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



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



THE PLANE AND ADDRESS

## Holtop Profile

HOLTOP

FRESH AIR EXPERT

**SINCE 2002** 

Holtop is the leading manufacturer in China specializing in the production of air to air heat recovery equipments. It is dedicated to the research and technology development in the field of heat recovery ventilation and energy saving air handling equipments since 2002.

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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 has participated in the compilation work of several national standards, and is 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 have been exported to more than 100 countries and regions. Holtop continuously ranks the top in domestic market of heat and energy recovery ventilators.

Holtop will 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.

NO. 1

IN CHINA

200,000 UNITS PER YEAR

#### A 2011 Holtop was certified by ISO1 OHSAS18001

2014

#### 2007-2008

00

loltop built the authorized enthalpy lab and supplied energy recovery ventilation systems to Olympic Games



#### 2005 Holtop moved to

and certificated by l

2002 Holtop was founded and energy recovery ventilator launched in the market

HOLTOP

#### 2018

aunched the fresh air dehumidifiers I with heat pump systems

- 61

38

THEL

#### 2016

Holtop moved to her new production base and achieved the annual growth of 39.9%.

### 2012

Holtop achieved great success in AHU field by working with Mercedes Benz, BMW, Ford, etc, and rotary heat exchanger certified by Eurovent.

#### 2009

Holtop supplied energy recovery ventilation systems to World Expo pavilions.

),000sqm factory 09001.



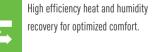


## Holtop Energy Recovery Ventilator

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.

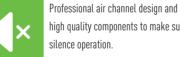
#### **Highlighted Features**





Providing fresh air all the time to

make you feel breathing in the nature.



20% less thickness.

Easy installation and maintenance,



Multi-stage gradual filters to remove dust, PM2.5, bacteria and harmful substances

Product Series

Eco-Smart

DMTH series

DCTP series

Eco-Slim

D series

CPD series

Eco-Clean

PMTH series

ERVQ-B150-

1A1F

ERVQ-L300-

1A1F,

ERVQ-L600-

1A1F

PMTG series

Eco-Vent

TH series

TZ series

TG series

H series

L TG/LD series

**B** 

max &

- 1

Suspended

Suspended

Suspended/

Floor standing

Suspended

Floor

standing

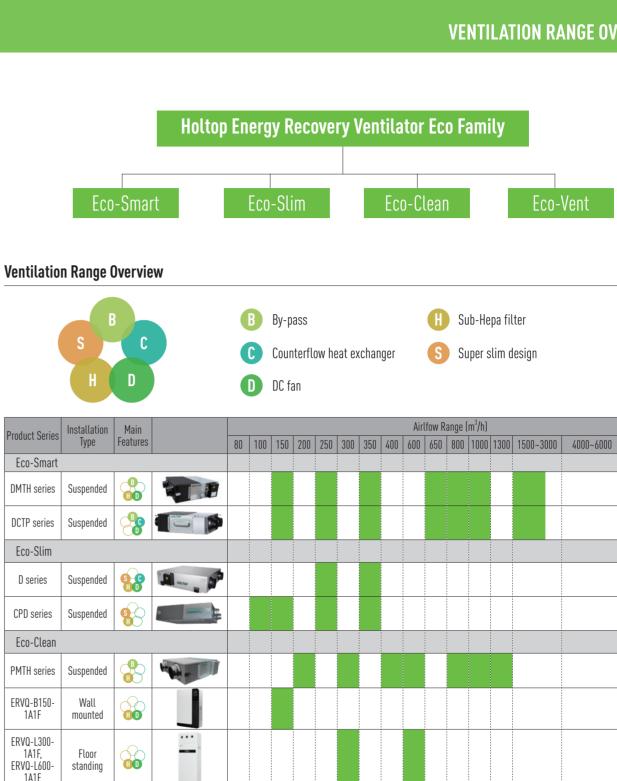


High energy saving, by reducing the load on the air conditioning system, delivering 40% energy savings compared with introducing untreated fresh air into a building.



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.

X





#### VENTILATION RANGE OVERVIEW

				fow Ra	ange (	m³/h)						
300	350	400	600	650	800	1000	1300	1500~30	000	4000~6	000	7500~15000



## **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.





**High Efficiency** 

Heat Exchanger





G3+F9 Filter

Auto Bypass Intelligent Control Gauge Alarm

A



XHBQ-D1.5DMTHA ~ XHBQ-D20DMTHA



XHBQ-D1.5DCTPA ~ XHBQ-D20DCTPA



Innovative Counterflow 10 Speeds Heat Exchanger

R



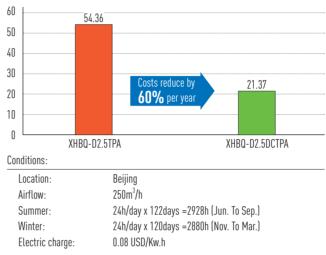
Auto Bypass Intelligent Control

COMPLIANT

#### 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



#### **High Efficiency Heat Exchanger**

High efficiency enthalpy heat recovery, more comfortable indoor climate.

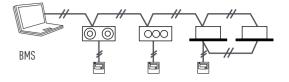
#### **Specifications**

Madal	Rated Airflow	External	Enthalpy Ef	ficiency (%)	Temperature	Noise	Voltage	Power Input	N.W.
Model	(m³/h)	Pressure (Pa)	Cooling	Heating	Efficiency (%)	dB(A)	(V)	(W) <sup>'</sup>	(kg)
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
Madal	Rated Airflow	External	Enthalpy Ef	ficiency (%)	Temperature	Noise	Voltage	Power Input	N.W.
Model	(m³/h)	Pressure (Pa)	Cooling	Heating	Efficiency (%)	dB(A)	(V)	(W) '	(kg)
XHBQ-D1.5DCTPA		(10)	oooting	inouting					
	150	75	63-70	70-76	75-82	31.5	220-240	26	25
XHBQ-D2.5DCTPA	150 250		0	0	-	31.5 34.5	220-240 220-240	26 46	25 29
XHBQ-D2.5DCTPA XHBQ-D3.5DCTPA		75	63-70	70-76	75-82				
	250	75 85	63-70 63-73	70-76	75-82	34.5	220-240	46	29
XHBQ-D3.5DCTPA	250 350	75 85 90	63-70 63-73 66-72	70-76 70-75 69-75	75-82 75-82 75-84	34.5 37.5	220-240 220-240	46 60	29 37
XHBQ-D3.5DCTPA XHBQ-D5DCTPA	250 350 500	75 85 90 100	63-70 63-73 66-72 62-74	70-76 70-75 69-75 67-75	75-82 75-82 75-84 75-86	34.5 37.5 39	220-240 220-240 220-240 220-240	46 60 88	29 37 43
XHBQ-D3.5DCTPA XHBQ-D5DCTPA XHBQ-D6.5DCTPA	250 350 500 650	75 85 90 100 85	63-70 63-73 66-72 62-74 62-70	70-76 70-75 69-75 67-75 68-73	75-82 75-82 75-84 75-86 75-84	34.5 37.5 39 39.5	220-240 220-240 220-240 220-240 220-240	46 60 88 114	29 37 43 64
XHBQ-D3.5DCTPA XHBQ-D5DCTPA XHBQ-D6.5DCTPA XHBQ-D8DCTPA	250 350 500 650 800	75 85 90 100 85 130	63-70 63-73 66-72 62-74 62-70 65-74	70-76 70-75 69-75 67-75 68-73 71-77	75-82 75-82 75-84 75-86 75-84 75-84	34.5 37.5 39 39.5 42	220-240 220-240 220-240 220-240 220-240 220-240	46 60 88 114 186	29 37 43 64 71

Madal	Rated Airflow	External	Enthalpy Ef	ficiency (%)	Temperature	Noise	Voltage	Power Input	N.W.
Model	(m³/h)	Pressure (Pa)	Cooling	Heating	Efficiency (%)	dB(A)	(V)	(W) <sup>'</sup>	(kg)
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
		<b>F</b>							
Model	Rated Airflow	External	Enthalpy Ef	ficiency (%)					
		Droceuro		11010110y (70)	Temperature	Noise	Voltage	Power Input	N.W.
MUUEL	(m <sup>3</sup> /h)	Pressure (Pa)	Cooling	Heating	_ Temperature Efficiency (%)	Noise dB(A)	Voltage (V)	Power Input (W)	N.W. (kg)
XHBQ-D1.5DCTPA				-					
	(m³/h)	(Pa)	Cooling	Heating	Efficiency (%)	dB(A)	(V) <sup>°</sup>	(W) ·	(kg)
XHBQ-D1.5DCTPA	(m³/h) 150	(Pa) 75	Cooling 63-70	Heating 70-76	Efficiency (%) 75-82	dB(A) 31.5	(V) 220-240	(W) · 26	(kg) 25
XHBQ-D1.5DCTPA XHBQ-D2.5DCTPA	(m³/h) 150 250	(Pa) 75 85	Cooling 63-70 63-73	Heating 70-76 70-75	Efficiency (%) 75-82 75-82	dB(A) 31.5 34.5	(V) 220-240 220-240	(W) · 26 46	(kg) 25 29
XHBQ-D1.5DCTPA XHBQ-D2.5DCTPA XHBQ-D3.5DCTPA	(m <sup>3</sup> /h) 150 250 350	(Pa) 75 85 90	Cooling 63-70 63-73 66-72	Heating 70-76 70-75 69-75	Efficiency (%) 75-82 75-82 75-84	dB(A) 31.5 34.5 37.5	(V) 220-240 220-240 220-240	(W) · 26 46 60	(kg) 25 29 37
XHBQ-D1.5DCTPA XHBQ-D2.5DCTPA XHBQ-D3.5DCTPA XHBQ-D5DCTPA	(m <sup>3</sup> /h) 150 250 350 500	(Pa) 75 85 90 100	Cooling           63-70           63-73           66-72           62-74	Heating 70-76 70-75 69-75 67-75	Efficiency (%) 75-82 75-82 75-84 75-86	dB(A) 31.5 34.5 37.5 39	(V) 220-240 220-240 220-240 220-240 220-240	(W) 26 46 60 88	(kg) 25 29 37 43
XHBQ-D1.5DCTPA XHBQ-D2.5DCTPA XHBQ-D3.5DCTPA XHBQ-D5DCTPA XHBQ-D6.5DCTPA	(m <sup>3</sup> /h) 150 250 350 500 650	(Pa) 75 85 90 100 85	Cooling           63-70           63-73           66-72           62-74           62-70	Heating 70-76 70-75 69-75 67-75 68-73	Efficiency (%) 75-82 75-82 75-84 75-86 75-84	dB(A) 31.5 34.5 37.5 39 39.5	(V)           220-240           220-240           220-240           220-240           220-240           220-240           220-240           220-240	(W) 26 46 60 88 114	(kg) 25 29 37 43 64
XHBQ-D1.5DCTPA XHBQ-D2.5DCTPA XHBQ-D3.5DCTPA XHBQ-D5DCTPA XHBQ-D6.5DCTPA XHBQ-D6.5DCTPA XHBQ-D8DCTPA	(m <sup>3</sup> /h) 150 250 350 500 650 800	(Pa) 75 85 90 100 85 130	Cooling           63-70           63-73           66-72           62-74           62-70           65-74	Heating 70-76 70-75 69-75 67-75 68-73 71-77	Efficiency (%) 75-82 75-82 75-84 75-84 75-84 75-84 75-84	dB(A) 31.5 34.5 37.5 39 39.5 42	(V) 220-240 220-240 220-240 220-240 220-240 220-240 220-240	(W) 26 46 60 88 114 186	(kg) 25 29 37 43 64 71

#### **ECO-SMART ENERGY RECOVERY VENTILATOR**

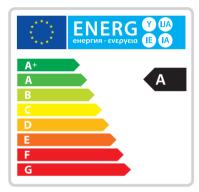
#### Linkage with External A/C System or BMS Control



#### 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





## **Eco-Slim Energy Recovery Ventilator** with Indoor Purification System









High efficiency

PM2.5 purification

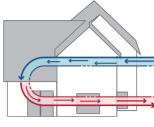
Low energy consumptior



Quick purification Easy Maintenance



#### Fresh Air Ventilator + Purifier (Multifunctional)



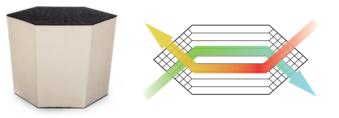


Heat recovery fresh air ventilation

Indoor purification

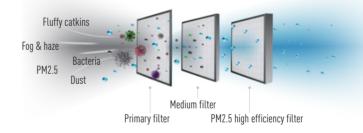
#### **High Efficiency Heat Exchanger**

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%.



#### **Specifications**

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

#### **ECO-SLIM ENERGY RECOVERY VENTILATOR**

#### **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



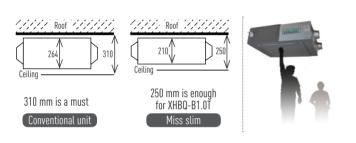
#### Miss Slim Energy Recovery Ventilator





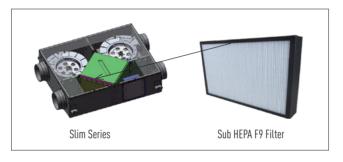
#### Supper Slim Body Design

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.



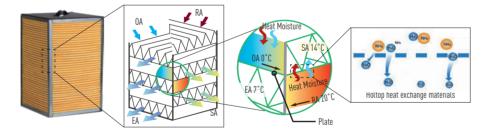
#### Sub-HEPA F9 Filter Integrated

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

## **Eco-Clean Energy Recovery Ventilator**

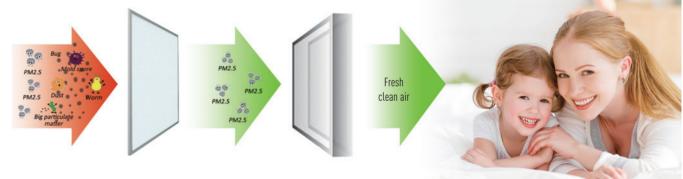




XHBQ-D2PMTH~XHBQ-D13PMTH







#### **Specifications**

		Airflow		Exter	nal Pre	ssure		Enth	alpy Ef	ficiency	(%)		Temn	Efficier	ICV (%)		Noise		Mall	C	Input	N1 147
Model		(m³/h)			(Pa)			Summe	r		Winter		iomp.	LIIIOIOI	.09 (70)		dB(A)		Volt.	Current (A)	Power	N. W. (Kg)
	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H			(W)	(
XHBQ-D2PMTH	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
XHBQ-D3PMTH	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
XHBQ-D4PMTH	350	400	400	70	75	78	62	57	57	65	60	60	74	69	69	31	37	37.5	220	0.65	145	33
XHBQ-D6PMTH	500	600	600	79	82	87	63	59	59	67	61	61	76	70	70	29	35	39	220	0.92	195	38
XHBQ-D8PMTH	700	800	800	82	86	90	57	55	55	63	57	57	74	68	68	34	39	41	220	1.7	355	62
XHBQ-D10PMTH	900	1000	1000	70	75	76	60	58	58	64	62	62	76	70	70	34	38	42	220	2.1	440	72
XHBQ-D13PMTH	1000	1300	1300	65	75	80	58	56	56	62	59	59	76	70	70	38	41	43	220	3.4	710	81

Model		Airflov (m³/h)	1	Exter	nal pre (Pa)	ssure		Entha Gumme			cy (%) Winter		Temp	). Effic (%)	iency		Noise dB(A)		Volt. (V)	Си	Irrent	(A)	Inț	out Pov (W)	ver	N. W. (Kg)
	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H	(*)	L	М	H	L	М	H	(rtg)
XHBQ-D15PMTG	1000	1500	1500	74	125	153	69	66	66	74	70	70	74	71	71	46	49	51		2.3	3.6	3.8	485	740	785	115
XHBQ-D20PMTG	1200	2000	2000	95	106	160	65	62	62	74	71	71	74	71	71	49	51	53	220	3	4.6	4.8	650	980	1020	117
XHBQ-D25PMTG	2000	2500	2500	125	155	185	64	61	61	72	70	70	73	70	70	50	52	55	220	4.5	6	6.3	940	1250	1300	137
XHBQ-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 ENERGY RECOVERY VENTILATOR**



XHBQ-D15PMTG~XHBQ-D30PMTG

# Breathing

2. Operating theatre clean class material;

3. Filtration class is up to F9, passing national GB/T 14295 standards.



Filtration efficiency test report

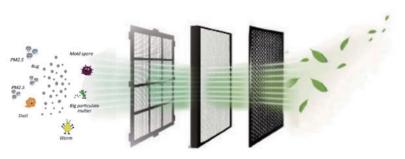


#### - Multiple HEPA purification of 99%

- 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

#### **Specifications**

#### **Innovative Multiple Filtration**



Model	ERVQ-B150-1A1F	Noise dB(A)	23~36
Airflow (m <sup>3</sup> /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 (m <sup>2</sup> )	20 - 45
Input Power (w)	35	Size (L*W*H) (mm)	450*155*660
Temperature Efficiency (%)	82	Weight (kg)	10



- 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 (m <sup>3</sup> /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

#### **ECO-CLEAN FOREST ENERGY RECOVERY VENTILATOR**



## **Eco-Clean Forest Vertical Energy Recovery Ventilator**

Direct blowed
installation



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



# Eco-Vent Energy Recovery Ventilator

#### TH Series

- Airflow from 150-1300  $\rm m^3/h$ 

- Crossflow heat exchanger

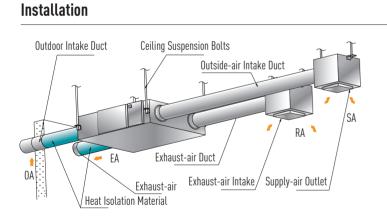
- Energy recovery

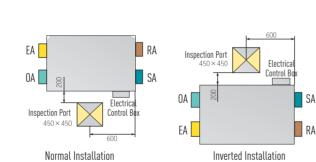
- Quiet operation

- Double filters - Easy installation to ceiling
  - By-pass function



XHBQ-D2TH ~ XHBQ-D13TH





#### Specifications

Model		Airflow (m³/h)		Exter	nal Pre: (Pa)	ssure	(	Enth Summe		ficiency	/ (%) Winter		Temj	p. Effici (%)	ency		Noise dB(A)		Volt. (V)	Current (A)	Input Power	N. W. (Kg)
	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H	(¥)	(//)	(W)	(Ny)
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 m³/h

- Energy recovery
- High ESP construction
- Quiet operation

#### **Specifications**

		Airflow		Exter	nal Pre	ssure		Enth	alpy Ef	ficiency	/ (%)		Tem	p. Effici	ency		Noise				Input	
Model		(m <sup>3</sup> /h)			(Pa)			Summe	r		Winter			(%)			dB(A)		Volt. (V)	Current	Power (W)	
	L	М	H	L	М	H	L	М	H	L	М	Η	L	М	H	L	М	H			ניין	
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

- Double filters

- By-pass function

- Easy installation to ceiling

## 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

#### **Specifications**

Model		Airflow (m³/h)	1	Exteri	nal Pre (Pa)	ssure		Enthal umme			cy (%) Vinte		Temp	. Effic (%)	iency		Noise dB(A)		Volt. (V)	Cu	rrent	(A)	Inpu	t Power	(W)	N. W. (Kg)
	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H		L	М	H	L	М	H	Ū
XHBQ-D15TG	1000	1500	1500	84	135	163	69	66	66	74	70	70	74	71	71	46	49	51		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	220	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	220	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	External Pressure	Enthalpy Ef	ficiency (%)	Temp.	Noise	Volt.	Current	Input Power	N. W.
Model	(m³/h)	(Pa)	Summer	Winter	Efficiency (%)	dB(A)	(V)	(A)	. (W)	(Kg)
XHBQ-D40H	4000	260	62	69	70	59		5.6	2000	240
XHBQ-D50H	5000	260	61	64	70	68	380	8.4	3000	300
XHBQ-D60H	6000	300	60	62	68	70		11.8	4400	355



XHBQ-D8TZ ~ XHBQ-D10TZ



XHBQ-D15TG ~ XHBQ-D30TG



XHBQ-D40H ~ XHBQ-D60H

#### 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



#### **Specifications**

Model		Airflow (m³/h)	I	Exter	nal Pre (Pa)	ssure		Entha Summe			cy (%) Winter		Temp	. Effic (%)	iency		Noise dB(A)		Volt. (V)	(	Curren (A)	t	Ing	out Pow (W)	/er	N. W. (Kg)
	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H		L	М	H	L	М	H	• 07
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	220	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	220	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



#### **Specifications**

Model	Airflow	External Pressure	Enthalpy Ef	ficiency (%)	Temp. Efficiency	Noise	Volt.	Current	Input Power	N. W.
Mouel	(m³/h)	(Pa)	Summer	Winter	(%)	dB(A)	(V)	(A)	. (W)	(Kg)
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	352
XHBQ-L75G	7500	290	64	69	72	76	380	14	6000	472
XHBQ-L100G	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

#### Specifications

Model	Airflow	(m³/h)	External Pr	essure (Pa)	Input Po	ower (W)	Curre	nt (A)	Noise	dB(A)	Pow	
Tibuot	L	Н	L	Н	L	Н	L	H	L	H	- supp	ly [Kg]
DX1.5B4	100	150	55	80	40	57	0.25	0.31	25	32	220V/5	OHz 8
DX2.5B4	150	250	60	100	68	85	0.3	0.45	30	34	220V/5	OHz 8
DX3.5B4	200	350	100	120	108	154	0.58	0.85	32	37	220V/5	OHz 10.5
Model	Spe	eed	Airflow	(m³/h)	External Pr	essure (Pa)	Input Powe	er (W)	Noise dB(A)	Power	supply	Weight (Kg)
	E	5	15	i0	8	0			32			
	1	í ŧ	12	20	6	4			29			
DX1.5DCB4	3	}	9	0	4	8	41		27	220V	/50Hz	9
	2 60 32 25											
	1		3	0	1	6			23			
	Ę	5	25	i0	1(	00			34			
		ł	20	00	8	0			31			
DX2.5DCB4	3	}	15	i0	6	0	60		29	220V	/50Hz	9
		2	10	00	4	0			27			
	1		5	0	2	0			25			
	Ę	5	35	50	12	20			37			
	1	4	28	30	9	6			33			
DX3.5DCB4		}	21	0	7	2	114		31	220V	/50Hz	9.5
	1	2	14	40	4	8			29			
	1		7	0	2	4			27			

#### Fresh Air Flitration 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

#### **Specifications**

Model	Air	rflow (m³,	/h)	Extern	al Pressu	ire (Pa)	Inp	ut Power	(W)	(	Current (A	)	N	loise dB(A	f)	Power supply	Weight (Kg)
110000	L	М	H	L	М	H	L	М	H	L	М	H	L	М	H		(Kg)
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

#### FRESH AIR FILTRATION SYSTEM



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



DX1.5B3 ~ DX3.5B3

## Control System

Controller	LH-12	<b>35.</b> °2038	10.	307		© 7.8 • • •	
Туре		Intellige	nt control			Standard	control
Suitable series	*DMTH, *DCTP, *Miss slim, *PMTH, *TH, *TZ	*TG, *PMTG	*DMTH, *DCTP, *Miss slim, *PMTH, *TH, *TZ	*TG, *PMTG	*TH *TZ	*Miss slim *PMTH	*Eco-slim
Temperature display	0A/RA/SA	/FR temp.	0A/RA/SA	/FR temp.		Room t	emp.
Speed selection	~	/	~	/		/	~
Timer ON/OFF	~	/		/		•	~
Bypass	Auto	×	Auto	×	Manually	×	×
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	~	/	3	٢	:	×	×
Defrosting heater control	~	/	~	/	:	×	×
Working condition monitor	~	/	~	/	:	×	Auto / manual running mode selection
Wifi function	•	•	•	•	:	×	×



#### Monitoring indoor air quality

Monitor local weather, temperature, humidity,  $\rm CO_2$  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%.

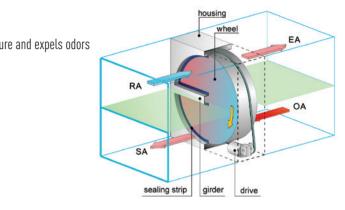
#### **Main Features**

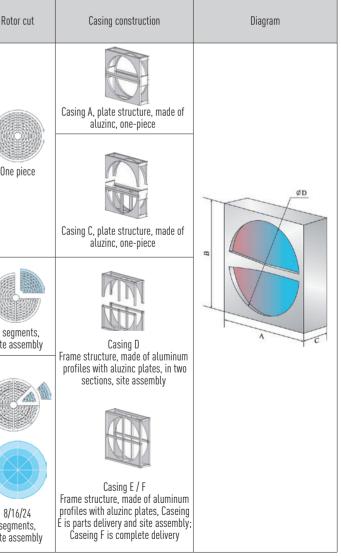
- 3A molecular sieve coating of hygroscopic wheel selectively absorbs moisture and expels odors
- Interior spokes are used to mechanically bond the rotor's laminations.
- Double sealing system
- Double purge sector
- Self cleaning
- life-time-lubricated bearing of easy maintenance

#### Specifications

Ro	Weight (kg) Up-down type /Right-left type	Motor Power (kw)	Diameter D(mm)	Depth C(mm)	Height B(mm)	Width A(mm)	Model HRT(S)-
	42	0.09	530	340	600	600	500
	59	0.09	630	340	700	700	600
	71	0.09	730	340	800	800	700
	82	0.09	830	340	900	900	800
	102	0.09	930	340	1030	1030	900
	130	0.09	1030	340	1130	1130	1000
	151	0.09	1130	340	1230	1230	1100
1888	169	0.18	1230	340	1330	1330	1200
0.	190	0.18	1330	340	1430	1430	1300
Or	205	0.18	1430	340	1530	1530	1400
	212/220	0.18	1530	340	1630	1630	1500
	230/239	0.18	1630	340	1730	1730	1600
	256/266	0.25	1730	340	1830	1830	1700
	283/293	0.25	1830	340	1930	1930	1800
	301/320	0.25	1930	340	2030	2030	1900
	358/370	0.25	2030	340	2130	2130	2000
	420	0.37	2230	400	2400	2400	2200
4 se Site	500	0.37	2430	400	2600	2600	2400
	570	0.37	2630	400	2800	2800	2600
10	860	0.37	2830	400	3000	3000	2800
	950	0.55	3030	430	3200	3200	3000
R	1039	0.55	3230	430	3400	3400	3200
	1110	0.55	3430	430	3600	3600	3400
	1220	0.55	3630	430	3800	3800	3600
	1360	0.55	3830	430	4000	4000	3800
	1500	0.75	4030	430	4200	4200	4000
	1645	0.75	4230	430	4400	4400	4200
	1750	0.75	4430	430	4600	4600	4400
8	1830	1.1	4630	430	4800	4800	4600
Se	1980	1.1	4830	430	5000	5000	4800
Site	2100	1.1	5030	430	5200	5200	5000

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





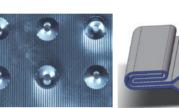
## **Crossflow Plate Heat Exchanger**

#### Working Principle

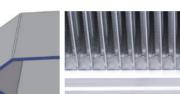
Two neighbor aluminum foils form a channel for fresh or exhaust air stream. Heat is transferred when the air streams flow crossly through the channels, and fresh air and exhaust air is totally separated

#### 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





Completely joint sealing

#### **Specifications**

Model	Ref. airflow rang (m³/h)	A (mm)	C (mm)	Length per piece (L)	Optional spacing (mm)	Remarks	
HBS-ZF250/250	400~2000	250	356	≤400	4.0		
HBS-ZF300/300	700 9700	300	427	≤400	4.0		
HBS-ZF300/300	700~2700	300	427	≤500	5.0	-	
HBS-ZF350/350	0 350 498 ≤400		≤400	4.0			
HBS-ZF350/350	1200~3000	350	498	≤500	5.0	-	
HBS-ZF350/350		350	498	≤550	6.0	One module	
HBS-ZF400/400		400	568	≤400	4.0		
HBS-ZF400/400	1800~3500 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		
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	Four modules combined	
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.



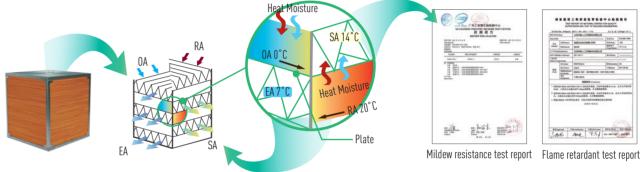
#### Working Principle

The flat plates and the corrugated plates form channels for fresh or exhaust air stream. When the two air steams 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



#### **Specifications**

Model	A (mm)	L (mm)	C (mm)	Optional c height
HBT-W168/168	168	≤500	240	2.0,
HBT -W202/202	202	≤500	288	2.0,
HBT -W222/222	222	≤500	317	2.0,
HBT-W250/250	250	≤700	356	2.0, 2.
HBT-W300/300	300	≤700	427	2.0, 2.
HBT -W350/350	350	≤700	498	2.5,
HBT -W372/372	372	≤700	529	2.5,
HBT -W400/400	400	≤700	568	3.
HBT -W472/472	472	≤550	670	3.
HBT -W500/500	500	≤550	710	3.
HBT -W552/552	552	≤550	783	3.
HBT -W600/600	600	≤550	851	3.
HBT -W652/652	652	≤550	925	3.
HBT -W700/700	700	≤550	993	3.
HBT -W800/800	800	≤550	1134	3.
HBT-W1000/1000	1000	≤450	1417	3.
HBT-W1200/1200	1200	≤450	1702	3.
HBT -W1400/1400	1400	≤450	1985	3.
HBT -W1600/1600	1600	≤450	2265	3.

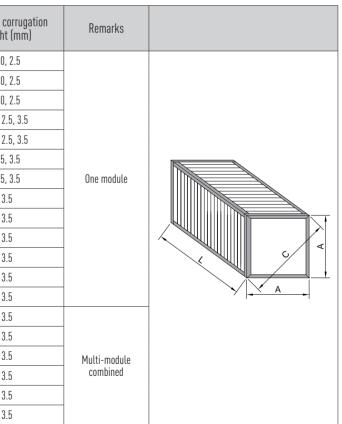
#### Remarks

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

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





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.



18 8



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



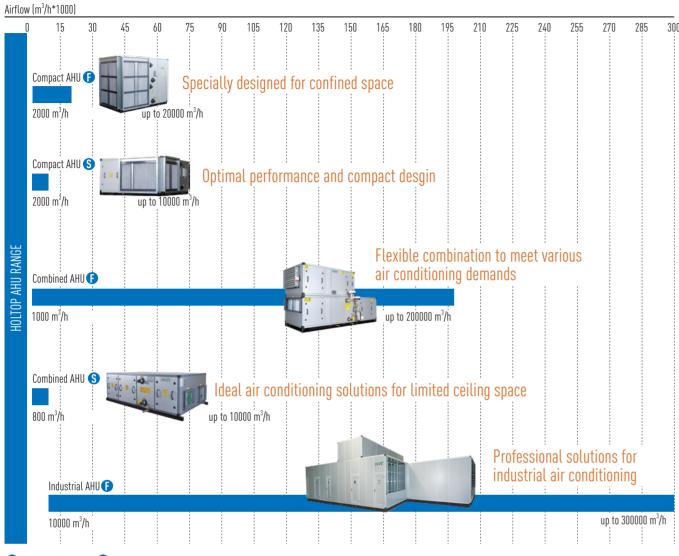
C									T
					Contra la	4 4 <del>4</del> 10	14	1	ile de la
	The set		tane (	TROUGH Additional Additional	50.57% gentes 51	1_	-	-	1
Andra (mar )-		t state in						-	



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

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

#### Selection Table of AHU



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**

consumption of the central AC, air-to-air heat recovery device becomes ideal for such fresh air handler.

Temperature sensor etc)





## **Cinema Air Quality Solution**

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



# **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



#### **AIR HANDLING UNIT**

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.

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.







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 innotivation and quality management, which are certified by National and International authorities.





Test lab Verification Certificates



CE Certificate

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Energy Saving Product Certificates



IS09001 / IS014001 / OHSAS18001 Certificates

## Job Reference

Projects & Cases Studies of Holtop Energy Revovery Solutions.



SAMSUNG

IMAX cinema, Mongolia, AHU

Samsung Electronics, Vietnam, **RHE** 





Geely Auto, Belarus, **AHU** 

Health Center at Latsia, Cyprus, **AHU** 





Workington Academy, UK, Eco Smart ERV

Sofitel shopping mall stage-II, Pakistan, **RHE** 





International Pharmaceutical Stanford University, USA, Factory, Cambodia, **AHU Eco Smart ERV** 



Canton Tower, Guangzhou, China, **RHE** 



**Cooperation Partners** 





Indoworth India Limited, India, Eco Vent ERV



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



Primary School, Poland, Eco Vent ERV



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



2008 Olympic Games, Beijing, China, **AHU** 



Tokyo Inn, Germany, Eco Slim ERV



Kaohsiung Library, Taiwan, China, **RHE** 



INNGANG Garage, Norway, **RHE** 



Mercedes Benz Auto factory, Beijing, China, **AHU** 



Longhua Hospital, Shanghai, China, **AHU**