WESTON

CLIMATE

HPERV

DC INVERTER

Purification

Ventilation and Heat Recovery

Cooling/Heating

Dehumidification

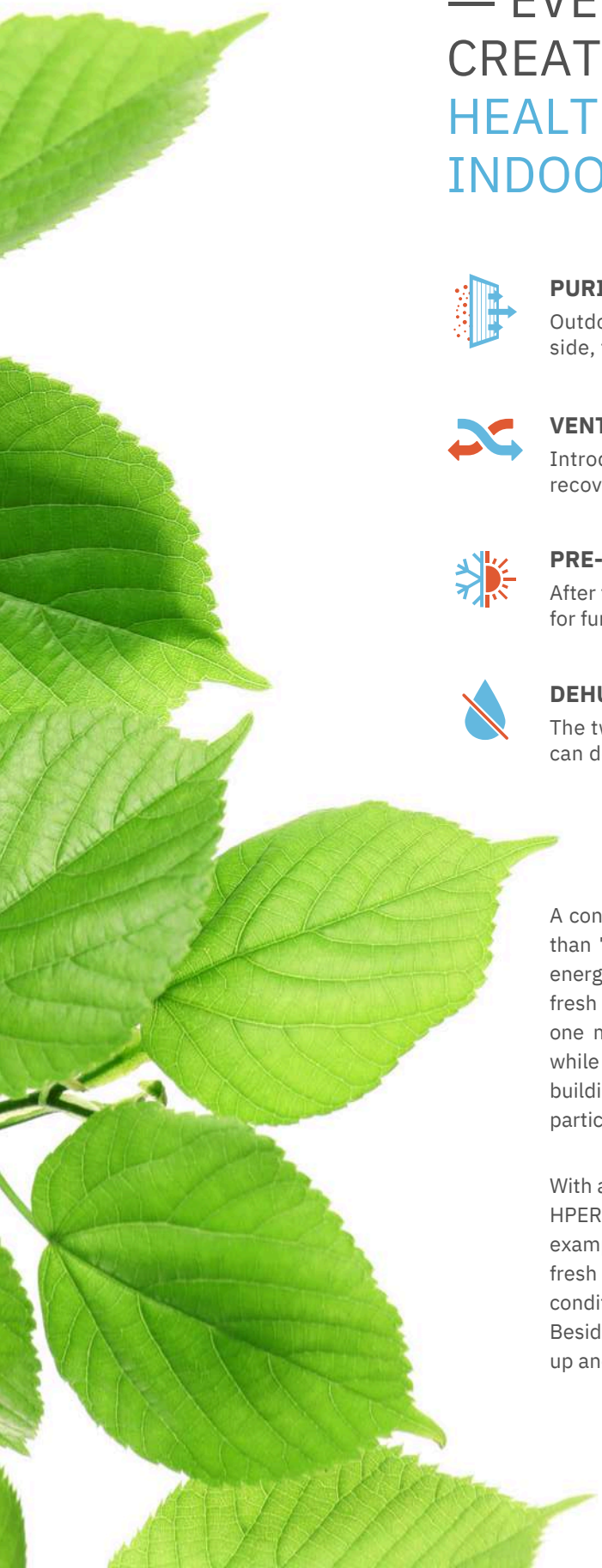
EFFICIENCY (COP) >6

ErP 2018 COMPLIANT

WiFi

Powered By zigbee

CE



WESTON CLIMATE

— EVERYTHING YOU NEED TO CREATE A COMFORTABLE, HEALTHY AND ENERGY-EFFICIENT INDOOR CLIMATE

PURIFICATION

Outdoor fresh air passes through the primary filter and F8 filter at OA side, to arrest the dust/ PM2.5/ other pollutants.

VENTILATION AND HEAT RECOVERY

Introduce outdoor fresh air into the room & extract the stale air out; It recovers the heating in winter and recover cooling in summer.

PRE-HEATING/ PRE-COOLING

After the first stage heat recovery, the air passes through the condensor for further heating/cooling.

DEHUMIDIFICATION

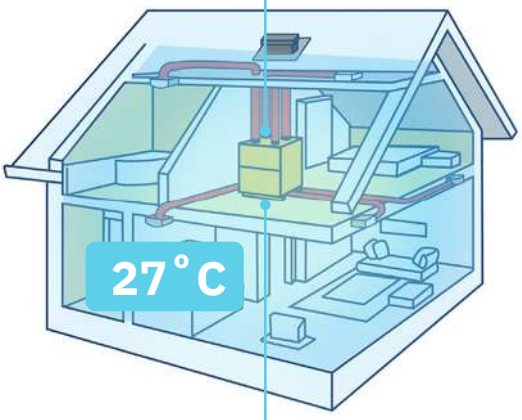
The two airstreams run through the heat exchanger and condensor, it can decrease the moisture of fresh air.

A constant supply of fresh air in the indoor spaces in which we spend more than 70% of our time is vital to our health. WESTON CLIMATE heat pump energy recovery ventilator (HPERV) is an innovative product that combines fresh air purification, heating/cooling, heat recovery, and dehumidification in one machine. It can provide you with comfortable and healthy indoor air while saving energy and money. It provides the ideal solution for air tight buildings in which the windows often remain closed due to noise, dust particles and energy loss.

With a heat exchanger and heat pump system inside, WESTON CLIMATE HPERV delivers clean and fresh air in a double energy recovery system. For example, 35˚C fresh air in summer time can be cooled to 21˚C, while 5˚C fresh air in the winter time can be heated to 36˚C. It can work as air conditioner in Autumn/ Spring or at night, when outdoor is 10-28˚C. Besides, it can remove the excess humidity, prevent furniture mold build-up and keep the indoor air at comfortable temperature and humidity.

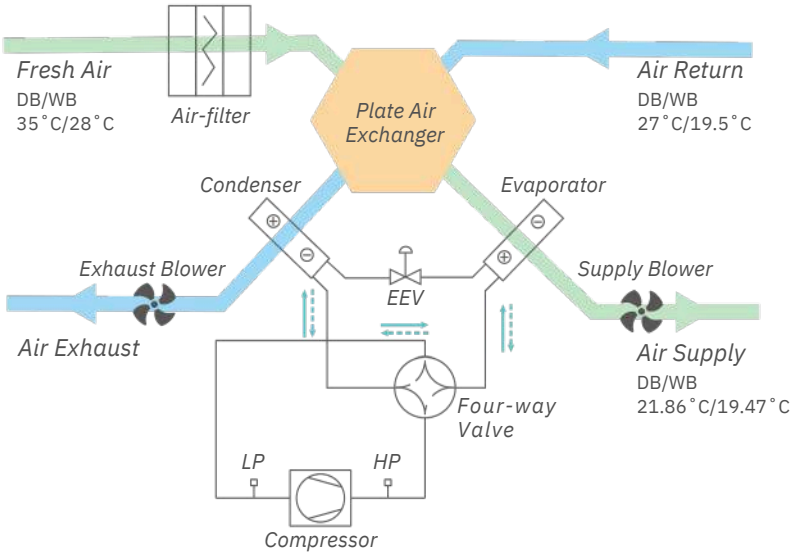
WORKING PRINCIPLE

SUMMER
35˚C

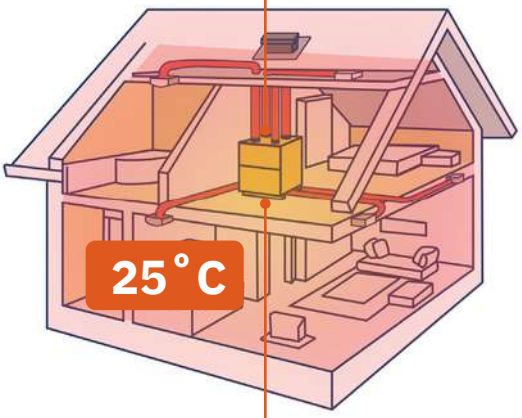


Airflow: 300 m3/h
Power: 847 W

EER 4.28

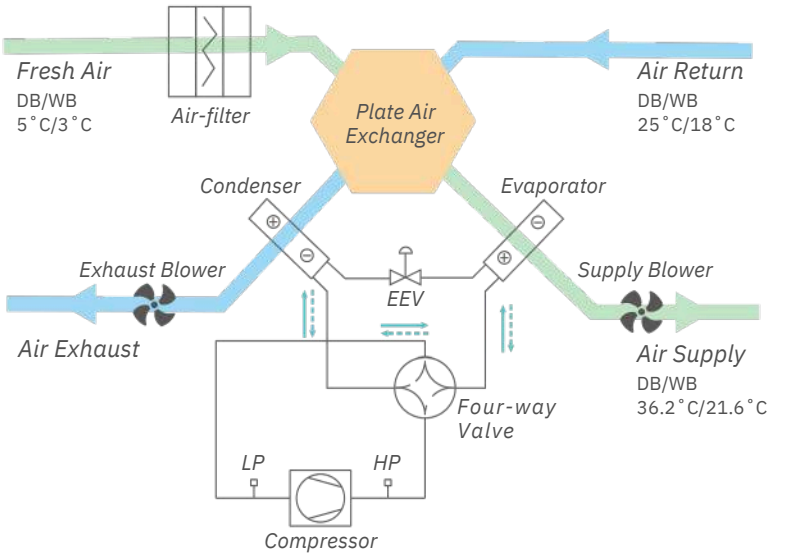


WINTER
5˚C



Airflow: 300 m3/h
Power: 790 W

COP 5.65



FEATURES

- Double energy recovery, **COP over 6**.
- Fresh air preconditioning, save your electricity bill on heating system and AC system greatly.
- Work as an independent air conditioner in suitable seasons and places.
- Low noise level of 37/42 dB(A).
- Equipped with EC fans & DC inverter compressor to minimize energy consumption.
- Wide working ambient conditions from -15˚C ~ 50˚C.
- Indoor air quality monitoring like CO2, humidity, TVOC and PM2.5.

Advantages Compared with Standard ERV

SUMMER CONDITIONS			
No	Description	Temperature	Relative Humidity
1	Outside Temperature OA	35˚C	59.10%
2	Inside Temperature RA	27˚C	49.80%
3	Fresh Air (Standard Heat Recovery Units) SA	29.24˚C	55.48%
4	**Fresh Air (Heat Pump Heat Recovery Units) SA**	**20.95˚C**	**79.18%**

WINTER CONDITIONS			
No	Description	Temperature	Relative Humidity
1	Outside Temperature OA	5˚C	71.90%
2	Inside Temperature RA	25˚C	50.70%
3	Fresh Air (Standard Heat Recovery Units) SA	20.30˚C	53.88%
4	**Fresh Air (Heat Pump Heat Recovery Units) SA**	**37.88˚C**	**17.76%**

DESIGN

EC Fans

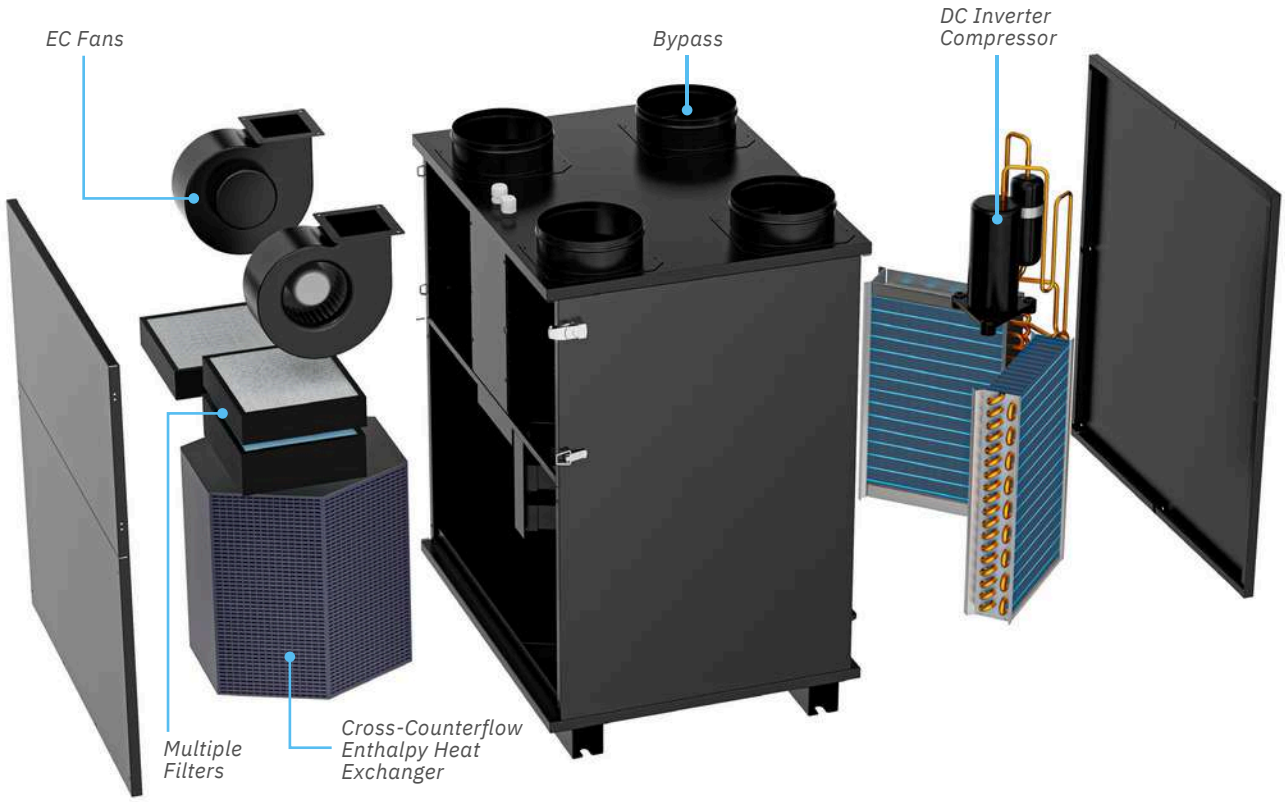
To save energyandmeet the ERP2018 standard, it's built with the forward EC motors with 0-10 Voltage control. It has 10 speeds and is featured by small vibration, low noise, energy-saving, and longer service life.

02 Bypass

In summer, the 100% bypass contributes to improved comfort and it is controlled automatically on the basis of the measured outdoor temperatures.

03 Multiple Filters

The standard filters are G4 and F8 grade filters. The primary filter can remove dust, pollen and other pollutants from the incoming fresh air. They also protect the heat exchanger from clogging or corrosion. And the F8 filter can further purify the air. The PM2.5 particle filtration efficiency is over 95%. An optional air disinfection filter is available for higher filtration efficiency.



04 DC Inverter Compressor

Itcomesfrom thewell-known brand GMCC.It compresses and expands refrigerant to transfer heat between the outdoor and indoor air streams. It is DC inverter type which can adjust its speed and output according to the load demand, ensuring energy saving performance and low noise level. It can also operate in a wide temperature range of -15˚C to 50˚C. Both R32 and R410a refrigerant available.

Advantages of DC Inverter Compressor

Advantages	DC Inverter Compressor	Fix-frequency Compressor
High efficiency	√	X
Quiet operation	√	X
Longer lifespan	√	X
Smooth start-stop	√	X
Accurate and fast temperature control	√	X
Energy saving	√	X
Operation temperature	-15˚C to 50˚C	-7˚C to 40˚C

CROSS-COUNTERFLOW ENTHALPY HEAT EXCHANGER

Thecross-counterflow enthalpy heat exchangercan transfer heatandmoisture betweenthe outdoor and indoor air streams without mixing them.

It can recover up to 80% of the energy from the exhaust air, reducing the heating or cooling load on the compressor. It is washable and easy to maintain. It has a lifetime of up to 15 years.

Anti-mold & Anti-bacteria

High Strength & Stability

Special Polymer Membrane

Washable

Long Service Life

ADVANTAGES

01 ENHANCED COMFORT THROUGH OPTIMUM INDOOR AIR QUALITY

- High efficiency with up to 90% heat recovery and up to 80% humidity recovery.
- No more dry air in winter.
- Pleasant reduction in humidity in summer.

02 INCREASED DURABILITY OF THE BUILDING FABRIC

A constant humidity level prevents cracks in sensitive materials such as wood flooring and extends their lifetime.

03 NO FROSTING UNDER - 30°C

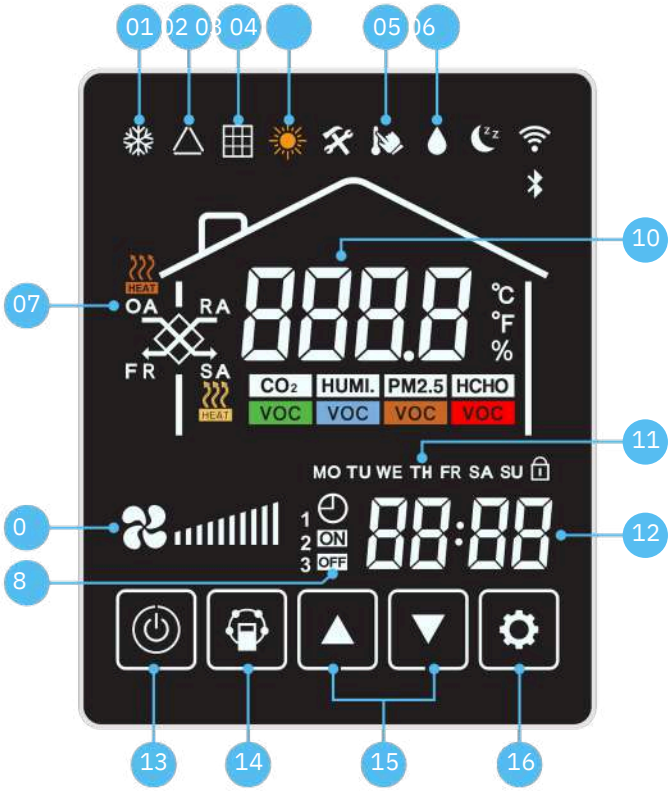
Because of its high permeability to water molecules, no condensation water will form on the surface of the membrane, and condensation and ice blockage will not occur under extreme conditions of - 30°C.

04 MORE COST EFFICIENCY

Condensate-free operation under normal conditions means there is no need for a condensate drain. This saves your customers money.

ADVANCED LCD REMOTE CONTROL PANEL

CONTROL & FUNCTIONS



01. Cooling mode
02. Ventilation mode
03. Filter alarm
04. Heating mode
05. SA setting
06. Dehumidification mode
07. Temperature type
08. Fan speed
09. Weekly timer on/off
10. Temperature display
11. Week day
12. Clock
13. ON/OFF button
14. Mode button
15. Up/Down button
16. Set button

WIFI FUNCTIONS

Wifi function is available to control and monitor the ventilation system from anywhere in the world using a smart phone. User can monitor the indoor air quality at your hand for healthy living.

Monitoring Indoor Air Quality

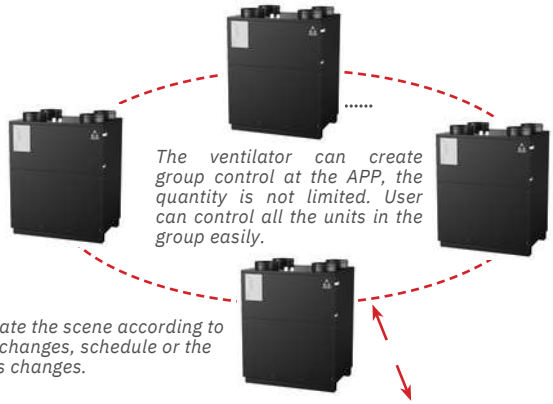
Monitor local weather, temperature, humidity, CO2 concentration at your hand for healthy living.

Variable Setting

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

Group Control

- Smart control according to local weather.
- One APP can control multiple units.
- Linkage control with other appliances with Tuya IoT.

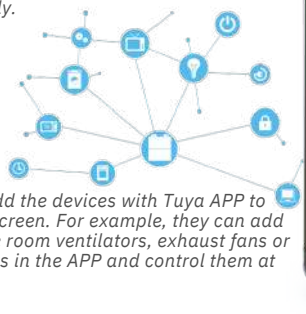


The ventilator can create group control at the APP, the quantity is not limited. User can control all the units in the group easily.

User can create the scene according to the weather changes, schedule or the device status changes.

85% → Stop Running

For example, when the weather shows the outdoor relative humidity is higher than 85%, user can set the ventilator to stop running, toprevent the outdoor humidity coming inside. The unit will run according to the setting automatically.



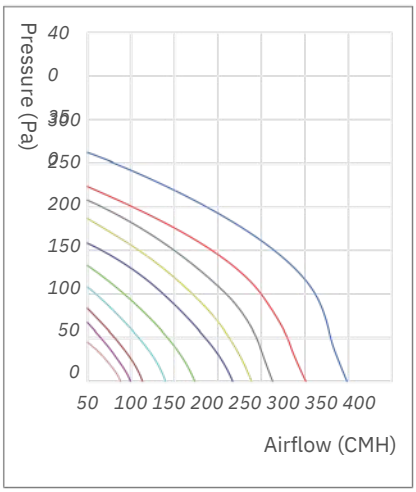
Users can add the devices with Tuya APP to their home screen. For example, they can add all the single room ventilators, exhaust fans or light switches in the APP and control them at their will.

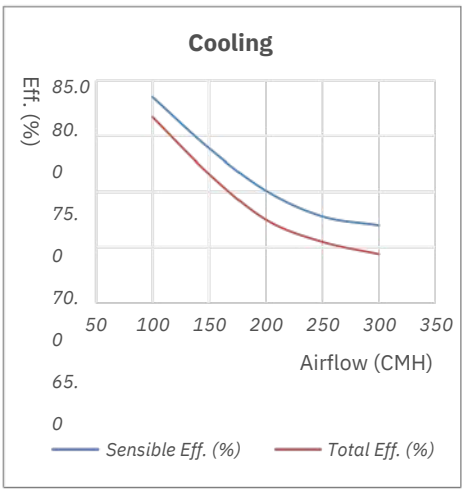
TECHNICAL PARAMETERS

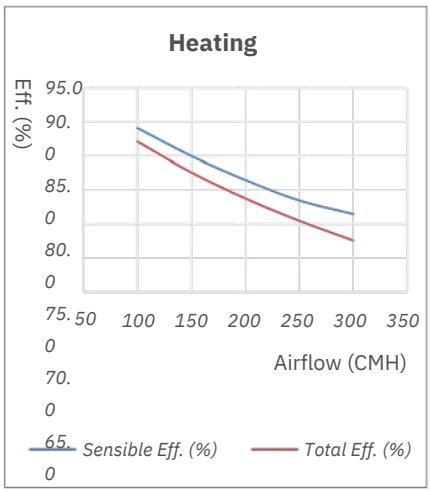
* The parameters are tested accordion to EN308 standards.

Model		Unit	AV-HTPF30/EI32
Rated airflow		CMH	300
Exhaust airflow (ventilation mode)		CMH	300
Exhaust airflow (heating/cooling mode)		CMH	350
External static pressure		Pa	100
Noise		dB(A)	37/42
Power			220V 1P 50/60Hz
Dimension (L×W×H)		mm	760×600×850
Air inlet/outlet diameter		mm	188
Air inlet/outlet height		mm	60
Machine base height		mm	61.5
Drainage pipe		Inch	1/2"
Refrigerant			R32
Operation temperature		˚C	-15~50
Ventilation mode	Temperature Effi. (heating)	%	76.5
	Temperature Effi. (cooling)	%	72
	Enthalpy Effi. (heating)	%	72.6
	Enthalpy Effi. (cooling)	%	69.4
	Input power	W	217
	Input current	A	1.19
Cooling/Heating	Norminal cooling capacity	W	3620
	Max cooling capacity	W	4140
	Input power (cooling)	W	847
	Operation current (cooling)	A	5.65
	Norminal heating capacity	W	4460
	Max heating capacity	W	4651
	Input power (heating)	W	790
	Operation current (heating)	A	5.8

Performance Chart





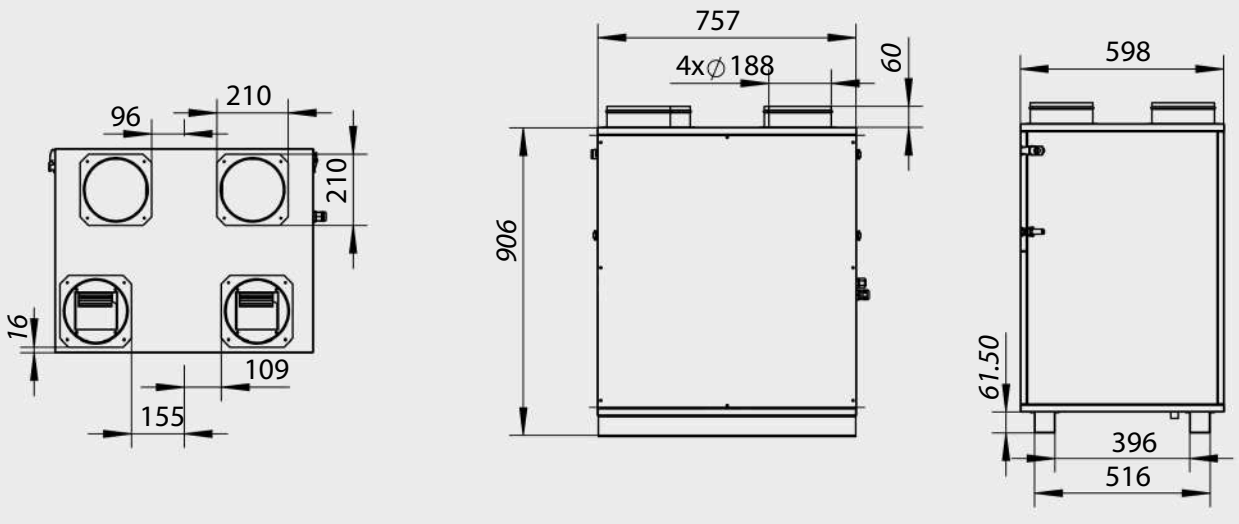


ECO-DESIGN INFORMATION

According to Commission Regulation (EU) 1254/2014.

Model	AV-HTPF30/EI32
Energy class-Averag	A
Specific energy consumption-Average (KWh/m2.a)	-36.27
Specific energy consumption-Cold (KWh/m2.a)	-80.11
Specific energy consumption-Warm (KWh/m2.a)	-11.16
Maximum internal and external leakage rates (%)	< 5% Internal, < 5% External
Visual filter warming	Timer
The annual electricity consumption (AEC) (kWh electricity/a)	3.83
The annual heating saved-Average (KWh primary energy/a)	45.84
The annual heating saved-Cold (KWh primary energy/a)	89.68
Electric power input of the fan drive at maximum flow rate (W)	217 (Ventilation mode)
The annual heating saved-Cold (KWh primary energy/a)	20.73
Reference flow rate (m3/s)	0.08
Reference pressure difference (Pa)	100
Specific power input (SPI) {W/(m3/h)}	0.72
Control factor	0.65
Type control system	Local demand control
Type of airflow	DF
Type of motor	EC motor
Type of heat recovery system	Recuperative
Thermal efficiency of heat recovery (%)	76.5
Maximum flow rate (m3/h)	300
Sound power level dB(A)	37

Dimensions



OTHER ACCESSORIES

Optional Preheater for Intelligent Defrosting

When the outdoor air is low than -15˚C in winter, it's recommended to use the preheater. The intelligent frost protection with preheater guarantees the high efficiency at extremely low outdoor temperatures. Compared to other solutions for frost protection, it means extra savings on the energy bill.

Model	Rated Airflow (m3/h)	Power Consumption (kw)	Heating Power (kw)	Temp. Rise (℃)	Current (A)	Volt (V)	Frequency (Hz)	Size L×W×H (mm)	Connected Air Duct Diameter (mm)
AS-EC35-1	300	1.1	1	10	4.68	230	50	350×250×250	144

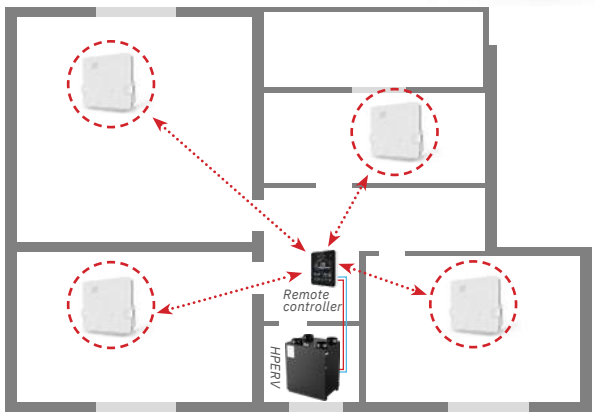
Optional IAQ Module

The wireless IAQ module can communicate with the touch screen control panel of HPERV with zigbee signal sensing indoor air quality and transmitting data to the control system, which will subsequently control the ERV to maintain good indoor air quality.

Powered By zigbee

Features:

1. Free installation, no wiring, no code matching.
2. Sensing the air quality of the user's living space in real-time.
3. An ERV maximum connected with 15 IAQ sensors.
4. Zigbee networking, long transmission distance, more stable data.
5. Micro USB 5V DC power supply, mobile phone charger can supply power.
6. Linked with APP to achieve more intelligent control.

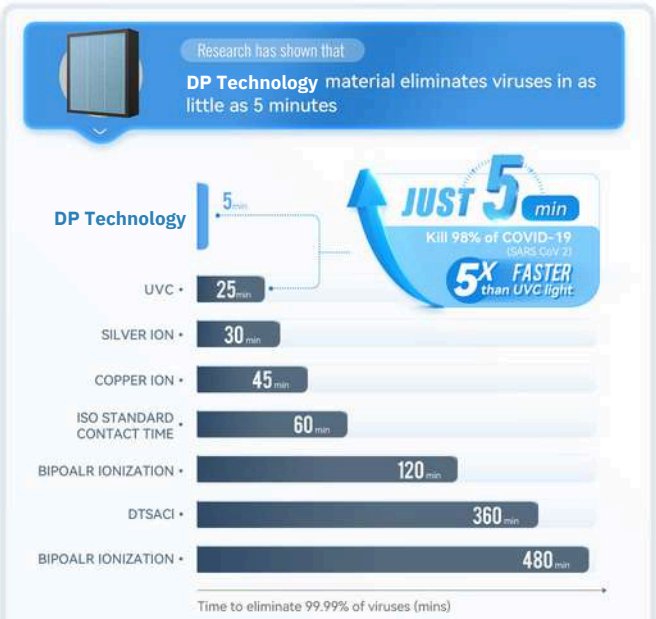


Besides, we have the wire CO2 sensor and humidity sensor for option.

CO2 Sensor

Humidity Sensor

Optional DP Technology Disinfection Filter

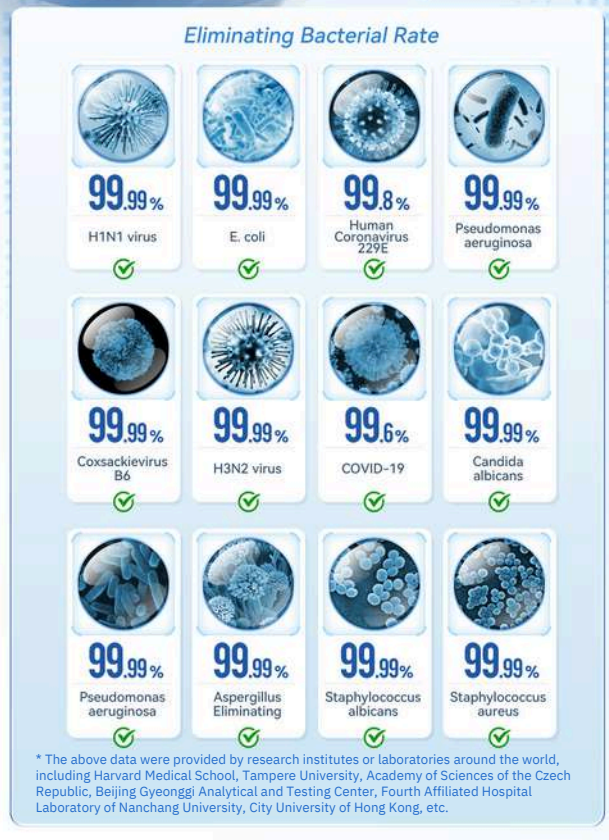


Air purification system with DP Technology filter protection

- Superior to other similar products -

Filtration system / Item	DP Technology	HEPA	UVC	ISO IONIZATION
Captures Viruses Microorganisms And Pollens*	√	√	X	X
Eradicates Viruses Microorganisms And Pollens*	√	X	√ Takes longer time, less effective in fast airflow environments	X A study showed limited reductions.
Investment costs	LOW	LOW	LOW	HIGH
Maintenance costs	LOW	LOW	MIDDLE UVC lights have a short service life and cause system components to age more quickly.	HIGH High voltage system need to maintain every two years with high costs
Safety	HIGH WHO and UN FAO-approved food additive.	MIDDLE Residual biofouling of filters may lead to second ary contamination	HIGH Direct exposure easily causes cancer and eye damage, as well as accelerated filter degradation.	LOW May emit ozone, which is harmful to the lungs and increas es harmful VOCs.

* Based on third-party studies, commercial installations, and internal testing.



* The above data were provided by research institutes or laboratories around the world, including Harvard Medical School, Tampere University, Academy of Sciences of the Czech Republic, Beijing Gyeonggi Analytical and Testing Center, Fourth Affiliated Hospital Laboratory of Nanchang University, City University of Hong Kong, etc.

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APPLICATIONS

It offers air volume of 300 cubic meters per hour, which can meet the ventilation needs of 80-150 m2 residential houses, villa, hotel, office etc.

If you are fed up with limited space in the house by adding traditional ventilation unit, dehumidifier, air purifier, split type heat pump etc, let's try one DC inverter fresh air heat pump system. It is available to install in the attic, basement, cabinet in the kitchen etc which take up limited space.

How to select the right model for your house?

1. Calculation of airflow according to air exchange rate.

$$L = V_{prem.} \times Ach \ (m3/h),$$

where **V prem**. – premise volume (m3]),

Ach – minimum air exchange per hour, refer air exchange table.

Premise		Air exchange rate
Domestic premises	Living room of apartments or hostel residential premises	3 m3/h for 1 m2 in residential premises
	Kitchen in flat or hostel	6-8
	Bathroom	7-9
	Shower cabin	7-9
	WC	8-10
	Home laundry room	7
	Cloakroom	1.5
	Storeroom	1
	Garage	4-8
	Cellar	4-6

2. Calculation of airflow according to number of inhabitants.

$$L = L1 \times NL \ (m3/hour),$$

where **L1** – rated value for air volume per one person, m3/h*person,

NL – number of inhabitants in the premises.

20-25 m3/h per one person at low physical activity
45 m3 /h per one person at light physical activity
60 m3 /h per one person at heavy physical activity

3. Choose the bigger result as the required airflow. Then choose the model with the required airflow accordingly.

The heat pump energy recovery ventilator should be used priority to supply fresh air then to do the air conditioning.

WESTON
CLIMATE

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