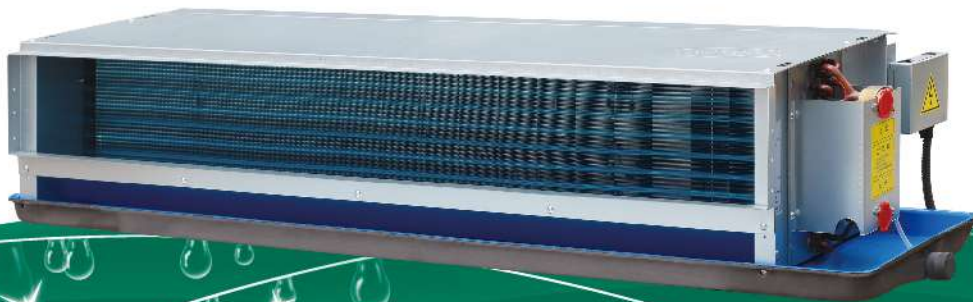


# RUIDONG

CEILING CONCEALED  
TYPE FAN COIL UNIT



## RUIDONG GROUP

[www.ruidonggroup.com](http://www.ruidonggroup.com)



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

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

### **Main business coverage:**

#### **1. Host series:**

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

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

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





## ENTERPRISE PROFILE

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

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

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

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



## CERTIFICATIONS

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



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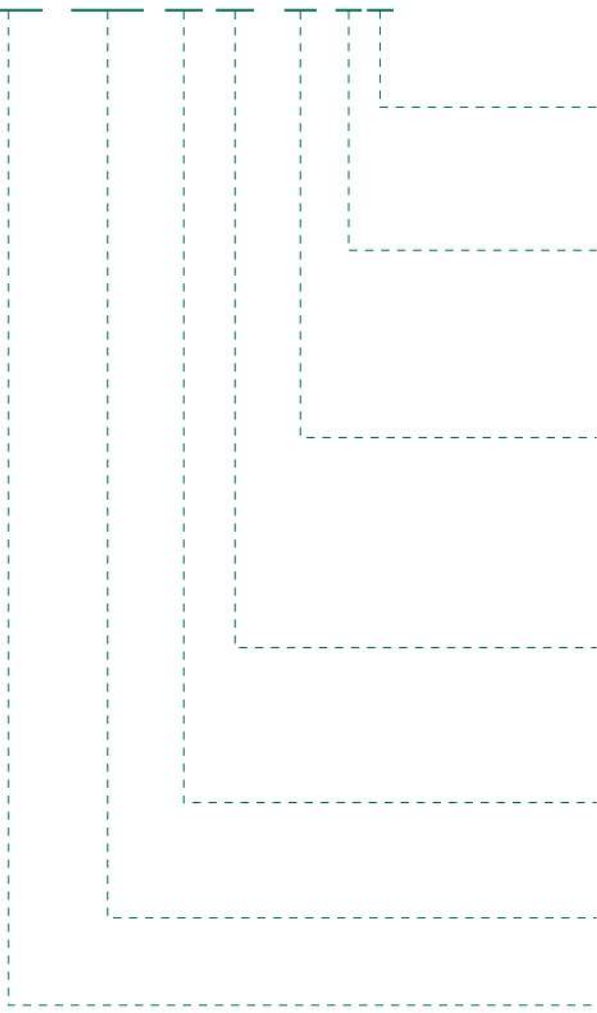
**CEILING CONCEALED TYPE FAN COIL UNIT**



# 1. Brief introduction

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RFP   XXX   X   X - X   XX



Omit:220V-1PH-50HZ  
A: 220V-1PH-60HZ  
B: 110V~120V-1PH-60HZ

L:Left  
R:Right

A:2 pipes 2 rows  
B:2 pipes 3 rows  
C:2 pipes 4 rows  
D:4 pipes 3+1 rows  
E:4 pipes 2+2 rows

A:12pa  
B:30pa  
C:50pa

H:Back return box  
X:Bottom return box

Air flow X 10m³/h

Ruidong water fan coil unit



RFP series standard fan coil unit can be widely used in hotels, restaurants, factories, hospitals, shopping malls and other places.

It integrates advanced low-noise fan manufacturing technology, air-conditioning product manufacturing process, and the newly developed advanced fin shape. It is a new generation of ultra-low noise, ultra-high efficiency, and re-development based on the original fan coil design. A convenient and compact structure replacement product, the unit has the following characteristics:



### Ultra low noise:

The unit adopts the newly designed low-speed forward multi-wing wide impeller, which is optimally matched with the motor, and has good thermal insulation and muffler materials, so that the noise of the unit is generally reduced by 2 ~ 5dB (A) to the best level compared with similar units. Imported low-noise rolling bearings, no need to add lubricating oil, the design life is more than 12 years.



### High efficiency:

The heat exchange coil adopts the newly developed fin form combined with the secondary flanging structure. Through the advanced mechanical tube expansion process, the copper tube and the aluminum foil are in close contact. The new fin provides an ideal heat flow channel for full heat exchange. The impeller provides a uniform heat transfer air speed environment for the coil, which makes the heat transfer efficiency higher and the heat transfer more sufficient, so that the unit input power and unit cooling capacity of the unit coil in the case of two rows meets or exceeds that of the industry level.





### Ultra-thin body:

The height of the unit is only 230mm, which can save more installation space than similar coils and fully meet the installation requirements of various occasions.



### Various options:

The design fully considers the particularity of the installation site and the site constraints, and the unit can provide drain pan of different lengths for customers to choose.

Standard drain pan--specially designed for narrow spaces, which can reduce the required installation position, suitable for places with limited installation space.

Extended drain pan--can more effectively accept valve leakage and condensate.

Stainless steel drain pan--According to special anti-corrosion requirements, stainless steel drain pan can be selected.



### Silent operation

The use of new environmentally friendly sound-absorbing glass fiber insulation materials can not only ensure a smooth and beautiful appearance, but even under severe condensation conditions, the insulation performance of the unit can meet the requirements of international standards.

### Optional wet film humidification:

Use the natural evaporation of water for humidification, combined with the surface cooler, save the length of the unit, and the air enthalpy change.

## Equipment structure / material description

The motor drives the centrifugal fan through the rotating shaft and is assembled on the back panel of the heat exchanger.

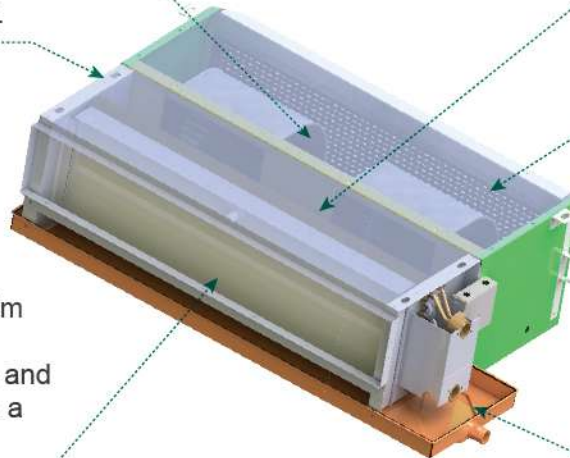
All sheet metal is galvanized steel, and the insulation material is self-extinguishing PE.

The addition of wet film humidification can facilitate temperature and humidity regulation in a single space.

The coil is made of copper tube and aluminum coil fin structure. It adopts mechanical expansion method to ensure efficient heat exchange, and is expanded and integrated into the end plates on both sides of the coil.

Can select usual nylon filter or aluminum filter.

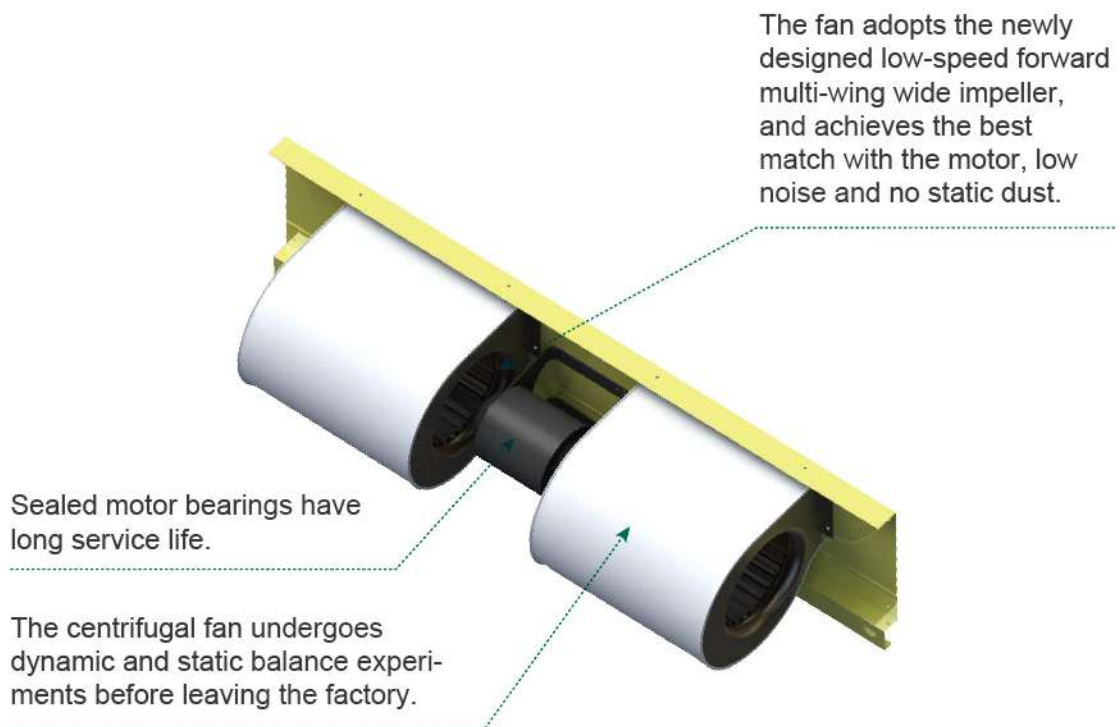
Equipped with lifting holes, which can be easily installed on site. The chilled water inlet and outlet pipes, condensate pipes and junction box are located on the same side of the unit.





## Description of fan and motor

The noise of the unit under rated operating conditions complies with national standards, and the selected motors have passed the national 3C certification.



### Pipe connection direction determine:

Face the front air outlet to distinguish the left and right direction of the unit. If the water inlet pipe of is in the left hand direction, it is called the left type, and the reverse is the right type.

### Standard unit:

- ESP: 12Pa, 30Pa, 50Pa
- Standard drain pan: galvanized plate with powder coating
- AC motor
- Without plenum box
- without air filter

## 2. Specification

### 2 pipes 2rows

Items	Model	RFP-34	RFP-51	RFP-68	RFP-85	RFP-102	RFP-136
	Air flow (m <sup>3</sup> /h)	H	340	530	700	860	1020
	M	270	420	560	700	810	1140
	L	200	310	420	520	610	850
Cooling capacity(W)	H	1770	2670	3530	4450	5300	7060
Heating capacity(W)	H	2700	4050	5400	6750	8100	10800
Input power (W)	12Pa	32	46	56	75	94	134
	30Pa	40	54	72	87	102	155
	50Pa	46	65	84	98	112	174
Noise dB(A)	12Pa	37	39	41	43	46	46
	30Pa	40	42	44	46	47	48
	50Pa	42	44	46	47	49	50
Water flow	m <sup>3</sup> /h	0.31	0.47	0.62	0.78	0.93	1.23
Fan type	kPa	30	30	30	30	40	40
Fan type	Forward multi-wing centrifugal double suction fan						
Motor type	Capacitor running asynchronous motor						
Coil	Rows	2					
	Pressure	Design pressure 1.6MPa, test pressure 2.5MPa					
Pipe size	Water pipe	R3/4 ( internal thread )					
	Drain pipe	R3/4 ( external thread )					
Net weight	( kg )	12.7	14.2	16.1	17.4	18.5	25.8
Optional accessories	Thermostat, 2-way / 3-way valve, return box						

- Note:**
1. Cooling: inlet/outlet water temperature 7 °C / 12 °C, inlet air DB27.0 °C, WB19.5 °C.
  2. Heating: inlet/outlet water temperature 60 °C / 50 °C, inlet air DB21.0 °C.
  3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .
  4. The static pressure at the outlet of the low static pressure unit with air outlet and filter is 0Pa; the static pressure at the outlet without air outlet and filter is 12Pa.
  5. The power consumed by the motor load is the input power (also referred to as reference operating condition consumption), the power on the motor nameplate indicates the nominal power, that is, the output power of the motor when it is running at rated operating conditions.
  6. If the actual operating conditions are different from the standard operating conditions, please refer to the correction coefficient table data to correct it. Correction method: actual cooling (heating) amount = rated cooling (heating) amount × working condition correction factor.



## 2 pipes 3 rows

Items		Model	RFP-34	RFP-51	RFP-68	RFP-85	RFP-102	RFP-136	RFP-170	RFP-204	RFP-238
Air flow ( m <sup>3</sup> /h )	H	340	510	680	850	1020	1360	1700	2040	2380	
	M	265	405	535	680	790	1060	1360	1595	1904	
	L	195	305	405	510	585	790	1020	1180	1428	
Cooling capacity(W)	H	1890	2830	3780	4680	5610	7350	9000	10800	12600	
Heating capacity(W)	H	2840	4240	5660	7000	8420	11230	13500	16200	18900	
Input power (W)	12Pa	32	46	56	75	94	134	150	180	225	
	30Pa	40	52	72	87	102	155	172	210	240	
	50Pa	46	63	84	98	112	174	195	236	290	
Noise dB (A)	12Pa	37	39	41	43	46	46	48	50	52	
	30Pa	40	42	44	46	47	48	50	52	54	
	50Pa	42	44	46	47	49	50	52	54	56	
Water flow	m <sup>3</sup> /h	0.33	0.50	0.67	0.80	0.96	1.26	1.55	1.86	2.18	
Water P.D.	kPa	30	30	30	30	40	40	40	40	50	
Fan type	Forward multi-wing centrifugal double suction fan										
Motor type	Capacitor running asynchronous motor										
Coil	Rows	3									
	Pressure	Design pressure 1.6MPa, test pressure 2.5MPa									
Pipe size	Water pipe	R3/4 ( internal thread )									
	Drain pipe	R3/4 ( external thread )									
Net weight	( kg )	13.4	14.9	16.9	18.2	19.5	26.9	29.5	33.6	39.5	
Optional accessories	Thermostat, 2-way / 3-way valve, return box										

- Note:**
1. Cooling: inlet/outlet water temperature 7 °C / 12 °C, inlet air DB27.0 °C, WB19.5 °C.
  2. Heating: inlet/outlet water temperature 60 °C / 50 °C, inlet air DB21.0 °C.
  3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .
  4. The static pressure at the outlet of the low static pressure unit with air outlet and filter is 0Pa; the static pressure at the outlet without air outlet and filter is 12Pa.
  5. The power consumed by the motor load is the input power (also referred to as reference operating condition consumption), the power on the motor nameplate indicates the nominal power, that is, the output power of the motor when it is running at rated operating conditions.
  6. If the actual operating conditions are different from the standard operating conditions, please refer to the correction coefficient table data to correct it. Correction method: actual cooling (heating) amount = rated cooling (heating) amount × working condition correction factor.

## 4 pipes 3+1 rows

Items		Model	RFP-34	RFP-51	RFP-68	RFP-85	RFP-102	RFP-136	RFP-170	RFP-204	RFP-238
Air flow ( m <sup>3</sup> /h )	H	340	510	680	850	1020	1360	1700	2040	2380	
	M	265	405	535	680	790	1060	1360	1595	1904	
	L	195	305	405	510	585	790	1020	1180	1428	
Cooling capacity(W)	H	1890	2830	3780	4680	5610	7350	9000	10800	12600	
Heating capacity(W)	H	1480	2220	2960	3720	4150	5180	6700	7290	8500	
Input power (W)	12Pa	37	52	62	76	96	134	152	189	228	
	30Pa	44	59	72	87	108	156	174	212	253	
	50Pa	49	66	84	100	118	174	210	250	300	
Noise dB (A)	12Pa	37	39	41	43	46	46	48	50	52	
	30Pa	40	42	44	46	47	48	50	52	54	
	50Pa	42	44	46	47	49	50	52	54	56	
Water flow	Cooling	0.33	0.50	0.67	0.80	0.96	1.26	1.55	1.86	2.18	
	Heating	0.13	0.19	0.25	0.32	0.37	0.45	0.58	0.63	0.73	
Water P.D.	kPa	30	30	30	30	40	40	40	40	50	
Fan type	Forward multi-wing centrifugal double suction fan										
Motor type	Capacitor running asynchronous motor										
Coil	Rows	3+1									
	Pressure	Design pressure 1.6MPa, test pressure 2.5MPa									
Pipe size	Water pipe	R3/4 ( internal thread )									
	Drain pipe	R3/4 ( external thread )									
Net weight	( kg )	15.4	17.2	19.1	20.5	22	29.7	31.5	35.6	41.5	
Optional accessories	Thermostat, 2-way / 3-way valve, return box										

- Note:**
1. Cooling: inlet/outlet water temperature 7 °C / 12 °C, inlet air DB27.0 °C, WB19.5 °C.
  2. Heating: inlet/outlet water temperature 60 °C / 50 °C, inlet air DB21.0 °C.
  3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .
  4. The static pressure at the outlet of the low static pressure unit with air outlet and filter is 0Pa; the static pressure at the outlet without air outlet and filter is 12Pa.
  5. The power consumed by the motor load is the input power (also referred to as reference operating condition consumption), the power on the motor nameplate indicates the nominal power, that is, the output power of the motor when it is running at rated operating conditions.
  6. If the actual operating conditions are different from the standard operating conditions, please refer to the correction coefficient table data to correct it. Correction method: actual cooling (heating) amount = rated cooling (heating) amount × working condition correction factor.



## 4 pipes 2+2 rows

Items		Model	RFP-34	RFP-51	RFP-68	RFP-85	RFP-102	RFP-136	RFP-170	RFP-204	RFP-238
		Air flow ( m <sup>3</sup> /h )	H	340	510	680	850	1020	1360	1700	2040
	M	265	405	535	680	790	1060	1360	1595	1904	
	L	195	305	405	510	585	790	1020	1180	1428	
Cooling capacity(W)	H	1900	2710	3540	4350	5400	6850	7650	9180	10710	
Heating capacity(W)	H	3100	4230	5650	6660	8400	10610	11860	14230	16600	
Input power (W)	12Pa	32	46	56	75	94	134	150	180	225	
	30Pa	40	52	72	87	102	155	172	210	240	
	50Pa	46	63	84	98	112	174	195	236	290	
Noise dB (A)	12Pa	36	38	41	43	45	46	47	50	51	
	30Pa	40	42	44	46	47	48	49	51	53	
	50Pa	42	44	46	47	49	50	51	53	54	
Water flow		0.33	0.47	0.61	0.75	0.93	1.18	1.32	1.58	1.84	
Water P.D.	kPa	0.33	0.47	0.61	0.75	0.93	1.18	1.32	1.58	1.84	
Fan type	Forward multi-wing centrifugal double suction fan										
Motor type	Capacitor running asynchronous motor										
Coil	Rows	2+2									
	Pressure	Design pressure 1.6MPa, test pressure 2.5MPa									
Pipe size	Water pipe	R3/4 ( internal thread )									
	Drain pipe	R3/4 ( external thread )									
Net weight	( kg )	15.4	17.2	19.1	20.5	22	29.7	31.5	35.6	41.5	
Optional accessories	Thermostat, 2-way / 3-way valve, return box										

- Note:**
1. Cooling: inlet/outlet water temperature 7°C / 12°C, inlet air DB27.0°C, WB19.5°C.
  2. Heating: inlet/outlet water temperature 60°C / 50°C, inlet air DB21.0°C.
  3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .
  4. The static pressure at the outlet of the low static pressure unit with air outlet and filter is 0Pa; the static pressure at the outlet without air outlet and filter is 12Pa.
  5. The power consumed by the motor load is the input power (also referred to as reference operating condition consumption), the power on the motor nameplate indicates the nominal power, that is, the output power of the motor when it is running at rated operating conditions.
  6. If the actual operating conditions are different from the standard operating conditions, please refer to the correction coefficient table data to correct it. Correction method: actual cooling (heating) amount = rated cooling (heating) amount × working condition correction factor.

## 2 pipes 4 rows(standard condition)

Items		Model	RFP-34	RFP-51	RFP-68	RFP-85	RFP-102	RFP-136	RFP-170	RFP-204	RFP-238
Air flow ( m <sup>3</sup> /h )	H	340	510	680	850	1020	1360	1700	2040	2380	
	M	265	405	535	680	790	1060	1360	1595	1904	
	L	195	305	405	510	585	790	1020	1180	1428	
Cooling capacity(W)	H	2392	3328	4420	5200	6136	8424	10192	11492	13520	
Heating capacity(W)	H	3780	5355	6773	8264	9765	13125	15960	18060	21525	
Input power (W)	12Pa	37	52	62	76	96	134	152	189	228	
	30Pa	44	59	72	87	108	156	174	212	253	
	50Pa	49	66	84	100	118	174	210	250	300	
Noise dB (A)	12Pa	37	39	41	43	46	46	48	50	52	
	30Pa	40	42	44	46	47	48	50	52	54	
	50Pa	42	44	46	47	49	50	52	54	56	
Water flow	m <sup>3</sup> /h	0.42	0.59	0.78	0.92	1.08	1.49	1.80	2.03	2.39	
Water P.D.	kPa	30	30	30	30	40	40	40	40	50	
Fan type	Forward multi-wing centrifugal double suction fan										
Motor type	Capacitor running asynchronous motor										
Coil	Rows	4									
	Pressure	Design pressure 1.6MPa, test pressure 2.5MPa									
Pipe size	Water pipe	R3/4 ( internal thread )									
	Drain pipe	R3/4 ( external thread )									
Net weight	( kg )	14.4	16.2	18.1	19.5	21	28.7	30.5	34.6	40.5	
Optional accessories	Thermostat, 2-way / 3-way valve, return box										

- Note:**
1. Cooling: inlet/outlet water temperature 7 °C / 12 °C, inlet air DB27.0 °C, WB19.5 °C.
  2. Heating: inlet/outlet water temperature 60 °C / 50 °C, inlet air DB21.0 °C.
  3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .
  4. The static pressure at the outlet of the low static pressure unit with air outlet and filter is 0Pa; the static pressure at the outlet without air outlet and filter is 12Pa.
  5. The power consumed by the motor load is the input power (also referred to as reference operating condition consumption), the power on the motor nameplate indicates the nominal power, that is, the output power of the motor when it is running at rated operating conditions.
  6. If the actual operating conditions are different from the standard operating conditions, please refer to the correction coefficient table data to correct it. Correction method: actual cooling (heating) amount = rated cooling (heating) amount × working condition correction factor.



## 2 pipes 4 rows(Dry condition)

Items		Model	RFP-34	RFP-51	RFP-68	RFP-85	RFP-102	RFP-136	RFP-170	RFP-204	RFP-238
		Air flow ( m <sup>3</sup> /h )	H	340	510	680	850	1020	1360	1700	2040
	M	265	405	535	680	790	1060	1360	1595	1904	
	L	195	305	405	510	585	790	1020	1180	1428	
Cooling capacity(W)	H	680	1020	1360	1700	2040	2720	3400	4080	4760	
Heating capacity(W)	H	1240	1860	2480	3100	3720	3960	6200	7440	8680	
Input power (W)	12Pa	37	52	62	76	96	134	152	189	228	
	30Pa	44	59	72	87	108	156	174	212	253	
	50Pa	49	66	84	100	118	174	210	250	300	
Noise dB (A)	12Pa	37	39	41	43	46	46	48	50	52	
	30Pa	40	42	44	46	47	48	50	52	54	
	50Pa	42	44	46	47	49	50	52	54	56	
Water flow	m <sup>3</sup> /h	0.12	0.18	0.24	0.31	0.37	0.49	0.61	0.73	0.86	
Water P.D.	kPa	25	26	30	30	32	35	38	40	50	
Fan type	Forward multi-wing centrifugal double suction fan										
Motor type	Capacitor running asynchronous motor										
Coil	Rows	4									
	Pressure	Design pressure 1.6MPa, test pressure 2.5MPa									
Pipe size	Water pipe	R3/ 4 ( internal thread )									
	Drain pipe	R3/4 ( external thread )									
Net weight	( kg )	14.4	16.2	18.1	19.5	21	28.7	30.5	34.6	40.5	
Optional accessories	Thermostat, 2-way / 3-way valve, return box										

- Note:**
1. Cooling: inlet/outlet water temperature 7 °C / 12 °C, inlet air DB27.0 °C, WB19.5 °C.
  2. Heating: inlet/outlet water temperature 60 °C / 50 °C, inlet air DB21.0 °C.
  3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .
  4. The static pressure at the outlet of the low static pressure unit with air outlet and filter is 0Pa; the static pressure at the outlet without air outlet and filter is 12Pa.
  5. The power consumed by the motor load is the input power (also referred to as reference operating condition consumption), the power on the motor nameplate indicates the nominal power, that is, the output power of the motor when it is running at rated operating conditions.
  6. If the actual operating conditions are different from the standard operating conditions, please refer to the correction coefficient table data to correct it. Correction method: actual cooling (heating) amount = rated cooling (heating) amount × working condition correction factor.

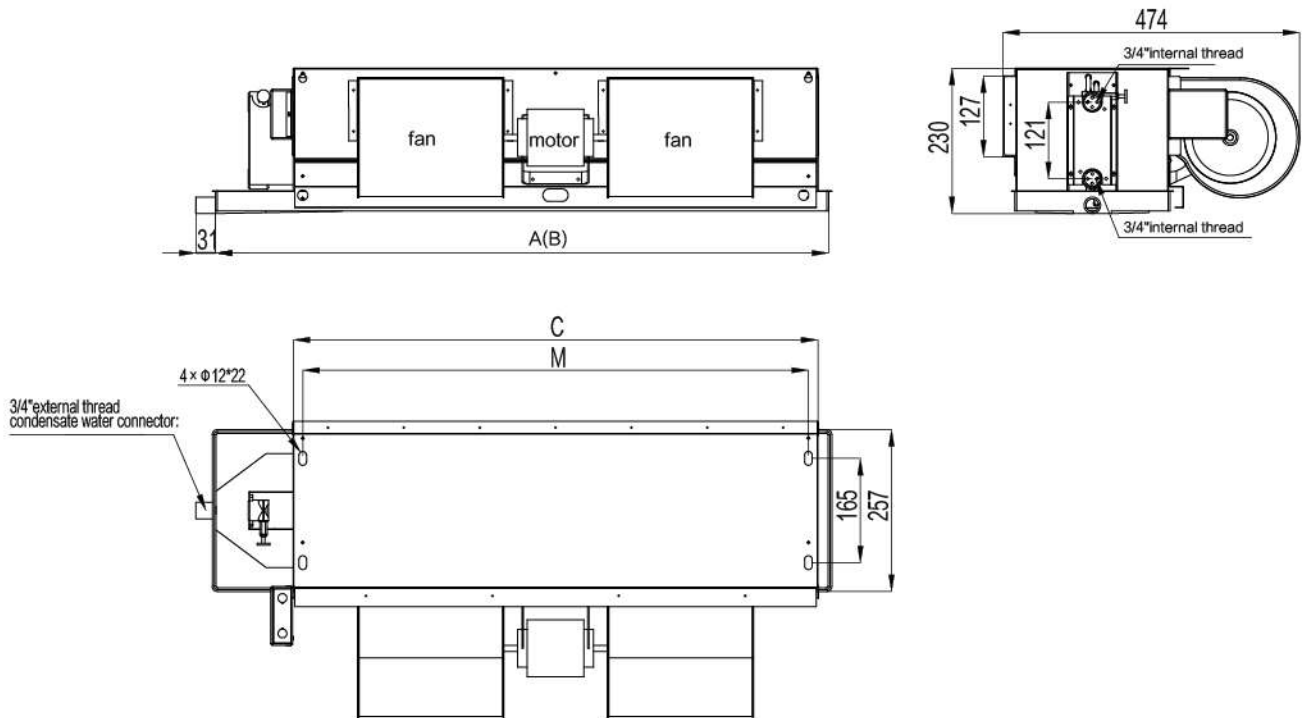
## 2 pipes 3 rows with brushless DC motor

Model		RFP-34	RFP-51	RFP-68	RFP-85	RFP-102	RFP-136	RFP-170	RFP-204	RFP-238
Air flow 3-speed (m <sup>3</sup> /h)	H	340	510	680	850	1020	1360	1700	2040	2380
	M	265	405	535	680	790	1060	1360	1595	1904
	L	195	305	405	510	585	790	1020	1180	1428
Air flow (m <sup>3</sup> /h) stepless speed	H	340	510	680	850	1020	1360	1700	2040	2380
	L	184	275	367	459	550	734	918	1102	1286
Cooling capacity (W)	H	1890	2830	3780	4680	5610	7350	9000	10800	12600
Heating capacity (W)	H	2840	4240	5660	7000	8420	11230	13500	16200	18900
Input power (W)	12Pa	20	23	35	45	69	70	90	125	156
	30Pa	28	36	49	59	93	96	115	159	168
	50Pa	36	49	67	79	108	130	149	196	204
Noise dB (A)	12Pa	36	38	41	43	45	46	47	50	51
	30Pa	40	41	44	46	47	48	49	51	53
	50Pa	42	44	46	47	49	50	51	53	54
Water flow	m <sup>3</sup> /h	0.33	0.50	0.67	0.80	0.96	1.26	1.55	1.86	2.18
Water P.D.	kPa	30	30	30	30	40	40	40	40	50
Fan type	Forward multi-wing centrifugal double suction fan									
Motor type	Brushless DC motor									
Coil	Rows	3								
	Pressure	Design pressure 1.6MPa, test pressure 2.5MPa								
Pipe size	Water pipe	R3/4 ( internal thread )								
	Drain pipe	R3/4 ( external thread )								
Net weight	(kg)	13.4	14.9	16.9	18.2	19.5	26.9	29.5	33.6	39.5
Optional accessories	Thermostat, 2-way / 3-way valve, return box									

- Note:**
1. Cooling: inlet/outlet water temperature 7 °C / 12 °C, inlet air DB27.0 °C, WB19.5 °C.
  2. Heating: inlet/outlet water temperature 60 °C / 50 °C, inlet air DB21.0 °C.
  3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .
  4. The static pressure at the outlet of the low static pressure unit with air outlet and filter is 0Pa; the static pressure at the outlet without air outlet and filter is 12Pa.
  5. The power consumed by the motor load is the input power (also referred to as reference operating condition consumption), the power on the motor nameplate indicates the nominal power, that is, the output power of the motor when it is running at rated operating conditions.
  6. If the actual operating conditions are different from the standard operating conditions, please refer to the correction coefficient table data to correct it. Correction method: actual cooling (heating) amount = rated cooling (heating) amount × working condition correction factor.

# 3.Diagram

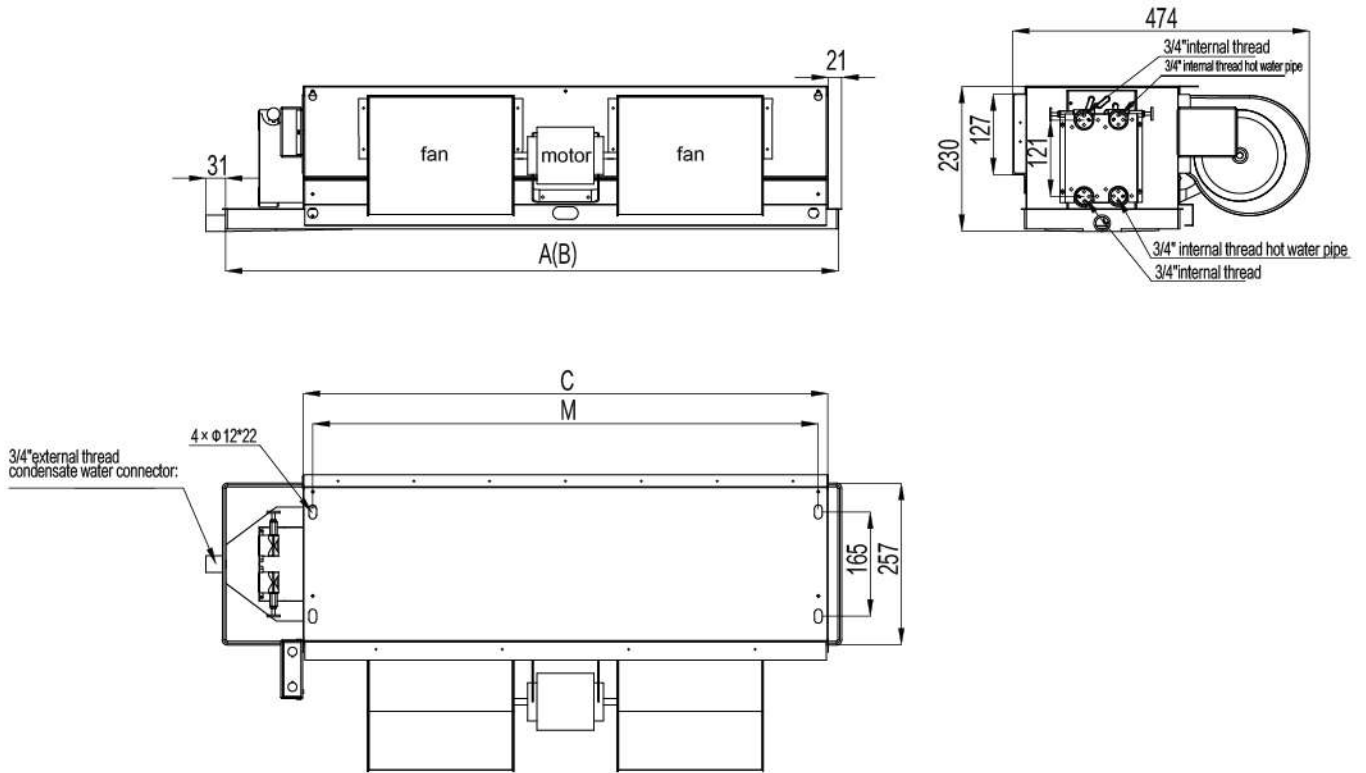
## 2 pipes unit diagram



Model	Normal drain pan A	Extended drain panB	Air outletC	Hoisting hole(M)
RFP-34	690	770	550	520
RFP-51	770	890	630	600
RFP-68	890	970	750	720
RFP-85	970	1170	830	800
RFP-102	1170	1410	1030	1000
RFP-136	1410	1530	1270	1240
RFP-170	1530	1770	1390	1360
RFP-204	1770	2010	1630	1600
RFP-238	2010	2250	1870	1840

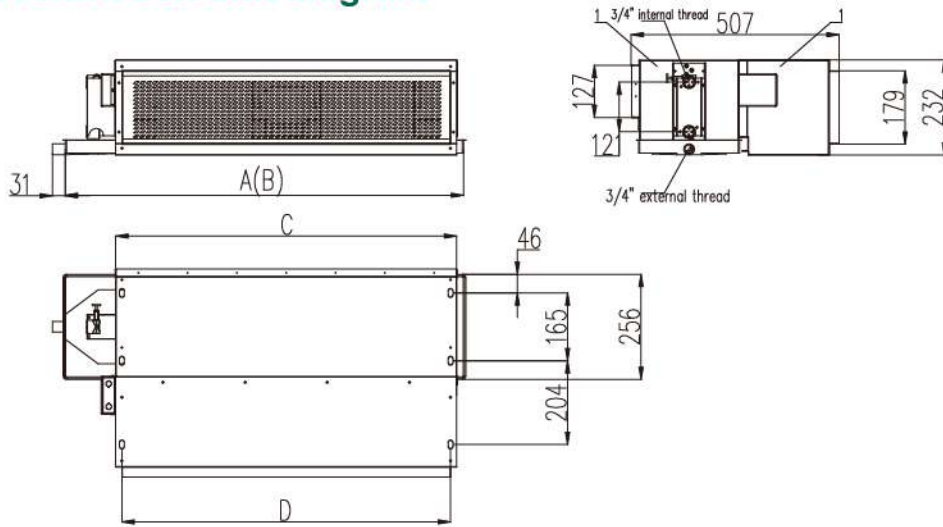


### 4 pipes unit diagram

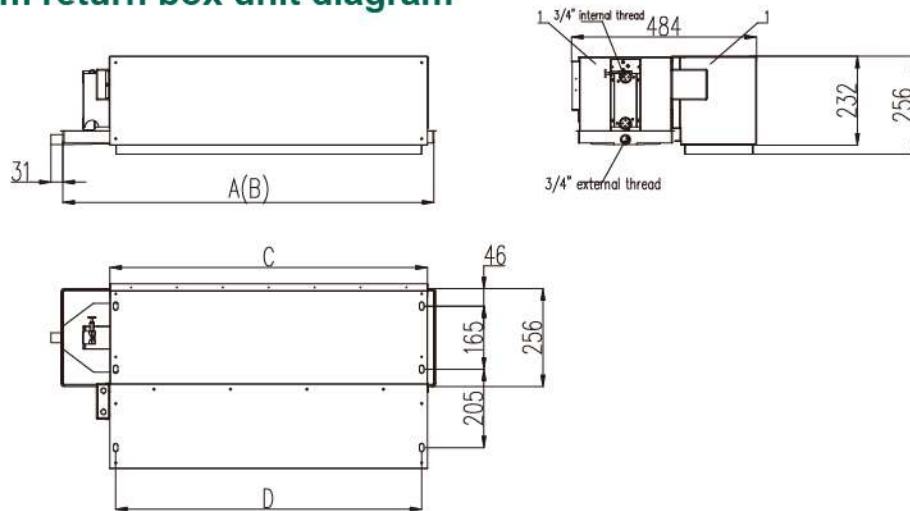


Model	Normal drain pan A	Extended drain panB	Air outlet C	Hoisting hole(M)
RFP-34	690	770	550	520
RFP-51	770	890	630	600
RFP-68	890	970	750	720
RFP-85	970	1170	830	800
RFP-102	1170	1410	1030	1000
RFP-136	1410	1530	1270	1240
RFP-170	1530	1770	1390	1360
RFP-204	1770	2010	1630	1600
RFP-238	2010	2250	1870	1840

### With back return box unit diagram

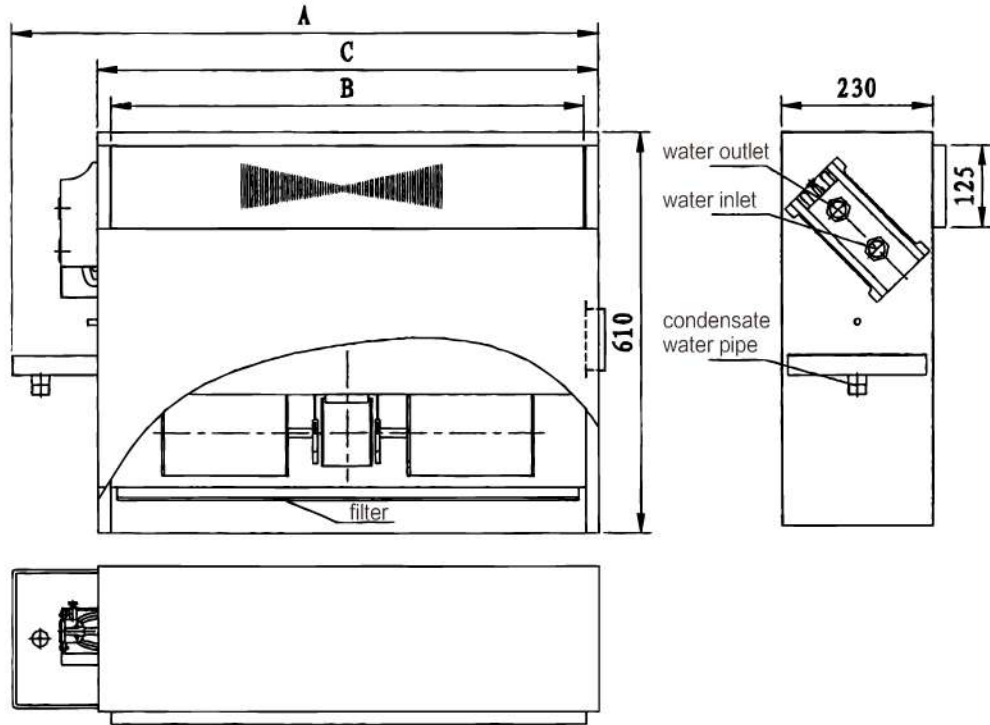


### With bottom return box unit diagram



Model	Normal drain pan A	Extended drain pan B	Air outlet C	Hoisting hole (M)	Air return (N)
RFP-34	690	770	550	520	520
RFP-51	770	890	630	600	600
RFP-68	890	970	750	720	720
RFP-85	970	1170	830	800	800
RFP-102	1170	1410	1030	1000	1000
RFP-136	1410	1530	1270	1240	1240
RFP-170	1530	1770	1390	1360	1360
RFP-204	1770	2010	1630	1600	1600
RFP-238	2010	2250	1870	1840	1840

### vertical concealed type unit diagram



Model	RFP-34LA	RFP-51LA	RFP-68LA	RFP-85LA	RFP-102LA	RFP-136LA	RFP-170LA	RFP-204LA	RFP-238LA
Dim									
A	640	790	870	990	1110	1410	1570	1750	1890
B	470	620	700	820	940	1240	1400	1580	1720
C	510	660	740	860	980	1280	1440	1620	1760

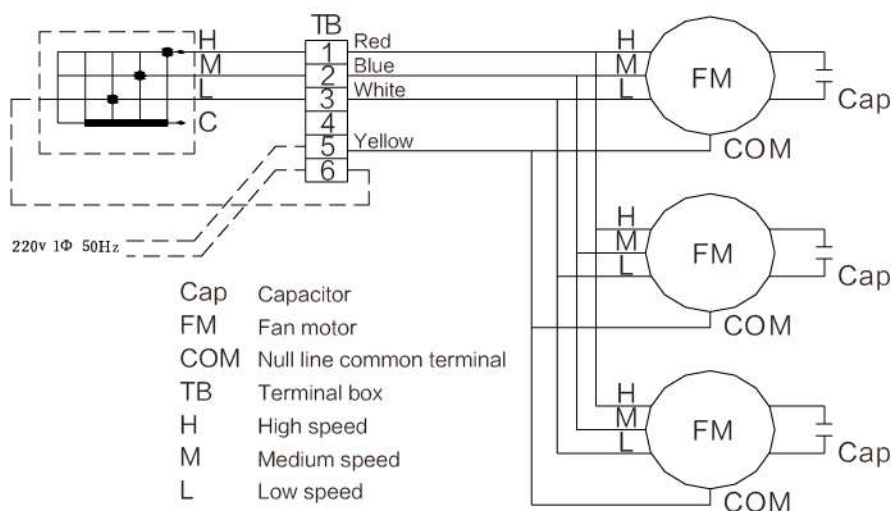


## 4. Electrical performance parameter table

**Power supply: 220V-1Ph-50Hz**

Model	RFP-34	RFP-51	RFP-68	RFP-85	RFP-102	RFP-136	RFP-170	RFP-204	RFP-238	
Input power-W	2 rows standard unit	32	46	56	75	94	134	-	-	-
	2 rows 30pa unit	40	54	72	87	102	155	-	-	-
	2 rows 50pa unit	46	65	84	98	112	174	-	-	-
	3rows standard unit	32	46	56	75	94	134	150	180	225
	3 rows 30pa unit	40	52	72	87	102	155	172	210	240
	3rows 50pa unit	46	63	84	98	112	174	195	236	290
	3+1rows standard unit	32	46	56	75	94	134	-	-	-
	3+1 rows 30pa unit	40	52	72	87	102	155	-	-	-
	3+1rows 50pa unit	46	63	84	98	112	174	-	-	-
Electric current-A	2 rows standard unit	0.15	0.21	0.25	0.34	0.43	0.61	-	-	-
	2 rows 30pa unit	0.18	0.25	0.33	0.40	0.46	0.70	-	-	-
	2 rows 50pa unit	0.21	0.30	0.38	0.45	0.51	0.79	-	-	-
	3rows standard unit	0.15	0.21	0.25	0.34	0.43	0.61	0.68	0.82	1.02
	3 rows 30pa unit	0.18	0.24	0.33	0.40	0.46	0.70	0.78	0.95	1.09
	3rows 50pa unit	0.21	0.29	0.38	0.45	0.51	0.79	0.89	1.07	1.32
	3+1rows standard unit	0.15	0.21	0.25	0.34	0.43	0.61	-	-	-
	3+1 rows 30pa unit	0.18	0.24	0.33	0.40	0.46	0.70	-	-	-
	3+1rows 50pa unit	0.21	0.29	0.38	0.45	0.51	0.79	-	-	-

## 5. Electrical diagram



## 6. Correction Factor

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### Heating capacity correction factor

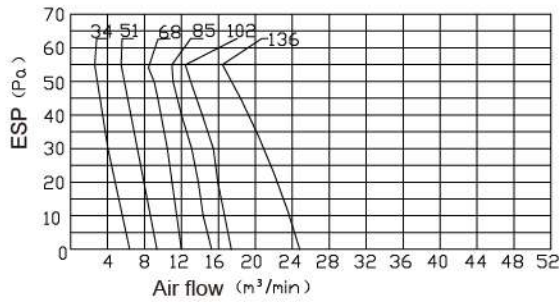
Inlet water°C \ Inlet air°C	Inlet water°C						
	40	45	50	55	60	65	70
16	0.62	0.75	0.87	1	1.13	1.26	1.39
17	0.59	0.72	0.85	0.98	1.1	1.23	1.36
18	0.57	0.69	0.82	0.95	1.08	1.21	1.33
19	0.54	0.67	0.8	0.92	1.05	1.18	1.31
20	0.51	0.64	0.77	0.9	1.03	1.16	1.28
21	0.49	0.62	0.75	0.87	1	1.13	1.26
22	0.46	0.59	0.72	0.85	0.98	1.1	1.23
23	0.44	0.57	0.69	0.82	0.95	1.08	1.21
24	0.41	0.54	0.67	0.8	0.92	1.05	1.18

### Cooling capacity correction factor

Inlet water°C \ Inlet air°C	Inlet water°C					
	5	6	7	8	9	10
22	0.85	0.76	0.66	0.57	0.49	0.4
23	0.92	0.83	0.74	0.65	0.56	0.47
24	0.98	0.89	0.8	0.71	0.62	0.53
25	1.06	0.97	0.88	0.79	0.7	0.61
26	1.14	1.05	0.96	0.87	0.78	0.69
27	1.21	1.12	1	0.94	0.85	0.76
28	1.27	1.18	1.09	0.99	0.91	0.82

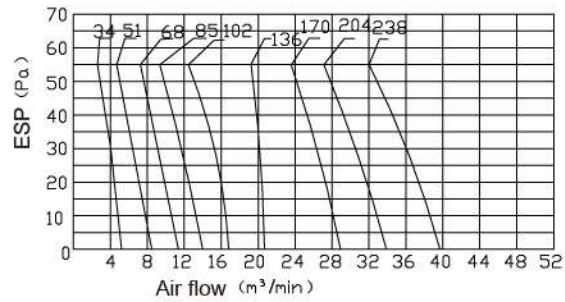
### 2 rows 12 pa

RFP-34~RFP-136



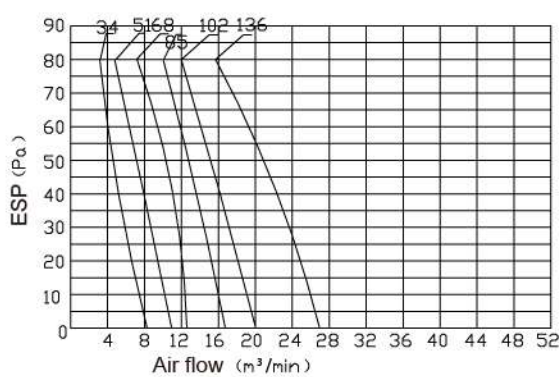
### 3 rows/4rows/3+1row/2+2rows 12 pa

RFP-34~RFP-238



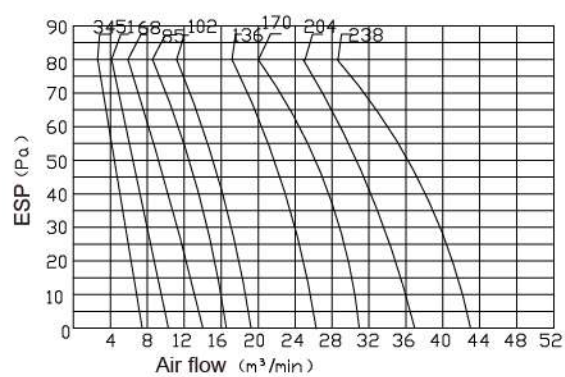
### 2 rows 30 pa

RFP-34~RFP-136



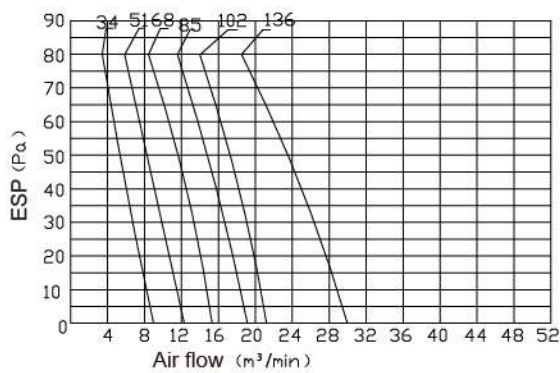
### 3 rows/4rows/3+1row/2+2rows 30 pa

RFP-34~RFP-238



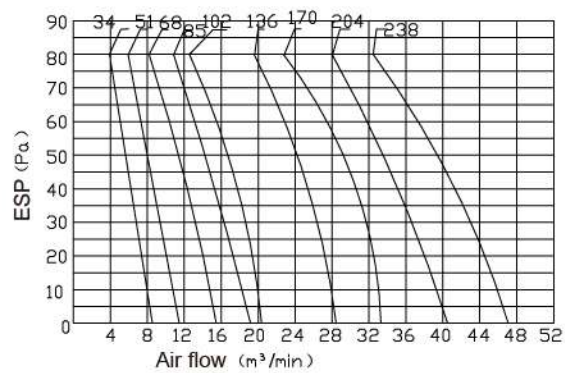
### 2 rows 50 pa

RFP-34~RFP-136



### 3 rows/4rows/3+1row/2+2rows 50 pa

RFP-34~RFP-238





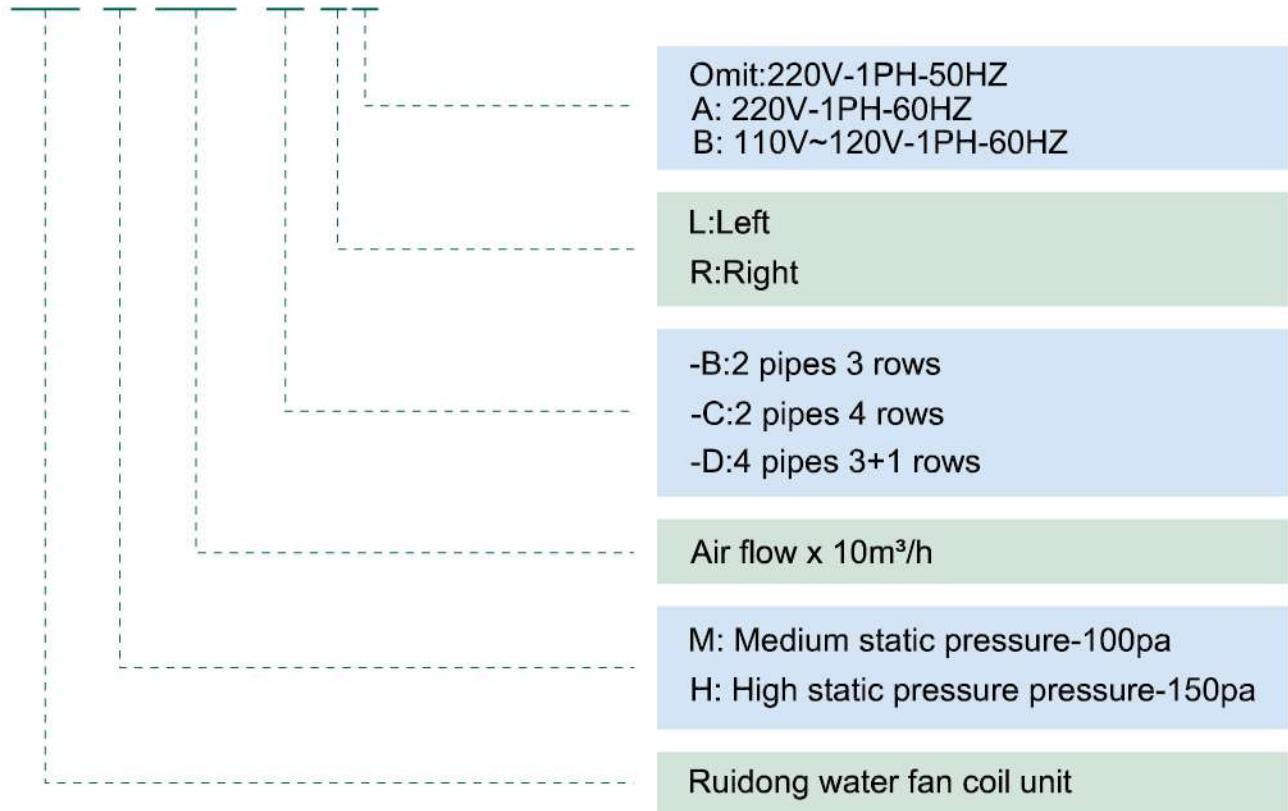
MEDIUM&HIGH STATIC PRESSURE  
DUCT TYPE FAN COIL UNIT



## (1) Brief Introduction

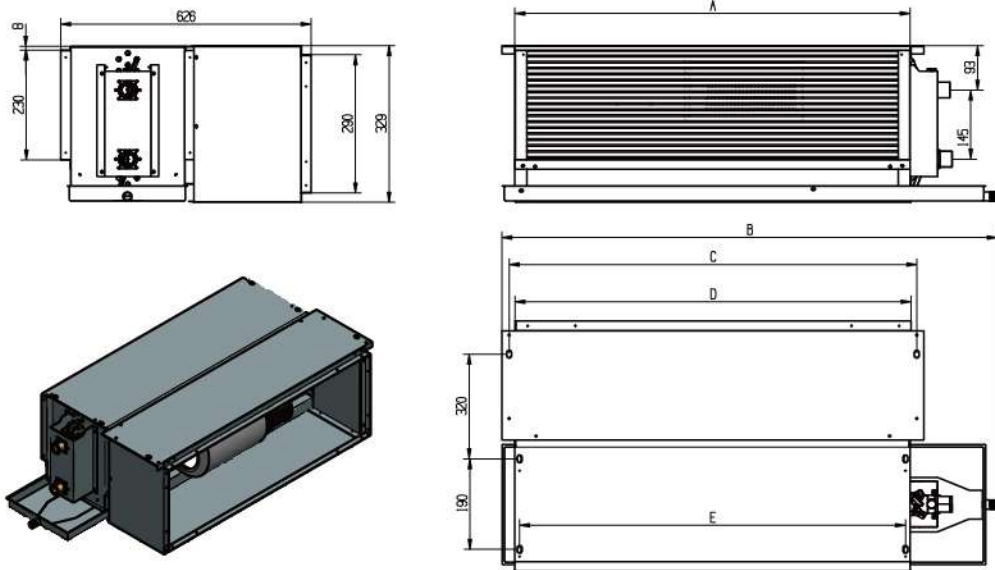
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RFP X XXX - X XX



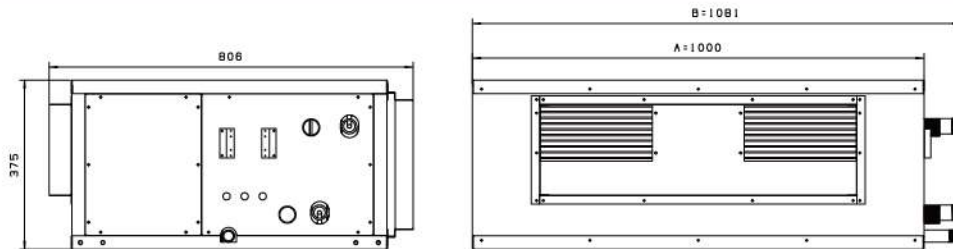
- Classical elegant design.  
No-spangle galvanized sheet, beautiful appearance.
- High static pressure, long distance air supply.  
The static pressure is max. 100pa to 150pa.
- Big diameter fan, big air volume, low noise.
- E-heater is optional.

## (2) Diagram-Medium Static Pressure Unit

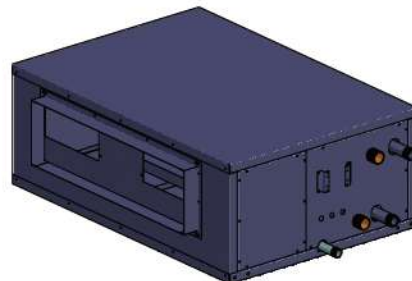


Model	A	B	C	D	E
RFP136	700	925	726	701	680
RFP170	830	1055	831	831	810
RFP204	990	1215	991	991	970
RFP238	1120	1345	1121	1121	1100
RFP272	1170	1395	1171	1171	1150
RFP306	1300	1525	1301	1301	1280
RFP340	1440	1665	1441	1441	1420

## (3) Diagram-High Static Pressure Unit



Model	A	B
RFP204	1000	1081
RFP238	1130	1211
RFP272	1300	1381
RFP306	1300	1381
RFP340	1490	1571





## (4) Specification

### Medium Static Pressure-2 pipes 3 rows

Model		RFP102	RFP136	RFP170	RFP204	RFP238	RFP272	RFP306	RFP340
Air flow(m <sup>3</sup> /h)	H	1020	1360	1700	2040	2380	2720	3060	3400
	M	765	1020	1275	1530	1785	2040	2295	2550
	L	561	748	935	1122	1309	1496	1683	1870
Cooling capacity(KW)	H	5.17	6.89	8.61	10.34	12.06	13.78	15.50	17.23
	M	4.08	5.44	6.80	8.16	9.53	10.89	12.25	13.61
	L	3.10	4.13	5.17	6.20	7.23	8.27	9.30	10.34
Heating capacity(KW)	H	8.61	11.49	14.36	17.23	20.10	22.97	25.84	28.71
	M	6.55	8.76	10.91	13.09	15.28	17.46	19.64	21.82
	L	5.00	6.66	8.33	9.99	11.66	13.32	14.99	16.65
Fan	Type	Double-inlet forward centrifugal fan							
	Qty	1	1	1	2	2	2	2	3
Motorr	Power	220V ~ 50Hz							
	Qty	1	1	1	1	1	1	1	2
	Input(W)	211	234	273	316	354	433	476	499
Heat Exchanger	Max working pressure	1.6 Mpa							
	Rows	3	3	3	3	3	3	3	3
	Water pipe size	DN25							
	Drain pipe	DN20							
Water flow(m <sup>3</sup> /h)		0.89	1.19	1.48	1.78	2.07	2.37	2.67	2.96
Water P.D(kPa)		23	23.5	36	35	42	31	69	43
Noise(dB(A))		52	53	55	57	58	60	61	61
Weight(kg)		35	36	38	45	50	61	77	81

- Note:** 1. Cooling: inlet/outlet water temperature 7°C / 12°C, inlet air DB27.0°C, WB19.5°C.  
 2. Heating: inlet/outlet water temperature 60°C / 50°C, inlet air DB21.0°C.  
 3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .

### Medium Static Pressure-2 pipes 4 rows

Model		RFP102	RFP136	RFP170	RFP204	RFP238	RFP272	RFP306	RFP340
Air flow(m <sup>3</sup> /h)	H	1020	1360	1700	2040	2380	2720	3060	3400
	M	765	1020	1275	1530	1785	2040	2295	2550
	L	561	748	935	1122	1309	1496	1683	1870
Cooling capacity(KW)	H	6.26	8.34	10.43	12.52	14.60	16.69	18.78	20.86
	M	4.94	6.59	8.24	9.89	11.54	13.18	14.83	16.48
	L	3.76	5.01	6.26	7.51	8.76	10.01	11.27	12.52
Heating capacity(KW)	H	10.43	13.91	17.39	20.87	24.34	27.82	31.30	34.78
	M	7.93	10.57	13.21	15.86	18.50	21.14	23.79	26.43
	L	6.05	8.07	10.08	12.10	14.12	16.14	18.15	20.17
Fan	Type	Double-inlet forward centrifugal fan							
	Qty	1	1	1	2	2	2	2	3
Motorr	Power	220V ~ 50Hz							
	Qty	1	1	1	1	1	1	1	2
	Input(W)	270	300	350	405	454	555	610	640
Heat Exchanger	Max working pressure	1.6 Mpa							
	Rows	4	4	4	4	4	4	4	4
	Water pipe size	DN25							
	Drain pipe	DN20							
Water flow(m <sup>3</sup> /h)		1.08	1.44	1.79	2.15	2.51	2.87	3.23	3.59
Water P.D(kPa)		23.5	24	37	40	50	30	38	42
Noise(dB(A))		52	53	55	57	58	60	61	61
Weight(kg)		39	40	42	49	55	66	80	84

- Note:** 1. Cooling: inlet/outlet water temperature 7°C / 12°C, inlet air DB27.0°C, WB19.5°C.  
 2. Heating: inlet/outlet water temperature 60°C / 50°C, inlet air DB21.0°C.  
 3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .

## Medium Static Pressure-4 pipes 3+1 rows

Model		RFP102	RFP136	RFP170	RFP204	RFP238	RFP272	RFP306	RFP340
Air flow(m <sup>3</sup> /h)	H	1020	1360	1700	2040	2380	2720	3060	3400
	M	765	1020	1275	1530	1785	2040	2295	2550
	L	561	748	935	1122	1309	1496	1683	1870
Cooling capacity(KW)	H	5.17	6.89	8.61	10.34	12.06	13.78	15.5	17.23
	M	4.08	5.44	6.80	8.16	9.53	10.89	12.28	13.61
	L	3.10	4.13	5.17	6.20	7.23	8.27	9.30	10.34
Heating capacity(KW)	H	4.27	5.70	7.12	8.55	9.97	11.40	12.82	14.25
	M	3.25	4.33	5.41	6.50	7.58	8.66	9.75	10.83
	L	2.48	3.31	4.13	4.96	5.79	6.61	7.44	8.26
Fan	Type	Double-inlet forward centrifugal fan							
	Qty	1	1	1	2	2	2	2	3
Motorr	Power	220V ~ 50Hz							
	Qty	1	1	1	1	1	1	1	2
	Input(W)	270	300	350	405	454	555	610	640
Heat Exchanger	Max working pressure	1.6 Mpa							
	Rows	3+1	3+1	3+1	3+1	3+1	3+1	3+1	3+1
	Water pipe size for cold water	DN25							
	Water pipe size for hot water	DN20							
	Drain pipe	DN20							
Cooling water flow(m <sup>3</sup> /h)		0.89	1.19	1.48	1.78	2.07	2.37	2.67	2.96
Cooling water P.D.(kPa)		23	23.5	36	35	42	31	39	43
Heating water flow(m <sup>3</sup> /h)		0.37	0.49	0.61	0.74	0.86	0.98	1.10	1.23
Heating water P.D.(kPa)		9.89	10.62	16	27.32	32.43	22.22	27.59	30.07
Noise(dB(A))		52	53	55	57	58	60	61	61
Weight(kg)		35	36	38	45	50	61	77	81

- Note:**
1. Cooling: inlet/outlet water temperature 7°C / 12°C, inlet air DB27.0°C, WB19.5°C.
  2. Heating: inlet/outlet water temperature 60°C / 50°C, inlet air DB21.0°C.
  3. The noise in the table is measured by the unit in a totally anechoic room with a background noise of 16.5dB (A) .

## High Static Pressure-2 pipes 3 rows

Model		RFP204	RFP238	RFP270	RFP306	RFP340
Air flow(m <sup>3</sup> /h)	H	2043	2377	2708	3062	3308
	M	1735	2001	2313	2624	2900
	L	1552	1806	2086	2309	2552
Cooling capacity(KW)	H	10.91	12.46	13.39	14	16.10
	M	9.56	10.55	11.74	12.42	14.16
	L	8.29	9.55	10.79	10.96	12.22
Heating capacity(KW)	H	18.19	20.77	22.32	23.60	26.84
	M	13.82	15.79	16.96	17.94	20.40
	L	10.55	12.05	12.95	13.69	15.57
Fan	Structure	Double-inlet forward centrifugal fan				
	Qty	2	2	2	2	2
Motorr	Power	220V ~ 50Hz				
	Qty	2	2	2	2	2
	Input(W)	334	396	428	517	710
Heat exchanger	Structure	Copper pipe with aluminium fins				
	Max. working Pre.	1.6 Mpa				
	Rows	3	3		3	3
	Water pipe	DN25				
	Drain pipe	DN20				
	Water flow(m <sup>3</sup> /h)	1.88	2.18	2.36	2.51	2.86
	Water P.D(kPa)	21.26	24.07	27.20	33.02	37.15
	External static pressure(Pa)	150				
	Noise(dB(A))	52	54	56	57	59
Dimension(mm)	L	1081	1211	1381	1381	1571
	W	806	806	806	806	806
	H	375	375	375	375	375
	Weight(kg)	62	73	85	93	107

**Note:** 1. Tesing: esp: 150pa.

2. Cooling: Air inlet (DB) 27°C, (WB) 19.5°C. Water inlet 7°C, water outlet 12°C

3. Heating: Air inlet (DB) 21°C. Water inlet 60°C, water flow same as cooling condition

## High Static Pressure-2 pipes 4 rows

Model		RFP204	RFP238	RFP270	RFP306	RFP340
Air flow(m <sup>3</sup> /h)	H	1979	2309	2629	2973	3298
	M	1682	1962	2313	2624	2900
	L	1504	1756	2086	2309	2552
Cooling capacity(KW)	H	11.93	14.36	15.36	17.17	19.98
	M	10.5	12.63	13.77	14.84	17.36
	L	9.19	11.06	12.47	12.81	14.84
Heating capacity(KW)	H	19.89	23.94	25.61	28.62	33.31
	M	15.11	18.19	19.46	21.75	25.31
	L	11.53	13.88	14.85	16.60	19.32
Fan	Structure	Double-inlet forward centrifugal fan				
	Qty	2	2	2	2	2
Motorr	Power	220V ~ 50Hz				
	Qty	2	2	2	2	2
	Input(W)	430	476	557	717	910
Heat exchanger	Structure	Copper pipe with aluminium fins				
	Max. working Pre.	1.6 Mpa				
	Rows	4	4		4	4
	Water pipe	DN25				
	Drain pipe	DN20				
	Water flow(m <sup>3</sup> /h)	2.05	2.52	2.64	2.95	3.43
	Water P.D(kPa)	30.04	31.29	32.01	32.01	55.86
	External static pressure(Pa)	150				
	Noise(dB(A))	53	55	58	59	61
Dimension(mm)	L	1081	1211	1381	1381	1571
	W	806	806	806	806	806
	H	375	375	375	375	375
	Weight(kg)	65	76	87	95	110

**Note:** 1. Tesing: esp: 150pa.

2. Cooling: Air inlet (DB) 27°C, (WB) 19.5°C. Water inlet 7°C, water outlet 12°C

3. Heating: Air inlet (DB) 21°C. Water inlet 60°C, water flow same as cooling condition



### 3. INSTALLATION REQUIREMENTS

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- Professionals are required for installation, wiring and maintenance, otherwise it may cause motor burnout, water leakage, electric shock or fire.
- The unit should be installed on the basis of sufficient load-bearing capacity, otherwise it may cause personal injury after loosening.
- During the installation process, it is strictly prohibited to handle the volute and the impeller handling unit, and it is strictly prohibited to hoist the hand-held motor. The volute of the fan must not be impacted to avoid deformation of the volute and friction or noise during the operation of the fan.
- For a horizontally installed unit, the four lifting points must be ensured that the unit is at a level during installation to prevent the condensate pipe from being higher than the condensate tray to cause condensate outflow to cause overflow.
- The concealed unit must be provided with an access door at the installation location for daily maintenance.
- An air filter must be installed in the air system to prevent dust from adsorbing on the surface of the heat exchanger for a long time and causing the heat exchanger to fail.
- The inlet and outlet pipes of the unit must be equipped with valves to facilitate the shut-off of the water system during adjustment and maintenance. The unit can only bear its own weight and cannot bear the water pipe and other external forces. When connecting the water pipe to the unit, rubber or metal hoses should be used. The inlet of the unit must be installed with a filter no larger than 16 mesh, and pay attention to the cleanliness of the inlet and outlet pipes.
- Do not use excessive force when connecting pipelines to avoid water leakage due to coil damage.
- After installation, be sure to remove all debris left in the condensate box during installation to ensure that the condensate drain channel is clear.
- Connect the wires strictly according to the electrical schematic diagram, and confirm that the third gear test runs normally.
- Unit power supply: single 220V-50HZ, the unit needs to be reliably grounded to prevent fire or personal injury caused by electrical leakage. When it is difficult to start the unit, please check whether the power supply voltage is normal and whether the wind wheel is in contact with the volute.
- After the power is turned on, the fan should be started to observe whether the rotation direction is correct.
- When the speed control switch of the unit is turned on, it should be started from the high grade, and then select other grades. When a switch is responsible for the sharing of multiple units, it must be noted that the speed of each unit should be the same.
- The temperature of the cold water supply of the unit in summer should not be lower than 6 ℃, and the temperature of the hot water supply in winter should not be higher than 80 ℃. The cold and hot water used must consider the local water quality and be softened if necessary.
- The unit is allowed to use the maximum pressure of 1.6MPa.

## 4.MAINTENANCE

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- When re-inspecting or repairing the fan coil unit, to ensure safety, be sure to cut off the power supply.
- The air filter should be cleaned regularly to avoid affecting the journey.
- When the motor runs normally, but the indoor effect is poor, first check whether the air volume at the air outlet is sufficient. If the air volume is insufficient, the air filter is generally blocked.
- When the temperature difference between the inlet and outlet water is large, the water filter is generally clogged. Please clean the corresponding filter according to different situations.
- Finned heat exchangers should be regularly inspected and cleaned to keep them clean and ensure good heat transfer.
- When the unit is stopped for long time, the pipe should be filled with water or other methods should be used to reduce the corrosion of the pipe. When used in winter, the water in the pipe must be drained. If some of the water in the horizontal unit cannot be exhausted, antifreeze can be added to the water to prevent the copper tube from freezing and cracking.

## 5.ORDERING INSTRUCTIONS

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- When selecting fan coil unit, please specify specifications, model, and the direction of the inlet and outlet pipes.
- When selecting the horizontal fan coil unit with air return box, please indicate the return air position.
- Please indicate the static pressure at the outlet of the unit, the standard type is 12Pa, and the medium static pressure is divided into 30Pa and 50Pa. If there is no special requirement, it will be supplied according to standard static pressure type.
- If you need extended drain pan, please specify in advance. If there is no special requirement, it will be supplied according to standard static pressure type.
- If you have other needs, please consult the salesman in advance.

## TESTING CENTER



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

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

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



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# MAIN PROJECTS

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High school building in Brazil



Presidential palace of Kazakhstan



Shanxi Dingxiang County People's Court



Shanxi Yuncheng odd Star Technology Co., Ltd



Beijing Grand Oriental Hotel



Shanxi Linfen High Speed Rail Station



Beijing Sihui building materials city



Shanxi Tongmei Group Zhangze Power Puzhou Power Generation Branch



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**Version number: 2020.04**

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

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