

Heat Recovery Ventilation Units (HRV)

Larger air supply rate enhanced heat exchange efficiency enhanced energy saving

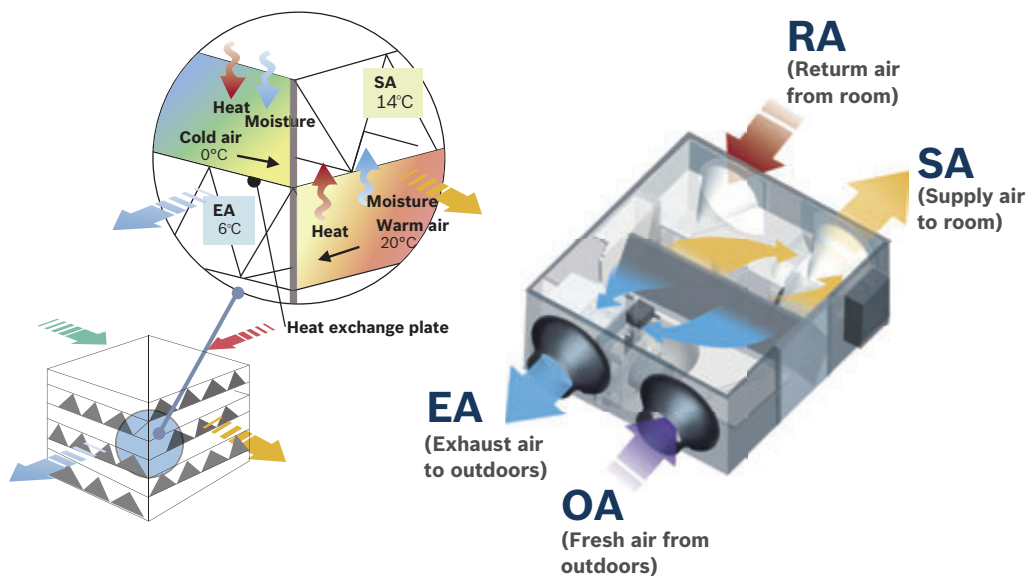
The heat recovery ventilation unit (HRV) can regain heat energy lost through ventilation and reduce the room temperature fluctuation caused by ventilation process. By utilizing the most advanced technology and technics, Bosch HRV has extremely good performance. The heat exchanger core is made of special 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 %.

Model Names

HRV200-1 HRV500-1
 HRV300-1 HRV800-1
 HRV400-1 HRV1000-1



HRV1500-3
 HRV2000-3



Low noise

Sound proof material is used to guarantee quiet operation.

Compact design, flexible installation and easy maintenance

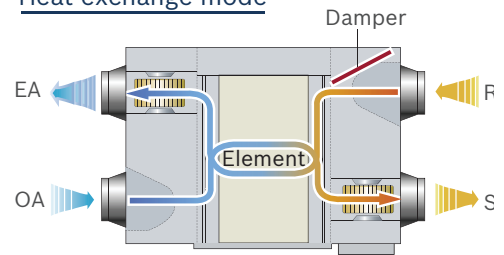
With a minimum height of only 264 mm and 23 kg weight, the unit provides best convenience and possibility for installation in limited spaces (HRV200-1 model).

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.

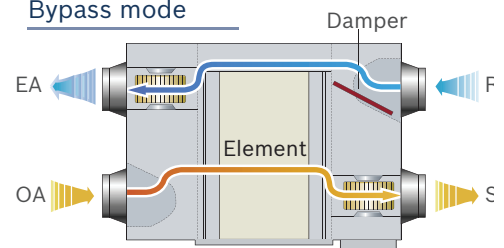
Heat exchange mode



Bypass mode

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

Bypass mode



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 areas where a large amount of fresh air is needed.

Exhaust air mode

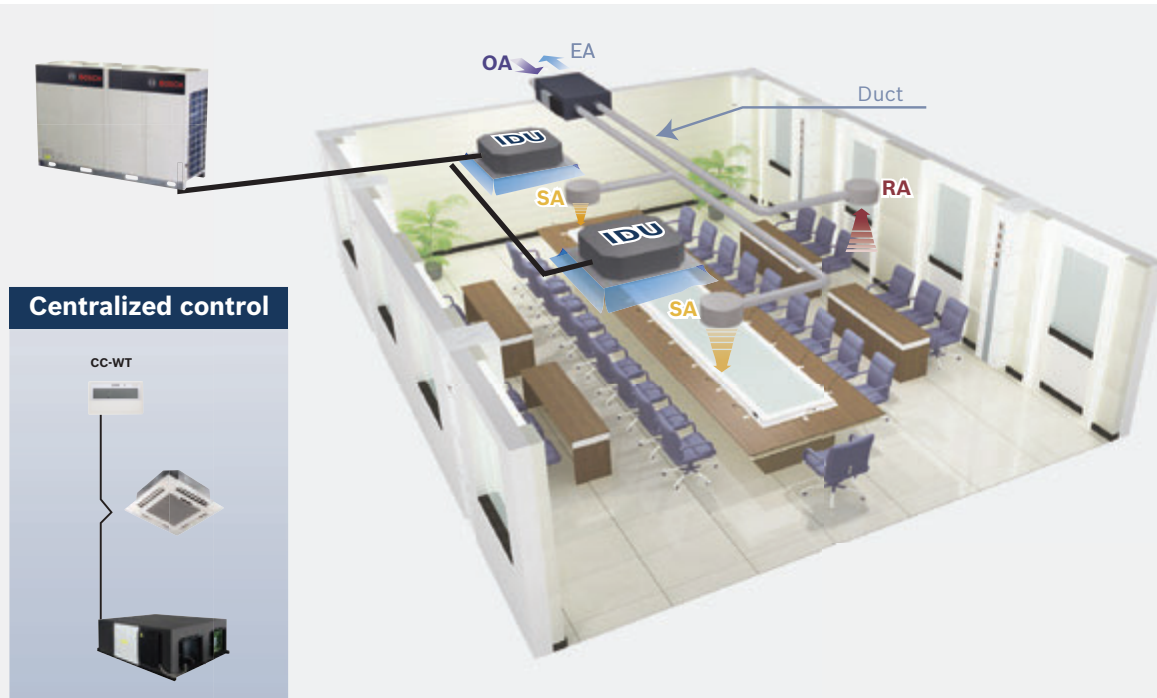
It is also one kind of bypass mode with exhaust fan speed higher than air supply fan speed. It can be used in mild climate areas where a large amount of exhaust air needs to be expelled.

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.



IDU = VRF Indoor Unit
 SA = Supply Air
 RA = Return Air
 OA = Outdoor Air (Fresh Air)
 EA = Exhaust Air

Specifications

Model				HRV200-1	HRV300-1	HRV400-1	HRV500-1
Power supply				V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50
Cooling	Temperature exchange efficiency	High	%	55	55	55	55
		Medium	%	55	55	55	55
		Low	%	60	60	60	60
	Enthalpy exchange efficiency	High	%	50	50	50	50
		Medium	%	50	50	50	50
		Low	%	55	55	55	55
Heating	Temperature exchange efficiency	High	%	60	60	60	65
		Medium	%	60	60	60	65
		Low	%	65	65	65	70
	Enthalpy exchange efficiency	High	%	55	55	60	60
		Medium	%	55	55	60	60
		Low	%	60	60	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 (W×D×H)			mm	866×655×264	944×722×270	944×927×270	1038×1026×270
Packing size (W×D×H)			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:**
- 1. 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.
 - 2. Sound level is measured at 1.4m below the center of the body in an anechoic chamber.
 - 3. 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				HRV800-1	HRV1000-1	HRV1500-3	HRV2000-3	
Power supply				V/Ph/Hz	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50
Cooling	Temperature exchange efficiency	High	%	55	55	55	55	
		Medium	%	55	55	—	—	
		Low	%	60	60	—	—	
	Enthalpy exchange efficiency	High	%	50	50	50	50	
		Medium	%	50	50	—	—	
		Low	%	55	55	—	—	
Heating	Temperature exchange efficiency	High	%	65	65	65	65	
		Medium	%	65	65	—	—	
		Low	%	70	70	—	—	
	Enthalpy exchange efficiency	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	62/88	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:

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