

# Heat Recovery Ventilator

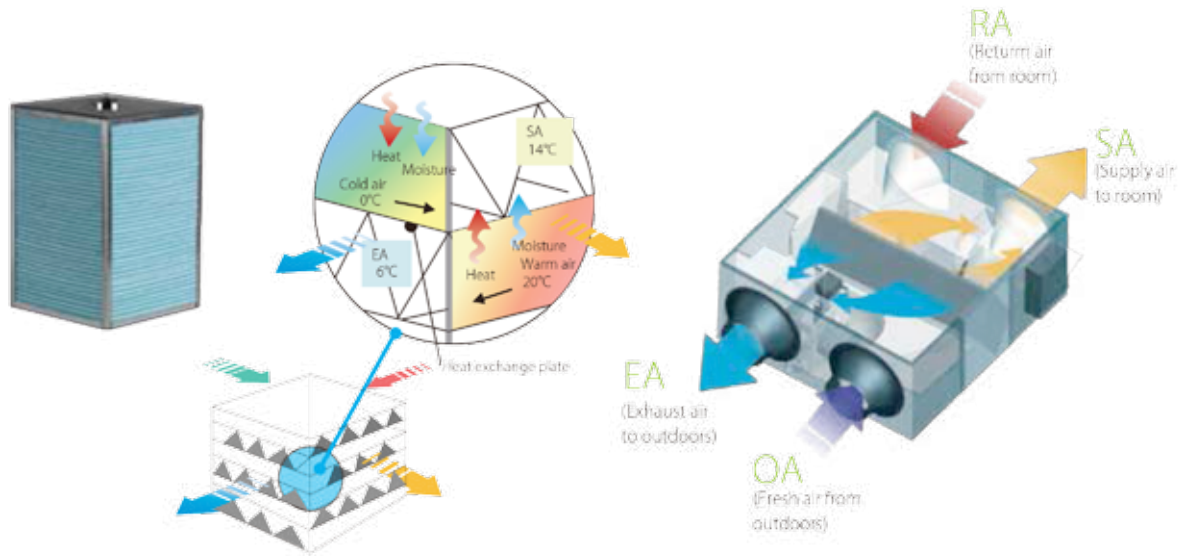
- Larger air supply rate**
- enhanced heat exchange efficiency**
- enhanced energy saving property**

The heat recovery ventilator (HRV) can reclaim heat energy lost through ventilation and reduce the room temperature fluctuation caused by ventilation process. By utilizing the most advanced technology and technics, Mitsui HRV has extremely good performance. The heat exchanged core is made of special paper processed with chemical treatment, which could realize better temperature and humidity control of the room environment. Temperature exchange efficiency is above 65% and enthalpy exchange efficiency between 50-65%.

HRV-200 HRV-500  
HRV-300 HRV-800  
HRV-400 HRV-1000



HRV-1500  
HRV-2000



## Low noise

Sound proof material is used to guarantee quiet operation.

## Compact design, flexible installation and easy maintenance

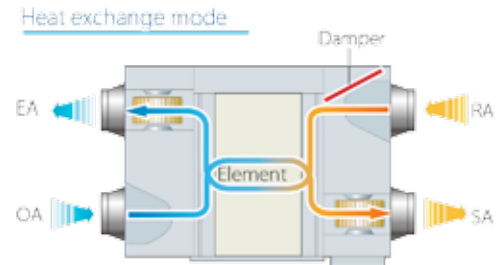
With a min. height of only 10-25/64in.(264mm) and 50lbs (23kg) weight, the unit provides best convenience and possibility for installation in limited spaces.



## Multi-modes for different situations

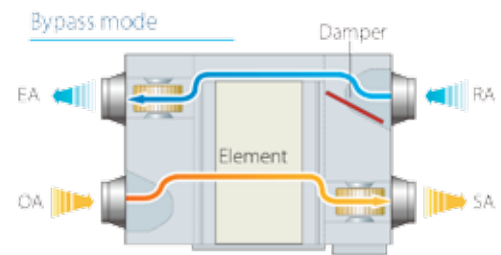
### Heat exchange mode

When air flow formed by the fans goes through the heat exchanged core in cross way, due to temperature difference between two channels of the core, thermal transmission happens naturally. In summer days, high temperature outdoor air gets cooled by indoor exhaust air; in winter, low temperature outdoor air gets heated by indoor exhaust air. So the energy contained in exhaust air can be reclaimed and energy efficiency gets improved.



### Bypass mode

In mild climate areas or seasons, when temperature and humidity level difference between indoor and outdoor is small, the unit works as conventional ventilation fan. Both supply fan and exhaust fan works at the same speed (Hi/mid/low/auto).



### Air supply mode

It is one kind of bypass mode with air supply fan speed higher than exhaust fan speed. It can be used in mild climate area where large amount fresh air is needed.

### Exhaust air mode

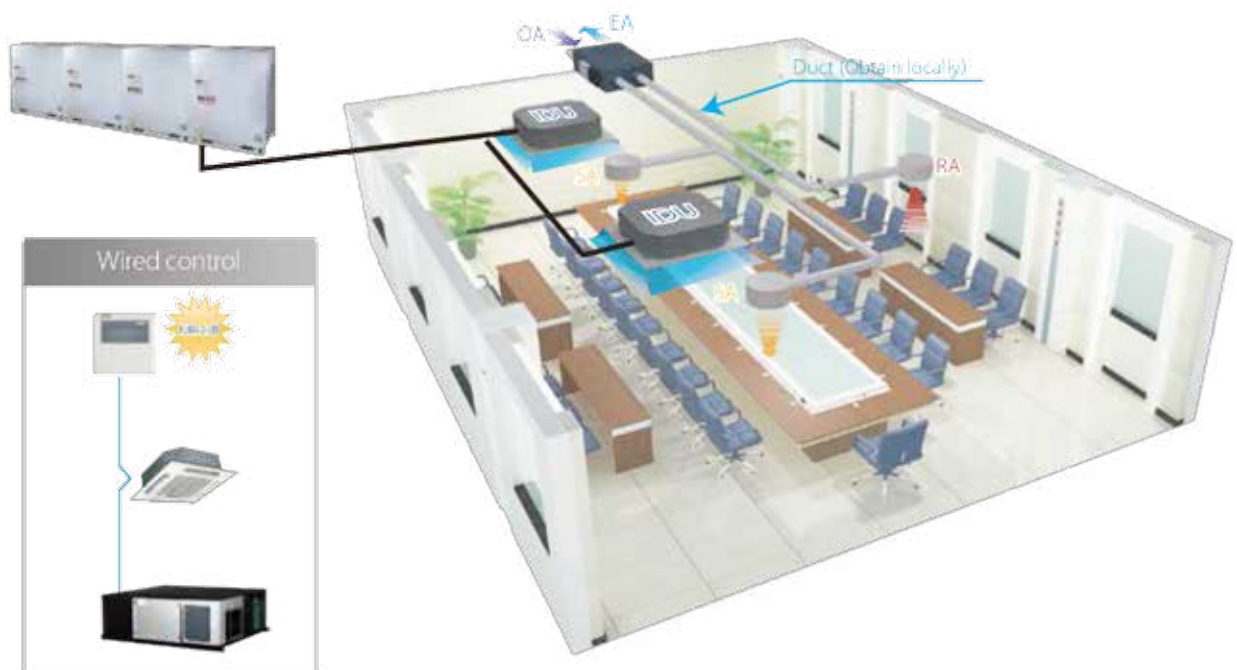
It is also one kind of bypass mode with exhaust fan speed higher than air supply fan speed. It can be used in mild climate area where large amount exhaust air needs to be expelled.

### Auto mode

The controller chooses heat exchange mode or bypass mode according to the temperature difference between outdoor and indoor temperature. Both the two fans work at low speed.

## Flexible control

Interlocking control with other indoor units by controller is possible.



## Specifications:

Model			HRV-200	HRV-300	HRV-400	HRV-500			
Power supply		V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50			
Temperature exchange efficiency (%)		High	%	65	65	65	65		
		Medium	%	65	65	65	65		
		Low	%	70	70	70	70		
Enthalpy exchange efficiency (%)		For cooling		High	%	50	50	50	50
				Medium	%	50	50	50	50
				Low	%	55	55	55	55
		For heating		High	%	55	55	60	60
				Medium	%	55	55	60	60
				Low	%	60	65	65	65
Sound pressure level		Heat exchange mode		High	dB(A)	27	30	32	35
				Medium	dB(A)	26	29	31	34
				Low	dB(A)	20	23	25	28
		Bypass mode		High	dB(A)	28	31	33	36
				Medium	dB(A)	27	30	32	35
				Low	dB(A)	22	25	27	30
Net dimension (WxDxH)		mm	866×655×264	944×722×270	1600×1270×540	1650×1470×540			
Packing size (WxDxH)		mm	930×730×445	1010×800×450	1010×1010×450	1120×1120×452			
Net/gross weight		kg	23/40	26/44	31/52	41/64			
Casing		Galvanized steel plate							
Heat exchange system		Air to air cross flow total heat (sensible heat + latent heat) exchange							
Heat exchange element material		Specially processed nonflammable paper							
Fan		Type		Centrifugal fan					
		Airflow rate		High	m3/h	200	300	400	500
				Medium	m3/h	200	300	400	500
				Low	m3/h	150	225	300	375
		ESP		High	Pa	75	75	80	80
				Medium	Pa	58	60	65	68
				Low	Pa	35	40	43	45
Motor output		W	20	40	80	120			
Duct diameter		mm	φ144	φ144	φ144	φ194			
Operating temperature range		°C	-7~43 DB, 80% RH or less						

### Notes:

- For the units model of HRV (200-1000), there are 3-speed adjustable air volume (Hi, Med, Low), but for the units model of HRV (1500-2000), there are only 1-speed which cannot be adjusted.
- Sound level is measured at 1.4m below the center of the body in an anechoic chamber.
- Temperature Exchange Efficiency is the mean value between cooling and heating.
- Efficiency is measured under the following conditions:  
 \* Cooling Condition: Air Exhaust Temp. 27°C DB, 19.5°C WB., Fresh Air Temp. 35°C DB, 28°C WB.  
 \* Heating Condition: Air Exhaust Temp. 21°C DB, 13°C WB., Fresh Air Temp. 5°C DB, 2°C WB.

Model			HRV-800	HRV-1000	HRV-1500	HRV-2000			
Power supply		V/Ph/Hz	220-240/1/50	220-240/1/50	380/3/50	380/3/50			
Temperature exchange efficiency (%)		High	%	65	65	65	65		
		Medium	%	65	65	/	/		
		Low	%	70	70	/	/		
Enthalpy exchange efficiency (%)		For cooling		High	%	50	50	50	50
				Medium	%	50	50	/	/
				Low	%	55	55	/	/
		For heating		High	%	60	60	60	60
				Medium	%	60	60	/	/
				Low	%	65	65	/	/
Sound pressure level		Heat exchange mode		High	dB(A)	39	40	51	53
				Medium	dB(A)	38	39	/	/
				Low	dB(A)	32	33	/	/
		Bypass mode		High	dB(A)	40	41	52	54
				Medium	dB(A)	39	40	/	/
				Low	dB(A)	34	35	/	/
Net dimension (W×D×H)		mm	1286×1006×388	1286×1256×388	1600×1270×540	1650×1470×540			
Packing size (W×D×H)		mm	1380×1100×573	1390×1350×580	1680×1350×720	1760×1580×720			
Net/gross weight		kg	23/40	79/110	163/224	182/247			
Casing		Galvanized steel plate							
Heat exchange system		Air to air cross flow total heat (sensible heat + latent heat) exchange							
Heat exchange element material		Specially processed nonflammable paper							
Fan		Type		Centrifugal fan					
		Airflow rate		High	m3/h	800	1000	1500	2000
				Medium	m3/h	800	1000	/	/
				Low	m3/h	600	750	/	/
		ESP		High	Pa	100	100	160	170
				Medium	Pa	82	85	/	/
				Low	Pa	54	58	/	/
Motor output		W	360	360	450	450			
Duct diameter		mm	φ242	φ242	346×326	346×326			
Operating temperature range		°C	-7~43 DB, 80% RH or less						

### Notes:

- For the units model of HRV (200-1000), there are 3-speed adjustable air volume (Hi, Med, Low), but for the units model of HRV (1500-2000), there are only 1-speed which cannot be adjusted.
- Sound level is measured at 1.4m below the center of the body in an anechoic chamber.
- Temperature Exchange Efficiency is the mean value between cooling and heating.
- Efficiency is measured under the following conditions:  
 \* Cooling Condition: Air Exhaust Temp. 27°C DB, 19.5°C WB., Fresh Air Temp. 35°C DB, 28°C WB.  
 \* Heating Condition: Air Exhaust Temp. 21°C DB, 13°C WB., Fresh Air Temp. 5°C DB, 2°C WB.