



Heat & Energy Recovery Ventilators  
Air to Air Heat Exchangers  
Air Handling Units

ENERGY RECOVERY  
VENTILATION  
SOLUTIONS

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\* Data is subject to changes without notification due to product improvement





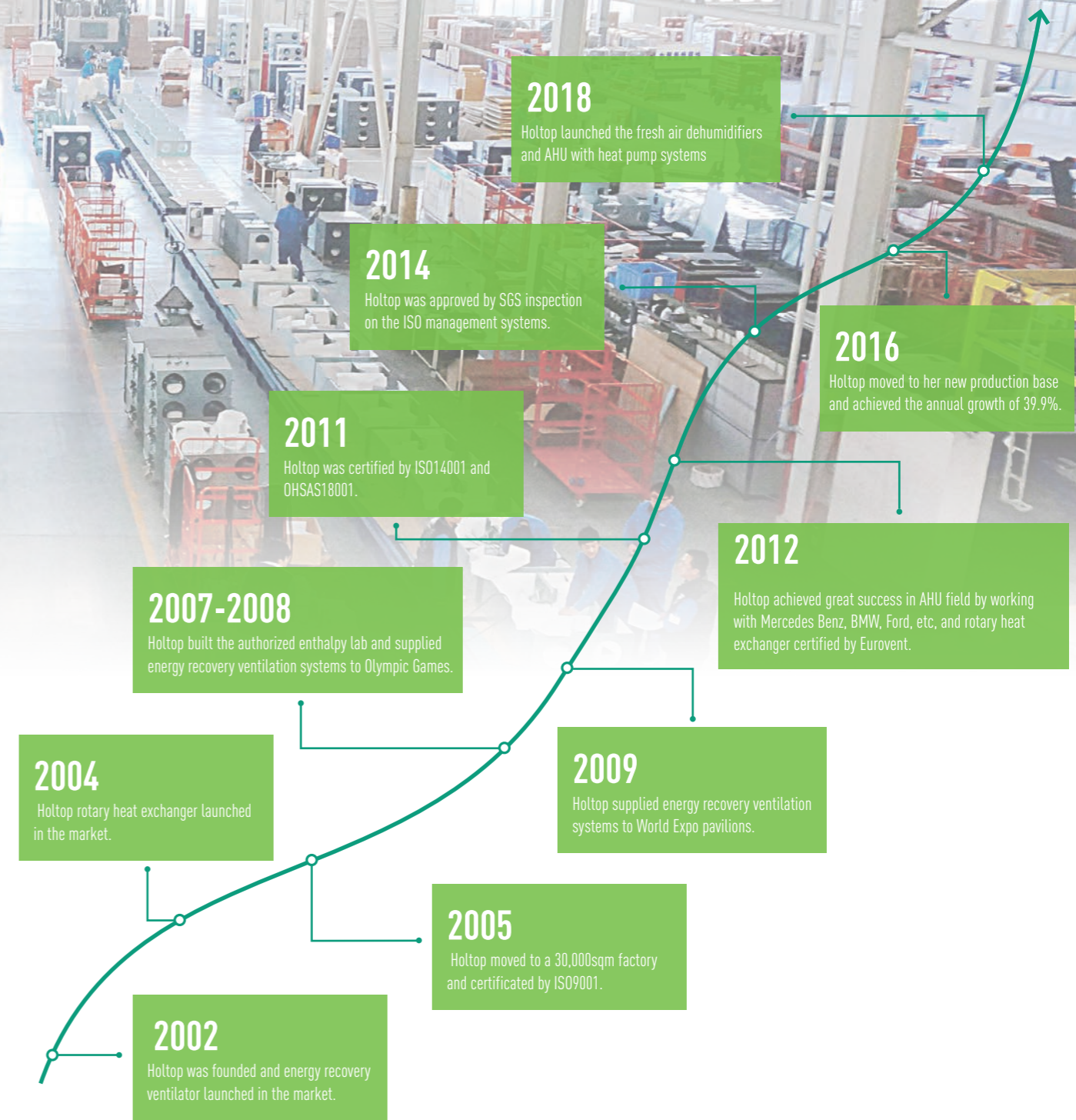
## Holtop Profile

Holtop is the leading manufacturer in China specializing in the production of air to air heat recovery equipments. Founded in 2002, it is dedicated to the research and technology development in the field of heat recovery ventilation and energy saving air handling equipments for more than 15 years.

Holtop headquarters is located at the foot of Beijing Baiwangshan Mountain, covering area of 30,000 square meters. The manufacturing base is in Beijing's Badaling Economic Development Zone, covering an area of 60 acres, with an annual production capacity of 200,000 units of air heat recovery equipments. Holtop builds a sound certificate system of ISO9001, ISO14001 and OHSAS18001 as well as product certification systems. Moreover, it has a laboratory certified by national authority. As a well-known manufacturer in the field of heat recovery, Holtop has a strong R&D team and possesses dozens of national invention patents, and participated in the compilation work of several national standards, Holtop was also elected as Zhongguancun High-Tech Enterprise.

Holtop has mastered the core technology of heat recovery, independently developing products like plate and rotary heat exchangers, various heat & energy recovery systems and air handling units. Products are exported to more than 41 countries and regions. Holtop continuously ranks the top in domestic market of heat and energy recovery ventilators.

Holtop is always committed to the mission of delivering highly efficient and energy saving products and solutions to improve indoor air quality, to ensure people's health and protect our earth.



HOLTOP  
FRESH AIR EXPERT  
SINCE 2002

**NO. 1**  
IN CHINA  
200,000 UNITS  
PER YEAR














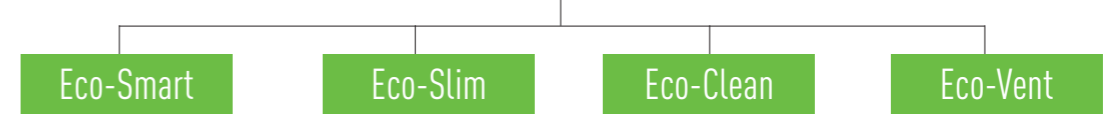
## Holtop Energy Recovery Ventilator

Energy recovery ventilators are central ventilation systems provide fresh air, remove indoor stale air and balance the humidity within a building. Besides, they can use the heat which recovered from the stale air to increase the incoming clean air to a comfortable temperature. These all help to create a clean and comfortable environment that enhances the well-being of building users.

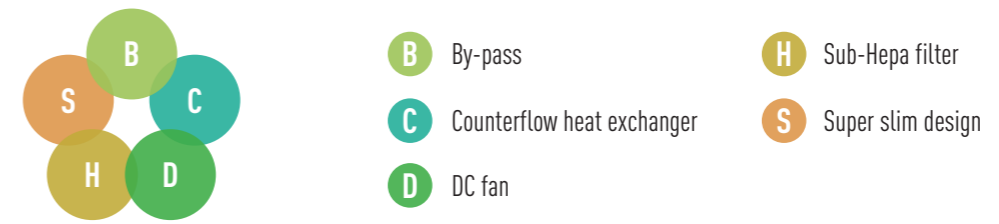
### Highlighted Features

-  High efficiency heat and humidity recovery for optimized comfort.
-  Professional air channel design and high quality components to make sure silence operation.
-  Multi-stage gradual filters to remove dust, PM2.5, bacteria and harmful substances
-  Providing fresh air all the time to make you feel breathing in the nature.
-  Easy installation and maintenance, 20% less thickness.
-  High energy saving, by reducing the load on the air conditioning system, delivering 40% energy savings compared with introducing untreated fresh air into a building.
-  Smart controller to decrease the energy costs of building with free cooling function, optional CO<sub>2</sub> sensor and humidity sensor to ensure proper ventilation while maintaining indoor comfort. Easy connection to central building control system.

### Holtop Energy Recovery Ventilator Eco Family



### Ventilation Range Overview



Product Series	Installation Type	Main Features	Airflow Range (m <sup>3</sup> /h)														
			80	100	150	200	250	300	350	400	600	650	800	1000	1300	1500-3000	4000-6000
Eco-Smart																	
DMTH series	Suspended	B, C, H, D															
DCTP series	Suspended	B, C, D															
Eco-Slim																	
D series	Suspended	S, H, C, D															
CPD series	Suspended	S, H, C, D															
Eco-Clean																	
PMTG series	Suspended	B, H, C, D															
ERVQ-B150-1A1F	Wall mounted	H, D															
ERVQ-L300-1A1F, ERVQ-L600-1A1F	Floor standing	H, D															
PMTG series	Suspended	H, C, D															
Eco-Vent																	
TH series	Suspended	B, C, D															
TZ series		B, C, D															
TG series	Suspended/ Floor standing	-															
H series	Suspended	-															
L TG/LD series	Floor standing	-															











## Eco-Smart Energy Recovery Ventilator

Modern buildings are being built tightly to improve energy efficiency. Eco-smart ERV is ideal ventilation solution for energy efficient buildings to reduce ecological footprint and improve human health. The energy can be saved by using DC motors and improving energy efficiency with smart control system, to achieve eco friendly climatic experience.









XHBQ-D1.5DMTHA - XHBQ-D20DMTHA

-   
DC Motor
-   
High Efficiency Heat Exchanger
-   
G3+F9 Filter
-   
Different Pressure Gauge Alarm
-   
Auto Bypass
-   
Intelligent Control



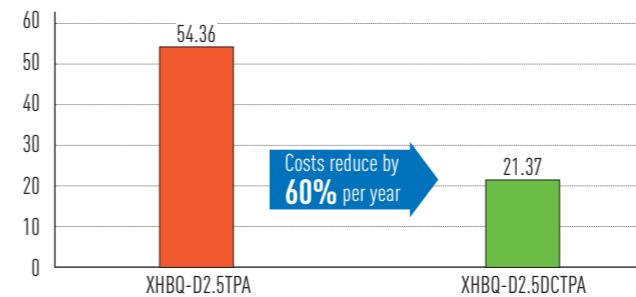
XHBQ-D1.5DCTPA - XHBQ-D20DCTPA

-   
DC Motor
-   
Innovative Counterflow Heat Exchanger
-   
10 Speeds
-   
Filter Alarm
-   
Auto Bypass
-   
Intelligent Control

### Higher Energy Efficiency and Ecology by Powerful Motors

Full series Eco Smart energy recovery ventilator are built in higher efficiency brushless DC motors, power consumption is reduced by up to 70%, resulting in significant energy saving. VSD control which is suitable for most of the projects air volume and ESP requirement.

Running costs comparison of conventional ERV and Eco-smart ERV



Conditions:

- Location: Beijing
- Airflow: 250m<sup>3</sup>/h
- Summer: 24h/day x 122days = 2928h (Jun. To Sep.)
- Winter: 24h/day x 120days = 2880h (Nov. To Mar.)
- Electric charge: 0.08 USD/Kw.h

### High Efficiency Heat Exchanger

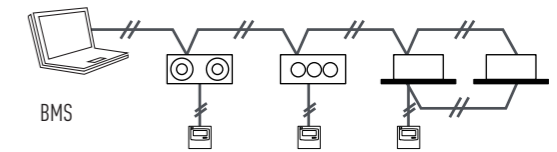
High efficiency enthalpy heat recovery, more comfortable indoor climate.

### Specifications

Model	Rated Airflow (m <sup>3</sup> /h)	External Pressure (Pa)	Enthalpy Efficiency (%)		Temperature Efficiency (%)	Noise dB(A)	Voltage (V)	Power Input (W)	N.W. (kg)
			Cooling	Heating					
XHBQ-D1.5DMTHA	150	70	60-65	63-70	75-80	31.5	220-240	38	25
XHBQ-D2.5DMTHA	250	90	62-71	65-73	73-81	34.5	220-240	85	27
XHBQ-D3.5DMTHA	350	140	62-70	65-73	74-82	37.5	220-240	107	33
XHBQ-D5DMTHA	500	110	63-72	67-75	76-84	39	220-240	140	38
XHBQ-D6.5DMTHA	650	100	60-67	65-71	74-82	41	220-240	160	62
XHBQ-D8DMTHA	800	140	63-71	65-73	76-82	42	220-240	188	72
XHBQ-D10DMTHA	1000	140	60-68	62-72	76-82	43	220-240	312	81
XHBQ-D13DMTHA	1300	135	58-71	59-75	74-82	43	220-240	405	81
XHBQ-D15DMTHA	1500	95	63-71	65-73	76-80	50	220-240	700	147
XHBQ-D20DMTHA	2000	115	60-68	62-72	76-82	51.5	220-240	724	167

Model	Rated Airflow (m <sup>3</sup> /h)	External Pressure (Pa)	Enthalpy Efficiency (%)		Temperature Efficiency (%)	Noise dB(A)	Voltage (V)	Power Input (W)	N.W. (kg)
			Cooling	Heating					
XHBQ-D1.5DCTPA	150	75	63-70	70-76	75-82	31.5	220-240	26	25
XHBQ-D2.5DCTPA	250	85	63-73	70-75	75-82	34.5	220-240	46	29
XHBQ-D3.5DCTPA	350	90	66-72	69-75	75-84	37.5	220-240	60	37
XHBQ-D5DCTPA	500	100	62-74	67-75	75-86	39	220-240	88	43
XHBQ-D6.5DCTPA	650	85	62-70	68-73	75-84	39.5	220-240	114	64
XHBQ-D8DCTPA	800	130	65-74	71-77	75-84	42	220-240	186	71
XHBQ-D10DCTPA	1000	110	65-74	71-78	75-85	43	220-240	243	83
XHBQ-D15DCTPA	1500	75	65-74	71-77	75-84	50	220-240	372	165
XHBQ-D20DCTPA	2000	60	65-74	71-78	75-85	51.5	220-240	486	189

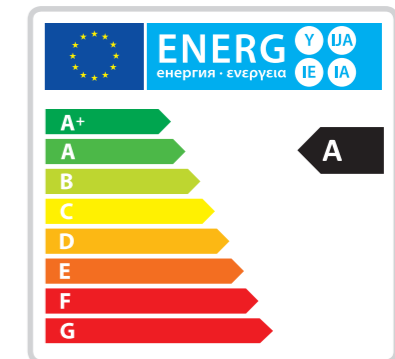
### Linkage with External A/C System or BMS Control



### Automatic Energy Recovery Ventilation or Nature Ventilation

In summer or winter when cooling or heating devices are in used. Bypass system is closed for energy recovery, when in spring or autumn when the outdoor temperature is soft, bypass system is open for nature ventilation.

### Energy Efficiency Class of A or A\* According to EU NO. 1254/2014







Fresh air ventilator + Indoor air purifier

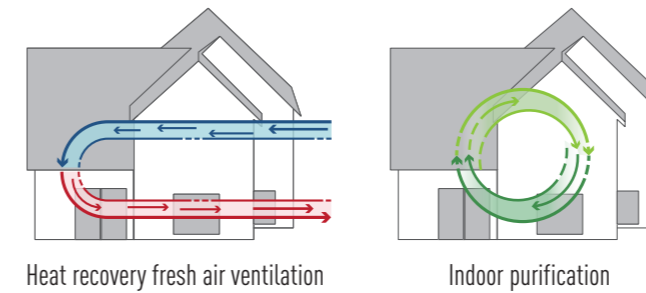
# Eco-Slim Energy Recovery Ventilator with Indoor Purification System



D250 / D350

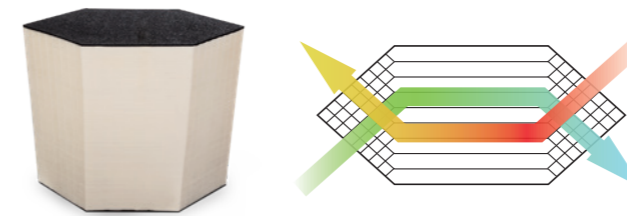
- Aluminized-zinc casing
- EPP inner structure
- Low noise
- High efficiency
- PM2.5 purification
- Dual function
- Low energy consumption
- Quick purification
- Easy Maintenance
- Intelligent Control

## Fresh Air Ventilator + Purifier (Multifunctional)



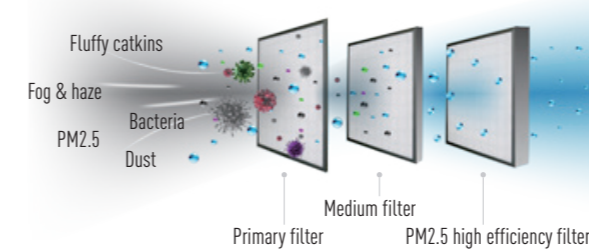
## High Efficiency Heat Exchanger

The newly designed counterflow heat exchanger effectively recovers energy, and the heat recovery efficiency is up to 86%.



## Multiple Filters

Three-layer high efficiency filtration system: primary filter, medium filter and HEPA high efficiency filter. The PM2.5 purification efficiency of the whole machine is up to 99%.



## Energy-saving DC Motor

- High static pressure
- Meet requirements of the top supply air / ground supply air
- Powerful DC driven
- Large impeller with more powerful

## Easy Installation and Maintenance

- Bottom and partial access available
- Easy to replace the filter
- Less space and easy maintenance
- Every important component can be independently repaired
- The filter can be replaced by manually opening the buckle
- Super slim design, reduce installation space
- Indoor ceiling could reduce by 50mm averagely



## Specifications

Model	Speed	Airflow (m³/h)	External Pressure (Pa)	Temperature Efficiency (%)		Enthalpy Efficiency (%)		Noise dB(A)	Power Input (W)	Current (A)	Voltage (V)	N.W. (kg)
				Cooling	Heating	Cooling	Heating					
D250	5	250	110	66	77	60	70	34	125	1	220V/50Hz	30
	4	250	60	66	77	60	70	32	110	0.8		
	3	180	45	68	79	64	74	29	65	0.6		
	2	100	30	72	83	72	82	25	35	0.4		
	1	80	20	75	86	74	84	23	27	0.3		
D350	5	350	120	66	76	60	69	35	215	1.6	220V/50Hz	36
	4	350	60	66	76	60	69	33	200	1.5		
	3	300	50	68	78	63	72	31	155	1.2		
	2	200	40	71	81	67	76	28	72	0.6		
	1	100	30	74	84	72	81	25	35	0.4		

## Remarks

1. The values of input power and heat exchange efficiency are measured under standard air volume.
2. The noise is measured 1.5 meters directly below the center of the device. Under actual conditions, the noise value may be larger than the value indicated due to environmental noise.



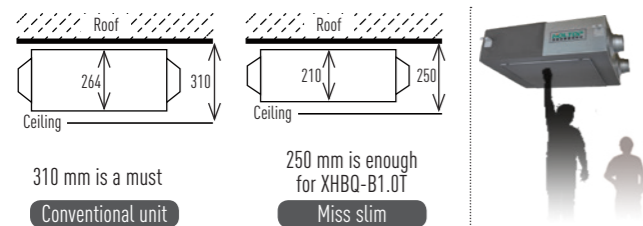
### Miss Slim Energy Recovery Ventilator



- Sub-HEPA F9 filter integrated
- Super slim design for easy installation
- High heat recovery efficiency up to 82%
- Bottom access for easy maintenance

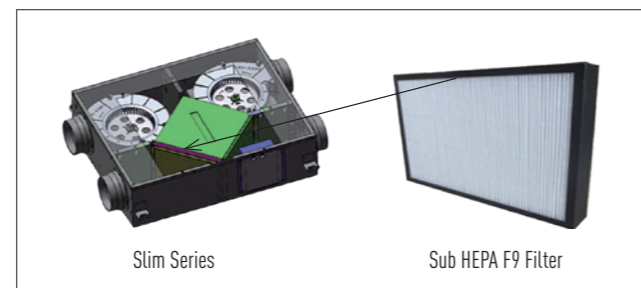
#### Supper Slim Body Design

Eco-slim ventilators are designed specially for the projects which have very strict ventilator height requirement, compared with the traditional congeneric products, Eco-slim height is 20% off. Access door is at the bottom so maintenance is much easier.



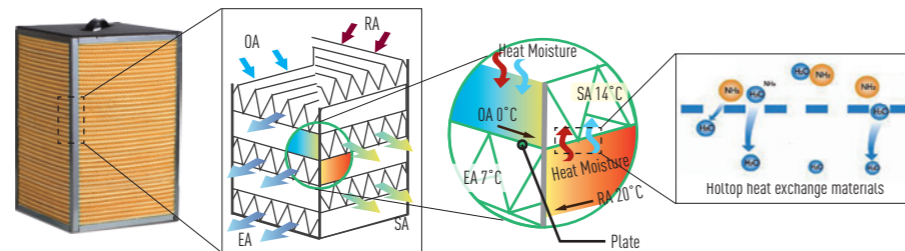
#### Sub-HEPA F9 Filter Integrated

With the sub HEPA F9 filter, particle diameter under 2.5µm can be filtered effectively, IAQ (indoor air quality) will be increased obviously.



#### Higher Efficiency with 3rd Generation Enthalpy Exchanger

Holtop crossflow enthalpy exchanger is built in the full Eco-slim series ERV, heat recovery efficiency up to 82% in winter, the allowance of moisture exchange between fresh air and exhaust air make a soft indoor temperature and humidity.



#### Specifications of Miss Slim

Model	Fan Speed	Airflow (m³/h)	External Pressure (Pa)	Temp. Efficiency (%)		Enthalpy Efficiency (%)		Noise dB(A)	Volt. (V)	Current (A)	Input Power (W)	N.W. (kg)
				Cooling	Heating	Cooling	Heating					
XHQB-B1.0T	H	100	80	67	80	55	65	29.5	220	0.3	65	20
	M	100	60	67	80	55	65	29		0.28	56	
	L	65	30	68	81	57	66	22		0.18	35	
C150PD2	H	150	90	72	80	59	73	31.5	220	0.45	95	27
	M	150	70	72	80	59	73	31		0.43	90	
	L	120	45	73	82	61	75	23		0.33	70	
C250PD2	H	250	75	62	73	55	68	34	220	0.66	136	31
	M	250	50	62	73	55	68	33.5		0.6	125	
	L	210	35	64	75	57	70	26.5		0.42	88	
C350PD2	H	350	130	65	76	57	68	37	220	1.03	215	42
	M	350	110	65	76	57	68	36.5		1.01	210	
	L	240	40	68	81	62	73	31		0.66	135	

### Eco-Clean Energy Recovery Ventilator



XHQB-D2PMTM-XHQB-D13PMTM



XHQB-D15PMTG-XHQB-D30PMTG



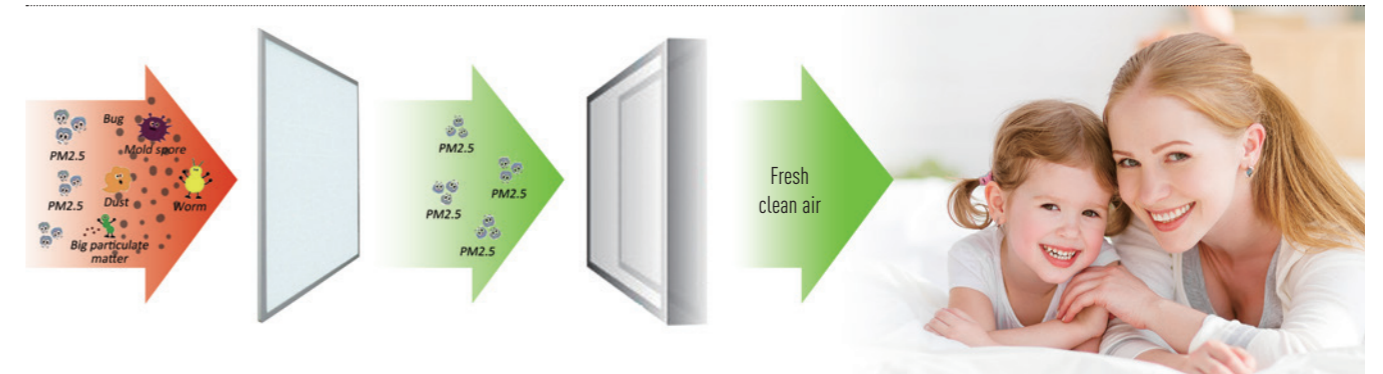
#### Filtration Effectiveness 96%

Sub HEPA F9 filter

1. Double high efficient filters;
2. Operating theatre clean class material;
3. Filtration class is up to F9, passing national GB/T 14295 standards.

Filtration efficiency test report

Filtration effectiveness (%) 96.3



#### Specifications

Model	Airflow (m³/h)			External Pressure (Pa)			Enthalpy Efficiency (%)						Temp. Efficiency (%)			Noise dB(A)			Volt. (V)	Current (A)	Input Power (W)	N. W. (Kg)
	L	M	H	L	M	H	Summer			Winter			L	M	H	L	M	H				
XHQB-D2PMTM	150	200	200	50	60	65	60	55	55	63	59	59	75	70	70	25	30	31.5	220	0.45	95	24.5
XHQB-D3PMTM	250	300	300	65	72	75	62	57	57	65	61	61	73	68	68	27	34	34.5	220	0.53	110	26.5
XHQB-D4PMTM	350	400	400	70	75	78	62	57	57	65	60	60	74	69	69	31	37	37.5	220	0.65	145	33
XHQB-D6PMTM	500	600	600	79	82	87	63	59	59	67	61	61	76	70	70	29	35	39	220	0.92	195	38
XHQB-D8PMTM	700	800	800	82	86	90	57	55	55	63	57	57	74	68	68	34	39	41	220	1.7	355	62
XHQB-D10PMTM	900	1000	1000	70	75	76	60	58	58	64	62	62	76	70	70	34	38	42	220	2.1	440	72
XHQB-D13PMTM	1000	1300	1300	65	75	80	58	56	56	62	59	59	76	70	70	38	41	43	220	3.4	710	81

Model	Airflow (m³/h)			External pressure (Pa)			Enthalpy Efficiency (%)						Temp. Efficiency (%)			Noise dB(A)			Volt. (V)	Current (A)			Input Power (W)			N. W. (Kg)
	L	M	H	L	M	H	Summer			Winter			L	M	H	L	M	H		L	M	H				
XHQB-D15PMTG	1000	1500	1500	74	125	153	69	66	66	74	70	70	74	71	71	46	49	51	220	2.3	3.6	3.8	485	740	785	115
XHQB-D20PMTG	1200	2000	2000	95	106	160	65	62	62	74	71	71	74	71	71	49	51	53		3	4.6	4.8	650	980	1020	117
XHQB-D25PMTG	2000	2500	2500	125	155	185	64	61	61	72	70	70	73	70	70	50	52	55		4.5	6	6.3	940	1250	1300	137
XHQB-D30PMTG	2500	3000	3000	135	165	195	63	60	60	71	69	69	73	70	70	51	54	57		6.5	8.7	9	1400	1870	1950	150



# ECO-CLEAN FOREST

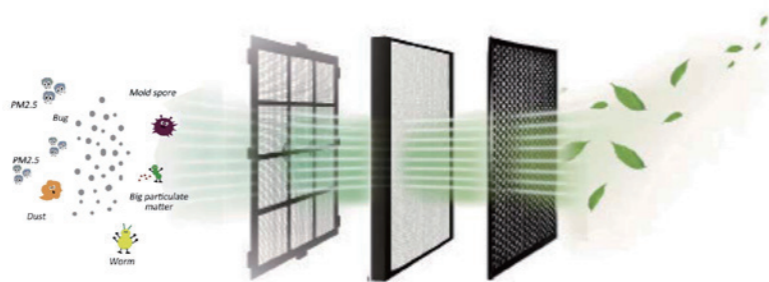
## WALL MOUNTED ENERGY RECOVERY VENTILATOR

- Multiple HEPA purification of 99%
- Indoor&outdoor air filtration
- High efficiency heat and humidity recovery
- Silence Operation
- High efficiency fans with DC motors
- Remote control
- Air quality Index(AQI) monitoring
- Indoor slight positive pressure



- Multiple HEPA purification of 99%
- Indoor&outdoor air filtration
- High efficiency heat and humidity recovery
- Indoor slight positive pressure
- High efficiency fan with DC motors
- Air quality Index(AQI) monitoring
- Silence operation
- Remote control

### Innovative Multiple Filtration



### Specifications

Model	ERVQ-B150-1A1F	Noise dB(A)	23-36
Airflow (m³/h)	150	Control	Touch screen panel & Remote control
Filtration efficiency (%)	99%, HEPA	Air Quality Display	PM2.5, Temp & R.H
Filtration mode	Pm2.5 purify / Deep purify / Ultra purify	Operational Model	Manual / Auto / Timer
Fan Speed	DC, 8 speeds	Suitable Room Size (m²)	20 - 45
Input Power (w)	35	Size (L*W*H) (mm)	450*155*660
Temperature Efficiency (%)	82	Weight (kg)	10



## Eco-Clean Forest Vertical Energy Recovery Ventilator

- Multiple filtration
- 99% HEPA filtration
- Slight positive indoor pressure
- Colorful design
- High efficiency energy recovery rate
- High efficiency fan with DC motors
- Visual management LCD display
- Remote control

### Specifications

Model	ERVQ-L300-1A1F	ERVQ-L600-1A1F
Airflow (m³/h)	300	600
Filtration efficiency (%)	99%, HEPA	99%, HEPA
Filtration mode	Pm2.5 purify / Deep purify / Ultra purify	Pm2.5 purify / Deep purify / Ultra purify
Fan Speed	DC, 8 speeds	DC, 8 speeds
Input Power (w)	70	125
Temperature Efficiency (%)	82	82
Noise dB(A)	25-36	25-36
Control	Touch screen panel & Remote control	Touch screen panel & Remote control
Air Quality Display	PM2.5, Temp & R.H	PM2.5, Temp & R.H
Operational Model	Manual / Auto / Timer	Manual / Auto / Timer
Suitable Room Size (m²)	50 - 120	100 - 240
Size (L*W*H) (mm)	560*410*1580	560*460*1700
Weight (kg)	55	65

Direct blown without duct installation



Suitable for living room, large bedroom, hospital, gym room, class room, kindergarten, etc..





## Eco-Vent Energy Recovery Ventilator

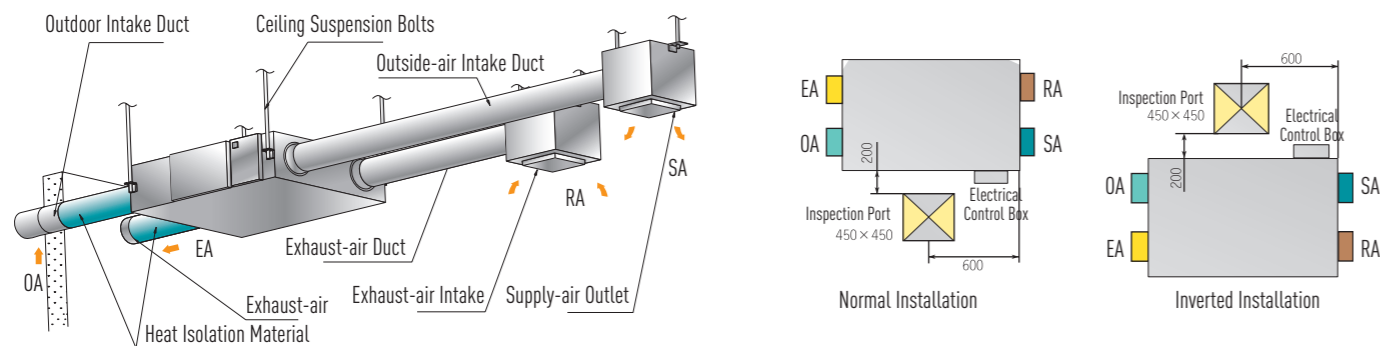
### TH Series

- Airflow from 150-1300 m<sup>3</sup>/h
- Energy recovery
- Crossflow heat exchanger
- Quiet operation
- Double filters
- Easy installation to ceiling
- By-pass function



XHBQ-D2TH ~ XHBQ-D13TH

### Installation



### Specifications

Model	Airflow (m <sup>3</sup> /h)			External Pressure (Pa)			Enthalpy Efficiency (%)						Temp. Efficiency (%)			Noise dB(A)			Volt. (V)	Current (A)	Input Power (W)			N. W. (Kg)
	L	M	H	L	M	H	Summer			Winter			L	M	H	L	M	H			L	M	H	
							L	M	H	L	M	H												
XHBQ-D2TH	150	200	200	60	70	75	60	55	55	63	59	59	75	70	70	25	30	31.5	220	0.5	105	23		
XHBQ-D3TH	250	300	300	75	82	85	62	57	57	65	61	61	73	68	68	27	34	34.5	220	0.56	117	25		
XHBQ-D4TH	350	400	400	80	85	88	62	57	57	65	60	60	74	69	69	31	37	37.5	220	0.72	150	31		
XHBQ-D6TH	500	600	600	89	92	97	63	59	59	67	61	61	76	70	70	29	35	39	220	0.96	200	36		
XHBQ-D8TH	700	800	800	92	96	100	57	55	55	63	57	57	74	68	68	34	39	41	220	1.7	355	60		
XHBQ-D10TH	900	1000	1000	80	85	86	60	58	58	64	62	62	76	70	70	34	38	42	220	2.1	440	70		
XHBQ-D13TH	1000	1300	1300	75	85	90	58	56	56	62	59	59	76	70	70	38	41	43	220	3.4	710	79		

### TZ Series

- Airflow from 800-1000 m<sup>3</sup>/h
- Energy recovery
- High ESP construction
- Quiet operation
- Double filters
- Easy installation to ceiling
- By-pass function



XHBQ-D8TZ ~ XHBQ-D10TZ

### Specifications

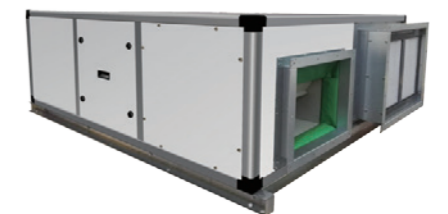
Model	Airflow (m <sup>3</sup> /h)			External Pressure (Pa)			Enthalpy Efficiency (%)						Temp. Efficiency (%)			Noise dB(A)			Volt. (V)	Current (A)	Input Power (W)			N. W. (Kg)
	L	M	H	L	M	H	Summer			Winter			L	M	H	L	M	H			L	M	H	
							L	M	H	L	M	H												
XHBQ-D8TZ	680	800	800	120	125	170	58	55	55	64	57	57	75	68	68	37	40	43	220	2.8	585	60		
XHBQ-D10TZ	840	1000	1000	105	120	175	60	57	57	63	61	61	75	69	69	36	42	44	220	3.3	690	79		

### TG Series / H Series

- Energy recovery
- Double skin panel with PU insulation of 20 mm
- Quiet operation
- Improved design with higher external static pressure
- Innovative access space design
- Double filters



XHBQ-D15TG ~ XHBQ-D30TG



XHBQ-D40H ~ XHBQ-D60H

### Specifications

Model	Airflow (m <sup>3</sup> /h)			External Pressure (Pa)			Enthalpy Efficiency (%)						Temp. Efficiency (%)			Noise dB(A)			Volt. (V)	Current (A)			Input Power (W)			N. W. (Kg)
	L	M	H	L	M	H	Summer			Winter			L	M	H	L	M	H		L	M	H	L	M	H	
							L	M	H	L	M	H														
XHBQ-D15TG	1000	1500	1500	84	135	163	69	66	66	74	70	70	74	71	71	46	49	51	220	2.3	3.6	3.8	485	740	785	110
XHBQ-D20TG	1200	2000	2000	110	132	176	65	62	62	73	71	71	74	71	71	49	51	53		3.0	4.6	4.8	650	980	1020	112
XHBQ-D25TG	2000	2500	2500	140	170	200	64	61	61	72	70	70	73	70	70	50	52	55		4.5	6.0	6.3	940	1250	1300	130
XHBQ-D30TG	2500	3000	3000	150	180	210	63	60	60	71	69	69	73	70	70	51	54	57		6.5	8.7	9.0	1400	1870	1950	142

Model	Airflow (m <sup>3</sup> /h)	External Pressure (Pa)	Enthalpy Efficiency (%)		Temp. Efficiency (%)	Noise dB(A)	Volt. (V)	Current (A)			Input Power (W)			N. W. (Kg)
			Summer	Winter				L	M	H	L	M	H	
XHBQ-D40H	4000	260	62	69	70	59	380	5.6			2000			240
XHBQ-D50H	5000	260	61	64	70	68		8.4			3000			300
XHBQ-D60H	6000	300	60	62	68	70		11.8			4400			355



### Floor Standing TG Series

- Airflow from 1000-3000 m<sup>3</sup>/h
- Energy recovery
- Double skin panel with PU insulation of 20mm
- Improved design with higher external static pressure
- Double filters
- Optional outdoor installation design available



XHBQ-L15TG ~ L30TG, XHBQ-L40G ~ L60G

#### Specifications

Model	Airflow (m <sup>3</sup> /h)			External Pressure (Pa)			Enthalpy Efficiency (%)						Temp. Efficiency (%)			Noise dB(A)			Volt. (V)	Current (A)			Input Power (W)			N. W. (Kg)
							Summer			Winter																
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H		L	M	H	L	M	H	
XHBQ-L15TG	1000	1500	1500	84	135	163	69	66	66	74	70	70	74	71	71	46	49	51	2.2	3.2	3.6	450	700	770	140	
XHBQ-L20TG	1200	2000	2000	110	132	176	65	62	62	73	71	71	74	71	71	49	51	53	2.8	4.1	4.4	600	930	980	148	
XHBQ-L25TG	2000	2500	2500	140	170	200	64	61	61	72	70	70	73	70	70	50	52	55	4.2	5.8	6.1	940	1250	1300	190	
XHBQ-L30TG	2500	3000	3000	150	180	210	63	60	60	71	69	69	73	70	70	51	54	57	5.2	7.4	7.7	1150	1600	1680	203	

### Floor Standing D Series

- Airflow from 4000-15000 m<sup>3</sup>/h
- Installed on the floor or in machine room
- Double filters
- Flexible and remote setting of control box



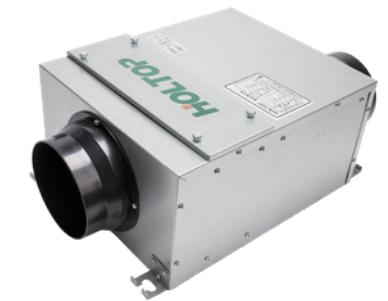
XHBQ-L75D ~ L150D

#### Specifications

Model	Airflow (m <sup>3</sup> /h)	External Pressure (Pa)	Enthalpy Efficiency (%)		Temp. Efficiency (%)	Noise dB(A)	Volt. (V)	Current (A)	Input Power (W)	N. W. (Kg)
			Summer	Winter						
XHBQ-L40G	4000	260	62	69	70	59	380	5.6	2000	266
XHBQ-L50G	5000	260	61	64	70	68	380	8.4	3000	342
XHBQ-L60G	6000	300	60	62	68	70	380	11.8	4400	342
XHBQ-L75D	7500	290	64	69	72	76	380	14	6000	472
XHBQ-L100D	10000	340	63	69	72	80	380	24	11000	757
XHBQ-L150D	15000	450	64	67	72	85	380	30.4	15000	1075

### Fresh Air Filtration System

- Double filters, PM2.5 filtration over 95%
- Zinc free galvanized steel plate, high corrosion resistance and long service life
- Built-in low-noise AC or DC blower
- High efficiency motor, running smoothly with low noise
- Super thin design and fit for installation



DX1.5B4 ~ DX3.5B4, DX1.5DCB4 ~ DX3.5DCB4

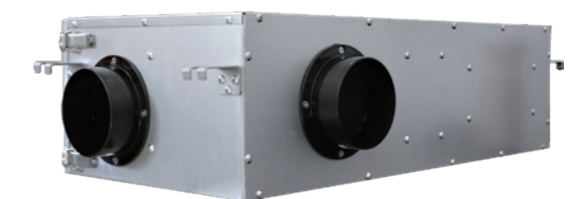
#### Specifications

Model	Airflow (m <sup>3</sup> /h)		External Pressure (Pa)		Input Power (W)		Current (A)		Noise dB(A)		Power supply	Weight (Kg)
	L	H	L	H	L	H	L	H	L	H		
DX1.5B4	100	150	55	80	40	57	0.25	0.31	25	32	220V/50Hz	8
DX2.5B4	150	250	60	100	68	85	0.3	0.45	30	34	220V/50Hz	8
DX3.5B4	200	350	100	120	108	154	0.58	0.85	32	37	220V/50Hz	10.5

Model	Speed	Airflow (m <sup>3</sup> /h)	External Pressure (Pa)	Input Power (W)	Noise dB(A)	Power supply	Weight (Kg)
DX1.5DCB4	5	150	80	41	32	220V/50Hz	9
	4	120	64		29		
	3	90	48		27		
	2	60	32		25		
	1	30	16		23		
DX2.5DCB4	5	250	100	60	34	220V/50Hz	9
	4	200	80		31		
	3	150	60		29		
	2	100	40		27		
	1	50	20		25		
DX3.5DCB4	5	350	120	114	37	220V/50Hz	9.5
	4	280	96		33		
	3	210	72		31		
	2	140	48		29		
	1	70	24		27		

### Fresh Air Filtration System with Internal Purification System

- PM2.5 High efficiency filter
- By-pass functions for indoor air purification
- Built-in low-noise blower
- 4P Asynchronous motor
- Easy to maintain
- Ultra thin design and fit for installation







DX1.5B3 ~ DX3.5B3

#### Specifications

Model	Airflow (m <sup>3</sup> /h)			External Pressure (Pa)			Input Power (W)			Current (A)			Noise dB(A)			Power supply	Weight (Kg)
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H		
DX1.5B3	120	150	150	55	68	88	45	47	48	0.22	0.22	0.23	25	31	32	220V/50Hz	18.5
DX2.5B3	210	250	250	45	55	65	60	72	80	0.29	0.34	0.36	30	33	34	220V/50Hz	19
DX3.5B3	260	350	350	53	70	80	106	131	139	0.51	0.63	0.67	32	36	37	220V/50Hz	24



# Control System

Controller	 LH-12100	 10307	 HDK-19S/HDK-19V	 HDK-BD01
Type	Intelligent control			
Suitable series	*DMTH, *DCTP, *Miss slim, *PMTG, *TH, *TZ	*TG, *PMTG	*DMTH, *DCTP, *Miss slim, *PMTG, *TH, *TZ	*TG, *PMTG
Temperature display	OA/RA/SA/FR temp.		Room temp.	
Speed selection	✓	✓	✓	✓
Timer ON/OFF	✓	✓	✓	✓
Bypass	Auto	✗	Auto	✗
External ON/OFF control	✓	✓	✗	✗
Comfortable heater control	✓	✓	✗	✗
Defrosting	✓	✓	✗	✗
CO <sub>2</sub> control	✓	✓	✗	Supply air PM2.5 & IAQ display
Filter alarm	✓	✓	✓	✓
Fault alarm	✓	✓	✗	✗
Power to auto restart	✓	✓	✗	✗
Night free cooling	✓	✗	✗	✗
BMS integration (RS485 connector)	✓	✓	✓	✗
Humidity control	✓	✗	✗	✗
Defrosting heater control	✓	✓	✗	✗
Working condition monitor	✓	✓	✗	Auto / manual running mode selection
Wifi function	✓	✓	✗	✗



► **Monitoring indoor air quality**

Monitor local weather, temperature, humidity, CO<sub>2</sub> concentration, VOC at your hand for healthy living.

► **Variable setting**

Timely switch, speed settings, bypass/timer/filter alarm/temperature setting.

► **Optional language**

Different language English/French/Italian/Spanish and so on to meet your requirement.

► **Group control**

One APP can control multiple units.



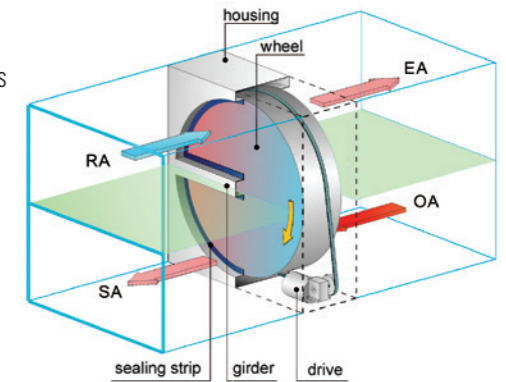
# Rotary Heat Exchanger

## Working Principle

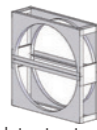


Rotary heat exchanger is composed of alveolate heat wheel, case, drive system and sealing parts. The exhaust and outdoor air pass through half of the wheel separately, when the wheel rotates, the heat and moisture are exchanged between the exhaust and outdoor air. The energy recovery efficiency is up to 70% to 90%.

## Main Features

- 3A molecular sieve coating of hygroscopic wheel selectively absorbs moisture and expels odors
- Interior spokes are used to mechanically bond the rotor's laminations.
- Double sealing system
- Double purge sector
- Self cleaning
- life-time-lubricated bearing of easy maintenance



## Specifications

Model HRT(S)-	Width A(mm)	Height B(mm)	Depth C(mm)	Diameter D(mm)	Motor Power (kw)	Weight (kg) Up-down type /Right-left type	Rotor cut	Casing construction	Diagram
500	600	600	340	530	0.09	42	One piece	Casing A, plate structure, made of aluzinc, one-piece	
600	700	700	340	630	0.09	59			
700	800	800	340	730	0.09	71			
800	900	900	340	830	0.09	82			
900	1030	1030	340	930	0.09	102			
1000	1130	1130	340	1030	0.09	130			
1100	1230	1230	340	1130	0.09	151			
1200	1330	1330	340	1230	0.18	169			
1300	1430	1430	340	1330	0.18	190			
1400	1530	1530	340	1430	0.18	205			
1500	1630	1630	340	1530	0.18	212/220			
1600	1730	1730	340	1630	0.18	230/239			
1700	1830	1830	340	1730	0.25	256/266			
1800	1930	1930	340	1830	0.25	283/293			
1900	2030	2030	340	1930	0.25	301/320			
2000	2130	2130	340	2030	0.25	358/370			
2200	2400	2400	400	2230	0.37	420	4 segments, Site assembly	Casing D	
2400	2600	2600	400	2430	0.37	500			
2600	2800	2800	400	2630	0.37	570	8/16/24 segments, Site assembly	Frame structure, made of aluminum profiles with aluzinc plates, in two sections, site assembly	
2800	3000	3000	400	2830	0.37	860			
3000	3200	3200	430	3030	0.55	950			
3200	3400	3400	430	3230	0.55	1039			
3400	3600	3600	430	3430	0.55	1110			
3600	3800	3800	430	3630	0.55	1220			
3800	4000	4000	430	3830	0.55	1360			
4000	4200	4200	430	4030	0.75	1500			
4200	4400	4400	430	4230	0.75	1645			
4400	4600	4600	430	4430	0.75	1750			
4600	4800	4800	430	4630	1.1	1830			
4800	5000	5000	430	4830	1.1	1980			
5000	5200	5200	430	5030	1.1	2100			

\* Model HRT-xxx stands for hygroscopic wheel, model HRS-xxx stands for sensible heat wheel.



# Crossflow Plate Heat Exchanger

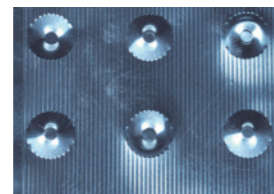
## Working Principle

Two neighbor aluminum foils form a channel for fresh or exhaust air stream. Heat is transferred when the air streams flow crossly through the channels, and fresh air and exhaust air is totally separated.

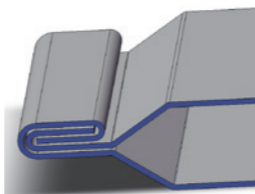


## Main Features

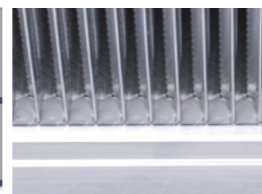
- Sensible heat recovery
- Total separation of fresh air & exhaust air streams
- Heat recovery efficiency up to 80%
- 2-side press shaping
- Double folded edge
- Completely joint sealing.
- Resistance of pressure difference up to 2500Pa
- Under pressure of 700Pa, air leakage less than 0.6%



2-side pressed shaping

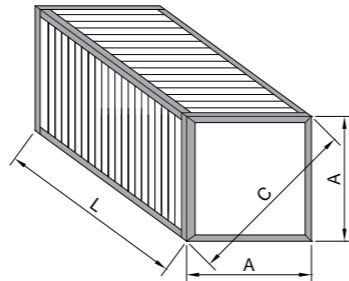


Double folded edge @ 5 times plate thickness



Completely joint sealing

## Specifications

Model	Ref. airflow rang (m <sup>3</sup> /h)	A (mm)	C (mm)	Length per piece (L)	Optional spacing (mm)	Remarks	
HBS-ZF250/250	400-2000	250	356	≤400	4.0	One module 	
HBS-ZF300/300	700-2700	300	427	≤400	4.0		
HBS-ZF300/300		300	427	≤500	5.0		
HBS-ZF350/350	1200-3000	350	498	≤400	4.0		
HBS-ZF350/350		350	498	≤500	5.0		
HBS-ZF350/350		350	498	≤550	6.0		
HBS-ZF400/400	1800-3500	400	568	≤400	4.0		
HBS-ZF400/400		400	568	≤500	5.0		
HBS-ZF400/400		400	568	≤550	6.0		
HBS-ZF500/500	2300-4000	500	710	≤550	6.0, 8.0, 10.0		Four modules combined
HBS-ZF600/600	2800-6000	600	851	≤550	6.0, 8.0, 10.0		
HBS-ZF700/700	3500-7000	700	993	≤550	8.0, 10.0		
HBS-ZF800/800	5000-1000	800	1134	≤550	8.0, 10.0		
HBS-ZF1000/1000	7000-16000	1000	1417	≤500	6.0, 8.0, 10.0		
HBS-ZF1200/1200	11000-21000	1200	1702	≤500	6.0, 8.0, 10.0		
HBS-ZF1400/1400	15000-28000	1400	1985	≤500	8.0, 10.0		
HBS-ZF1600/1600	18000-37000	1600	2265	≤500	8.0, 10.0		

### Remarks

1. Length is customized, but should be within the specified range.
2. Size C is for reference, size can be slightly increased according to heat exchanger length.

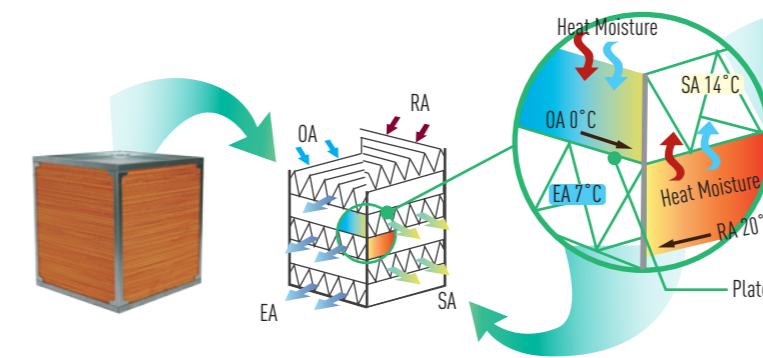
# Crossflow Total Heat Exchanger

## Working Principle

The flat plates and the corrugated plates form channels for fresh or exhaust air stream. When the two air streams passing through the exchanger crossly with temperature difference, the energy is recovered.

## Main Features

- Heat recovery efficiency up to 85%
- Enthalpy efficiency up to 76%
- Effective air exchange rate over 98%
- Selective molecule permeability
- Flame retardant and mildew resistance

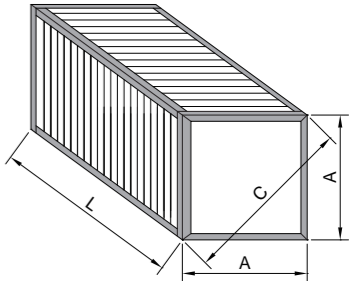


Mildew resistance test report



Flame retardant test report

## Specifications

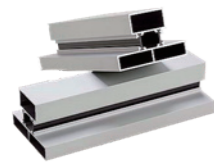
Model	A (mm)	L (mm)	C (mm)	Optional corrugation height (mm)	Remarks
HBT-W168/168	168	≤500	240	2.0, 2.5	One module 
HBT-W202/202	202	≤500	288	2.0, 2.5	
HBT-W222/222	222	≤500	317	2.0, 2.5	
HBT-W250/250	250	≤700	356	2.0, 2.5, 3.5	
HBT-W300/300	300	≤700	427	2.0, 2.5, 3.5	
HBT-W350/350	350	≤700	498	2.5, 3.5	
HBT-W372/372	372	≤700	529	2.5, 3.5	
HBT-W400/400	400	≤700	568	3.5	
HBT-W472/472	472	≤550	670	3.5	
HBT-W500/500	500	≤550	710	3.5	
HBT-W552/552	552	≤550	783	3.5	
HBT-W600/600	600	≤550	851	3.5	
HBT-W652/652	652	≤550	925	3.5	Multi-module combined
HBT-W700/700	700	≤550	993	3.5	
HBT-W800/800	800	≤550	1134	3.5	
HBT-W1000/1000	1000	≤450	1417	3.5	
HBT-W1200/1200	1200	≤450	1702	3.5	
HBT-W1400/1400	1400	≤450	1985	3.5	
HBT-W1600/1600	1600	≤450	2265	3.5	

### Remarks

1. The height of heat exchanger is customer-made, and the height of per single heat exchanger should be within the required range.
2. Size C is for reference only, can be adjusted according to the length of heat exchanger.



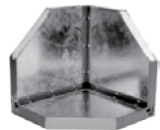
# Air Handling Unit



Upgraded insulation strip to make thermal bridge factor meet TB2<En 1886-2007> and air leakage ratio 0.94% according to <GB/T1429-2008> standards.



High strength aluminum alloy framework with AHU casing mechanical strength D1 grade according to <En 1886-2007>.



Sandwich panels are made with high density injection polyurethane insulation, meeting the thermal transmittance T2<En 1886-2007> standards.



Equipped with various of high-efficiency air-to-air heat recovery devices, such as heat recovery wheel, "U" heat pipe, plate heat exchanger, glycol circulation heat exchanger, to get the lowest energy and power consumption cost.

Professional selection program and modular design (1module=100mm) is providing customer with reasonable, economical, and practical solution.



Hinged/removable type access door are both available. Panel of AHU can be removed from outside, easy to disassemble at project site when necessary.



Variety of optional accessories, like water-proof service lamp, observation window, filter of all classes, air inlet and outlet damper(TOX connection technology), etc.

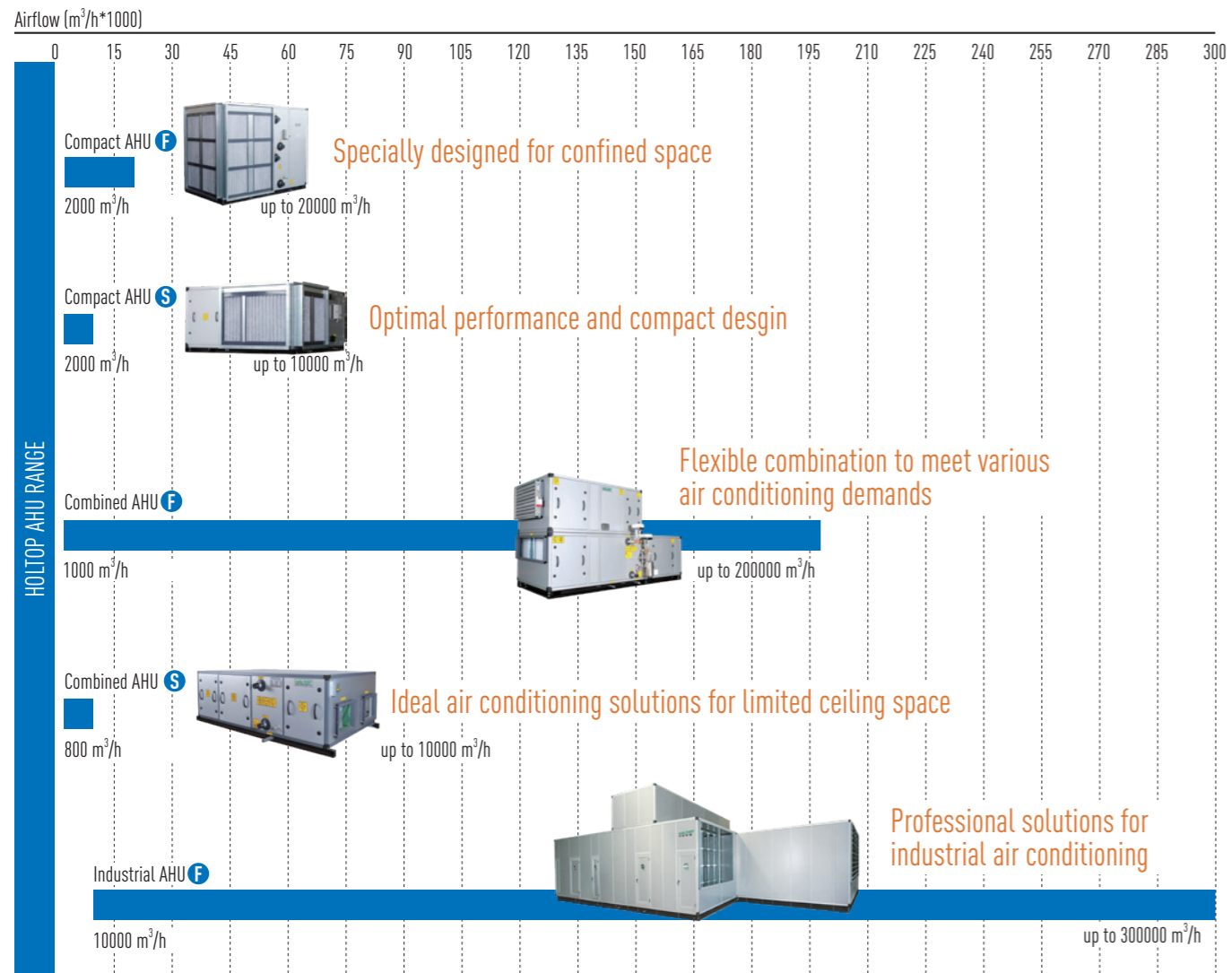


High performance water/DX coil with excellent heat transfer. Coil is made of copper pipe and aluminum fin.





Selection Table of AHU



F Floor standing type, S Suspended type  
HOLTOP offers customized AHU according to various project requirements.

Solutions

We offer solutions for

- Commercial buildings
- Auto industry
- Medical and pharmaceutical industry
- Printing and food industry
- VOC treatment and environment protection
- Wind turbine nacelles and data centers

Our Services

- Consultancy
- Design
- Equipments supply
- Installation
- Maintenance



Big Mall Fresh Air Solution

Shopping mall is a public area where central ventilation system with 100% fresh air is frequently used. In order to reduce the power consumption of the central AC, air-to-air heat recovery device becomes ideal for such fresh air handler.

**Solution:** HOLTOP fresh air handling unit is equipped with heat recovery wheel, recovering energy from indoor return air efficiently, to pre-cool or pre-heat the fresh air. Both fan and wheel drive can be VFD, to match the exact need of indoor air quality (based on CO<sub>2</sub> sensor, Temperature sensor etc)



FAHU Airflow range: 1000-250,000CMH



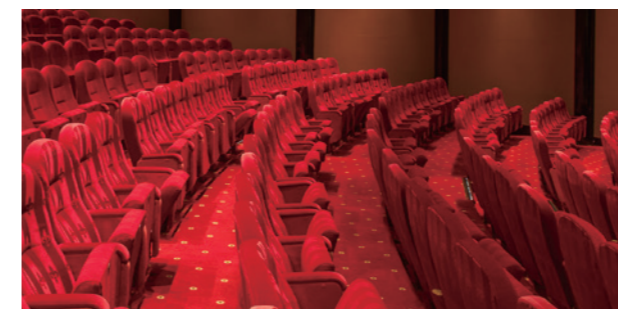
Heat recovery wheel, Dia. 500-5000; CE approved.



PLC control

Cinema Air Quality Solution

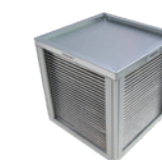
A perfect fresh air ventilation system and low noise environment (≤5 dB) is a key for the Cinema.



**Solution:** FAHU equipped with VFD fan to match sufficient fresh air demand of the audience hall, with muffler section before/after the fan section to achieve quiet and comfortable environment. Sensible plate heat exchanger is also recommended to save power consumption.



FAHU, Airflow range: 1000-250,000CMH



Sensible plate heat exchanger, airflow range: 1000-37000CMH.

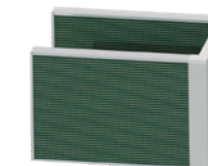
Clean Room Air Quality Solution

Clean room for the pharmaceuticals and lab should be with an indoor positive pressure and a wide-range airflow control. Fresh air and exhaust air should be separated. At the same time, AHU should satisfy the clean room with constant temperature & humidity control, cleanliness class.

**Solution:** Holtop provides dual heat recovery AHU. For example, under summer condition, fresh air is pre-cooled by the heat recovery wheel and forwarded to



release heat to the former side of the "U" heat pipe. Then passed to the cooling coil for dehumidification. Finally the fresh air is re-heated by the later side of "U" heat pipe to raise the air temperature thus to meet the designed supply air condition.



"U" heat pipe



Heat recovery wheel, CE approved



# Certificates

After years of dedication to the research and technology development in the filed of heat recovery and indoor airquality, Holtop has many achievements on the product innovation and quality management, which are certified by National and International authorities.



■ Product Patent Certificates



■ Test lab Verification Certificates



■ Energy Saving Product Certificates



■ CE Certificate



■ ISO9001 / ISO14001 / OHSAS18001 Certificates

# Job Reference

Projects & Cases Studies of Holtop Energy Recovery Solutions.



IMAX cinema, Mongolia, AHU



Samsung Electronics, Vietnam, RHE



Indoworth India Limited, India, Eco Vent ERV



Tokyo Inn, Germany, Eco Slim ERV



Geely Auto, Belarus, AHU



Health Center at Latsia, Cyprus, AHU



National Chung Cheng University, Taiwan, China, Eco Vent ERV



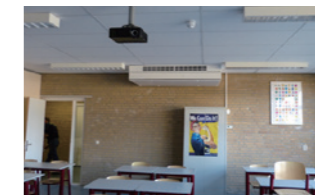
Kaohsiung Library, Taiwan, China, RHE



Workington Academy, UK, Eco Smart ERV



Sofitel shopping mall stage-II, Pakistan, RHE



Primary School, Poland, Eco Vent ERV



INNANG Garage, Norway, RHE



International Pharmaceutical Factory, Cambodia, AHU



Stanford University, USA, Eco Smart ERV



MeiLu villa residential project, Beijing, China, Eco Slim ERV



Mercedes Benz Auto factory, Beijing, China, AHU



Canton Tower, Guangzhou, China, RHE



World Expo Exhibition, Shanghai, China, AHU



2008 Olympic Games, Beijing, China, AHU



Longhua Hospital, Shanghai, China, AHU

## Cooperation Partners

