



LG ERV DX for ventilation

For Middle East & Africa

Necessity of Energy Efficient Ventilation

HVAC Societies emphasize the need of sufficient Ventilation

Importance of ventilation and IAQ is being emphasized by leading organizations such as ASHRAE.

Ventilation Air Requirement (Housing)

Floor Area (m ²)	Bedrooms				
	1	2	3	4	5
47-93	21	24	28	31	35
140-186	35	38	42	45	49
233-279	49	52	56	59	63
326-372	63	66	70	73	77
419-465	77	80	84	87	91

LG ERV DX Air Volume

Model	Air Volume
LZ-H050GXN4	139
LZ-H080GXN4	222
LZ-H100GXN4	278

In case of villa that has 500 m² as floor area with 10 bedrooms, 113.5 L/s of ventilation air is required according to formula which is suggested by ASHRAE.

Even by using only one ERV DX unit of LZ-H050GXN4 (139L/s), you can intake sufficient amount of fresh air that recommended by ASHRAE.

$$Q_{tot} = 0.15 A_{floor} + 3.5 (N_{br} + 1) \quad [\text{Unit : L/s}]$$

where

Q_{tot} = Total Required Ventilation Rate, L/s

A_{floor} = Dwelling-unit Floor Area, m²

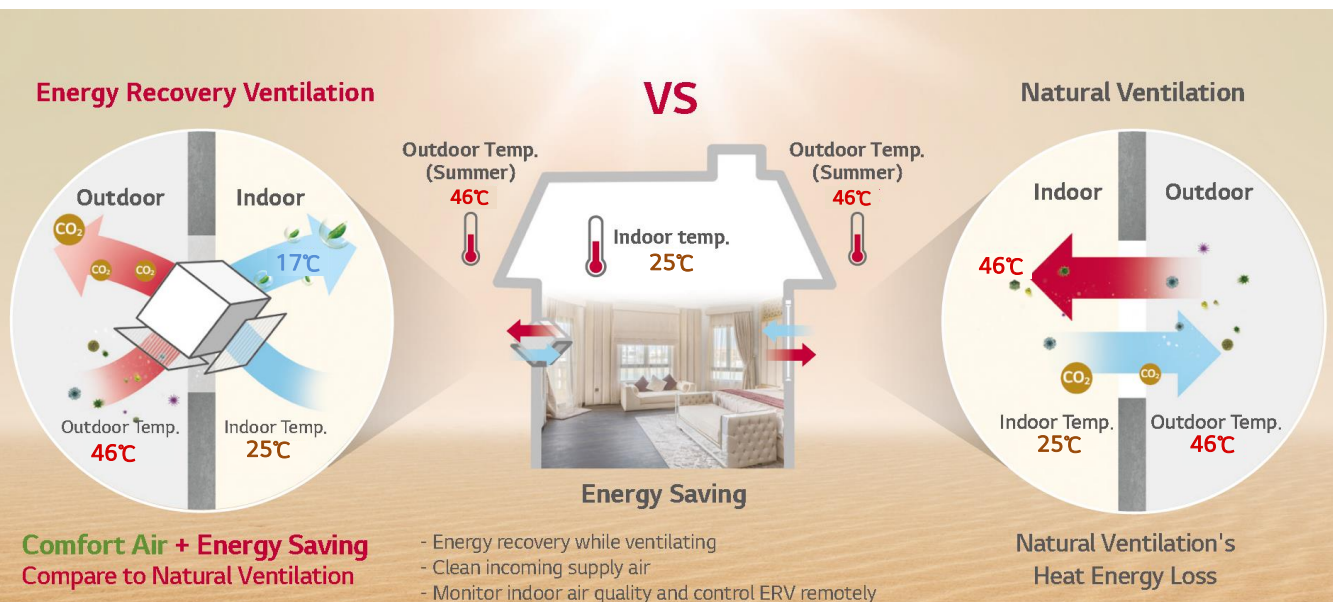
N_{br} = Number of Bedrooms (not to be less than 1)

Source : ASHRAE Standard 62.2-2013

Difference between LG ERV DX and Natural Ventilation

Natural ventilation loss cooling, heating energy when exhausting polluted air inside.

Heat exchanger in LG ERV DX collects the cooling, heating energy to save while supplying fresh air.

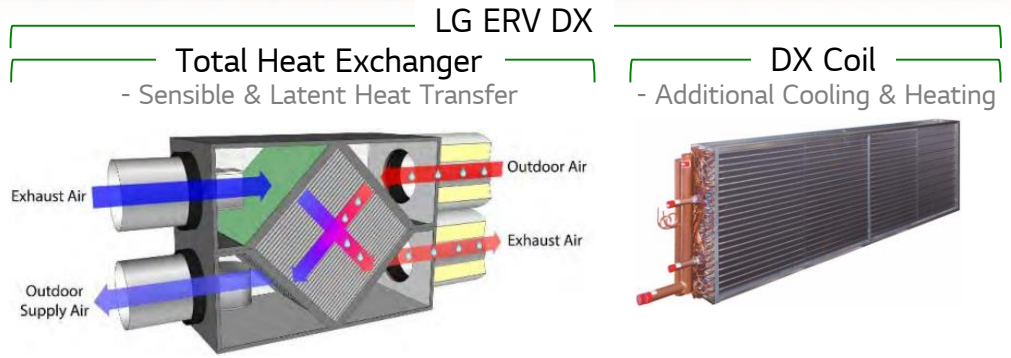


Why LG ERV DX ?

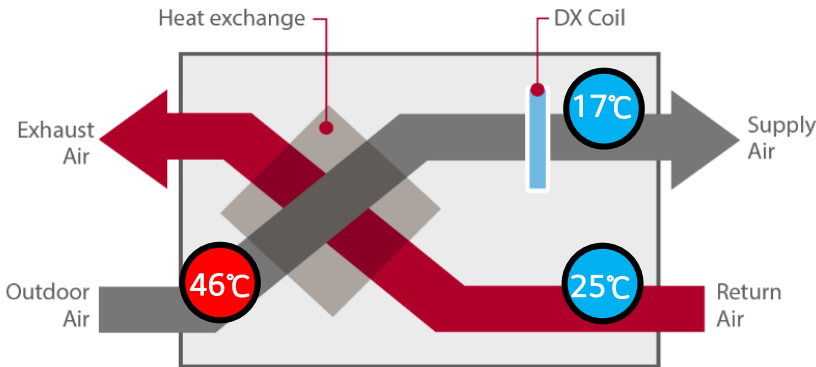
LG ERV DX (Energy Recovery Ventilator with Direct Expansion Coil)

During the summer, LG ERV DX can transform outdoor warm air into cool air for indoors and it can prevent cold drafts during the winter by supplying warm air with DX coil.

LG VRF (MULTI V)

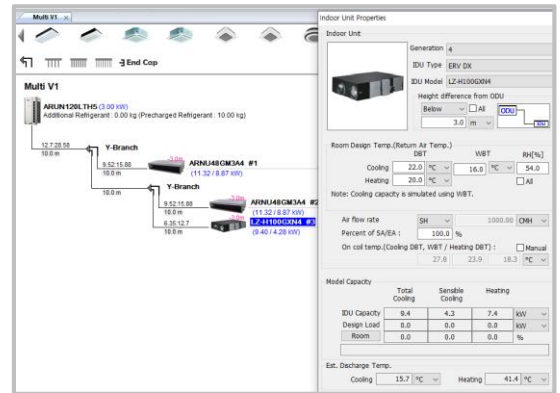


[Expected Air Temperature of each sections]



- Based on LG internal test result (air volume of 500 m³/hour)
- Results may vary depending on detailed temperature and humidity conditions.

[System design by LG LATS HVAC]



LATS HVAC is an integrated model selection program of LG HVAC products for an accurate, quick and suitable selection to each sites.

LG ERV DX is installed in Dubai LG Academy, and monitored for temperature and humidity. You can visit / see the product's operation once you contact LG sales engineers in any time.



Why LG ERV DX is the Best?

Villa requires an efficient ventilation not only cooling

LG ERV DX can be used as a Total Air Conditioning Solution. It can control condition of incoming air with the DX coil and humidifier for making comfortable indoor air interlocked with MULTI V (LG VRF).



Benefits with LG ERV DX

- Not only cooling itself, but also 100% fresh air ventilation
- No need to equip additional outdoor unit for ventilation
- Easy installation due to its simple piping and compact size rather than FAHU
- Pre-cooled 100% fresh air intake through total heat exchanger and DX coil interlocking with MULTI V (LG VRF)
- Improved IAQ (Indoor Air Quality) with optional F7 filter and CO2 Sensor.
- It can provide saving installation space and initial cost

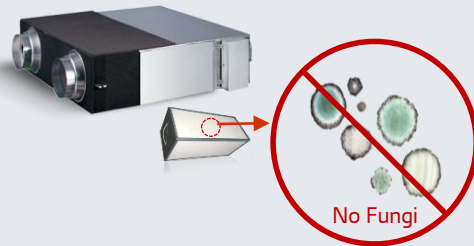
Additional Benefits

Air Purifying System



Recommendation	Pre-filter	T. H. Exchanger	M. Filter
Maintenance	Vacuuming (Washable)	Vacuuming	-
Replacement	3 years	10 years	1 years

Fungi Resistance Treatment



3rd party Test Report

The Fungi resistance performance of the total heat exchanger is certified by 3rd Party Test Report.

CO2 Auto Operation

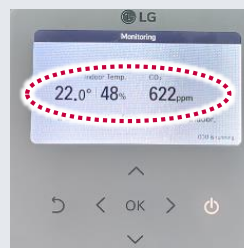
LG ERV DX reduces energy loss with auto fan speed control following CO2 level.

CO2 status (ppm)	Auto Fan speed control	
	Supply Air	Return Air
Below 500	Low speed	Low speed
500 ≤ CO2 < 700	Low speed	Low speed
700 ≤ CO2 < 900	High speed	High speed
Above ≥ 900	Power speed	Power speed

- Auto Fan speed control can be used only when the fan speed is set to Auto function with CO2 sensor installed.

CO2 Level Monitoring

CO2 level is displayed by RS3 remote controller



RS3 Wired Remote Controller

This function will be applied using RS3 remote controller with CO2 sensor (Optional).

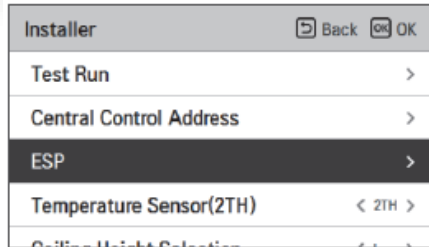
What's the Differentiation?

Positive Pressure Ventilation Solution for Residential

It is possible to create a reliable and stable positive pressure environment by differentially applying the Supply Air / Return Air fan speed of LG ERV DX.



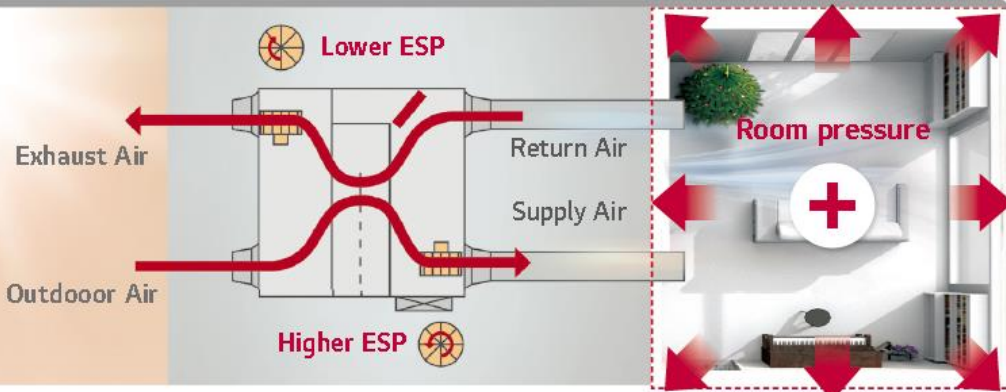
RS3 Wired Remote Controller



OK



Principle of creating positive pressure



- ※ Room pressure might be affected by other environmental conditions.
- ※ Pre-heating & pre-cooling capacity and efficiency may be reduced due to air flow imbalance for heat exchange using features for pressure control.

Specification



Model Name			LZ-H050GXN4	LZ-H080GXN4	LZ-H100GXN4
Dimensions	H x W x D	mm	365 x 1,667 x 1,240		
Fresh Air Conditioning Load * Total Capacity (Heat Reclaimed Capacity + DX Coil Capacity)	Cooling	kW	4.93 (1.23 + 3.70)	7.46 (1.84 + 5.60)	9.12 (2.53 + 6.59)
	Heating	kW	6.73 (2.53 + 4.20)	9.80 (3.68 + 6.12)	11.72 (4.32 + 7.40)
Weight	Net	kg	98	98	98
Air Flow Rate	Super-High	CMH	500	800	1,000
	High	CMH	500	800	1,000
	Low	CMH	440	640	820
Temperature Exchange Efficiency	Super-High	%	86	80	76
	High	%	86	80	76
	Low	%	87	81	78
Enthalpy Exchange Efficiency	Super-High	%	61	50	45
	High	%	61	50	45
	Low	%	63	53	50
Sound Pressure Level	Super-High	dB(A)	39	41	41
	High	dB(A)	37	38	39
	Low	dB(A)	35	36	36
Operation Range	Outdoor Air Temperature	°C	-15 ~ 55		
Piping Connection Diameter	Liquid	mm	Ø6.35		
	Gas	mm	Ø12.7		
Connection Duct Diameter		mm	Ø250		
Operation Mode	-	-	Heat Exchange Mode, Bypass Mode, Auto Mode		
Heat Exchange System	-	-	Air to Air Cross Flow Total Heat(Sensible + Latent Heat) Exchange		
Heat Exchange Element	-	-	Specially Processed Non-Flammable Paper		

※ Due to our policy of innovation some specifications may be changed without notification

LG Electronics

<http://lge.com/ae>
<http://partner.lge.com>
<http://lghvacstory.com>



Distribute by :