R	RWK35(B)R	RWK50(B)R	RWK70(B)R	RWK90(B)R	RWK105(B)R
Capacity	Cooling	kW	18	27.5	35.6	50	70	90	105
		TR	5	8	10	14	20	26	30
	Heating	kW	18.2	28.3	38	54	75	96	110
		TR	5	8	11	15	21	27	31
Max starting current		A	35	50	76	168	181	196	211
Running current on cooling		A	12	17	26	36	58	64	70
Running current on heating		A	12	17	24	34	55	59	65
Power input	Cooling	kW	6.23	9.45	12	20	27	32	33
	Heating	kW	6.25	9.45	11	18	25	29	30
Compressor	Brand		Panasonic						
	Quantity		1	1	1	2	2	2	2
	Refrigerant		R410a						
	Refrigerant charge	kG	4.5	6.5	7.5	11	15	20	32
Condenser	Coil		Copper pipe with hydrophilic coated 0,11 mm aluminium fins (12 fins/inch)						
	Copper pipe type		Internal thread						
	Fan type		Axial						
	Fan qty		1						
	Fan drive		Direct						
	Motor qty		1	1	1	1	2	2	2
	Fan rotating speed	RPM	710	710	930	930	930	930	930
	Motor input power	kW	0.37	0.55	1.1	1.5	1.5	1.5	3
Evaporator	Coil		Copper pipe with hydrophilic coated 0,11 mm aluminium fins (12 fins/inch)						
	Copper pipe type		Internal thread						
	Fan type		Centrifugal						
	Evaporator fan drive		Direct drive					Belt drive	
	Fan rotating speed	RPM	960	1400	1400	960	960	960	716
	Motor input power	kW	0.8	1.1	2.2	2.2	5.5	5.5	5.5
	Air flow rate	m³/h	3,400	5,200	6,000	8,000	12,500	16,000	19,000
		cfm	2,000	3,050	3,500	4,700	7,350	9,412	11,200
	External static pressure	Pa	100	150	250	250	300	300	300
		inch H2o	0.4	0.6	1.0	1.0	1.2	1.2	1.2
Evaporator section panel			Single skin: painted galavanized steel plate with inner thermal insulation cotton					Double skin:0.5mm inner/outer galavanized steel panel+30mm insulation +1.5mm top rain cover	
Galvanized thickness		μm	80	80	80	80	80	80	80
Paint thickness		μm	60	60	60	60	60	60	60
Filter material			Aluminium						
Noise		db(A)	70	72	72	72	74	74	75
System pressure control			High/low pressure switch						
Dimension	L	mm	1661	2010	2010	2010	2800	2960	2960
	W	mm	1020	1158	1158	1158	2150	2250	2250
	H	mm	1028	1155	1155	1155	1230	2005	2005
Weight		kg	280	320	580	650	800	1390	1450

· **Continuous improvement of technology is our aim, Ruidong keep the rights to change the parameter without prior notice**

1.Cooling conditioning: Indoor temperature DB: 27℃,WB:19℃;outdoor temperature DB:35℃,WB:24℃.

2.Heating conditioning: Indoor temperature DB: 20℃, WB: 15℃; outdoor temperature DB: 7℃,WB: 6℃.

Model			RWK120(B)R	RWK140(B)R	RWK180(B)R	RWK210(B)R	RWK280(B)R	RWK320(B)R	RWK360(B)R
Capacity	Cooling	kW	121	140	180	210	280	320	360
		TR	34	40	51	60	81	90	100
	Heating	kW	126	146	188	220	288	340	368
		TR	36	42	53	63	82	97	105
Max starting current		A	112	232	252	266	301	445	550
Running current on cooling		A	93	82	110	138	160	234	320
Running current on heating		A	80	76	102	130	152	218	310
Power input	Cooling	kW	45	40	56	70	83	105	120
	Heating	kW	38	37	52	65	77	100	118
Compressor	Brand		Panasonic				Copeland		
	Quantity		2	4	4	4	4	4	6
	Refrigerant		R410a						
	Refrigerant charge	kG	48	48	48	48	48	56	88
Condenser	Coil		Copper pipe with hydrophilic coated 0,11 mm aluminium fins (12 fins/inch)						
	Copper pipe type		Internal thread						
	Fan type		Axial						
	Fan qty		1						2
	Fan drive		Direct						
	Motor qty		2	4	4	4	4	4	6
	Fan rotating speed	RPM	930	930	710	930	930	960	960
	Motor input power	kW	4.4	4.4	4.4	6	8.8	8.8	13.2
Evaporator	Coil		Copper pipe with hydrophilic coated 0,11 mm aluminium fins (12 fins/inch)						
	Copper pipe type		Internal thread						
	Fan type		Centrifugal						
	Evaporator fan drive		Belt drive						
	Fan rotating speed	RPM	634	757	676	593	548	548	548
	Motor input power	kW	5.5	5.5	11	15	15	18.5	20
	Air flow rate	m³/h	22,000	24,000	30,000	36,000	36,000	46000	60000
		cfm	12,941	14,700	17,647	21,176	21,176	27,059	35,294
	External static pressure	Pa	400	400	400	500	500	500	500
		inch H2o	1.6	1.6	1.6	2.0	2.0	2.0	2.0
Evaporator section panel			Double skin:0.5mm inner/outer galavanized steel panel+30mm insulation +1.5mm top rain cover						
Galvanized thickness		μm	80	80	80	80	80	80	80
Paint thickness		μm	60	60	60	60	60	60	60
Filter material			Aluminium						
Noise		db(A)	75	79	79	80	80	85	85
System pressure control			High/low pressure switch						
Dimension	L	mm	2960	5130	5130	5130	5130	5525	7558
	W	mm	2250	2280	2280	2280	2280	2310	2310
	H	mm	2005	2062	2062	2062	2062	2125	2484
Weight		kg	2700	2700	2800	2850	2900	3150	5500

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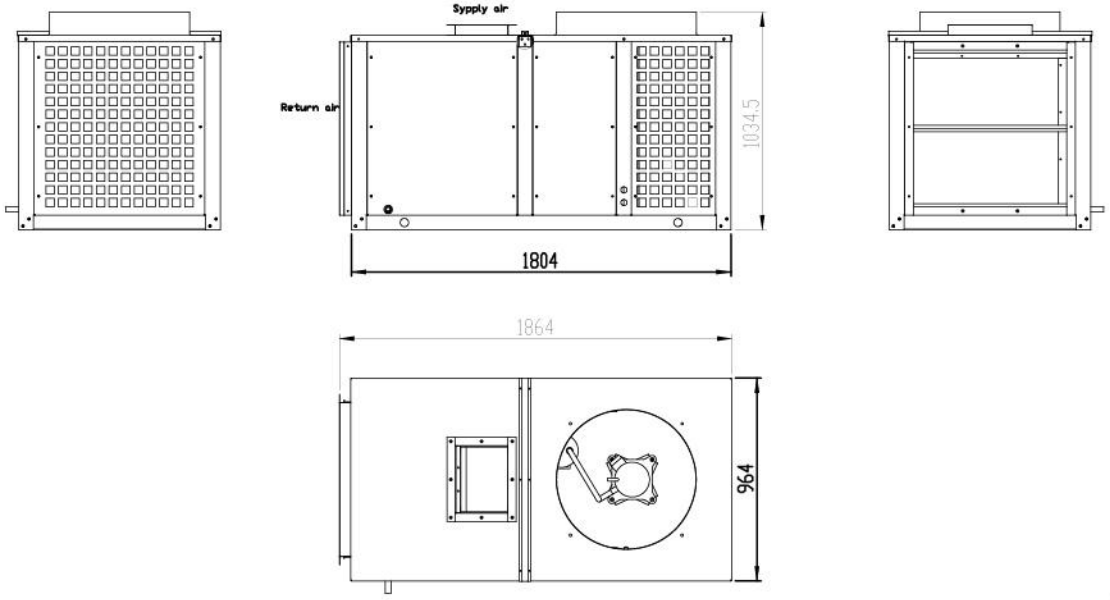
1.Cooling conditioning: Indoor temperature DB: 27℃,WB:19℃;outdoor temperature DB:35℃,WB:24℃.

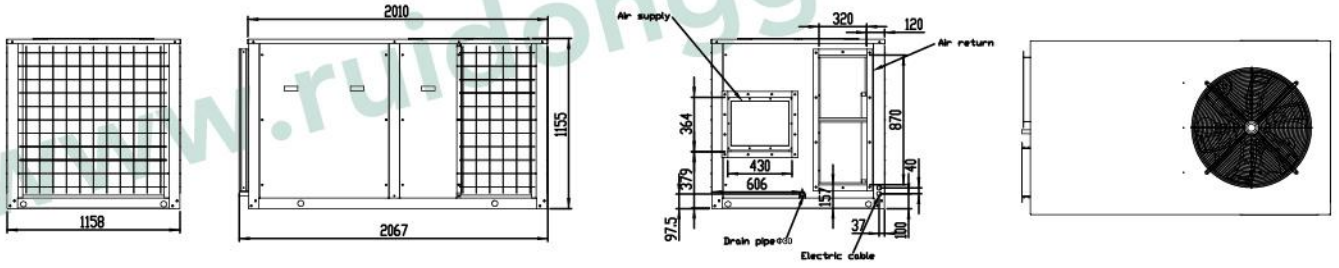
2.Heating conditioning: Indoor temperature DB: 20℃, WB: 15℃; outdoor temperature DB: 7℃,WB: 6℃.

4.STRUCTURE DIAGRAM

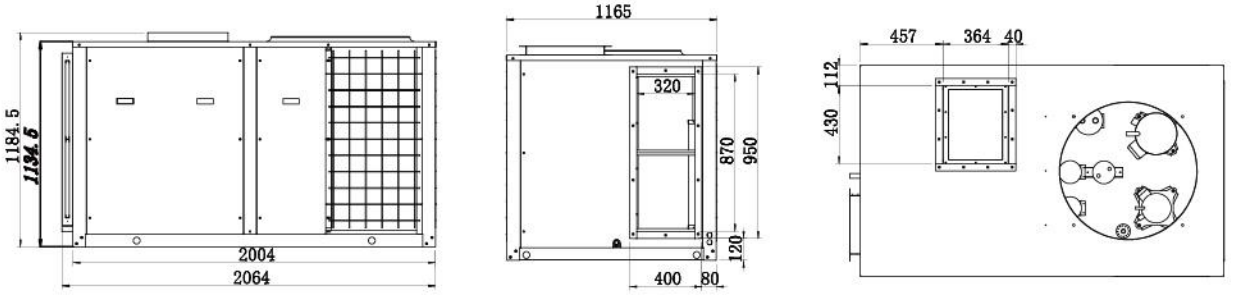
RWK18(B)R (Top air supply)



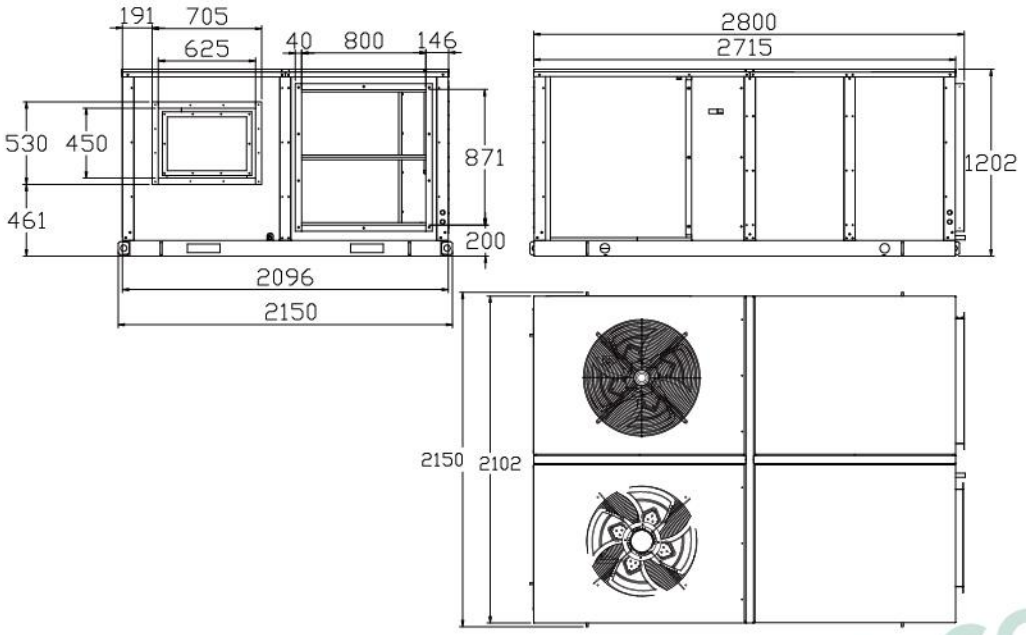
RWK28(B)R/ RWK35(B)R/ RWK50(B)R (Horizontal air supply)



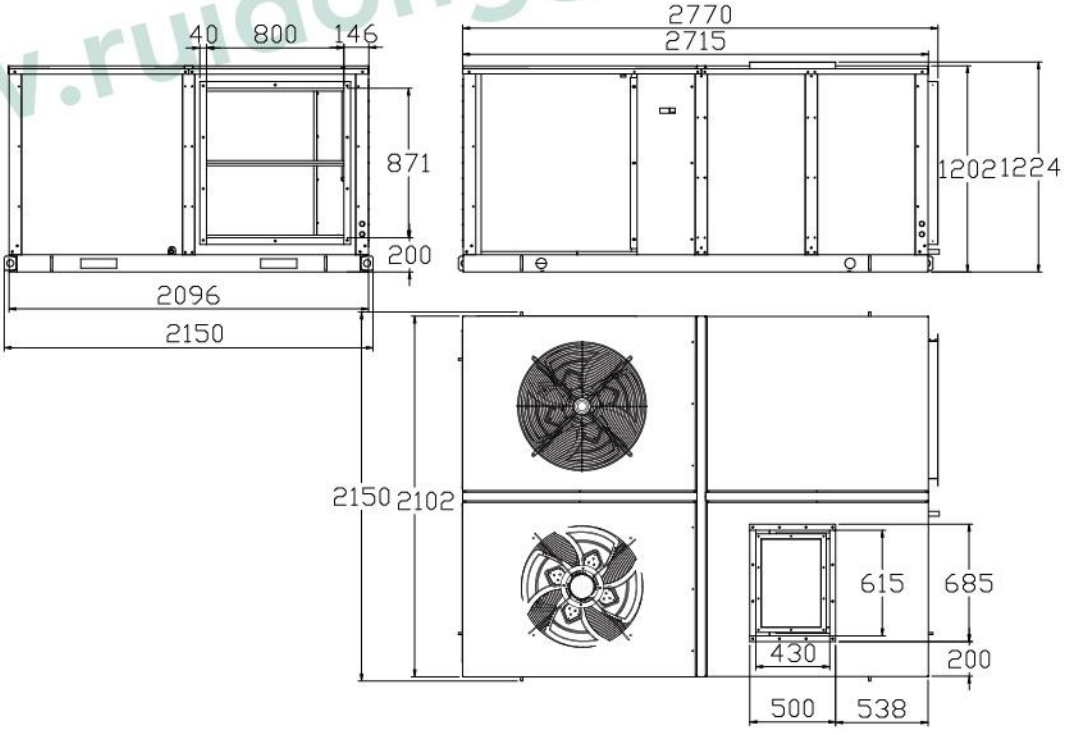
RWK28(B)R/ RWK35(B)R/ RWK50(B)R (Top air supply)



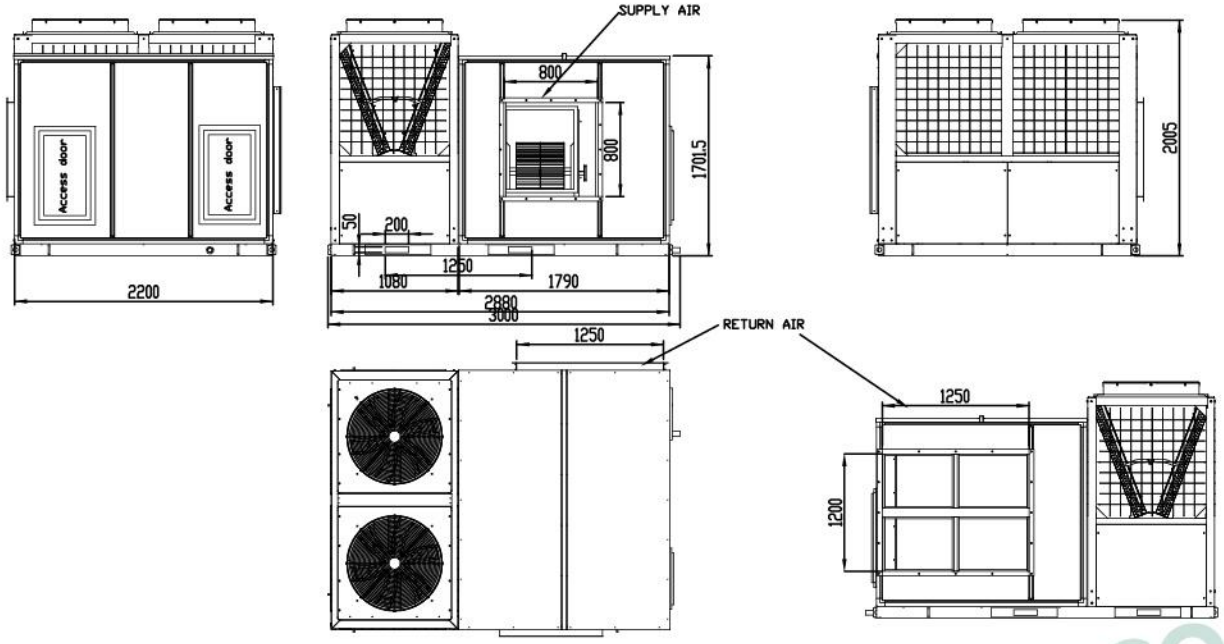
RWK70(B)R (Horizontal air supply)



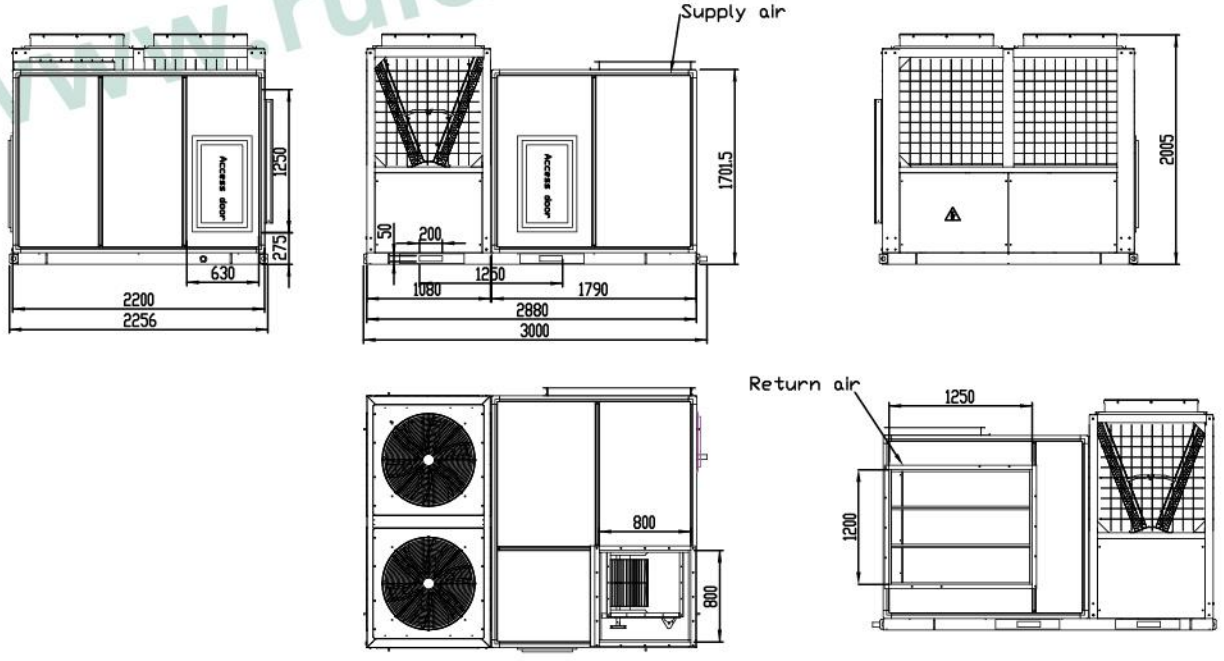
RWK70(B)R (Vertical air supply)



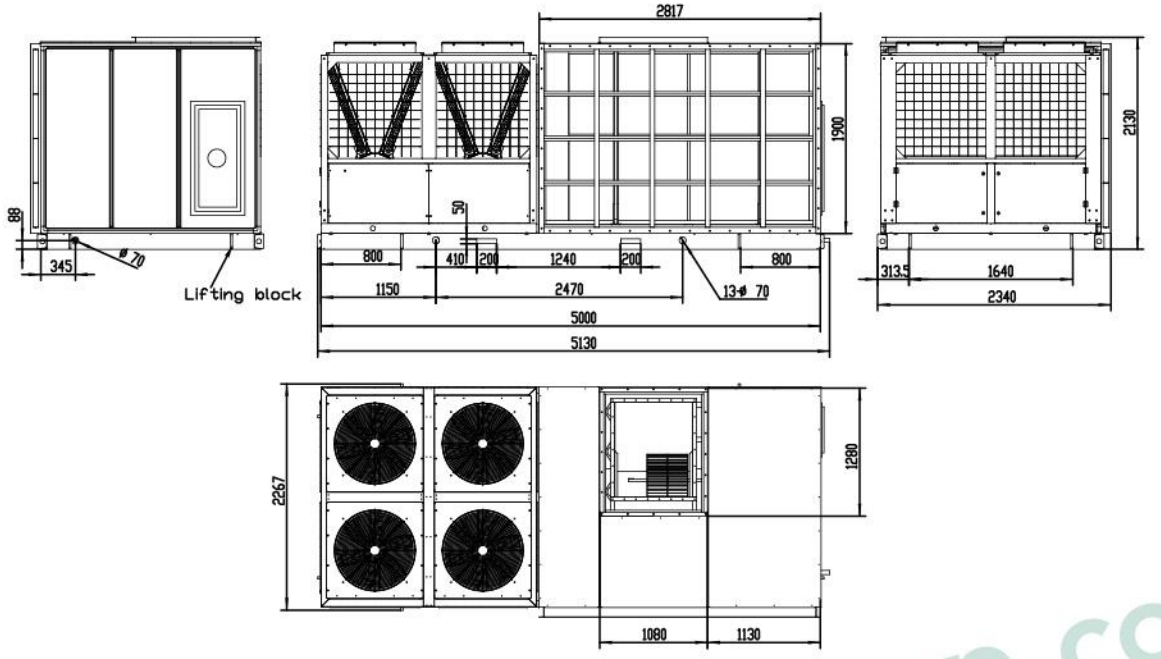
RWK90(B)R/ RWK105(B)R/ RWK120(B)R (Horizontal air supply)



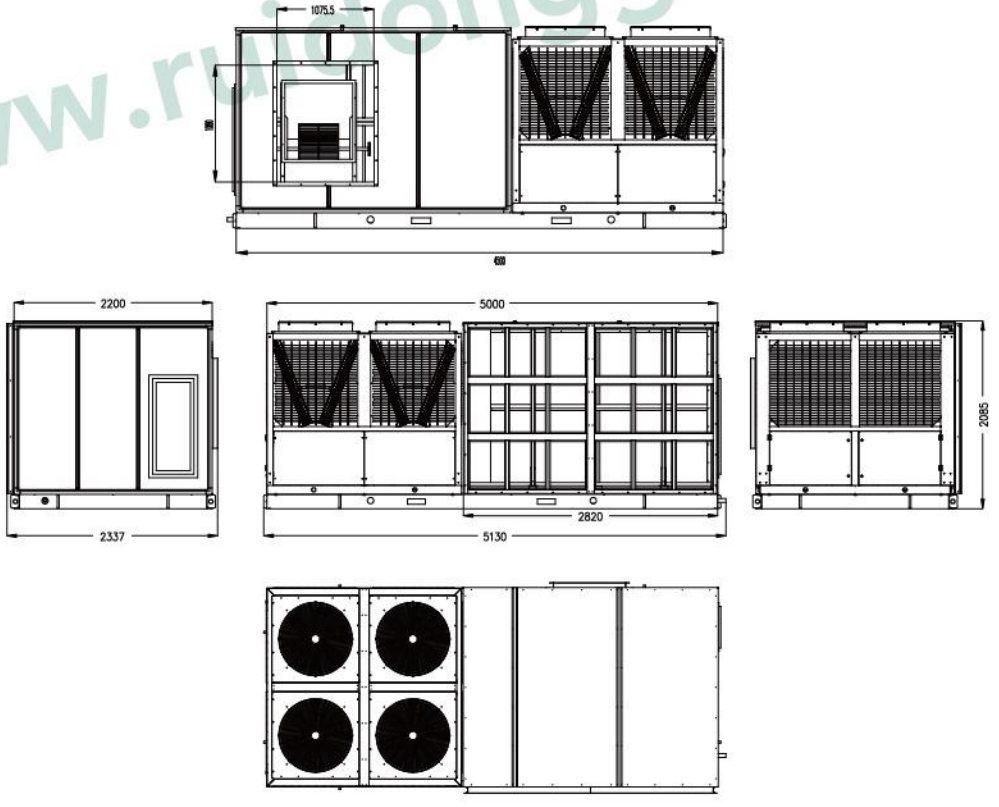
RWK90(B)R/ RWK105(B)R/ RWK120(B)R (Top air supply)



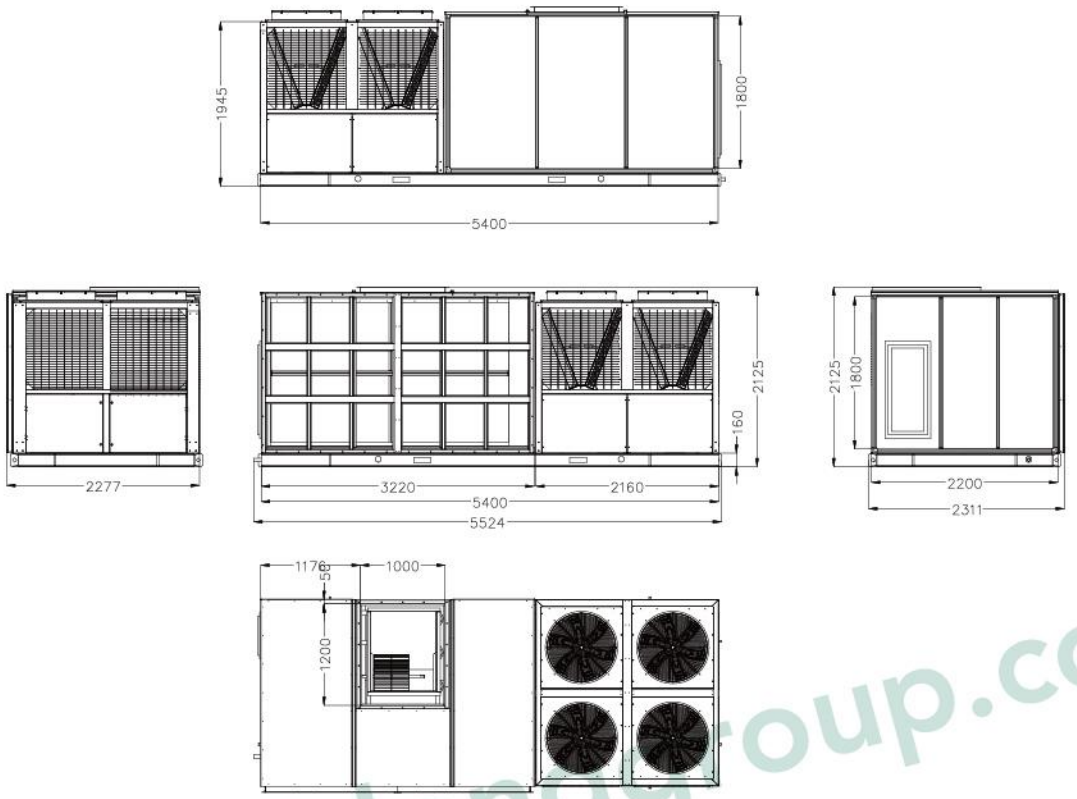
RWK140(B)R/ RWK180(B)R/ RWK210(B)R/ RWK280(B)R (Top air supply)



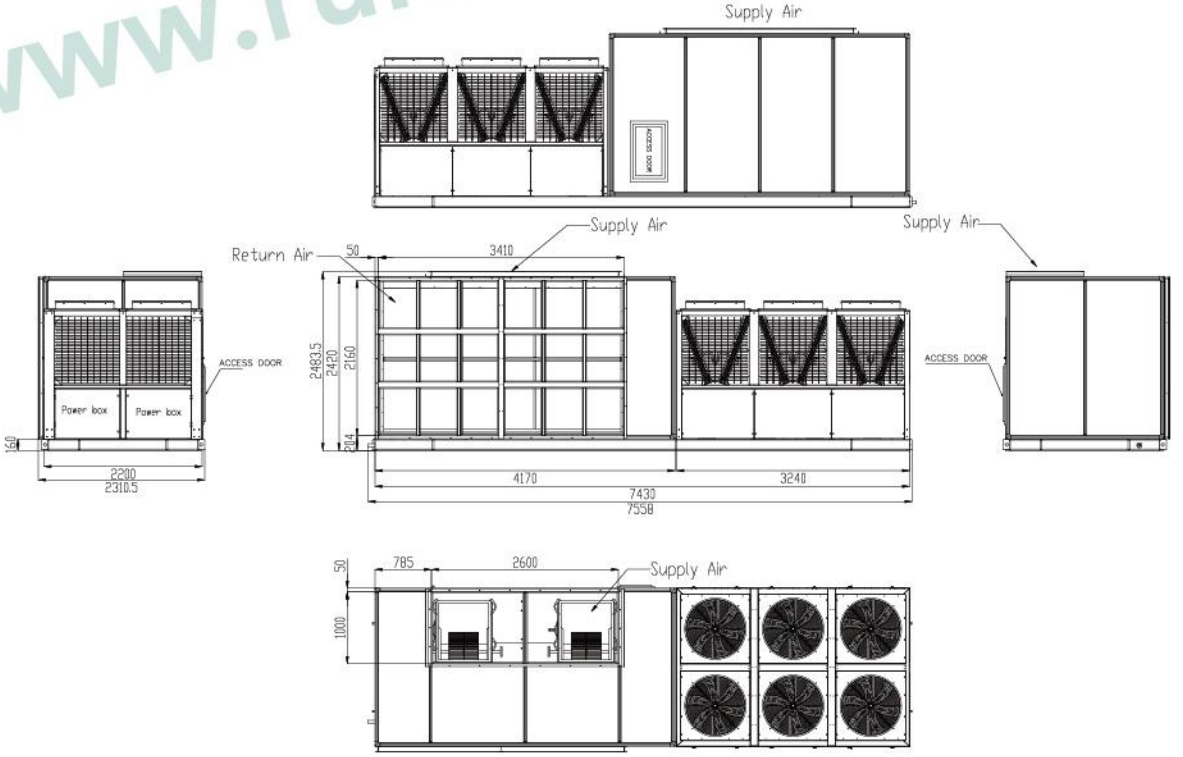
RWK140(B)R/ RWK180(B)R/ RWK210(B)R/ RWK280(B)R (Horizontal air supply)



RWK320(B)R (Top air supply)

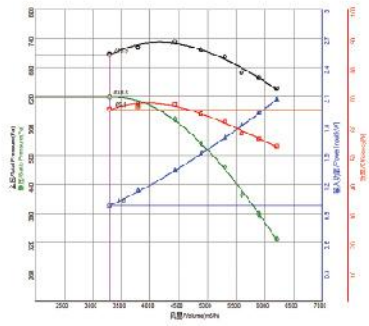


RWK360(B)R (Top air supply)

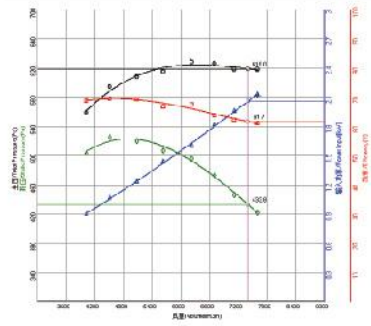


5. EVAPORATOR FAN PARAMETERS

RWK35



RWK50



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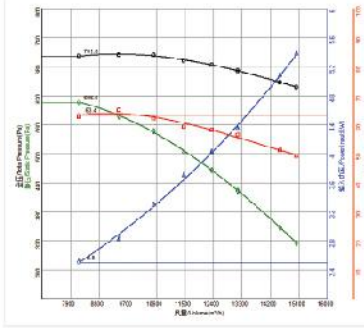

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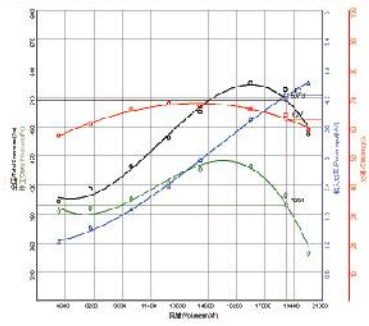

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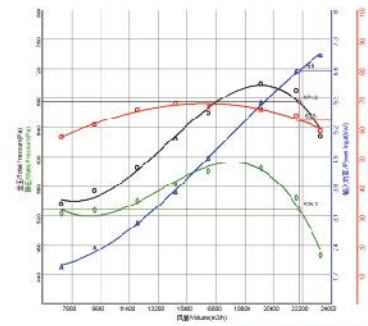

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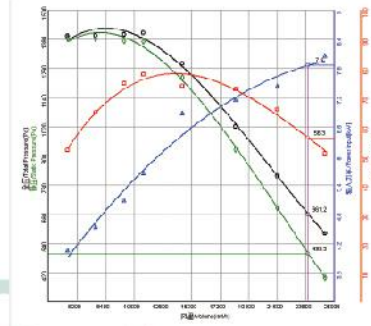

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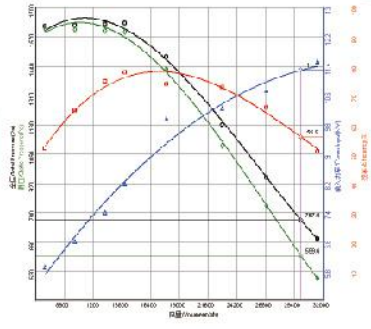
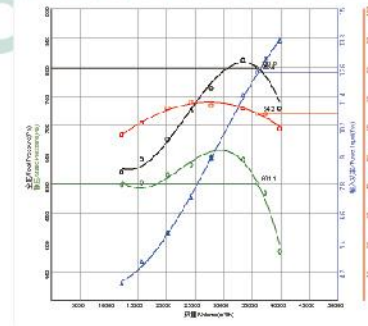
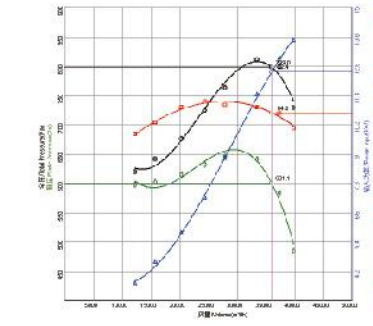


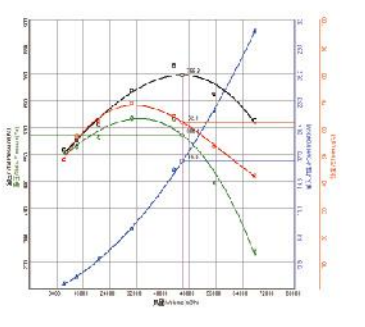
RWK210



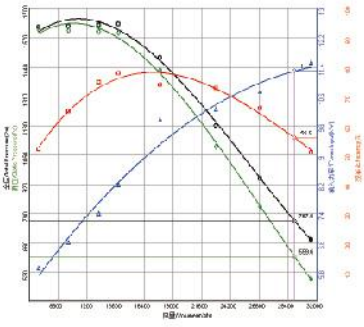
RWK280



RWK320



RWK360



6. INSTALLATION&MAINTENANCE

Unit installation

1) The installation location should make the hot air through condenser not be absorbed back to the unit or absorb hot air which comes from another unit. Besides, enough space should be kept for unit maintenance.

2) Barrier should not exsit to block the air discharge and air suction in the passage of air discharge and air suction of the units.

3) There should be good ventilation at the location of unit installation so as to take away the heat air blown from the unit and bring in the air at a lower temperature.

4) The unit should be installed on a base which is firm and flat, 50~100mm higher than the plane. Enough strength should be kept to support the weight of the unit and the vibration when running.

5) The unit should be installed horizontally to decrease the vibration, lower the noise and make the condensing water discharge smooth. The condensing water discharge vent of the unit must have water seal whose height should be more than 50mm.

6) Keep the installation away from the dirty or oily place so as not to block the heat exchanger.

Duct installation

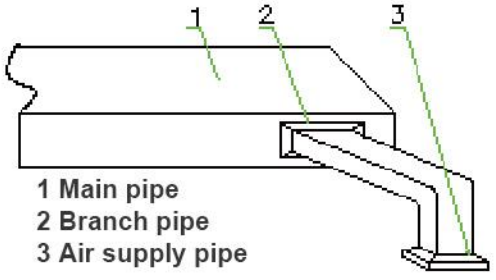
1) Usually two air supply ducts: Rectangle air duct and circular one.

2) Rectangle air duct can connect the air supply inlet of the indoor unit by flexible connection.

3) For circular duct, add a transition duct to the air inlet of indoor unit, and be connected separately to air diffuser, (referring to the drawing),the air inlet velocity of air diffuser should be the same to meet the requirement.

4) Suggest using silencer box in the air supply duct of the heavy airflow unit for lower noise.

5) If adopting fresh air, the fresh air entrance is better to choose the place where the air is clean and there is no pollution. As for the outdoor air entrance, rain-proof shutter and filter should be installed and at the fresh air section, air flow adjuster should be installed. It is suitable when the fresh air quantity makes up 10% of the total air quantity.



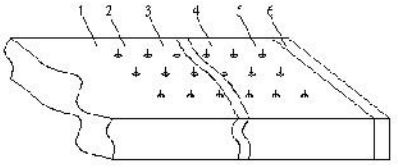
1 Main pipe
2 Branch pipe
3 Air supply pipe

Duct heat preservation

Air supply and air return pipes should both have heat preservation. First of all, stick the nail on the air duct and then attach the cotton preservation with tin foil paper. Fasten it with nails and seal the connection with tin foil adhesive tape.

Remarks:

1. Every air supply pipe and return air pipe should have iron bracket fastened on the floor prefabricated board. The air duct connector should be sealed tight by adhesive tape.
2.It is recommended that the air return margin should keep the wall 150mm far.



1 Galvanized plate
2 nail
3 Cotton preservation
4 Tin foil
5 Nail cover
6 Adhesive tape

Electrical installation

Notice:

1) The power supply capacity must meet the a/c requirement. The voltage at the side of the power supply incoming line inside the a/c unit should remain within +10% rating and the power supply frequency is within 2%.

2) Cut the power supply at electric wire connection. Forbidden to operate with electricity.

3) To protect the staff and avoid the danger of electric shock caused by leakage, the unit body should have good and reliable grounding protection setting to prevent the electric shock accident. It also needs check the grounding line very often to guarantee a good grounding(grounding resistance should not exceed 4 ohm)

4) The layout of power supply routing must conform to the national standard and the unit body must have good grounding to avoid the danger caused by insulation failure. The indoor suspending routing adopts electric specialized PVC conduit tube and PVC connection wire box with cover (not use recycling material connection wire box) Wiring conduit should flat and erect and be fixed. Threading pipe should not use right angle elbow plumbing, but use proper siphon spring bend. The radius of the syphon should be more than four times as long as the diameter of the conduit. Drape should not occur after bending the threading pipe. Lay the connection box properly so as to easy maintenance and wire changeover.

5) The communication wire (Temp. Probe connection wire) and the power supply source should be laid separately to prevent interruption.

Maintenance

1) The on-off of the unit per hour should not exceed four times, otherwise the service life of the unit will decrease.

2) The surroundings of the units should keep clean and tidy. Clean the leaves and rubbish absorbed by the fin on time.

3) Clean the air return filter once three months to guarantee the quality of the air.

4) Check if the condensing water pipe is smooth regularly. Make sure the drainage is clear.

5) Not allowed to reset the unit by force without any reason of the trouble if something is wrong with the unit. Contact the agent or the technician.

6) All diameters have been setup at the ex-work of the units. If the customer needs to adjust the diameter, please contact the agent and the technician. It is not allowed to adjust the diameter automatically.

RUIDONG

7. VARIABLEOPERATINGCONDITIONINGPARAMETERTABLE

Performance data – Normal unit

RWK18

Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	62808	58914	55262	51880	48663
	SHC(Btu/H)	53387	50077	46972	44098	41364
	IP(kW)	3.61	4.51	4.96	5.45	6.20
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	62934	59032	55372	51984	48761
	SHC(Btu/H)	53494	50178	47066	44186	41446
	IP(kW)	4.11	5.13	5.64	6.20	7.05
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	68037	63819	59862	57396	53837
	SHC(Btu/H)	57832	54246	50883	48786	45762
	IP(kW)	4.51	5.64	6.20	6.81	7.49
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	68377	64138	60161	56479	52978
	SHC(Btu/H)	58121	54517	51137	48008	45031
	IP(kW)	4.96	6.20	6.81	7.49	8.52
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	68719	64459	60462	56762	53243
	SHC(Btu/H)	58411	54790	51393	48248	45256
	IP(kW)	5.45	6.81	7.49	8.23	9.36

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit

RWK28

Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	100493	94263	88419	83007	77861
	SHC(Btu/H)	85419	80123	75156	70556	66182
	IP(kW)	5.50	6.88	7.56	8.31	9.45
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	100695	94452	88596	83174	78017
	SHC(Btu/H)	85591	80284	75306	70698	66314
	IP(kW)	6.26	7.82	8.60	9.45	10.75
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	108859	102110	95779	91833	86139
	SHC(Btu/H)	92530	86794	81412	78058	73219
	IP(kW)	6.88	8.60	9.45	10.39	11.41
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	109404	102621	96258	90367	84764
	SHC(Btu/H)	92993	87227	81819	76812	72050
	IP(kW)	7.56	9.45	10.39	11.41	12.98
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	109951	103134	96739	90819	85188
	SHC(Btu/H)	93458	87664	82228	77196	72410
	IP(kW)	8.31	10.39	11.41	12.54	14.27

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit						
RWK35						
Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	125617	117829	110523	103759	97326
	SHC(Btu/H)	106774	100154	93945	88195	82727
	IP(kW)	6.99	8.74	9.60	10.55	12.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	125869	118065	110745	103967	97521
	SHC(Btu/H)	106988	100355	94133	88372	82893
	IP(kW)	7.95	9.94	10.92	12.00	13.65
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	136074	127638	119724	114791	107674
	SHC(Btu/H)	115663	108492	101765	97573	91523
	IP(kW)	8.74	10.92	12.00	13.19	14.49
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	136754	128276	120323	112959	105955
	SHC(Btu/H)	116241	109034	102274	96015	90062
	IP(kW)	9.60	12.00	13.19	14.49	16.49
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	137438	128917	120924	113524	106485
	SHC(Btu/H)	116823	109580	102786	96495	90512
	IP(kW)	10.55	13.19	14.49	15.93	18.12

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit						
RWK50						
Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	186782	175202	164339	154282	144716
	SHC(Btu/H)	158765	148921	139688	131139	123009
	IP(kW)	12.24	15.30	16.82	18.48	21.02
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	187156	175553	164669	154591	145006
	SHC(Btu/H)	159083	149220	139968	131402	123255
	IP(kW)	13.92	17.40	19.13	21.02	23.91
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	202331	189787	178020	170686	160103
	SHC(Btu/H)	171982	161319	151317	145083	136088
	IP(kW)	15.30	19.13	21.02	23.10	25.39
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	203343	190736	178910	167961	157547
	SHC(Btu/H)	172842	162125	152074	142767	133915
	IP(kW)	16.82	21.02	23.10	25.39	28.88
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	204360	191689	179805	168801	158335
	SHC(Btu/H)	173706	162936	152834	143481	134585
	IP(kW)	18.48	23.10	25.39	27.90	31.73

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit						
RWK70						
Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	251309	235728	221113	207581	194711
	SHC(Btu/H)	213613	200369	187946	176444	165504
	IP(kW)	15.72	19.65	21.60	23.74	27.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	251813	236200	221556	207997	195101
	SHC(Btu/H)	214041	200770	188323	176797	165836
	IP(kW)	17.88	22.35	24.57	27.00	30.71
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	272230	255352	239520	229652	215413
	SHC(Btu/H)	231396	217049	203321	195204	183101
	IP(kW)	19.65	24.57	27.00	29.67	32.61
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	273591	256629	240718	225986	211975
	SHC(Btu/H)	232553	218134	204610	192088	180178
	IP(kW)	21.60	27.00	29.67	32.61	37.09
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	274959	257912	241921	227116	213034
	SHC(Btu/H)	233715	219225	205633	193048	181079
	IP(kW)	23.74	29.67	32.61	35.84	40.76

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit						
RWK105						
Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	376964	353592	331669	311371	292066
	SHC(Btu/H)	320419	300553	281919	264665	248256
	IP(kW)	19.22	24.02	26.40	29.01	33.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	377719	354301	332334	311995	292651
	SHC(Btu/H)	321061	301156	282484	265196	248754
	IP(kW)	21.86	27.32	30.03	33.00	37.53
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	408345	383028	359280	344478	323120
	SHC(Btu/H)	347093	325574	305388	292806	274652
	IP(kW)	24.02	30.03	33.00	36.27	39.86
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	410387	384943	361076	338979	317962
	SHC(Btu/H)	348829	327201	306915	288132	270268
	IP(kW)	26.40	33.00	36.27	39.86	45.33
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	412439	386868	362882	340673	319552
	SHC(Btu/H)	350573	328837	308450	289572	271619
	IP(kW)	29.01	36.27	39.86	43.80	49.82

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit						
RWK140						
Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	502618	471456	442226	415162	389422
	SHC(Btu/H)	427226	400738	375892	352887	331008
	IP(kW)	23.29	29.12	32.00	35.17	40.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	503626	472401	443112	415994	390202
	SHC(Btu/H)	428082	401541	376645	353595	331672
	IP(kW)	26.49	33.12	36.40	40.00	45.50
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	544460	510704	479040	459304	430827
	SHC(Btu/H)	462791	434098	407184	390408	366203
	IP(kW)	29.12	36.40	40.00	43.96	48.31
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	547182	513257	481435	451971	423949
	SHC(Btu/H)	465105	436269	409220	384176	360357
	IP(kW)	32.00	40.00	43.96	48.31	54.95
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	549918	515823	483842	454231	426069
	SHC(Btu/H)	467431	438450	411266	386097	362159
	IP(kW)	35.17	43.96	48.31	53.09	60.39

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit						
RWK180						
Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	634931	595565	558640	524451	491935
	SHC(Btu/H)	539691	506230	474844	445784	418145
	IP(kW)	32.61	40.76	44.80	49.24	56.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	636203	596759	559760	525502	492921
	SHC(Btu/H)	540773	507245	475796	446677	418983
	IP(kW)	37.09	46.37	50.96	56.00	63.69
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	687787	645145	605146	580214	544240
	SHC(Btu/H)	584619	548373	514374	493182	462604
	IP(kW)	40.76	50.96	56.00	61.54	67.64
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	691226	648370	608171	570951	535552
	SHC(Btu/H)	587542	551115	516946	485309	455219
	IP(kW)	44.80	56.00	61.54	67.64	76.93
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	694682	651612	611212	573806	538230
	SHC(Btu/H)	590480	553870	519530	487735	457496
	IP(kW)	49.24	61.54	67.64	74.33	84.55

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

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Performance data – Normal unit						
RWK210						
Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	766493	718970	674394	633121	593868
	SHC(Btu/H)	651519	611125	573235	538153	504788
	IP(kW)	40.76	50.96	56.00	61.54	70.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	768029	720411	675746	634390	595058
	SHC(Btu/H)	652825	612350	574384	539232	505799
	IP(kW)	46.37	57.96	63.69	70.00	79.62
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	830302	778823	730536	700438	657011
	SHC(Btu/H)	705756	662000	620956	595372	558459
	IP(kW)	50.96	63.69	70.00	76.93	84.55
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	834453	782717	734189	689256	646522
	SHC(Btu/H)	709285	665310	624060	585868	549544
	IP(kW)	56.00	70.00	76.93	84.55	96.16
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	838626	786631	737860	692703	649755
	SHC(Btu/H)	712832	668636	627181	588797	552292
	IP(kW)	61.54	76.93	84.55	92.92	105.68

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit						
RWK280						
Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	933614	875730	821434	771163	723351
	SHC(Btu/H)	793572	744370	698219	655488	614848
	IP(kW)	48.33	60.42	66.40	72.97	83.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	935485	877485	823081	772708	724800
	SHC(Btu/H)	795162	745862	699618	656802	616080
	IP(kW)	54.98	68.72	75.52	83.00	94.40
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	1011335	948632	889817	853156	800261
	SHC(Btu/H)	859635	806337	756344	725183	680222
	IP(kW)	60.42	75.52	83.00	91.22	100.25
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	1016391	953375	894266	839537	787486
	SHC(Btu/H)	863933	810369	760126	713606	669363
	IP(kW)	66.40	83.00	91.22	100.25	114.02
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	1021473	958142	898737	843734	791423
	SHC(Btu/H)	868252	814421	763927	717174	672710
	IP(kW)	72.97	91.22	100.25	110.17	125.31

Notes:

1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit

RWK320

Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	1130891	1060776	995008	934114	876198
	SHC(Btu/H)	961258	901660	845757	793996	744769
	IP(kW)	61.15	76.43	84.00	92.32	105.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	1133158	1062902	997002	935985	877954
	SHC(Btu/H)	963184	903467	847452	795588	746261
	IP(kW)	69.55	86.93	95.54	105.00	119.43
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	1225035	1149083	1077840	1033433	969360
	SHC(Btu/H)	1041280	976721	916164	878418	823956
	IP(kW)	76.43	95.54	105.00	115.40	126.82
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	1231161	1154829	1083229	1016936	953886
	SHC(Btu/H)	1046486	981604	920745	864395	810803
	IP(kW)	84.00	105.00	115.40	126.82	144.24
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	1237316	1160603	1088645	1022020	958655
	SHC(Btu/H)	1051719	986512	925349	868717	814857
	IP(kW)	92.32	115.40	126.82	139.37	158.52

Notes:
1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

Performance data – Normal unit

RWK360

Indoor air temp		Outdoor air Temp (DB)				
		70℉/21℃	82℉/28℃	95℉/35℃	115℉/45℃	125℉/52℃
70℉/21℃ DB 59℉/15℃ WB	TGC(Btu/H)	1256546	1178640	1105564	1037904	973554
	SHC(Btu/H)	1068064	1001844	939730	882218	827521
	IP(kW)	69.88	87.35	96.00	105.50	120.00
75℉/24℃ DB 63℉/17℃ WB	TGC(Btu/H)	1259064	1181002	1107780	1039984	975505
	SHC(Btu/H)	1070204	1003852	941613	883986	829179
	IP(kW)	79.48	99.35	109.19	120.00	136.49
80℉/27℃ DB 66.9℉/19℃ WB	TGC(Btu/H)	1361150	1276759	1197600	1148259	1077067
	SHC(Btu/H)	1156978	1085245	1017960	976020	915507
	IP(kW)	87.35	109.19	120.00	131.88	144.94
84℉/29℃ DB 66℉/19.5℃ WB	TGC(Btu/H)	1367956	1283143	1203588	1129928	1059873
	SHC(Btu/H)	1162763	1090671	1023050	960439	900892
	IP(kW)	96.00	120.00	131.88	144.94	164.85
90℉/32℃ DB 73℉/23℃ WB	TGC(Btu/H)	1374796	1289559	1209606	1135578	1065172
	SHC(Btu/H)	1168577	1096125	1028165	965241	905396
	IP(kW)	105.50	131.88	144.94	159.28	181.17

Notes:
1. DB=Dry Bulb Temperature, WB= Wet Bulb Temperature
2. TGC= Total Gross Capacity
3. SHC= Sensible Heat Capacity
4. IP= Input power, sum of compressor & Outdoor and indoor fan power input

RUIDONG

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

Tel Aviv supermarket chains

Stadium in Tel Aviv

Planting base is in Beijing

Office building in America

Shanxi Linfen High Speed Rail Station

Hotel in Iraq

Shanxi Tongmei Group Zhangze Power Puzhou Power Generation Branch

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