RUIDONG

FRESH AIR EXCHANGE 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.

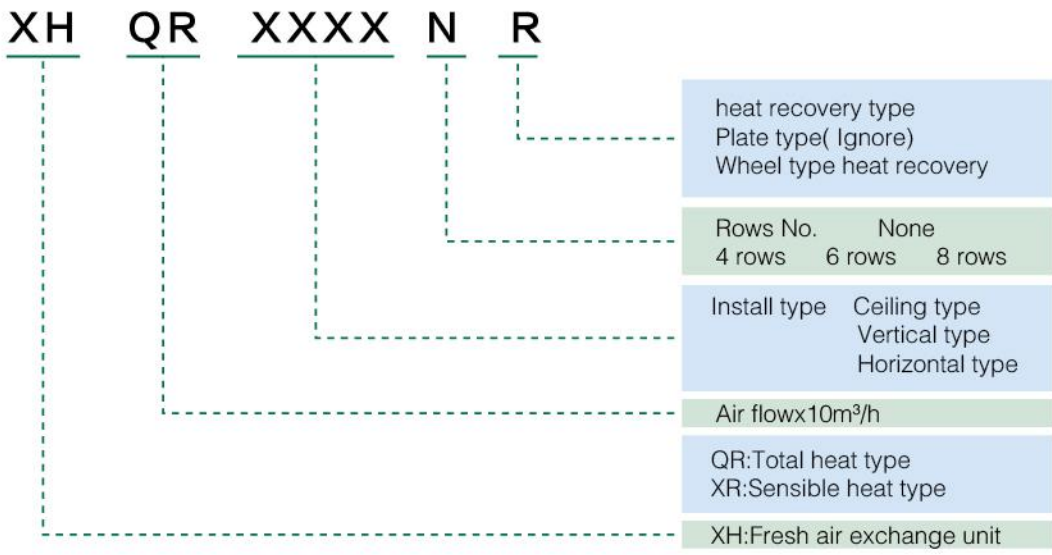
Ruidong Air Conditioning wishes you: Cooling air for propitious summer, spring returns with warm air from Ruidong.

CERTIFICATIONS

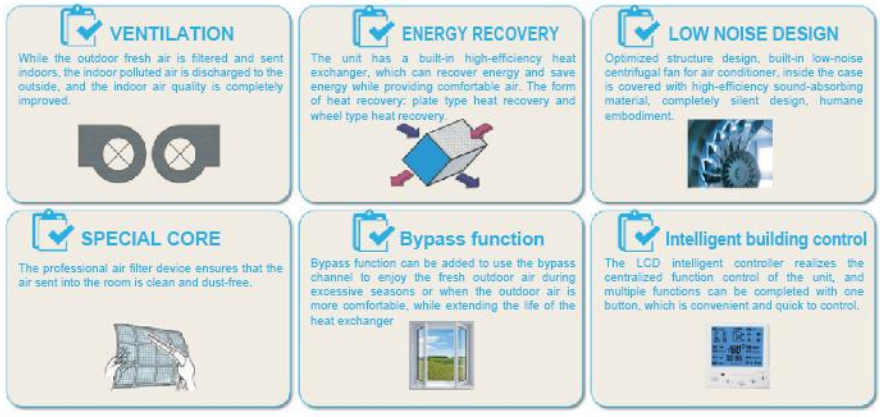
Ruidong group always takes "create first-class quality, offer sincere service" as the quality concept, builds customer-oriented quality management system, focuses on teamwork and insists on continuous innovation.

CONTENTS

1. NAMING SCHEME



2. BRIEF INTRODUCTION



Ventilation

While the outdoor fresh air is filtered and sent indoors, the indoor polluted air is discharged to the outside, and the indoor air quality is completely improved.

Energy recovery

The unit has a built-in high-efficiency heat exchanger, which can recover energy and save energy while providing comfortable air. The form of heat recovery: plate type heat recovery and wheel type heat recovery.

Low noise design

Optimized structure design, built-in low-noise centrifugal fan for air conditioner, inside the case is covered with high-efficiency sound-absorbing material, completely silent design, humane embodiment.

Special core

The professional air filter device ensures that the air sent into the room is clean and dust-free.

Complete variety

According to the working principle, there are wheel type and plate type; according to the structural form, there are ceiling type, horizontal type and vertical type; with and without coil.

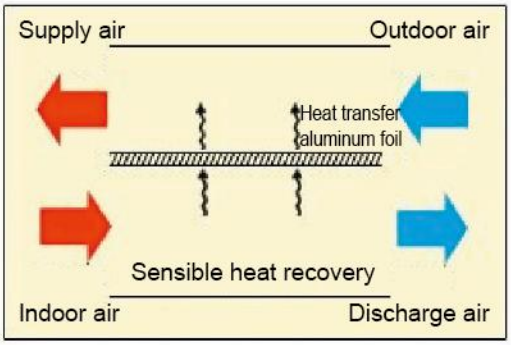
3. SCOPE OF APPLICATION

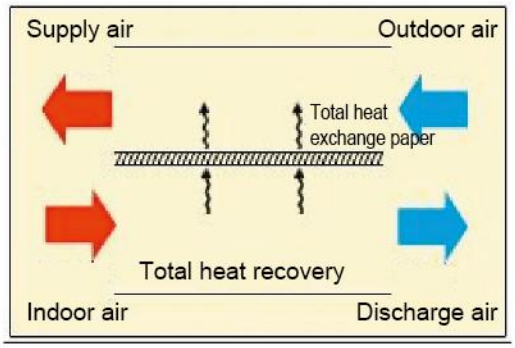
Suitable for conference rooms, laboratories, office buildings, computer rooms, restaurants, shops and other fitness and entertainment venues. It has various forms and adapts to different installation environments. There are ceiling forms and landing forms, which are flexible and diverse. Complete functions, two-way ventilation, air purification, and energy recovery.

4.WORKING PRINCIPLE

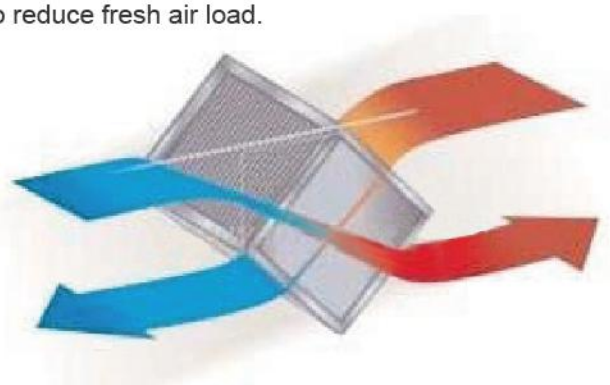
Working principle of plate type heat recovery:

Plate heat recovery can be divided into two types: sensible heat recovery and total heat recovery:



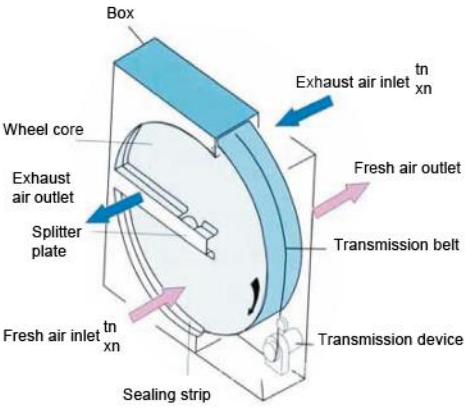


Two cross-flowing air enter the two channels of the plate heat exchanger respectively. In summer, under the action of the temperature difference between the fresh air and the exhaust air, the heat is transferred from the fresh air to the exhaust air, so that the temperature of the fresh air is lowered and the temperature of the exhaust air is increased, thereby achieving a purpose to reduce fresh air load.



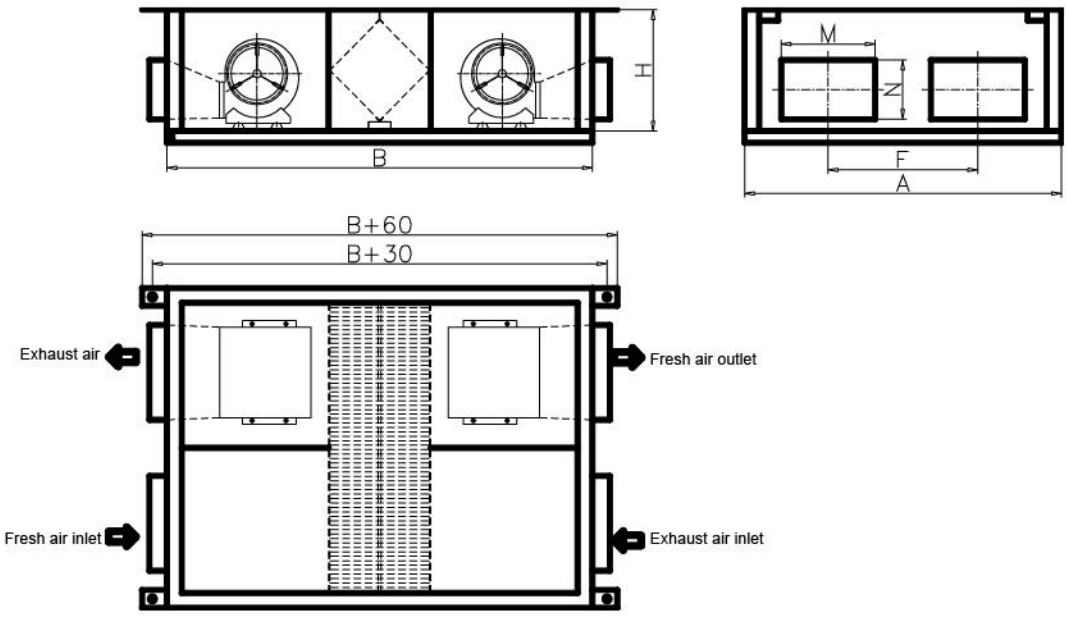
Working principle of wheel type heat recovery:

The continuously rotating runner acts as a heat storage core. The fresh air passes through one semicircle of the wheel, while the exhaust air passes through the other semicircle of the wheel in reverse direction. In this way, the fresh air and exhaust air pass through the wheel in opposite directions alternately. In winter, the heat storage core of the wheel absorbs the heat (humidity) in the exhaust air. When it is switched to the fresh air side for testing, due to the temperature (humidity) difference, the heat storage core will release the heat (humidity) in it, and then return to the exhaust air to continue to absorb heat (humidity). The wheel reciprocates in this way to realize energy recovery. The summer operation is the opposite, the principle is shown in the figure.



5. UNIT DIAGRAM & SPECIFICATION

Small ceiling type diagram

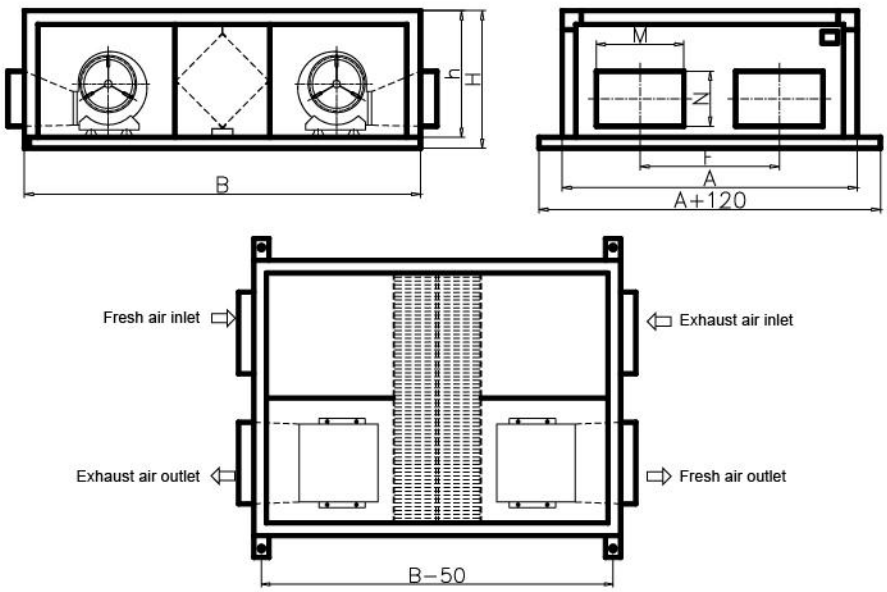


Small ceiling type specification

Model	XH-30D	XH-40D	XH-50D	XH-60D	XH-80D
A(mm)	700	700	700	900	900
B(mm)	1100	1100	1100	1100	1100
H(mm)	320	320	320	320	320
F(mm)	330	330	330	450	450
M(mm)	230	230	230	240	240
N(mm)	120	120	120	130	130
Power supply	220V/50Hz				
Air flow (m³/h)	300	400	500	600	800
Total pressure (Pa)	90	95	100	110	110
Total heat recovery rate%	Cooling condition≥50 Heating condition≥55				
Sensible heat recovery rate%	Cooling condition≥60 Heating condition≥65				
Input power (KW)	200	220	240	270	300
NoisedB(A)	60	60	60	61	62
Weight (kg)	31	32	33	35	38

Note: For small units, it is recommended to only make total heat type

Medium ceiling type diagram



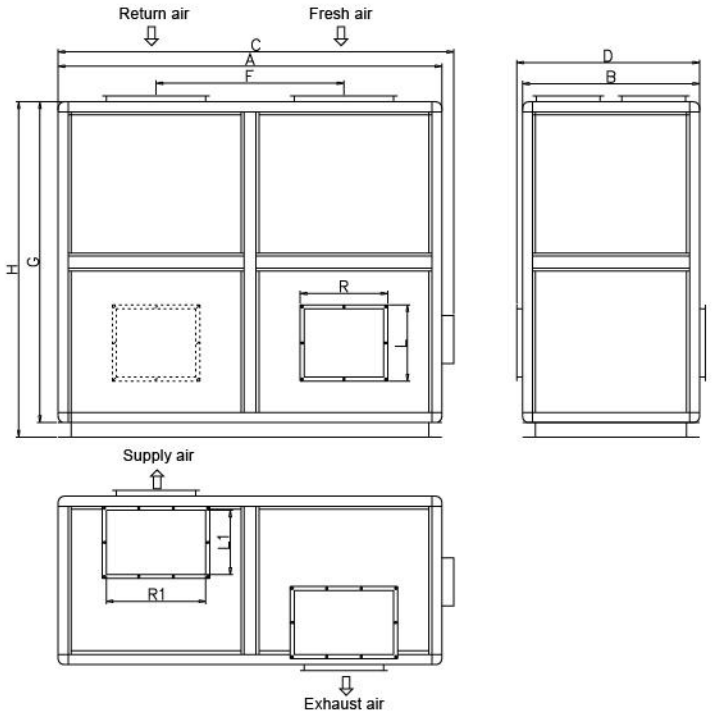
Medium ceiling type specification

Model	Unit and install dimension(mm)							Power supply	Air flow (m^3/h)	Total pressure (Pa)	Total heat recovery rate%	Sensible heat recovery rate%	Input power (kW)	Noise dB(A)	Weight (kg)
	A	B	H	h	F	M	N								
XH−100D	950	1260	570	500	445	300	160	380V/50Hz	1000	110	Cooling condition≥50 Heating condition≥55	Cooling condition≥60 Heating condition≥65	0.32×2	60	90
XH−120D	950	1340	570	500	445	300	160		1200	110			0.34×2	60	95
XH−150D	1240	1420	570	500	590	350	190		1500	110			0.37×2	60	100
XH−200D	1240	1420	625	555	590	380	220		2000	150			0.45×2	61	110
XH−250D	1240	1730	625	555	590	400	250		2500	150			0.55×2	61	130
XH−300D	1575	1730	650	580	757	500	250		3000	200			0.75×2	62	150
XH−400D	1890	1820	725	655	915	650	250		4000	200			1.1×2	64	180
XH−500D	2100	1820	725	655	1020	650	250		5000	250			1.5×2	66	210
XH−600D	2300	2000	830	760	1120	650	350		6000	250			1.5×2	68	250
XH−700D	2400	2060	830	760	1170	650	350		7000	300			1.9×2	69	265
XH−800D	2500	2120	830	760	1220	650	350		8000	300			2.2×2	69	280
XH−1000D	2800	2240	935	1005	1370	650	400		10000	350			3.0×2	69	350
XH−1200D	3000	2360	935	1005	1470	650	400		12000	380			3.7×2	70	420

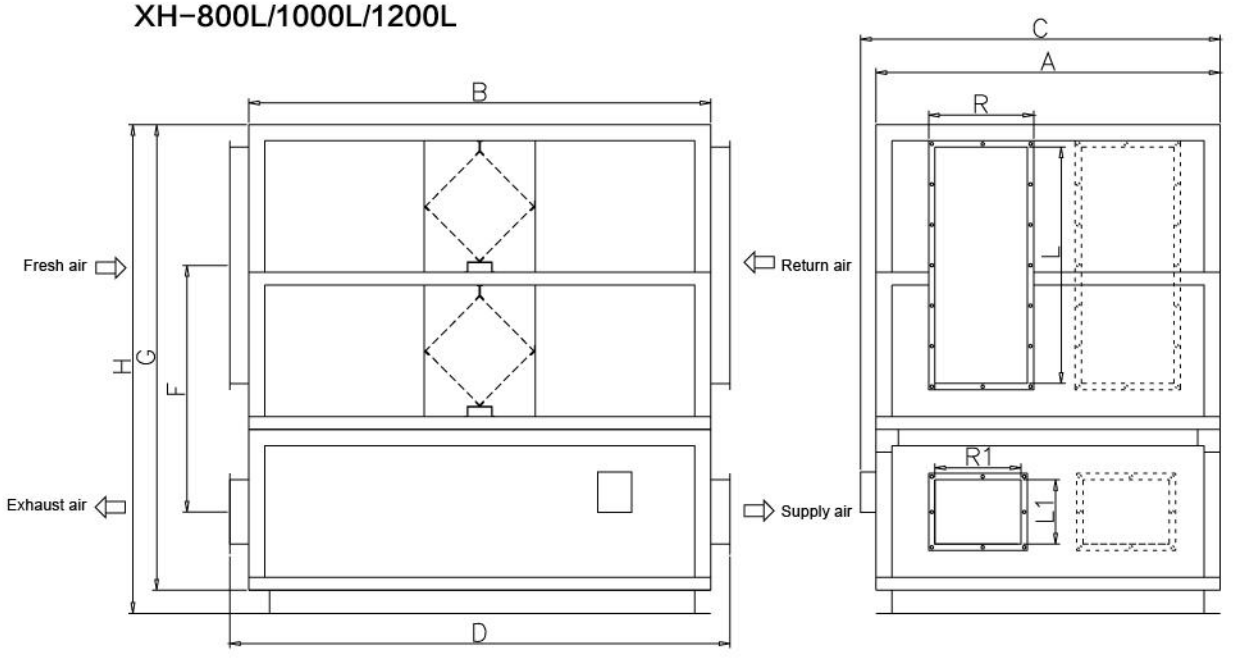
Note:
1. XH-1000 and XH-1200 are recommended to be horizontal type. If they are used as ceiling-mounted units, special reinforcement must be done.
2. Sensible heat type unit with condenser tube, total heat type unit without condenser tube.

Large vertical type diagram

XH-400L XH-500L XH-600L



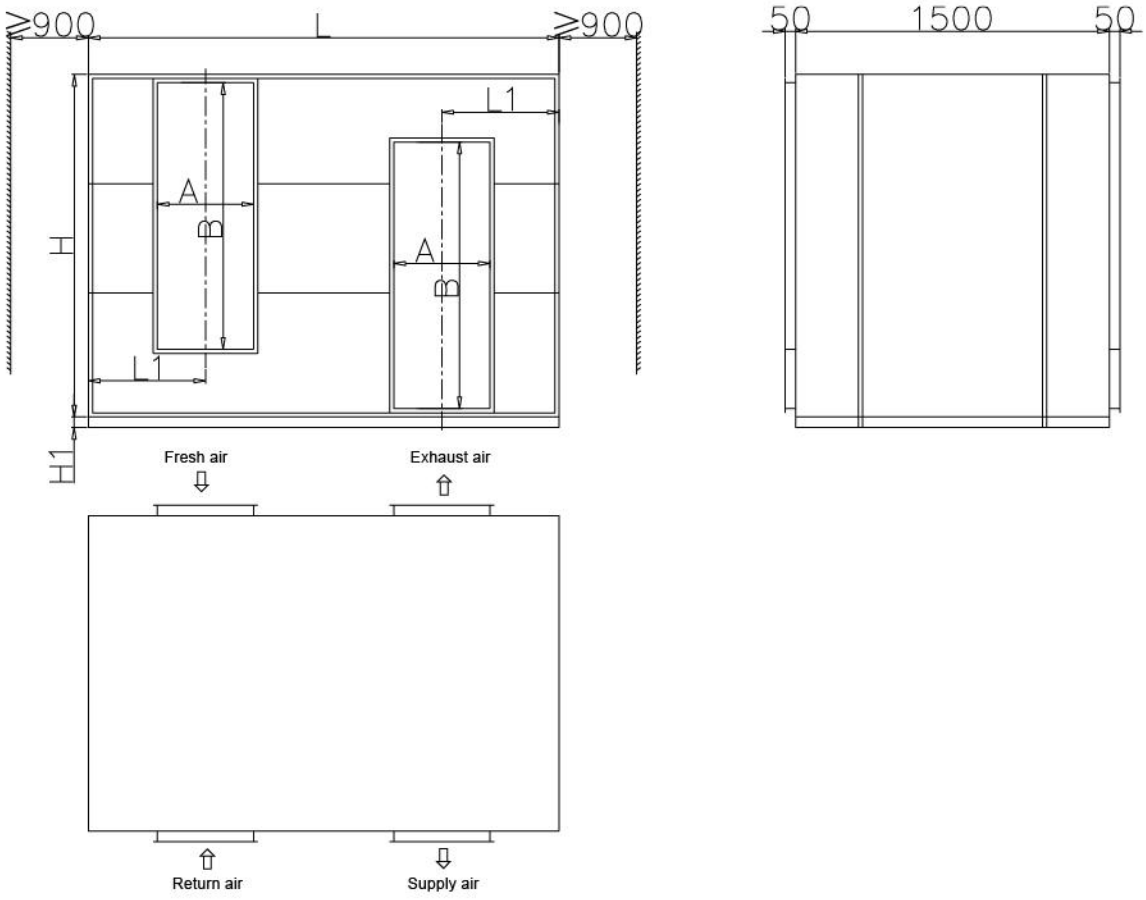
XH-800L/1000L/1200L



Large vertical type specification

Model		XH-400L	XH-500L	XH-600L	XH-800L	XH-1000L	XH-1200L
Unit and install dimension (mm)	A	1850	2250	2550	1850	2250	2550
	B	790	790	790	1500	1500	1500
	C	1930	2330	2630	1950	2350	2650
	D	890	890	890	1700	1700	1700
	E	50	50	50	100	100	100
	F	1022	1105	1255	1290	1290	1290
	G	1600	1600	1600	2455	2535	2615
	H	1700	1700	1700	2555	2635	2715
	L × R	340 × 400	340 × 400	400 × 450	1250 × 500	1250 × 500	1250 × 500
	L1 × R1	320 × 500	320 × 600	320 × 700	320 × 500	400 × 500	400 × 600
Power supply		380V/50Hz					
Air flow (m^3/h)		4000	5000	6000	8000	10000	12000
ESP (Pa)		320	320	320	350	350	370
Heat recovery rate%		Cooling condition≥50 Heating condition≥55					
Rated input power (KW)		1.1 × 2	1.5 × 2	1.8 × 2	2.2 × 2	3.0 × 2	3.8 × 2
Noise dB(A)		64	65	66	68	69	69
Weight (kg)		350	385	650	950	1150	1350

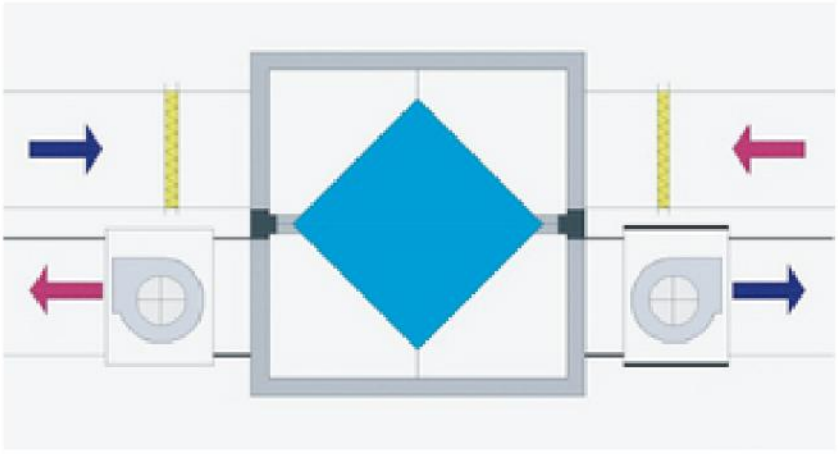
Large horizontal type diagram



Large horizontal type specification

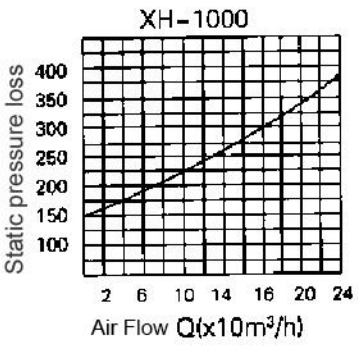
Model		XH-1000W	XH-1200W	XH-1500W	XH-2000W	XH-3000W	XH-4000W	XH-5000W
Unit and install dimension	L(mm)	2250	2670	3300	4400	4400	4400	4400
	H(mm)	1630	1630	1630	1600	2375	3150	3925
	L1(mm)	560	685	838	1112	1112	1112	1112
	A(mm)	500	1000	1000	800	1000	1000	1000
	B(mm)	1108	1120	1137	1137	1912	2687	3462
	H1(mm)	100	100	100	100	100	140	140
Air flow (m^3/h)		10000	12000	15000	20000	30000	40000	50000
ESP (Pa)		230	235	240	270	260	280	300
Heat recovery rate%		Cooling work condition≥50 Heating work condition≥55						
Weight (kg)		700	800	950	1300	1950	2600	3250

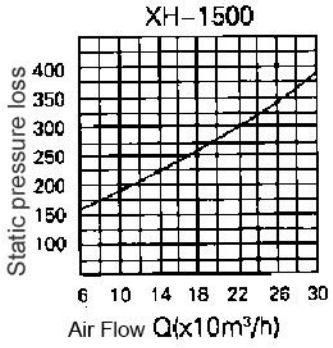
Supporting use diagram

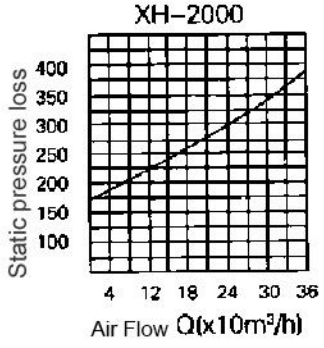


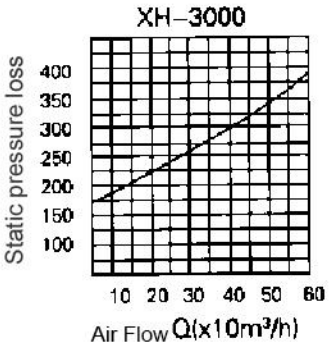
The horizontal series unit needs to be equipped with a fan box to achieve air flow and energy recovery. When selecting the air box, the pressure value should be reasonably determined according to all the resistance of the ventilation system, such as the resistance of the heat exchange box, air duct and other parts. The combined total heat exchanger can be used alone or in conjunction with the air conditioning box to pre-treat the fresh air, thereby reducing the fresh air load in the air conditioning system.

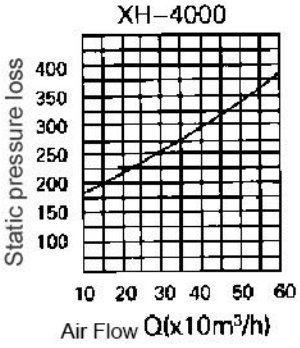
Airflow resistance curve

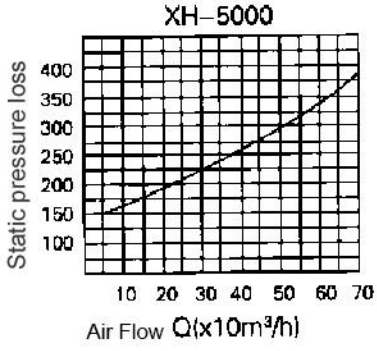












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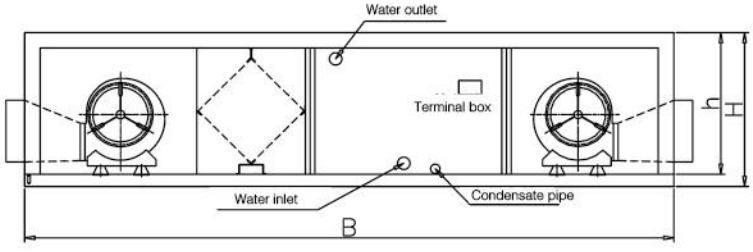
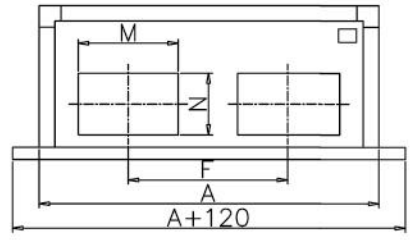
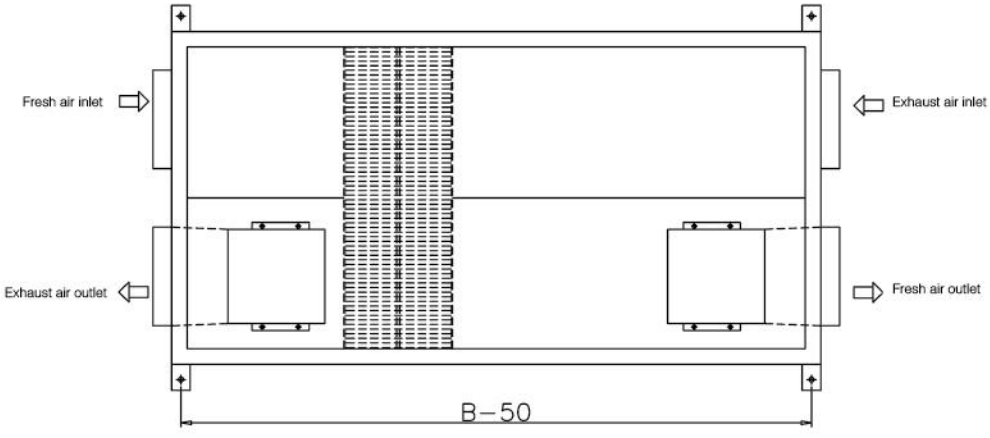
With Cooling Coil Type Fresh Air Exchange Unit Specification

Model		XH-250D4(/6/8)			XH-300D4(/6/8)			XH-400D4(/6/8)			XH-500D4(/6/8)			XH-600D4(/6/8)			XH-800D4(/6/8)		
		4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows
Unit and installation dimensions (mm)	A	1240			1575			1890			2100			2300			2500		
	B	2360			2360			2450			2450			2630			2750		
	H	625			650			725			725			830			830		
	h	555			580			655			655			760			760		
	F	590			757			915			1020			1120			1220		
	M	400			500			650			650			650			650		
	N	250			250			250			250			350			350		
Cold water pipe size	DN	40			40			40			40			40			40		
Condensate pipe size	DN	25			25			25			25			25			25		
Power supply		380V/50Hz																	
Air flow (m^3/h)		2500			3000			4000			5000			6000			8000		
Total pressure (Pa)		150			200			200			250			250			300		
Total heat recovery rate%		Cooling condition≥50 Heating condition≥55																	
Sensible heat recovery rate%		Cooling condition≥60 Heating condition≥65																	
Input power (kW)		0.55×2			0.75×2			1.1×2			1.5×2			1.5×2			2.2×2		
Noise dB(A)		61			62			64			66			68			69		
Weight (kg)		150	160	170	180	195	210	220	240	260	250	270	290	300	325	350	340	370	400
Cooling capacity (kW)		21	26	31	26	33	39	35	44	52	43	54	64	52	66	78	70	89	105
Heating capacity (kW)		28	35	42	36	45	54	48	61	72	60	76	90	72	92	108	96	122	144

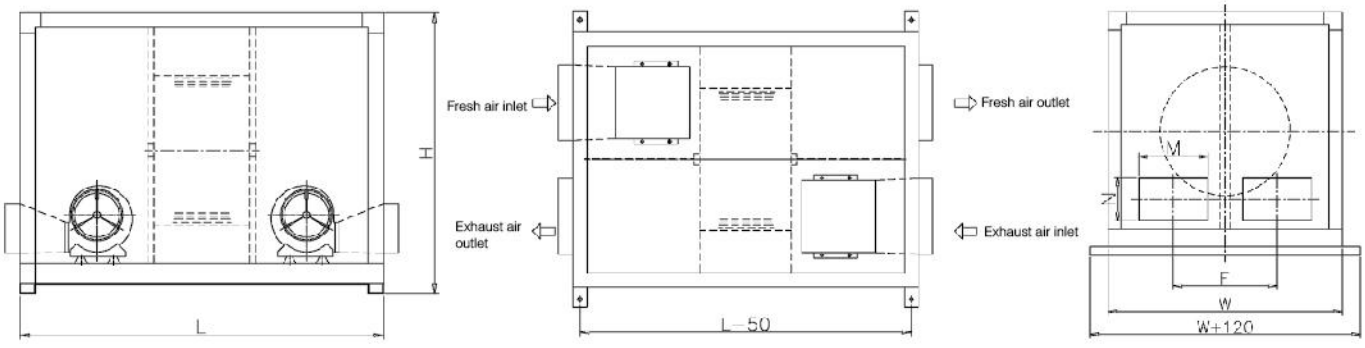






Wheel Heat Recovery Type Specification

Model	Air flow (m^3/h)	Total pressure Pa	Total heat recovery rate %	Sensible heat recovery rate %	Power supply	Wheel efficiency (kW)	Input power (kW)	Unit and installation dimensions (mm)						Noise dB (A)	Weight (kg)
								L	W	H	M	N	F		
XHR-100	1000	360	≥75%	≥70%	380/3/50	0.09	0.32×2	1700	1200	1100	300	160	400	60	135
XHR-120	1200	380	≥75%	≥70%	380/3/50	0.09	0.37×2	1700	1200	1100	300	160	400	60	145
XHR-150	1500	410	≥75%	≥70%	380/3/50	0.09	0.55×2	1700	1300	1100	350	190	400	60	154
XHR-200	2000	465	≥75%	≥70%	380/3/50	0.09	0.75×2	1700	1300	1100	380	220	425	61	170
XHR-250	2500	445	≥75%	≥70%	380/3/50	0.09	0.75×2	1900	1450	1200	400	250	475	61	200
XHR-300	3000	540	≥75%	≥70%	380/3/50	0.09	1.1×2	1900	1550	1200	500	250	475	62	230
XHR-400	4000	546	≥75%	≥70%	380/3/50	0.09	1.1×2	1900	1650	1300	650	250	500	64	278
XHR-500	5000	593	≥75%	≥70%	380/3/50	0.09	1.5×2	2100	1650	1400	650	250	550	66	320
XHR-600	6000	585	≥75%	≥70%	380/3/50	0.18	2.2×2	2100	1900	1500	650	350	600	68	380
XHR-700	7000	625	≥75%	≥70%	380/3/50	0.18	3×2	2300	2100	1500	650	350	625	69	400
XHR-800	8000	615	≥75%	≥70%	380/3/50	0.18	3×2	2300	2200	1600	650	350	675	69	430
XHR-1000	10000	681	≥75%	≥70%	380/3/50	0.18	4×2	2500	2200	1700	650	400	725	69	530
XHR-1200	12000	720	≥75%	≥70%	380/3/50	0.18	4×2	2500	2400	1800	650	400	775	70	620



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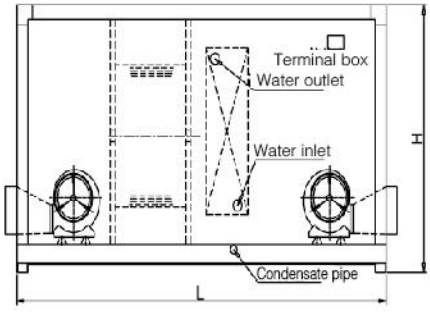
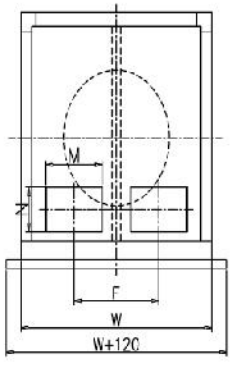
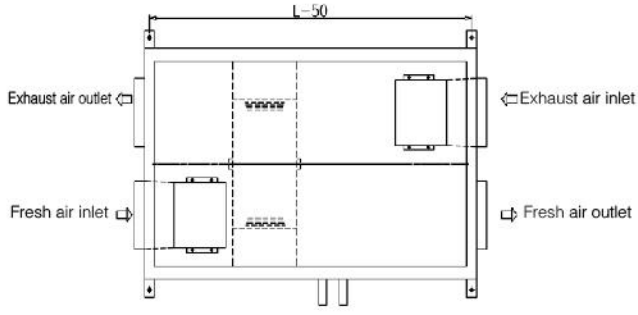
Wheel Heat Recovery With Cooling Coil Type Specification

Model		XHR-250			XHR-300			XHR-400			XHR-500			XHR-600			XHR-700			XHR-800		
		4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows	4Rows	6Rows	8Rows
Air flow (m^3/h)		2500			3000			4000			5000			6000			7000			8000		
Total pressure Pa		445			540			546			593			585			625			615		
Total heat recovery rate		⩾75%																				
Sensible heat recovery rate		⩾70%																				
Power supply		380/3/50																				
Wheel efficiency KW		0.09			0.09			0.09			0.09			0.18			0.18			0.18		
Input power (kW)		0.75×2			1.1×2			1.1×2			1.5×2			2.2×2			3×2			3×2		
Unit and installation dimensions (mm)	L	2530			2530			2530			2730			2730			2930			2930		
	W	1450			1550			1650			1650			1900			2100			2200		
	H	1200			1200			1300			1400			1500			1500			1600		
	M	400			500			650			650			650			650			650		
	N	250			250			250			250			350			350			350		
	F	475			475			500			550			600			625			675		
Cold water pipe size	DN	40			40			40			40			40			40			40		
Condensate pipe size	DN	25			25			25			25			25			25			25		
Noise dB (A)		61			62			64			66			68			69			69		
Weight (kg)		200	210	220	230	245	245	278	298	318	320	340	360	380	405	430	400	425	450	430	460	490
Cooling capacity (kW)		21	26	31	26	33	39	35	44	52	43	54	64	52	66	78	60	76	90	70	89	105
Heating capacity(kW)		28	35	42	36	45	54	48	61	72	60	76	90	72	92	108	84	106	126	96	122	144







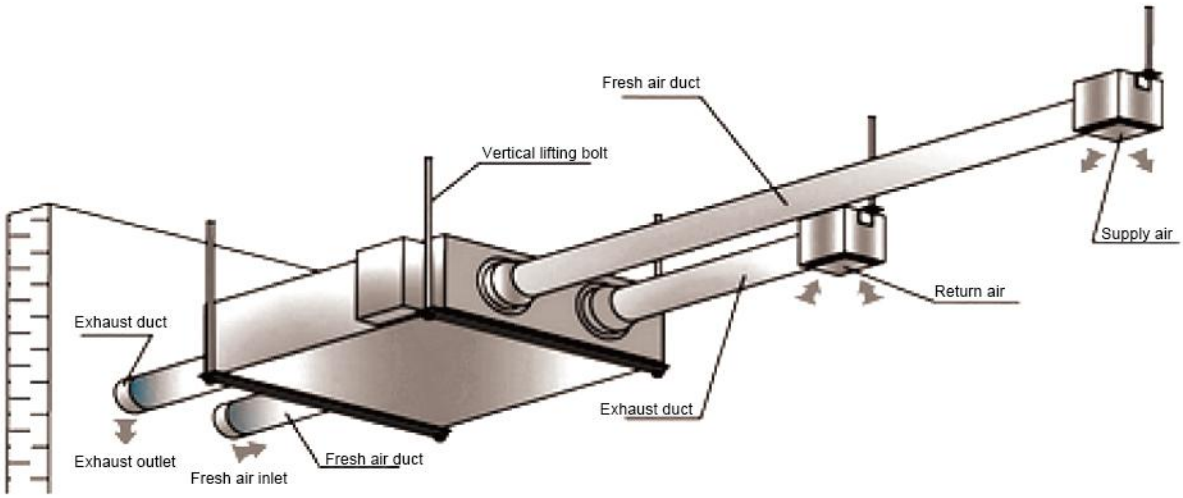
6. SELECTION & INSTALLATION GUIDE

Room type	NO Smoking					Light Smoking	Heavy smoking	
	Office	Shopping mall	Computer room	Sports hall	Inpatient ward	Dining room	KTV, bar, hotel	Meeting room
Fresh air per person Q(m^3/h)	25–62	8.5–21	40–100	8–20	17–42	20–50	30–75	50–125
Room fresh air ventilation frequency P(次/h)	1.56–3.90	1.06–2.66	2.50–6.25	0.5–1.25	1.06–2.65	1.25–3.13	1.88–4.69	3.13–7.81

Fresh air volume standards for different types of buildings(Fresh air m3/h.Per son)

Hotel buildings		Entertainment buildings		Office buildings		Residential buidlings	
Room type	Fresh air	Room type	Fresh air	Room type	Fresh air	Room type	Fresh air
Hotel/Room	30~50	Training room/gym	60~80	General office	30	General Villa apartment	30
Reception room	30~50	Squash/Tennis	40	Senior office	30~50	Senior villa Apartment	50
Restaurant/Banquet Hall	15~30	Chess and card room/ billiards room	40~50	Conference room/ Reception Room	30~50	Shopping mall	15~25
Coffee room	20~50	Swimming pool	50	Telephone exchange room	30	Inpatient ward	50
Function hall	15~25	Game Room	40~50	Computer room	30	Classroom	11~30
Business center	10~20	Leisure/video hall	20	Copy room	30	Exhibition hall	20~30
Foyer/lobby	10	Massage room	30	Laboratory	20~30	Movie theater	15~25
Salon	35	locker room	30				
Cabaret/KTV	30~50	Bar	17~50				
Dance hall	30	Nightclub	20				

Typical installation diagram



Calculate

A computer room area S=65 (m^2), net height=3 (m), personnel n=25, if calculated according to the fresh air volume required per person [take the required fresh air volume per person q=30 (m^3/h) , the total fresh air volume Q1=nxq=25x30=750 (m3 /h); if calculated according to the room fresh air exchange frequency [take the room fresh air exchange frequency p=4 (times/h)], then the fresh air volume Q2=p x s x h = 4 x 65 x 3=780 (m^3/h); Since Q2>Q1, Q2 is taken as the basis for equipment selection; combined with product models, XH-80D full heat exchange products can be selected.
Note: The room volume calculation formula: volume = length x width x height below the air outlet.
The number of fresh air exchange unit = room volume x required number of air changes / rated fresh air volume of a single fresh air exchange unit.

Also note

1. In order to make the environment smooth, the system exhaust air volume = fresh air volume
2. The size of the building space: the breathing zone of people living indoors is 2.4m in vertical height; the breathing zone of people in commercial buildings is 4.5m in vertical height, and the volume ratio of breathing zone to the entire space is about 0.26~0.47
3. The fresh air volume for residential and office buildings is not less than 30m3/h.p. Considering the two factors of the number of air changes and the minimum fresh air volume, the maximum fresh air volume of the two is taken as the basis for selection.
4. For stadiums, large conference rooms, theaters, etc., the fresh air volume selection can be determined according to the attendance rate and the number of air changes. If the person stays for less than 3 hours, the fresh air volume is determined according to the 50% attendance rate.
5. For central air-conditioning system spaces such as large shopping malls, select the fresh air volume according to 30% of the total air volume of the central air-conditioning system.
6. In factories, workshops and other places where toxic and harmful substances are emitted, the fresh air volume is determined according to the air volume required for the dilution concentration, and the type is selected according to the number of air changes.

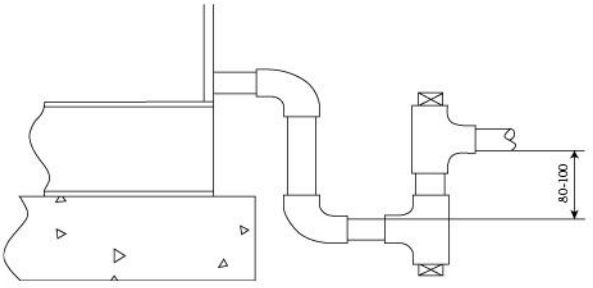
7. INSTALLATION

Ceiling type unit installation

● To make the designed air duct reach the lowest air resistance and noise, use a muffler or soft canvas connection between the fresh air outlet and the unit, and between the exhaust outlet and the host.
● For ceiling type unit, spring shock absorbers or rubber shock absorbers must be installed on the boom.
● When concealed indoor hoisting, maintenance and inspection ports must be reserved.
● The main engine and main air duct should maintain a slope angle of 3~5°, and the position of the main engine should be kept slightly higher.
● The metal duct must be insulated.
● PVC pipes, rubber corrugated pipes, aluminum foil asbestos pipes, and aluminum foil composite pipes have thermal insulation properties and can be installed and used directly.
● The installation of the air valve: The air volume control valve must be installed at the junction of the main air pipe and the branch pipe at the proximal and end ends, and the air flow deflector or air volume control valve can be used in the middle of the pipeline system
● The air ducts should be connected by flanges, and the connecting flange should be filled with rubber sealing strips.
● Choose the location of the air outlets: in principle, the opening of the air outlets should be uniform to ensure that the fresh air volume and exhaust air volume in various places in the room can be balanced.
● The tuyere should not be arranged in the following positions: the turning point of the wind pipe, the tail of the wind pipe, and the reducing position of the wind pipe.

Horizontal type unit installation

● The unit should be installed on a level basis, otherwise it may affect the section seal of the unit and the dynamic balance of the fan during operation.
● The base of the unit is equipped with forklift holes or lifting holes. When lifting the unit, a pad should be added between the lifting rope and the unit to avoid damage to the unit panel, so as not to affect the unit performance and installation accuracy. During the lifting process, the sling should avoid all water pipes and air pipe connections outside the power unit.
● The unit should be placed on a flat concrete foundation 200~250mm higher than the ground of the machine room (or channel steel welded foundation). The length and width of the concrete foundation are 200mm larger than the external contour of the unit, and there should be drainage ditch and floor drain. . The length and width of the channel steel foundation are the same as those of the base of the unit, and there should be drainage ditch and floor drain. The channel steel is provided by the user.
● There should be enough space around the unit, especially on the side of the unit's piping, wiring, and overhaul doors (not less than 1 meter recommended) to facilitate the unit's installation, convenient operation, and daily monitoring and maintenance.
● Each inlet and outlet pipes must be installed with valves and unions outside the unit, but the weight of the valves, pipes and equipment external to the unit must not be borne by the unit.
● The condensate drain pipe of the surface cooler should be equipped with a water seal to ensure smooth drainage (with photos). The water seal is provided by the user.
● The motor of the unit should be connected to a power source with overload protection and grounding protection.
● A flexible connection should be adopted between the unit and the external air duct to avoid the transmission of vibration.



Other matters needing attention

● Heat insulation and dew isolation measures should be adopted for the piping requiring public coils, and there should be piping for exhaust and drainage;
● If the heat exchange coil uses hot and cold water as the medium, the lower part is the water inlet and the upper part is the water outlet. If steam is used as the medium, the inlet and outlet are opposite. When steam is used as the medium, a condensate drain valve should be installed on the outer pipeline, and the condensate in the pipeline should be drained before steaming;
● The weight of the air pipe and water pipe connected to the unit cannot be borne by the unit;
● When connecting to the piping of the heat exchanger, please be careful not to use excessive force to avoid damage to the copper pipe;
● The designed working pressure of the coil is 1.6Mpa;
● Winter antifreeze measures for cooling coil and heating coil.

8. OPERATION

● Before starting, check whether the fan rotates flexibly, whether the fan impeller and the casing collide with each other. All mechanical and electrical equipment should be checked by professionals before they can be turned on. Jog check whether the rotation direction of the fan impeller is correct, and only can operate after there is no abnormality.
● When the unit has multiple functions, the interlocking interaction requirements of each functional section should be considered. For example, the electric heating section should be turned on after the fan is started, and the electric heater must be turned off before the fan turned off;
● System adjustments should be made before the fan is running. For example, when the air conditioner is running without a load, the air outlet should be blocked by 3/4 to ensure that the current of the motor is running at the rated current to prevent the motor from being burned.
● Do not close the air inlet and outlet air valves during operation to prevent excessive pressure in the machine and deformation of the unit. If necessary, install air valves and motor opening and closing interlocking devices.
● Before each operation of the unit, the valves of the water and air channels should be checked and kept in normal operating conditions.
● Check the belt tightness and wear on a regular basis. If the belt is too loose or runs slippery, you can adjust the adjusting bolt at the bottom of the motor. The belt should be replaced even if the belt is severely worn. Fans and fan bearings should be checked and refueled regularly to improve operating efficiency and life.
● The primary filter should be cleaned with water or detergent according to the degree of dirt, and the frequency of cleaning depends on the environment in which it is used.
● When the current resistance of the medium-efficiency filter rises to twice the initial resistance, it should be cleaned or replaced.
● When the unit is not operating in winter, the water in the coil should be drained; when the unit continues to run in winter, if it is shut down for a short time, the water in the coil must be kept flowing continuously and the fresh air valve should be closed to avoid damage to the coil. Long-term shutdown requires the water in the coil to be drained.
● The unit should be thoroughly cleaned every 1 to 2 years of operation. The inner wall of the copper pipe should be cleaned chemically to remove the scale in the copper pipe. At the same time, use compressed air or flush the dirt on the surface of the heat exchanger fin.
● In order to avoid blockage of the water passage of the heat exchanger, a water filter should be installed on the water inlet pipe of the heat exchanger and the filter screen should be cleaned regularly; cold, hot water and cleaning water should be treated with clean demineralized water.
● The unit should be managed by professionals, appoint a strict post responsibility system and operating procedures, establish equipment operation and maintenance rules and files, and strengthen daily maintenance and maintenance.

Wheel maintenance

Regular visual inspection is necessary. After regular inspections at intervals of the first three months, maintenance can be carried out every 12 months. Check according to the following items:

- The tension of the belt
- Sealing of the motor
- The state of the bearing (evaluated by the noise of the bearing)
- The state of the sliding seal
- The state of the horizontal sealing strip
- The situation of the frame
- The situation of the wheel

Based on long-term practical experience, clogging of the wheel installed in the air handling device is undesirable. However, in special occasions, dust will inevitably enter the exchanger and must be cleaned according to the following procedures:

Use a soft brush or vacuum cleaner to remove dust and fibers. When using compressed air to clean, do not damage the runner and keep a certain distance.

Oil, liquor, etc. can be removed with hot water (maximum 70°C) or grease solvent by washing or soaking. High-voltage devices can also be used, but the following conditions must be met:

A. Use a smooth 40° nozzle;

B. The highest water pressure does not exceed 40bar;

C. When cleaning, whether mechanical or chemical methods are used, care must be taken not to damage the heat exchanger;

D. Choose a harmless cleaning agent;

Warning:

It must be ensured that the steam coil closes the steam valve before the fan stops;
It must be ensured that the steam humidifier closes the steam valve before the fan stops;
It must be ensured that the electric heating is turned on after the fan is turned on, and the electric heating is turned off 5 minutes before the fan stops.

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

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