



WORLD STANDARD AIR CONDITIONERS

ERV3

ADVANCED INVERTER



8 - 102 HP
86,000 - 972,000 BTU/hr

Energy Saving High Efficiency Design

With latest refrigerant efficiency technology ERV3 can increase energy savings up to 30% more than standard VRF models.



Capacity Output Control

Output limitation during electricity supply restrictions

For locations with temporary electricity supply restrictions, ERV3 can be set to limit output 40 - 100% capacity to prevent overloading the electricity supply network.



- Limit the maximum capacity output
- Reduce power consumption
- Ensure basic cooling/heating
- Good solution for temporary electricity supply restrictions

High Efficiency Enhanced Vapor Injection (EVI) Compressor

The enhanced vapor injection DC inverter compressor on the ERV3 Series increases refrigerant circulation and increases cooling capacity more than 10%.



EVI Compressor

High Efficiency Enhanced Vapor Injection (EVI) Compressor (Hermetic Scroll Type)

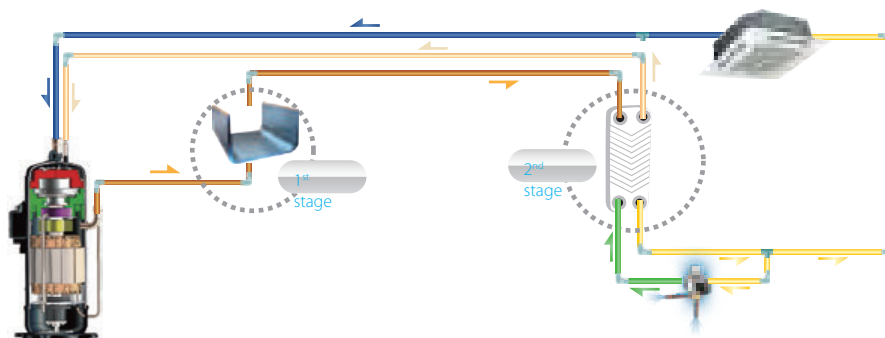
The enhanced vapor injection DC inverter compressor on the ERV3 Series increases refrigerant circulation and improves more than 10% cooling capacity.



EVI Compressor

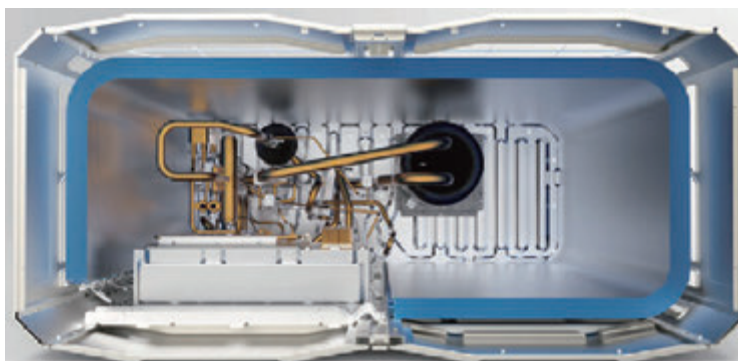
Plate Heat Exchanger (PHE) Subcooling, Heat Interchange Circuit

Plate Heat Exchanger as a secondary intercooler boosts up refrigerant subcooling and improves 10% energy efficiency.

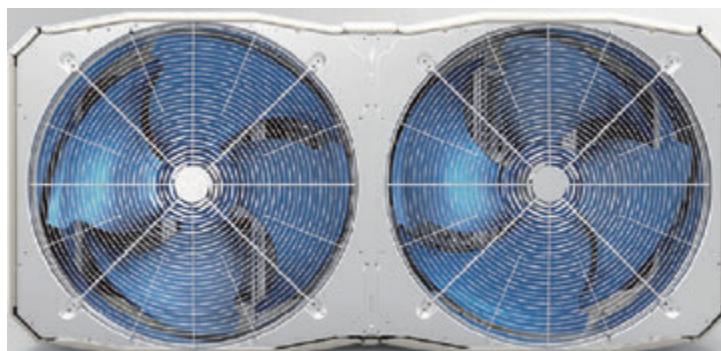


High Efficiency G-Type Heat Exchanger

26-34HP units use a high efficiency 3-row G-type heat exchanger with a heat exchange area 1.5 times that of the 24HP unit. The 26-34HP units also use super big size fan which diameter is up to 750mm.



3-rows G-type heat exchanger



Super big size fan

Wide Capacity Range

Starting at 8HP, capacity increases in 2HP increments up to 102HP, for flexible system design and meeting the widest range of capacity requirements.

8-14HP
(with single fan)



16-18HP
(with single fan)



20-24HP
(with dual fans)



26-34HP
(with dual fans)



16-68HP

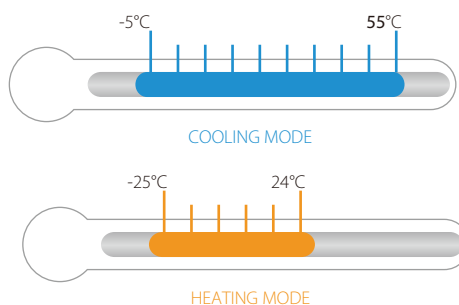


24-102HP



Wide Operation Range

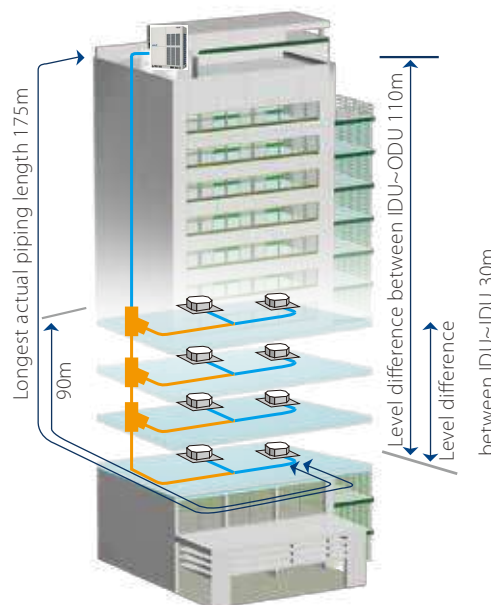
The ERV3 VRF can operate stably in a wide ambient temperature range: from -5°C to 55°C in cooling mode and from -25°C to 24°C in heating mode.



Long Piping Capability

- Total piping length: 1000m
- Longest piping length – actual (equivalent): 175m (220m)
- Longest piping length after first branch: 40/90*m
- Level difference between IDUs and ODU - ODU above (below): 90m (110m)
- Level difference between IDUs: 30m

*The longest length after first branch is 40m as standard but can be extended to up to 90m under certain conditions. Please contact your Eminent dealer for further information.



Duty Cycling

Duty cycling equalizes the running time of the outdoor units in a multiple-unit system and of the compressors in each unit, significantly extending compressor lifespan.



1st cycle



2nd cycle

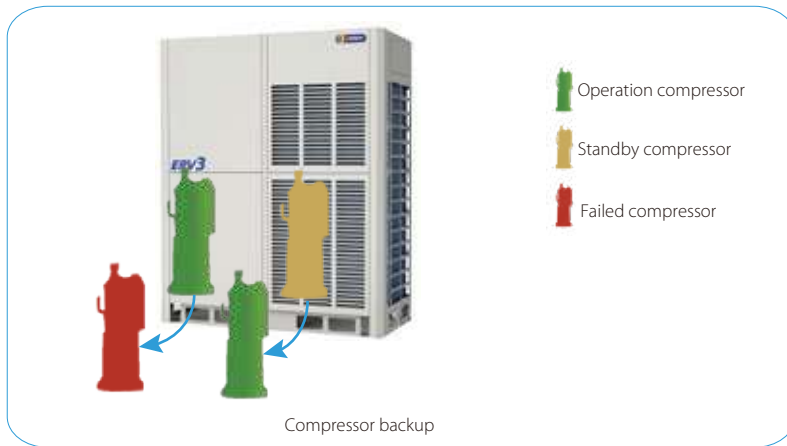


3rd cycle

Double Back-up Operation

1 Compressor backup

In units with two compressors, if one compressor fails, the other compressor can run on its own for up to 4 days, allowing time for maintenance or repair while maintaining comfort.



2 Unit backup

In a multi-unit system, if one module fails, the other modules provide backup so that the system can continue operating.



High External Static Pressure

Condensor fan is capable to use with ducted air discharge or decorative grille, ESP can be up to 120 Pa (0.48" W.G.)



High Efficiency Compressor

Extended compressor speed from 15rpm to 140rpm.

<p>Can operate in low-load conditions at a minimum frequency of 5 Hz</p>		<p>Vapor injection technology: In heating mode, increase refrigerant circulation amount and heating capacity</p>																
<p>Regular Suction</p>		<p>Release Valve : Reduce the leakage loss and Decrease discharge noise greatly, prevent over compression</p>																
<p>Improved asymmetric scroll wrap: Improving compressor efficiency by reducing leakage and invalid suction superheat.</p>																		
<p>Non-contact oil membrane Adopted in both axial and radial chamber, oil film seal formed by lubricating oil, so friction reduced and reliability improved</p>		<p>Advanced bearing design for high speed running: Cylindrical bearing + aligning ball bearing to support compressor running at 140rps perfectly</p>																
<p>Concentrated BLDC motor Compared with distributed type, it has lower height and higher efficiency in the mid-low speed area, better to improve part load EER</p>		<p>High pressure chamber structure: Achieve high volumetric efficiency, good performance, good lubrication effect, low operation sound and high stability</p>																
<table border="1"> <thead> <tr> <th colspan="2">[Before] Distributed BLDCM</th> <th colspan="2">[New] Concentrated BLDCM</th> </tr> <tr> <th>Profile of Motor</th> <th>Winding</th> <th>Profile of Motor</th> <th>Winding</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>High winding shape</td> <td>Long winding span</td> <td>Low winding shape</td> <td>Short winding span</td> </tr> </tbody> </table>		[Before] Distributed BLDCM		[New] Concentrated BLDCM		Profile of Motor	Winding	Profile of Motor	Winding					High winding shape	Long winding span	Low winding shape	Short winding span	<p>Internal oil circulation, positive displacement gear oil pump and dynamic oil balance Reduce the over-heat loss and oil discharge rate, as well ensure oil supply during high and low frequency operation; As well dynamic oil balance between compressors in parallel operation.</p>
[Before] Distributed BLDCM		[New] Concentrated BLDCM																
Profile of Motor	Winding	Profile of Motor	Winding															
High winding shape	Long winding span	Low winding shape	Short winding span															

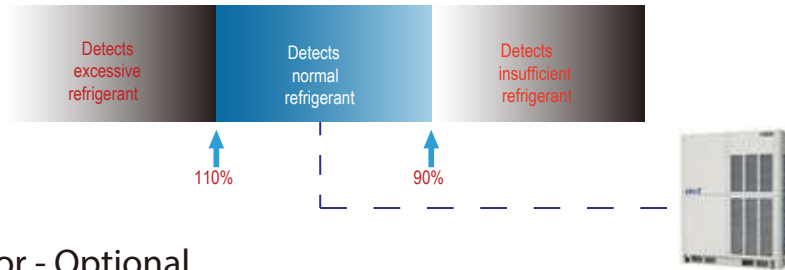
PCB Double Cooling Technology

The electrical control compartment uses both passive heat sink and active refrigerant cooling to ensure safe and stable operation of the control system. Lower temperature of electrical components helps ensure long lifespan.



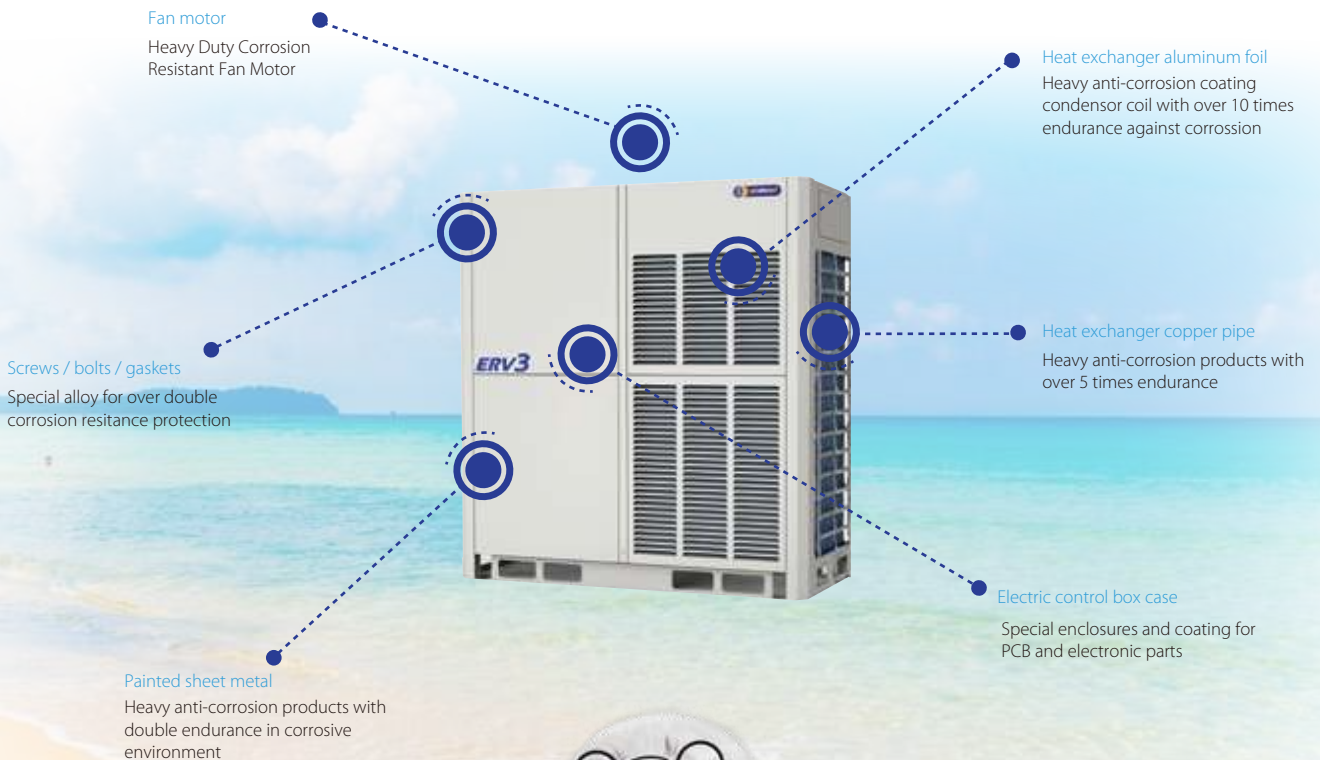
Real-time Refrigerant Amount Monitoring

ERV3 outdoor unit can provide real-time monitoring of the refrigerant temperature and pressure. Excessive high or low level of refrigerant can cause damage to the unit and poor performance. ERV3 outdoor unit can detect excessive or insufficient amounts of refrigerant, to ensure consistent and stable performance.



Coastal Protector - Optional

Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anti-corrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life. The integrity of the anti-corrosion treatment is ensured by subjecting major components and parts to salt mist testing, moisture and heat/ sunlight aging testing.



Anti-corrosion Protection

Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anti-corrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life. The integrity of the anti-corrosion treatment is ensured by subjecting major components and parts to salt mist testing, moisture and heating testing and light aging testing.

Fan motor

Standard products:
72h of neutral salt mist



Heavy anti-corrosion products:
240h of neutral salt mist



Heat exchanger aluminum foil

Standard products:
72h of neutral salt mist

Heavy anti-corrosion products:
1000h of neutral salt mist
140h of acid salt mis



Screws / bolts / gaskets

Standard products:
300h of neutral salt mist

Heavy anti-corrosion products:
720h of neutral salt mist



Heat exchanger copper pipe

Standard products:
24h of neutral salt mist

Heavy anti-corrosion products:
120h of neutral salt mist



Painted sheet metal

Standard products:
500h of neutral salt mist
1000h of moisture and heating test
500h of light aging test

Heavy anti-corrosion products:
1000h of neutral salt mist
2000h of moisture and heating test
720h of light aging test

Electric control box case

Standard products:
96h of neutral salt mist

Heavy anti-corrosion products:
240h of neutral salt mist



Advanced Silent Technology

4 night silent modes, 3 silent modes and 4 super silent modes selections, provide more freedom and convenience to match the customer needs.



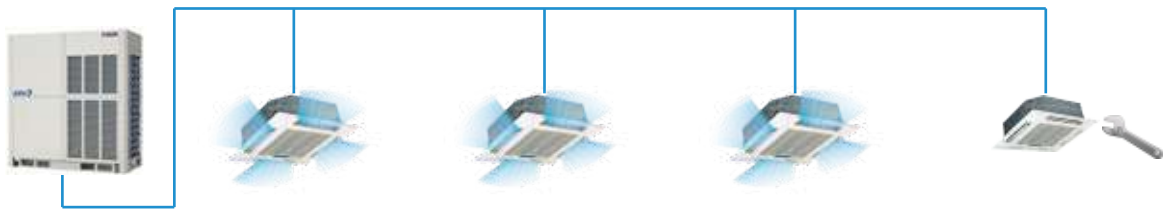
- In night silent mode and silent mode, only maximum fan speed is limited to meet the normal silent requirement.



- In super silent mode, both maximum fan speed and compressor frequency are limited to meet higher silent requirement.

Continuous Running under Indoor Unit Repair Mode

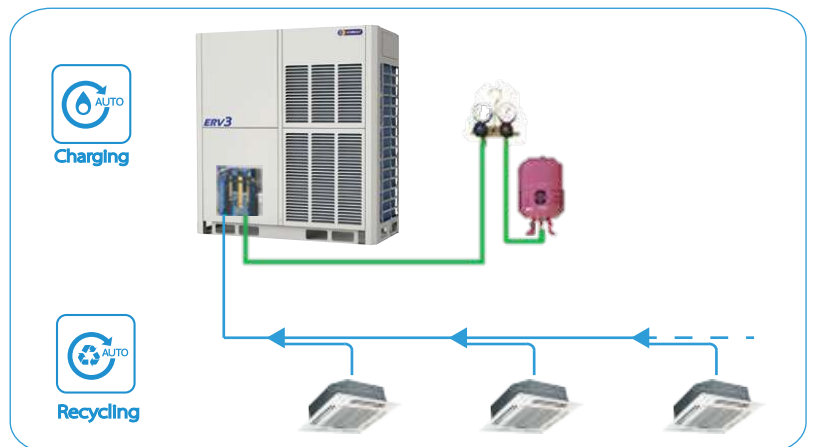
In case of one IDU needs to be repaired, it can be power off and serviced without any interruption to the system's operation.



Automatic Refrigerant Charging/Recycling Function*

Automatic refrigerant charging and recycling make installation and service easier and more efficient.

*This function is available as a customization option.



ERV3 Standard Combination Table

HP	tons	BTU/hr	kW	Standard Combination		Max. Qty of Indoor Units	COP W/W
				Model	Combination type		
8	7.2	86,000	25.2	ERV3-086	single module	13	4.75
10	8.0	95,500	28.0	ERV3-096	single module	16	4.51
12	9.5	114,300	33.5	ERV3-114	single module	20	4.31
14	11.3	136,500	40.0	ERV3-137	single module	23	4.21
16	12.8	153,500	45.0	ERV3-154	single module	26	4.12
18	14.3	170,600	50.0	ERV3-171	single module	29	4.10
20	15.9	191,100	56.0	ERV3-191	single module	33	4.05
22	17.5	209,800	61.5	ERV3-210	single module	36	4.00
24	19.1	228,600	67.0	ERV3-229	single module	39	3.75
26	20.8	249,100	73.0	ERV3-250	single module	43	3.95
28	22.3	267,800	78.5	ERV3-268	single module	46	3.90
30	24.2	290,000	85.0	ERV3-290	single module	50	3.71
32	25.6	307,100	90.0	ERV3-307	single module	53	3.65
34	27.0	324,900	95.2	ERV3-324	single module	56	3.51
36	28.6	343,000	100.5	ERV3-343	ERV3-114 + ERV3-229	59	3.94
38	30.4	365,000	107.0	ERV3-366	ERV3-137 + ERV3-229	63	3.92
40	31.8	382,000	112.0	ERV3-383	ERV3-154 + ERV3-229	64	3.90
42	33.3	399,000	117.0	ERV3-400	ERV3-171 + ERV3-229	64	3.90
44	35.0	420,000	123.0	ERV3-420	ERV3-210 + ERV3-210	64	4.00
46	36.5	438,000	128.5	ERV3-439	ERV3-210 + ERV3-229	64	3.87
48	38.1	457,000	134.0	ERV3-458	ERV3-229 + ERV3-229	64	3.75
50	39.8	478,000	140.0	ERV3-479	ERV3-229 + ERV3-250	64	3.85
52	41.3	496,000	145.5	ERV3-497	ERV3-229 + ERV3-268	64	3.83
54	43.3	519,000	152.0	ERV3-519	ERV3-229 + ERV3-290	64	3.73
56	44.7	536,000	157.0	ERV3-536	ERV3-268 + ERV3-268	64	3.90
58	46.5	558,000	163.5	ERV3-558	ERV3-268 + ERV3-290	64	3.80
60	48.3	580,000	170.0	ERV3-580	ERV3-290 + ERV3-290	64	3.71
62	49.4	592,700	173.7	ERV3-592	ERV3-268 + ERV3-324	64	3.65
64	51.2	614,900	180.2	ERV3-614	ERV3-290 + ERV3-324	64	3.60
66	52.7	632,000	185.2	ERV3-631	ERV3-307 + ERV3-324	64	3.58
68	54.2	649,800	190.4	ERV3-648	ERV3-324 + ERV3-324	64	3.51
70	55.7	667,800	195.7	ERV3-667	ERV3-114 + ERV3-229 + ERV3-324	64	3.71
72	57.5	690,000	202.2	ERV3-690	ERV3-137 + ERV3-229 + ERV3-324	64	3.71
74	59.7	716,500	209.9	ERV3-717	ERV3-137 + ERV3-290 + ERV3-290	64	3.75
76	60.3	724,100	212.2	ERV3-724	ERV3-171 + ERV3-229 + ERV3-324	64	3.71
78	62.0	744,500	218.2	ERV3-744	ERV3-210 + ERV3-210 + ERV3-324	64	3.77
80	63.6	763,300	223.7	ERV3-763	ERV3-210 + ERV3-229 + ERV3-324	64	3.70
82	65.2	782,100	229.2	ERV3-782	ERV3-229 + ERV3-229 + ERV3-324	64	3.65
84	66.9	802,600	235.2	ERV3-803	ERV3-229 + ERV3-250 + ERV3-324	64	3.70
86	68.4	821,300	240.7	ERV3-821	ERV3-229 + ERV3-268 + ERV3-324	64	3.70
88	70.3	843,500	247.2	ERV3-843	ERV3-229 + ERV3-290 + ERV3-324	64	3.64
90	71.6	859,600	251.9	ERV3-860	ERV3-210 + ERV3-324 + ERV3-324	64	3.74
92	74.9	898,900	263.4	ERV3-898	ERV3-250 + ERV3-324 + ERV3-324	64	3.75
94	75.4	904,900	265.2	ERV3-904	ERV3-290 + ERV3-290 + ERV3-324	64	3.64
96	76.5	917,600	268.6	ERV3-916	ERV3-268 + ERV3-324 + ERV3-324	64	3.62
98	78.3	939,800	275.4	ERV3-938	ERV3-290 + ERV3-324 + ERV3-324	64	3.57
100	79.7	956,900	280.4	ERV3-955	ERV3-307 + ERV3-324 + ERV3-324	64	3.55
102	81.2	974,700	285.6	ERV3-972	ERV3-324 + ERV3-324 + ERV3-324	64	3.51

Specifications

HP		8	10	12	14	
Model name		ERV3-086	ERV3-096	ERV3-114	ERV3-137	
Power supply		V/Ph/Hz 380-415/3/50(60)				
Cooling ¹	Capacity	kW	25.2	28.0	33.5	40.0
		kBtu/h	86.0	95.5	114.3	136.5
	Power input	kW	5.30	6.21	7.77	9.50
	EER / COP		4.75	4.51	4.31	4.21
Heating ²	Capacity	kW	27.0	31.5	37.5	45.0
		kBtu/h	92.1	107.5	128.0	153.5
	Power input	kW	4.82	5.92	7.55	9.57
	COP		5.60	5.32	4.97	4.70
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		13	16	20	23
Compressors	Type		DC inverter			
	Quantity		1			
Fan motors	Type		DC			
	Quantity		1			
Refrigerant	Static pressure		Pa 0-20 (default); 20-60 (customized)			
	Type		R410A			
Pipe connections ³	Factory charge		kg 11			
	Liquid pipe	mm	Φ12.7	Φ15.9	Φ15.9	
	Gas pipe	mm	Φ25.4	Φ28.6	Φ31.8	
Air flow rate		m ³ /h	12500			
Sound pressure level ⁴		dB(A)	58	58	60	60
Net dimensions (W×H×D)		mm	990×1635×790			
Packed dimensions (W×H×D)		mm	1090×1805×860			
Net weight		kg	227			
Gross weight		kg	242			
Ambient temp. operation range	Cooling	°C	-5 ~ 55			
	Heating	°C	-23 ~ 24			

HP		16	18	
Model name		ERV3-154	ERV3-171	
Power supply		V/Ph/Hz 380-415/3/50(60)		
Cooling ¹	Capacity	kW	45.0	50.0
		kBtu/h	153.5	170.6
	Power input	kW	10.92	12.20
	EER / COP		4.12	4.10
Heating ²	Capacity	kW	50.0	56.0
		kBtu/h	170.6	191.1
	Power input	kW	10.87	12.44
	COP		4.60	4.50
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity	
	Maximum quantity		26	29
Compressors	Type		DC inverter	
	Quantity		1	
Fan motors	Type		DC	
	Quantity		1	
Refrigerant	Static pressure		Pa 0-20 (default); 20-60 (customized)	
	Type		R410A	
Pipe connections ³	Factory charge		kg 13	
	Liquid pipe	mm	Φ15.9	Φ19.1
	Gas pipe	mm	Φ31.8	Φ31.8
Air flow rate		m ³ /h	13000	
Sound pressure level ⁴		dB(A)	60	61
Net dimensions (W×H×D)		mm	1340×1635×850	
Packed dimensions (W×H×D)		mm	1405×1805×910	
Net weight		kg	277	
Gross weight		kg	304	
Ambient temp. operation range	Cooling	°C	-5 ~ 55	
	Heating	°C	-23 ~ 24	

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Diameters given are those of the unit's stop valve.
4. Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Specifications

HP			20	22	24
Model name			ERV3-191	ERV3-210	ERV3-229
Power supply			V/Ph/Hz 380-415/3/50(60)		
Cooling ¹	Capacity	kW	56.0	61.5	67.0
		kBtu/h	191.1	209.8	228.6
	Power input	kW	13.83	15.38	17.87
	EER / COP			4.05	4.00
Heating ²	Capacity	kW	63.0	69.0	75.0
		kBtu/h	215.0	235.4	255.9
	Power input	kW	14.48	16.83	17.16
	COP			4.35	4.10
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		33	36	39
Compressors	Type		DC inverter		
	Quantity		2		
Fan motors	Type		DC		
	Quantity		2		
	Static pressure	Pa	0-20 (default); 20-60 (customized)		
Refrigerant	Type		R410A		
	Factory charge	kg	17		
Pipe connections ³	Liquid pipe	mm	Φ19.1		
	Gas pipe	mm	Φ31.8		
Air flow rate		m ³ /h	21000		
Sound pressure level ⁴		dB(A)	62	63	63
Net dimensions (W×H×D)		mm	1340×1635×825		
Packed dimensions (W×H×D)		mm	1405×1805×910		
Net weight		kg	348		
Gross weight		kg	368		
Ambient temp. operation range	Cooling	°C	-5 ~ 55		
	Heating	°C	-23 ~ 24		

HP			26	28	30
Model name			ERV3-250	ERV3-268	ERV3-290
Power supply			V/Ph/Hz 380-415/3/50(60)		
Cooling ¹	Capacity	kW	73.0	78.5	85.0
		kBtu/h	249.1	267.8	290.0
	Power input	kW	18.48	20.13	22.91
	EER / COP			3.95	3.90
Heating ²	Capacity	kW	81.5	87.5	95.0
		kBtu/h	278.1	298.6	324.1
	Power input	kW	18.15	19.98	22.09
	COP			4.49	4.38
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		43	46	50
Compressors	Type		DC inverter		
	Quantity		2		
Fan motors	Type		DC		
	Quantity		2		
	Static pressure	Pa	0-20 (default); 20-60 (customized)		
Refrigerant	Type		R410A		
	Factory charge	kg	22		
Pipe connections ³	Liquid pipe	mm	Φ22.2		Φ22.2
	Gas pipe	mm	Φ31.8		Φ38.1
Air flow rate		m ³ /h	25000		
Sound pressure level ⁴		dB(A)	64		
Net dimensions (W×H×D)		mm	1730×1830×850		
Packed dimensions (W×H×D)		mm	1800×2000×910		
Net weight		kg	430		
Gross weight		kg	453		
Ambient temp. operation range	Cooling	°C	-5 ~ 55		
	Heating	°C	-23 ~ 24		

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those of the unit's stop valve.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Specifications

HP			32		34	
Model name			ERV3-307		ERV3-324	
Power supply			V/Ph/Hz		380-415/3/50(60)	
Cooling ¹	Capacity	kW	90.0		95.2	
		kBtu/h	307.1		324.9	
	Power input	kW	24.66		27.14	
	EER / COP		3.65		3.51	
Heating ²	Capacity	kW	100.0		106.0	
		kBtu/h	341.2		361.7	
	Power input	kW	23.36		26.37	
	COP		4.28		4.02	
Connected indoor unit			Total capacity		50-130% of outdoor unit capacity	
			Maximum quantity		53	
Compressors			Type		DC inverter	
			Quantity		2	
Fan motors			Type		DC	
			Quantity		2	
			Static pressure		Pa	
					0-20 (default); 20-60 (customized)	
Refrigerant			Type		R410A	
			Factory charge		kg	
					25	
Pipe connections ³			Liquid pipe		mm	
					Φ22.2	
			Gas pipe		mm	
					Φ38.1	
Air flow rate					m ³ /h	
					25000	
Sound pressure level ⁴					dB(A)	
					64	
Net dimensions (W×H×D)					mm	
					1730×1830×850	
Packed dimensions (W×H×D)					mm	
					1800×2000×910	
Net weight					kg	
					475	
Gross weight					kg	
					507	
Ambient temp. operation range			Cooling		°C	
			Heating		°C	
					-5 ~ 55	
					-23 ~ 24	

HP			36		38		40		42	
Model name			ERV3-343		ERV3-366		ERV3-383		ERV3-400	
Combination type			12HP+24HP		14HP+24HP		16HP+24HP		18HP+24HP	
Power supply			V/Ph/Hz		380-415/3/50(60)					
Cooling ¹	Capacity	kW	100.5		107.0		112.0		117.0	
		kBtu/h	342.9		365.1		382.1		399.2	
	Power input	kW	25.64		27.37		28.79		30.07	
	EER / COP		3.94		3.92		3.90		3.90	
Heating ²	Capacity	kW	112.5		120.0		125.0		131.0	
		kBtu/h	383.9		409.4		426.5		447.0	
	Power input	kW	24.7		26.7		28.0		29.6	
	COP		4.55		4.49		4.46		4.42	
Connected indoor unit			Total capacity		50-130% of outdoor unit capacity					
			Maximum quantity		59		63		64	
Compressors			Type		DC inverter					
			Quantity		3					
Fan motors			Type		DC					
			Quantity		3					
			Static pressure		Pa					
					0-20 (default); 20-60 (customized)					
Refrigerant			Type		R410A					
			Factory charge		kg					
					11+17				13+17	
Pipe connections ³			Liquid pipe		mm		Φ19.1			
			Gas pipe		mm		Φ38.1			
Air flow rate					m ³ /h		33500		34000	
Sound pressure level ⁴					dB(A)		65			
Net dimensions (W×H×D)					mm		(990×1635×790)+(1340×1635×825)		(1340×1635×850)+(1340×1635×825)	
Packed dimensions (W×H×D)					mm		(1090×1805×860)+(1405×1805×910)		(1405×1805×910)×2	
Net weight					kg		227+348		277+348	
Gross weight					kg		242+368		304+368	
Ambient temp. operation range			Cooling		°C		-5 ~ 55			
			Heating		°C		-23 ~ 24			

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to the ERV3 Series Engineering Data for connection piping diameters..
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Specifications

HP			44	46	48
Model name			ERV3-420	ERV3-439	ERV3-458
Combination type			22HP+22HP	22HP+24HP	24HP+24HP
Power supply			V/Ph/Hz 380-415/3/50(60)		
Cooling ¹	Capacity	kW	123.0	128.5	134.0
		kBtu/h	419.7	438.4	457.2
	Power input	kW	30.76	33.25	35.74
	EER / COP		4.00	3.87	3.75
Heating ²	Capacity	kW	138.0	144.0	150.0
		kBtu/h	470.9	491.3	511.8
	Power input	kW	33.7	34.0	34.3
	COP		4.10	4.24	4.37
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		64		
Compressors	Type		DC inverter		
	Quantity		4		
Fan motors	Type		DC		
	Quantity		4		
	Static pressure	Pa	0-20 (default); 20-60 (customized)		
Refrigerant	Type		R410A		
	Factory charge	kg	17×2		
Pipe connections ³	Liquid pipe	mm	Φ19.1		
	Gas pipe	mm	Φ38.1		
Air flow rate		m ³ /h	42000		
Sound pressure level ⁴		dB(A)	66		
Net dimensions (W×H×D)		mm	(1340×1635×825)×2		
Packed dimensions (W×H×D)		mm	(1405×1805×910)×2		
Net weight		kg	348×2		
Gross weight		kg	368×2		
Ambient temp. operation range	Cooling	°C	-5 ~ 55		
	Heating	°C	-23 ~ 24		

HP			50	52	54
Model name			ERV3-479	ERV3-497	ERV3-519
Combination type			24HP+26HP	24HP+28HP	24HP+30HP
Power supply			V/Ph/Hz 380-415/3/50(60)		
Cooling ¹	Capacity	kW	140.0	145.5	152.0
		kBtu/h	477.7	496.4	518.6
	Power input	kW	36.35	38.00	40.78
	EER / COP		3.85	3.83	3.73
Heating ²	Capacity	kW	156.5	162.5	170.0
		kBtu/h	534.0	554.5	580.0
	Power input	kW	35.3	37.1	39.3
	COP		4.43	4.38	4.33
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		64		
Compressors	Type		DC inverter		
	Quantity		4		
Fan motors	Type		DC		
	Quantity		4		
	Static pressure	Pa	0-20 (default); 20-60 (customized)		
Refrigerant	Type		R410A		
	Factory charge	kg	17+22		
Pipe connections ³	Liquid pipe	mm	Φ19.1		
	Gas pipe	mm	Φ38.1		
Air flow rate		m ³ /h	46000		
Sound pressure level ⁴		dB(A)	66		
Net dimensions (W×H×D)		mm	(1340×1635×825)+(1730×1830×850)		
Packed dimensions (W×H×D)		mm	(1405×1805×910)+(1800×2000×910)		
Net weight		kg	348+430		
Gross weight		kg	368+453		
Ambient temp. operation range	Cooling	°C	-5 ~ 55		
	Heating	°C	-23 ~ 24		

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to the ERV3 Series Engineering Data for connection piping diameters..
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Specifications

HP			56	58	60	62
Model name			ERV3-536	ERV3-558	ERV3-580	ERV3-592
Combination type			28HP+28HP	28HP+30HP	30HP+30HP	28HP+34HP
Power supply			V/Ph/Hz 380-415/3/50(60)			
Cooling ¹	Capacity	kW	157.0	163.5	170.0	173.7
		kBtu/h	535.7	557.9	580.0	592.7
	Power input	kW	40.26	43.04	45.82	47.57
	EER / COP		3.90	3.80	3.71	3.65
Heating ²	Capacity	kW	175.0	182.5	190.0	195.0
		kBtu/h	597.1	622.7	648.3	665.3
	Power input	kW	40.0	42.1	44.2	45.5
	COP		4.38	4.34	4.30	4.29
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		64			
Compressors	Type		DC inverter			
	Quantity		4			
Fan motors	Type		DC			
	Quantity		4			
	Static pressure	Pa	0-20 (default); 20-60 (customized)			
Refrigerant	Type		R410A			
	Factory charge	kg	22×2		22+25	
Pipe connections ³	Liquid pipe	mm	Φ19.1			
	Gas pipe	mm	Φ41.3			
Air flow rate		m ³ /h	50000			50000
Sound pressure level ⁴		dB(A)	67			
Net dimensions (W×H×D)		mm	(1730×1830×850)×2			
Packed dimensions (W×H×D)		mm	(1800×2000×910)×2			
Net weight		kg	430×2			430+475
Gross weight		kg	453×2			453+507
Ambient temp. operation range	Cooling	°C	-5 ~ 55			
	Heating	°C	-23 ~ 24			

HP			64	66	68
Model name			ERV3-614	ERV3-631	ERV3-648
Combination type			30HP+34HP	32HP+34HP	34HP+34HP
Power supply			V/Ph/Hz 380-415/3/50(60)		
Cooling ¹	Capacity	kW	180.2	185.2	190.4
		kBtu/h	614.9	632.0	649.8
	Power input	kW	50.05	51.80	54.29
	EER / COP		3.60	3.58	3.51
Heating ²	Capacity	kW	201.0	206.0	212.0
		kBtu/h	685.8	702.9	723.3
	Power input	kW	48.5	49.7	52.7
	COP		4.15	4.14	4.02
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		64		
Compressors	Type		DC inverter		
	Quantity		4		
Fan motors	Type		DC		
	Quantity		4		
	Static pressure	Pa	0-20 (default); 20-60 (customized)		
Refrigerant	Type		R410A		
	Factory charge	kg	22+25	25×2	
Pipe connections ³	Liquid pipe	mm	Φ19.1	Φ22.2	
	Gas pipe	mm	Φ41.3	Φ44.5	
Air flow rate		m ³ /h	50000	50000	
Sound pressure level ⁴		dB(A)	67		
Net dimensions (W×H×D)		mm	(1730×1830×850)×2		
Packed dimensions (W×H×D)		mm	(1800×2000×910)×2		
Net weight		kg	430+475	475×2	
Gross weight		kg	453+507	507×2	
Ambient temp. operation range	Cooling	°C	-5 ~ 55		
	Heating	°C	-23 ~ 24		

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to the ERV3 Series Engineering Data for connection piping diameters..
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Specifications

HP			70	72
Model name			ERV3-667	ERV3-690
Combination type			12HP+24HP+34HP	14HP+24HP+34HP
Power supply		V/Ph/Hz	380-415/3/50(60)	
Cooling ¹	Capacity	kW	195.7	202.2
		kBtu/h	667.8	690.0
	Power input	kW	52.79	54.51
	EER / COP			3.71
Heating ²	Capacity	kW	218.5	226.0
		kBtu/h	745.5	771.1
	Power input	kW	51.1	53.1
	COP			4.28
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity	
	Maximum quantity		64	
Compressors	Type		DC inverter	
	Quantity		5	
Fan motors	Type		DC	
	Quantity		5	
	Static pressure	Pa	0-20 (default); 20-60 (customized)	
Refrigerant	Type		R410A	
	Factory charge	kg	11+17+25	
Pipe connections ³	Liquid pipe	mm	Φ22.2	
	Gas pipe	mm	Φ44.5	
Air flow rate		m ³ /h	58500	
Sound pressure level ⁴		dB(A)	68	
Net dimensions (W×H×D)		mm	(990×1635×790)+(1340×1635×825)+(1730×1830×850)	
Packed dimensions (W×H×D)		mm	(1090×1805×860)+(1405×1805×910)+(1800×2000×910)	
Net weight		kg	227+348+475	
Gross weight		kg	242+368+507	
Ambient temp. operation range	Cooling	°C	-5 ~ 55	
	Heating	°C	-23 ~ 24	

HP			74	76
Model name			ERV3-717	ERV3-724
Combination type			14HP+30HP+30HP	18HP+24HP+34HP
Power supply		V/Ph/Hz	380-415/3/50(60)	
Cooling ¹	Capacity	kW	209.9	212.2
		kBtu/h	716.5	724.1
	Power input	kW	55.94	57.21
	EER / COP			3.75
Heating ²	Capacity	kW	231.0	237.0
		kBtu/h	788.2	808.6
	Power input	kW	54.4	56.0
	COP			4.25
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity	
	Maximum quantity		64	
Compressors	Type		DC inverter	
	Quantity		5	
Fan motors	Type		DC	
	Quantity		5	
	Static pressure	Pa	0-20 (default); 20-60 (customized)	
Refrigerant	Type		R410A	
	Factory charge	kg	13+17+25	
Pipe connections ³	Liquid pipe	mm	Φ22.2	
	Gas pipe	mm	Φ44.5	
Air flow rate		m ³ /h	59000	
Sound pressure level ⁴		dB(A)	68	
Net dimensions (W×H×D)		mm	(1340×1635×850)+(1340×1635×825)+(1730×1830×850)	
Packed dimensions (W×H×D)		mm	(1405×1805×910)×2+(1800×2000×910)	
Net weight		kg	277+348+475	
Gross weight		kg	304+368+507	
Ambient temp. operation range	Cooling	°C	-5 ~ 55	
	Heating	°C	-23 ~ 24	

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to the ERV3 Series Engineering Data for connection piping diameters.
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Specifications

HP			78	80	82
Model name			ERV3-744	ERV3-763	ERV3-782
Combination type			22HP+22HP+34HP	22HP+24HP+34HP	24HP+24HP+34HP
Power supply			V/Ph/Hz		
Cooling ¹	Capacity	kW	218.2	223.7	229.2
		kBtu/h	744.5	763.3	782.1
	Power input	kW	57.90	60.39	62.88
	EER / COP		3.77	3.70	3.65
Heating ²	Capacity	kW	244.0	250.0	256.0
		kBtu/h	832.5	853.0	873.5
	Power input	kW	60.0	60.4	60.7
	COP		4.06	4.14	4.22
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		64		
Compressors	Type		DC inverter		
	Quantity		6		
Fan motors	Type		DC		
	Quantity		6		
	Static pressure	Pa	0-20 (default); 20-60 (customized)		
Refrigerant	Type		R410A		
	Factory charge	kg	17×2+25		
Pipe connections ³	Liquid pipe	mm	Φ22.2		
	Gas pipe	mm	Φ44.5		
Air flow rate		m ³ /h	67000		
Sound pressure level ⁴		dB(A)	69		
Net dimensions (W×H×D)		mm	(1340×1635×825)×2+(1730×1830×850)		
Packed dimensions (W×H×D)		mm	(1405×1805×910)×2+(1800×2000×910)		
Net weight		kg	348×2+475		
Gross weight		kg	368×2+507		
Ambient temp. operation range	Cooling	°C	-5 ~ 55		
	Heating	°C	-23 ~ 24		

HP			84	86	88
Model name			ERV3-803	ERV3-821	ERV3-843
Combination type			24HP+26HP+34HP	24HP+28HP+34HP	24HP+30HP+34HP
Power supply			V/Ph/Hz		
Cooling ¹	Capacity	kW	235.2	240.7	247.2
		kBtu/h	802.6	821.3	843.5
	Power input	kW	63.49	65.14	67.92
	EER / COP		3.70	3.70	3.64
Heating ²	Capacity	kW	262.5	268.5	276.0
		kBtu/h	895.7	916.1	941.7
	Power input	kW	61.7	63.5	65.6
	COP		4.26	4.23	4.21
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		64		
Compressors	Type		DC inverter		
	Quantity		6		
Fan motors	Type		DC		
	Quantity		6		
	Static pressure	Pa	0-20 (default); 20-60 (customized)		
Refrigerant	Type		R410A		
	Factory charge	kg	17+22+25		
Pipe connections ³	Liquid pipe	mm	Φ25.4		
	Gas pipe	mm	Φ50.8		
Air flow rate		m ³ /h	71000		
Sound pressure level ⁴		dB(A)	69		
Net dimensions (W×H×D)		mm	(1340×1635×825)+(1730×1830×850)×2		
Packed dimensions (W×H×D)		mm	(1405×1805×910)+(1800×2000×910)×2		
Net weight		kg	348+430+475		
Gross weight		kg	368+453+507		
Ambient temp. operation range	Cooling	°C	-5 ~ 55		
	Heating	°C	-23 ~ 24		

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to the ERV3 Series Engineering Data for connection piping diameters..
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

Specifications

HP			90	92	94	96
Model name			ERV3-860	ERV3-898	ERV3-904	ERV3-916
Combination type			22HP+34HP+34HP	26HP+34HP+34HP	30HP+30HP+34HP	28HP+34HP+34HP
Power supply			V/Ph/Hz 380-415/3/50(60)			
Cooling ¹	Capacity	kW	251.9	263.4	265.2	268.9
		kBtu/h	859.6	898.9	904.9	917.6
	Power input	kW	67.40	70.18	72.96	74.71
	EER / COP		3.74	3.75	3.64	3.62
Heating ²	Capacity	kW	281.0	288.5	296.0	301.0
		kBtu/h	958.8	984.4	1010.0	1027.0
	Power input	kW	66.3	68.4	70.6	71.8
	COP		4.24	4.22	4.20	4.19
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		64			
Compressors	Type		DC inverter			
	Quantity		6			
Fan motors	Type		DC			
	Quantity		6			
	Static pressure	Pa	0-20 (default); 20-60 (customized)			
Refrigerant	Type		R410A			
	Factory charge	kg	22×2+25		22+25×2	
Pipe connections ³	Liquid pipe	mm	Φ25.4			
	Gas pipe	mm	Φ50.8			
Air flow rate			m ³ /h 75000			
Sound pressure level ⁴			dB(A) 70			
Net dimensions (W×H×D)			mm (1730×1830×850)×3			
Packed dimensions (W×H×D)			mm (1800×2000×910)×3			
Net weight			kg 430×2+475		kg 430+475×2	
Gross weight			kg 453×2+507		kg 453+507×2	
Ambient temp. operation range	Cooling	°C	-5 ~ 55			
	Heating	°C	-23 ~ 24			

HP			98	100	102
Model name			ERV3-938	ERV3-955	ERV3-972
Combination type			30HP+34HP+34HP	32HP+34HP+34HP	34HP+34HP+34HP
Power supply			V/Ph/Hz 380-415/3/50(60)		
Cooling ¹	Capacity	kW	275.4	280.4	285.6
		kBtu/h	939.8	956.9	974.7
	Power input	kW	77.20	78.94	81.43
	EER / COP		3.57	3.55	3.51
Heating ²	Capacity	kW	307.0	312.0	318.0
		kBtu/h	1047.5	1064.5	1085.0
	Power input	kW	74.8	76.1	79.1
	COP		4.10	4.10	4.02
Connected indoor unit	Total capacity		50-130% of outdoor unit capacity		
	Maximum quantity		64		
Compressors	Type		DC inverter		
	Quantity		6		
Fan motors	Type		DC		
	Quantity		6		
	Static pressure	Pa	0-20 (default); 20-60 (customized)		
Refrigerant	Type		R410A		
	Factory charge	kg	22+25×2		25×3
Pipe connections ³	Liquid pipe	mm	Φ25.4		
	Gas pipe	mm	Φ50.8		
Air flow rate			m ³ /h 75000		
Sound pressure level ⁴			dB(A) 71		
Net dimensions (W×H×D)			mm (1730×1830×850)×3		
Packed dimensions (W×H×D)			mm (1800×2000×910)×3		
Net weight			kg 430+475×2		kg 475×3
Gross weight			kg 453+507×2		kg 507×3
Ambient temp. operation range	Cooling	°C	-5 ~ 55		
	Heating	°C	-23 ~ 24		

Notes:

- Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
- Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
- Diameters given are those for the pipe connecting the outdoor unit combination to the first indoor branch joint for systems with total equivalent liquid piping lengths of less than 90m. For systems with total equivalent liquid piping lengths of 90m or longer, please refer to the ERV3 Series Engineering Data for connection piping diameters..
- Sound pressure level is measured at a position 1m in front of the unit and 1.3m above the floor in a semi-anechoic chamber.

High Static Pressure Duct

- External static pressure up to 400Pa facilitates extensive duct and grille network
- 20-step static pressure control on all models (requires latest generation wired controllers)
- A double-skin drainage pan provides double protection for ceilings (models 71 to 160).
- Drain pump with a 750mm pump head available as a customization option



Optional wireless remote controller



RM05B RM12D

Optional wired controller



WDC-86E/KD WDC-120G/WK

Model			VDHS-24DC	VDHS-28DC	VDHS-30DC
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling ¹	Capacity	kW	7.1	8.0	9.0
		kBtu/h	24.2	27.3	30.7
	Power input	W	180	180	220
Heating ²	Capacity	kW	8.0	9.0	10.0
		kBtu/h	27.3	30.7	34.1
	Power input	W	180	180	220
Air flow rate ³		m ³ /h	1360/1327/1293/1260/1227/1193/1160	1360/1327/1293/1260/1227/1193/1160	1420/1373/1327/1280/1233/1187/1140
External static pressure		Pa	100 (30~ 200)		
Sound pressure level ⁴		dB(A)	46/46/45/45/44/43/42	46/46/45/45/44/43/42	50/49/48/48/47/46/45
Unit	Net dimensions ⁵ (WxHxD)	mm	965x423x690		
	Packed dimensions (WxHxD)	mm	1090x440x768		
	Net/Gross weight	kg	41/47		51/57
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9		
	Drain pipe	mm	OD Φ25		

Model			VDHS-38DC	VDHS-48DC	VDHS-60DC
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling ¹	Capacity	kW	11.2	14.0	16.0
		kBtu/h	38.2	47.8	54.6
	Power input	W	380	420	700
Heating ²	Capacity	kW	12.5	16.0	17.0
		kBtu/h	42.7	54.6	58.0
	Power input	W	380	420	700
Air flow rate ³		m ³ /h	1870/1783/1697/1610/1523/1437/1350	2240/2133/2027/1920/1813/1707/1600	2660/2530/2400/2270/2140/2010/1880
External static pressure		Pa	100 (30~ 200)		
Sound pressure level ⁴		dB(A)	50/50/49/48/47/46/45	53/52/51/51/50/49/48	54/54/53/52/51/50/50
Unit	Net dimensions ⁵ (WxHxD)	mm	965x423x690	1322x423x691	
	Packed dimensions (WxHxD)	mm	1090x440x768	1436x450x768	
	Net/Gross weight	kg	51/57	68/76	
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9		
	Drain pipe	mm	OD Φ25		

Model			VDHS-70DC	VDHS-86DC	VDHS-96DC
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling ¹	Capacity	kW	20.0	25.0	28.0
		kBtu/h	68.2	85.3	95.5
	Power input	W	990	1200	1200
Heating ²	Capacity	kW	22.5	26.0	31.5
		kBtu/h	76.8	88.7	107.5
	Power input	W	990	1200	1200
Air flow rate ³		m ³ /h	4330/4230/4130/4030/3930/3830/3730		
External static pressure		Pa	170 (20~250)		
Sound pressure level ⁴		dB(A)	57/56/55/54/53/52/50		
Unit	Net dimensions ⁵ (WxHxD)	mm	1454x515x931		
	Packed dimensions (WxHxD)	mm	1509x550x990		
	Net/Gross weight	kg	130/142		
Pipe connections	Liquid/Gas pipe	mm	Φ12.7/Φ22.2		
	Drain pipe	mm	OD Φ32		

Notes:

1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
 2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
 3. Each model's 7 airflow rate options are listed in order, from highest to lowest.
 4. Each model's 7 sound pressure levels are listed in order from highest to lowest and correspond to the model's 7 airflow rate options (see Note 3). Sound pressure level is measured 1.4m below the unit in a semi-anechoic chamber.
 5. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.
- All specifications are measured at standard external static pressure.



SPECIFICATION : MODEL PDN DIRECT AND BELT DRIVE



เอ็มทิวไทย ก้าวไกลระดับโลก

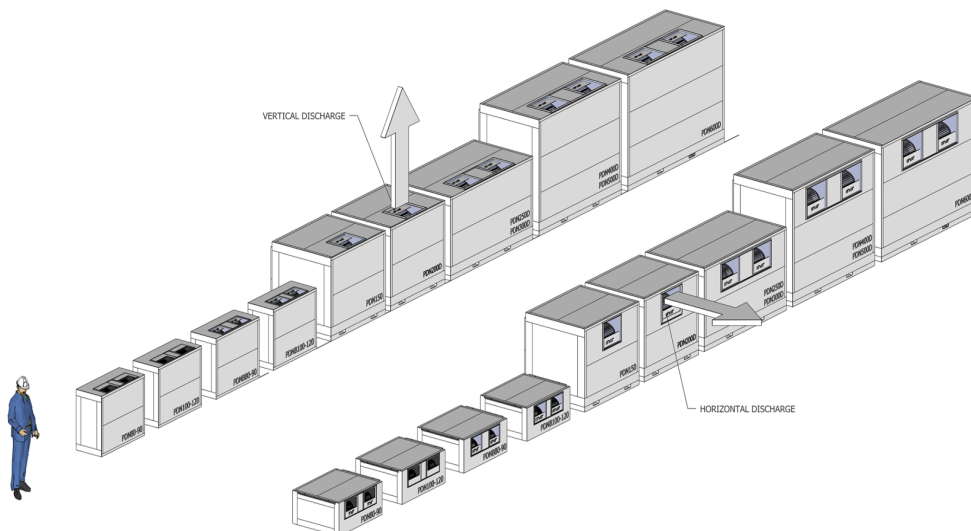
MODEL		PDN90M	PDN120M	PDNB90M	PDNB120M	PDN150M	PDN200MD	PDN250MD	PDN300MD	PDN400MD	PDN500MD	PDN600MD	
Nominal Air Flow	Cfm	3,000	4,000	3,000	4,000	5,000	7,000	9,000	10,000	14,000	17,000	20,000	
Fan Type Drive Ty		Centrifugal Double Inlet											
pe Fan Diameter x Wid		Direct				Belt And Pulley							
th Fan Quantity	Inch	9"x9"	9"x10"	10" x 8"	10" x 10"	15" x 15"	18" x 18"	15" x 15"	15" x 15"	18" x 18"	18" x 18"	18" x 18"	
		2	2	2	2	1	1	2	2	2	2	2	
Motor Type	Power Supply / (Rpm)	220V-1Ph-50Hz / (1,300/1,200/1,100)				380V-3Ph-50 Hz / (1,430)							
Motor Power	HP (XQuantity)	1 (X1)	1 (X1)	1 (X1)	2 (X1)	3 (X1)	3 (X1)	5.5 (X1)	5.5 (X1)	7.5 (X1)	10 (X1)	15 (X1)	
Full Load Amp A		4.55	4.55	1.57	3.67	5.16	5.16	8.8	8.8	11.8	15.6	22.6	
Evaporator Coil		Louver				Corrugate							
		Ø3/8" , Plain Copper Tube											
Refrigerant	Flow Control	Expansion Valve											
	Type	R-410a											
No. Refrigerant Circuit		1					2						
Suction Line O.D. X Quantity	Inch (XQuantity)	1-1/8 (X1)	1-3/8 (X1)	1-1/8 (X1)	1-3/8 (X1)	1-3/8 (X1)	1-1/8 (X2)	1-3/8 (X2)	1-3/8 (X2)	1-5/8 (X2)	1-5/8 (X2)	1-5/8 (X2)	
Liquid Line O.D. X Quantity	Inch (XQuantity)	1/2 (X1)	5/8 (X1)	1/2 (X1)	5/8 (X1)	3/4 (X1)	1/2 (X2)	5/8 (X2)	3/4 (X2)	7/8 (X2)	7/8 (X2)	7/8 (X2)	
Dimension (mm)	Depth	555					1,350						1,550
	Width	1,225	1,225	1,225	1,225	1,550	1,550	2,340	2,340	2,340	2,340	2,750	
	Height	1,011	1,011	1,011	1,011	1,250	1,250	1,250	1,250	1,750	1,750	1,750	
Aluminium Filter	No. Used	2	2	2	2	4	4	6	6	9	9	12	
Wieght	kg.	150	170	160	180	300	350	400	450	550	650	750	

Remark : - Cooling capacity and electric characteristics are based on 27c CDB /19c CWB. indoor air temperature and 35c CDB /24c CWB outdoor air temperature.

- Specification are subject to change without notice.

- สามารถเลือกทิศทางการส่งลมเย็นได้ 2 แบบ คือ โปรดแน้งความต้องการต่อฝ่ายขายก่อนสั่งซื้อ ทุกครั้ง ดังนี้

1. เป้าลมตามแนวตั้ง VERTICAL(V) 2.เป้าลมตามแนวนอน HORIZONTAL(H)

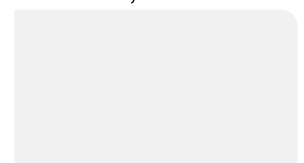


SIMILAR CO.,LTD.
235 Lasalle Road, Bangna Tai Sub-district,
Bangna, Bangkok 10260 Thailand.

✉ : marketing@eminent.co.th
 🌐 : www.eminent.co.th
 📺 : EminentAir
 ☎ : 02-083-5555



Distributed by:



CONTROL SOLUTIONS



Wireless Remote Controllers

Wired Controllers

Centralized Controllers

Data Converter


Network Control System

BMS Gateways

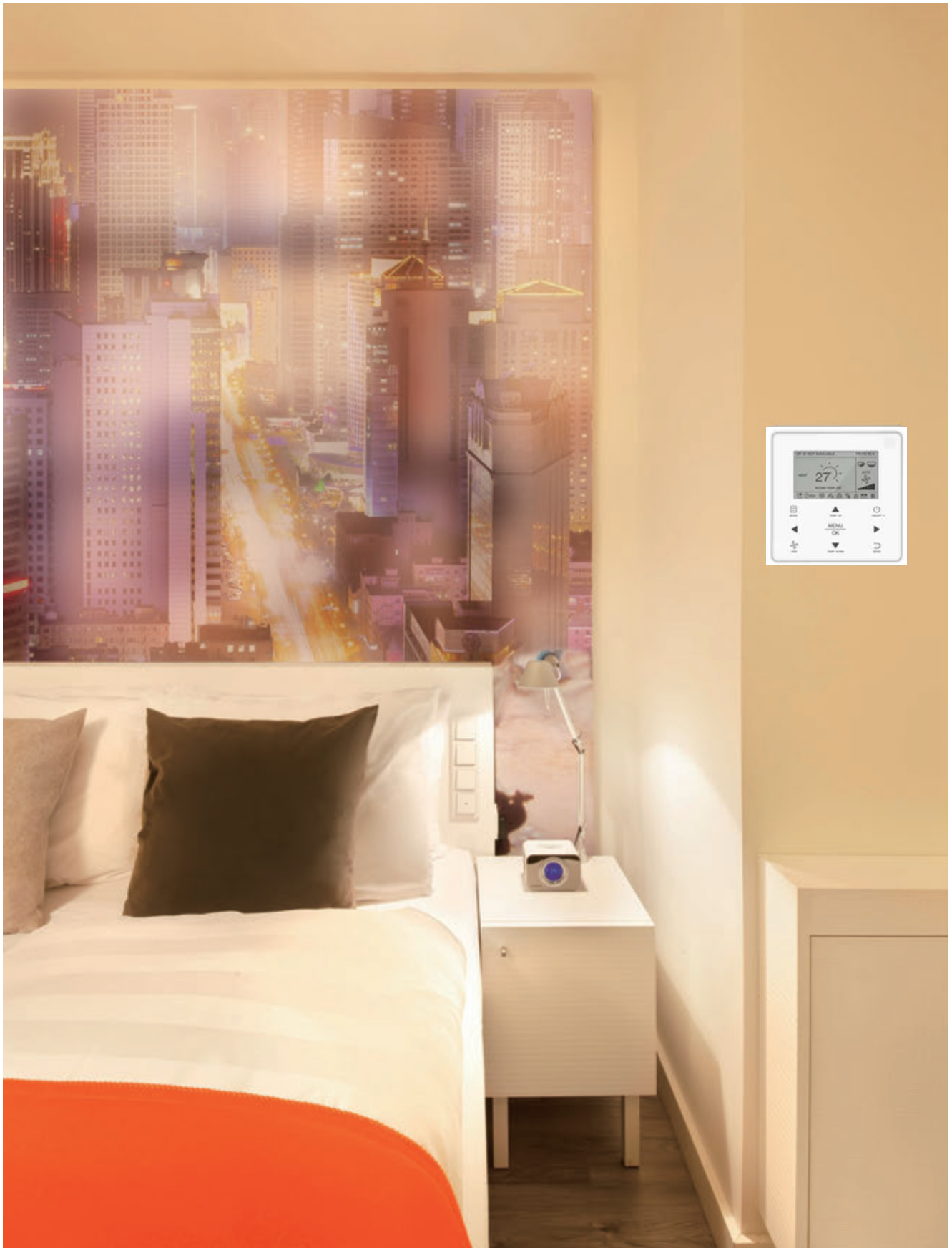
Accessories

CONTROLLER LINEUP


Wireless Remote/ Wireless Controllers	Centralized Controllers Data	Data converter
 <p>RM05B RM12D</p>	 <p>CCM-180A/BWS</p>	 <p>CCM-15</p>
 <p>WDC-86E/KD</p>	 <p>CCM-270B/WS</p>	 <p>CCM-15</p>
 <p>WDC-120G/AWK</p>		

Network Control System	BMS Gateways	Accessories
 <p>IMMP-BAC</p>	 <p>IMMP-BAC</p>	<p>Hotel Key Card Interface Module</p>  <p>MD-NIM05/E</p>  <p>MD-NIM05B/E</p>
<p>+</p> <p>IMMP-S</p>	 <p>GW-LON</p>	<p>Infrared Sensor Controller</p>  <p>MD-NIM09</p>
 <p>CCM-270B/WS</p>	 <p>GW-MOD</p>	<p>Diagnosis software</p>  <p>MCAC-DIAG-B</p>
<p>+</p>  <p>IMMP-S</p>	 <p>GW-KNX</p>	 <p>MCAC-PIDU</p>

Wired Controllers

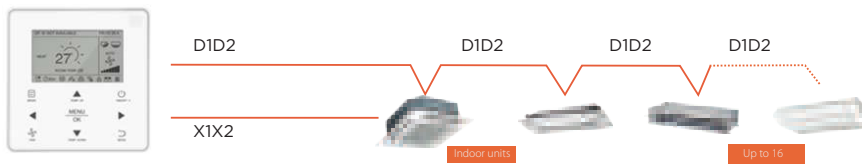


Features

Model	 WDC-86E/KD	 WDC-86E/K	 WDC-120G/WK
On / Off	●	●	●
Mode selection	●	●	●
Temperature setting	● (0.5°C or 1°C steps)	● (0.5°C or 1°C steps)	● (0.5°C or 1°C steps)
Dual temperature set points	●	—	●
7-speed fan control	●	●	●
Auto swing	●	●	●
5-step swing louver	●	●	●
Address setting	●	●	●
Follow me	●	●	●
Eco mode	●	●	●
Room temperature display	●	—	●
°F/°C display	●	●	●
Keyboard lock	—	—	●
Background light	●	●	●
Daily timer	●	●	●
Weekly schedule timer	—	—	●
Auto restart	●	●	●
2 permission levels	—	—	●
Bi-directional communication	●	—	●
Group control	—	—	●
Main or secondary controller setting	●	—	●
Display shut-off	●	●	●
Night silent mode	●	●	●
Remote signal receiver	●	●	●
Clean filter reminder	●	●	●
Extension function	—	—	●
Daylight saving time	—	—	●
Clock display	—	—	●
Dot matrix display	—	—	●
Error check function	●	—	●
System parameter querying	●	—	●
System setting control	●	—	●
Dimensions (WxHxD) (mm)	86x86x18	86x86x18	120x120x20
Power supply	18V DC	5V DC	18V DC

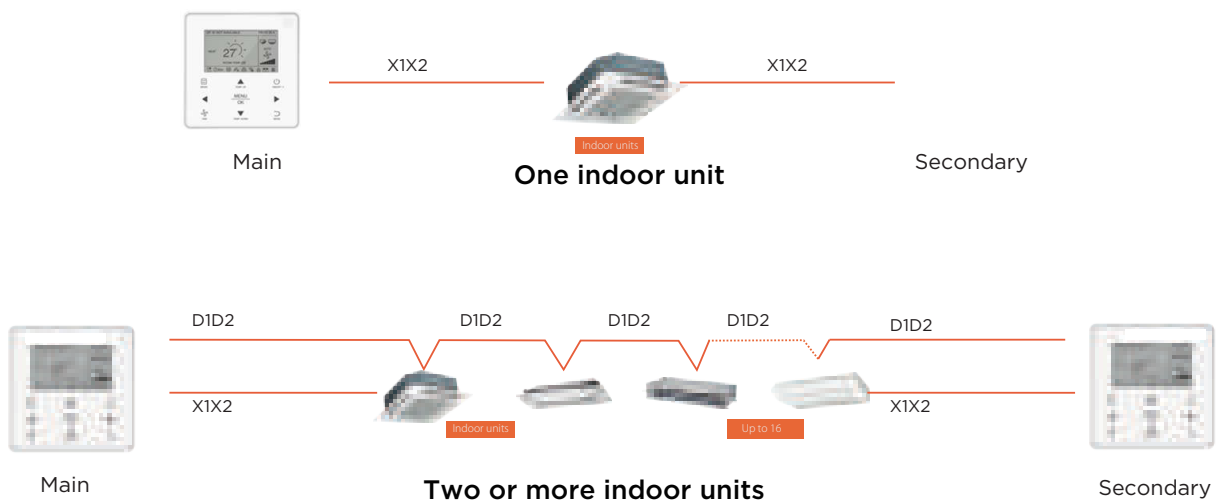
Group Control

One controller can be used to unify the settings across up to 16 indoor units.



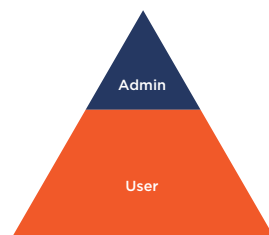
Main or Secondary Controller Setting

Two controllers can be used together, with the indoor units' operating mode and settings being set according to the most recent instruction received. The controller display screens are synchronized so that both displays update when a setting is adjusted.



2 Permission Levels

2 permission levels ensure users can easily access control functions and allow administrators convenient access to operating parameters.



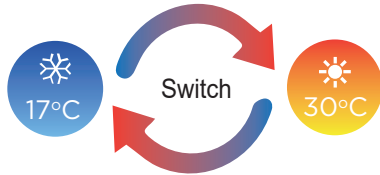
Extension Function

The extension function is specifically designed for users working overtime. Pressing the delay button postpones system shutdown by 1 or 2 hours.



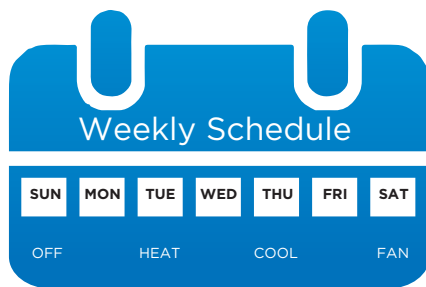
Dual Temperature Set Points

With dual temperature set point control, the set temperature changes automatically when the operating mode is changed.



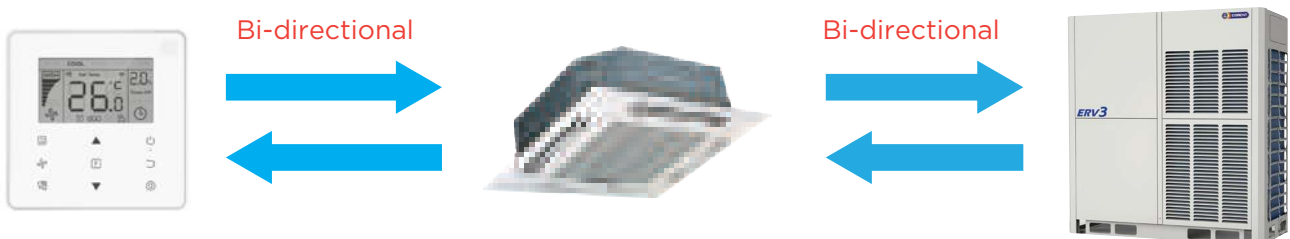
Weekly Schedule Timer

The weekly schedule timer allows users to set multiple schedules each with its own operating mode, temperature settings and fan speeds.



Bi-directional Communication

The wired controller can query the system operating parameters thanks to the new bi-directional communication functionality. In addition, settings including static pressure, cold draft prevention and temperature compensation can be configured on the wired controller.



Centralized Controllers



Features

Model	 CCM-180A/WS	 CCM-270A/WS
Max. number of indoor units	64	384
Max. number of outdoor units	32	192
Max. number of refrigerant systems	8	48
Touch screen	● (6.2-inch)	● (10.1-inch)
On / Off	●	●
Mode selection	●	●
Dual temperature set points	●	●
7-speed fan control	●	●
Auto swing	●	●
5-step swing louver	●	●
Room temperature display	—	●
Outdoor unit Eco mode setting	●	●
Holiday setting	●	●
°C/°F display	●	●
Schedule management	●	●
Clock display	●	●
2 permission levels	●	●
Extension function	●	—
Daylight saving time	●	—
Unit model recognition	●	●
Electricity charge distribution	—	●
Visual schematic	—	●
Energy management	●	●
Group management	●	●
Error check function	●	●
System parameter querying	●	—
USB output		Error report, operation record and electricity consumption report
Report display	Error report	
Email output	—	●
Operation log	—	●
LAN access	—	●
languages supported	English	English
Dimensions (W×H×D) (mm)	181x124x30	270×183×27
Power supply	12V DC	24V AC

Touch Screen

Colorful touch screen and vivid display make operation more convenient and simple.



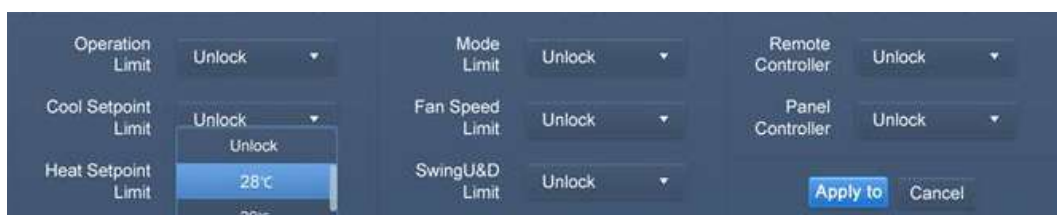
Electricity Charge Distribution

The controllers use the patented Eminent Calculation Method to estimate the electricity consumption of the outdoor units and then divide it among the indoor units so that the electricity charges can be equitably divided among building occupants.



Energy Management

User can set limits or locks on an indoor unit, such as minimum cooling temperature, maximum heating temperature, fan speed, operation mode, swing lock, remote controller lock and wired controller lock.



Visual Schematic

By importing floor plans and then dragging and dropping the indoor units to their actual positions on the floor plan, users can create a tailored system schematic which enables monitoring and control of the indoor units through a clear visual representation of the system layout.



Group Management

Units can be viewed according to group, system or location, making unit management clearer and more convenient.



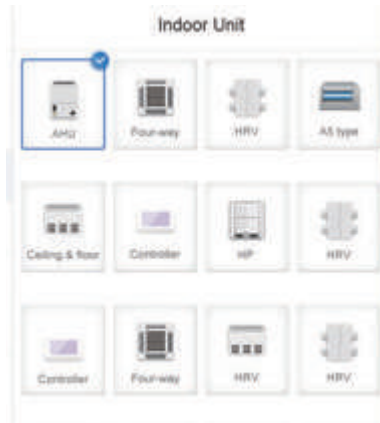
Outdoor Unit Configuration

Outdoor unit configuration and settings can be monitored and controlled without having to go outdoors.



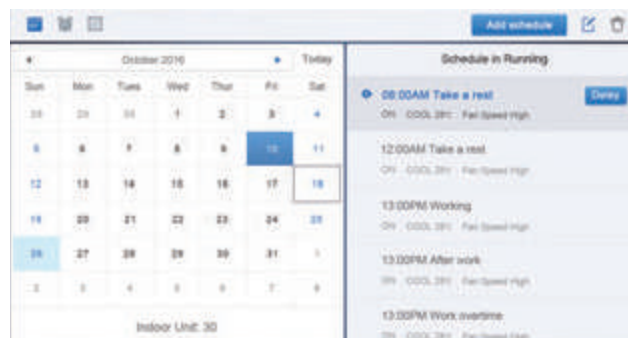
Unit Model Recognition

The controller recognizes the model of indoor and outdoor units and different models are represented by different icons.



Schedule Management

Daily, weekly or annual schedules can be used to set unit settings such as on/off, operating mode, set temperature, fan speed and swing.



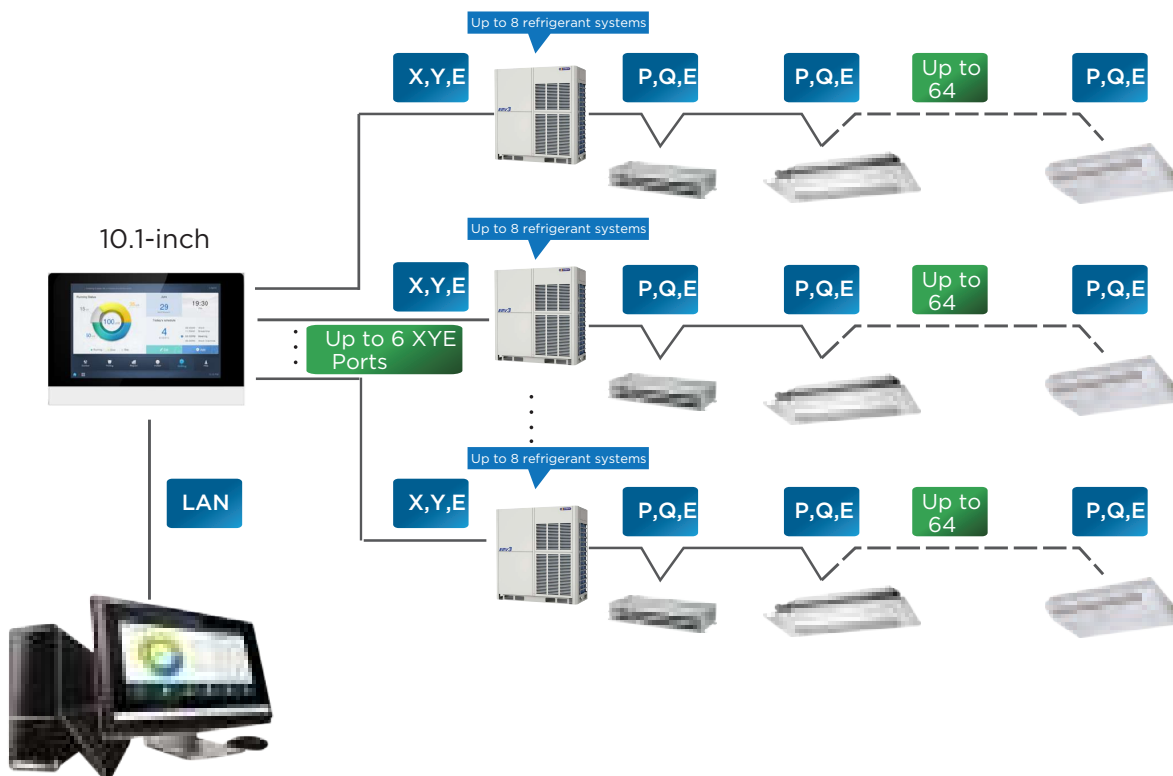
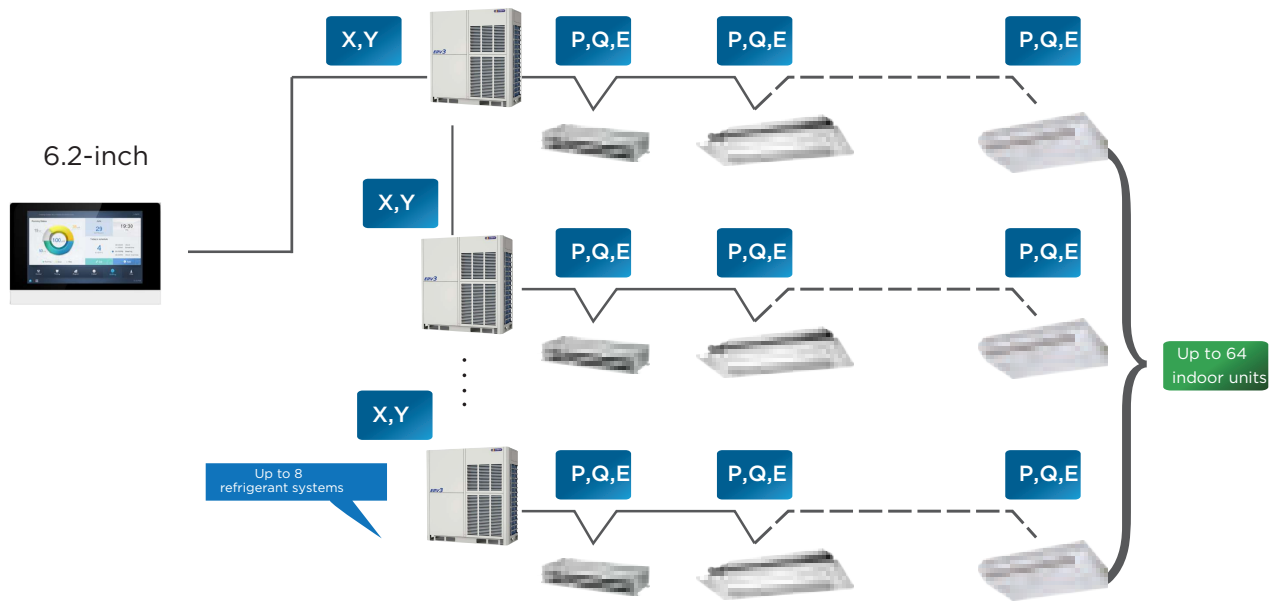
LAN Access

A desktop or laptop PC can be used for browser-based access via a LAN connection.



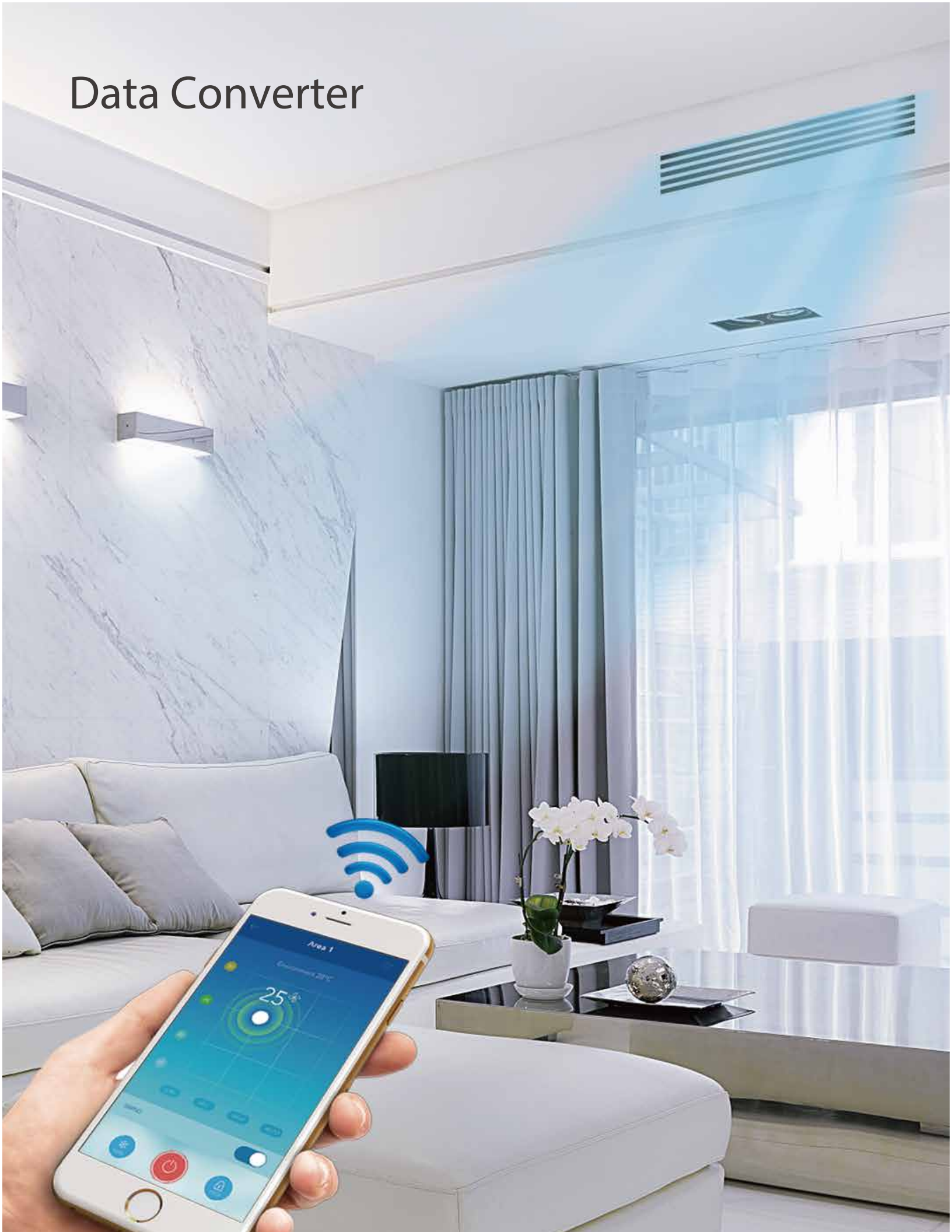
Wiring Flexibility

The controllers can be connected to the master outdoor unit directly.



CONTROL SOLUTIONS

Data Converter



Features

<p>Hardware model</p>	 <p>CCM-15</p>	
<p>Application scenarios</p>	 <p>Mobile Phone Application</p>	 <p>Cloud Server Website</p>
<p>Max. number of CCM-15 for one mobile APP</p>	<p>10</p>	<p>10</p>
<p>Max. number of indoor units</p>	<p>640</p>	<p>640</p>
<p>Max. number of refrigerant systems</p>	<p>80</p>	<p>80</p>
<p>On/Off</p>	<p>●</p>	<p>●</p>
<p>Mode selection</p>	<p>●</p>	<p>●</p>
<p>Temperature setting</p>	<p>● (1°C steps)</p>	<p>● (1°C steps)</p>
<p>7-speed fan control</p>	<p>—</p>	<p>—</p>
<p>Auto swing</p>	<p>●</p>	<p>●</p>
<p>5-step swing louver</p>	<p>—</p>	<p>—</p>
<p>Room temperature display</p>	<p>●</p>	<p>●</p>
<p>°C/°F display</p>	<p>●</p>	<p>●</p>
<p>Weekly timer</p>	<p>●</p>	<p>●</p>
<p>Indoor unit type recognition</p>	<p>—</p>	<p>—</p>
<p>Energy management</p>	<p>●</p>	<p>●</p>
<p>Group management</p>	<p>●</p>	<p>●</p>
<p>User group management</p>	<p>●</p>	<p>●</p>
<p>Operation log</p>	<p>●</p>	<p>●</p>
<p>Device log</p>	<p>●</p>	<p>●</p>
<p>Login record</p>	<p>●</p>	<p>●</p>
<p>Error log</p>	<p>—</p>	<p>●</p>
<p>Configuration</p>	<p>●</p>	<p>—</p>
<p>Account registration</p>	<p>●</p>	<p>—</p>
<p>Virtual</p>	<p>●</p>	<p>—</p>
<p>Mode display</p>	<p>●</p>	<p>●</p>
<p>Languages supported</p>	<p>English, French, Spanish</p>	<p>English, French, Spanish</p>
<p>Dimensions (WxHxD) (mm)</p>	<p>187×115×28</p>	
<p>Power supply</p>	<p>1 phase, 100-240V, 50/60Hz</p>	
<p>Outdoor unit series</p>	<p>All series</p>	

High Compatibility

Compatible with a variety of operating systems.



User Friendly Interface

Clear, stylish interface designed by leading industrial designers.



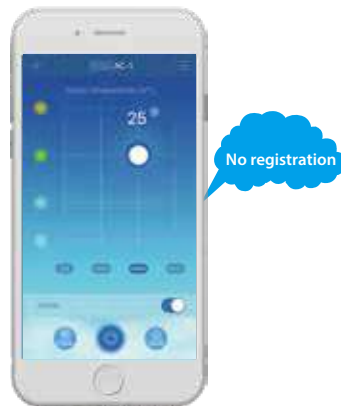
Cloud Server Website

In addition to "M-control", users can control air conditioners and query the status of air conditioning equipment anytime and anywhere through the cloud server website.



Virtual Experience

After downloading "M-control", you can experience the operation of the interface through the virtual experience function without registration.



Easy Configuration

User groups can be joined simply by scanning a QR code.



Convenient Operation

Drag the position of the floating bubbles to change temperature and fan speed.



Anytime Control

Remote access to CCM-15 allows anytime, anywhere control.



Clear Icons

Clear, color-coded icons allow unit operating states to be viewed at a glance.



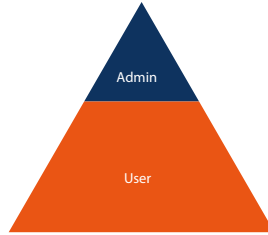
Group Management

The user can group the air conditioners equipment, and the air conditioner in the same group can be controlled together just with one tap.



2 Permission Levels

Administrators can set different permissions for different users to facilitate better management of devices.



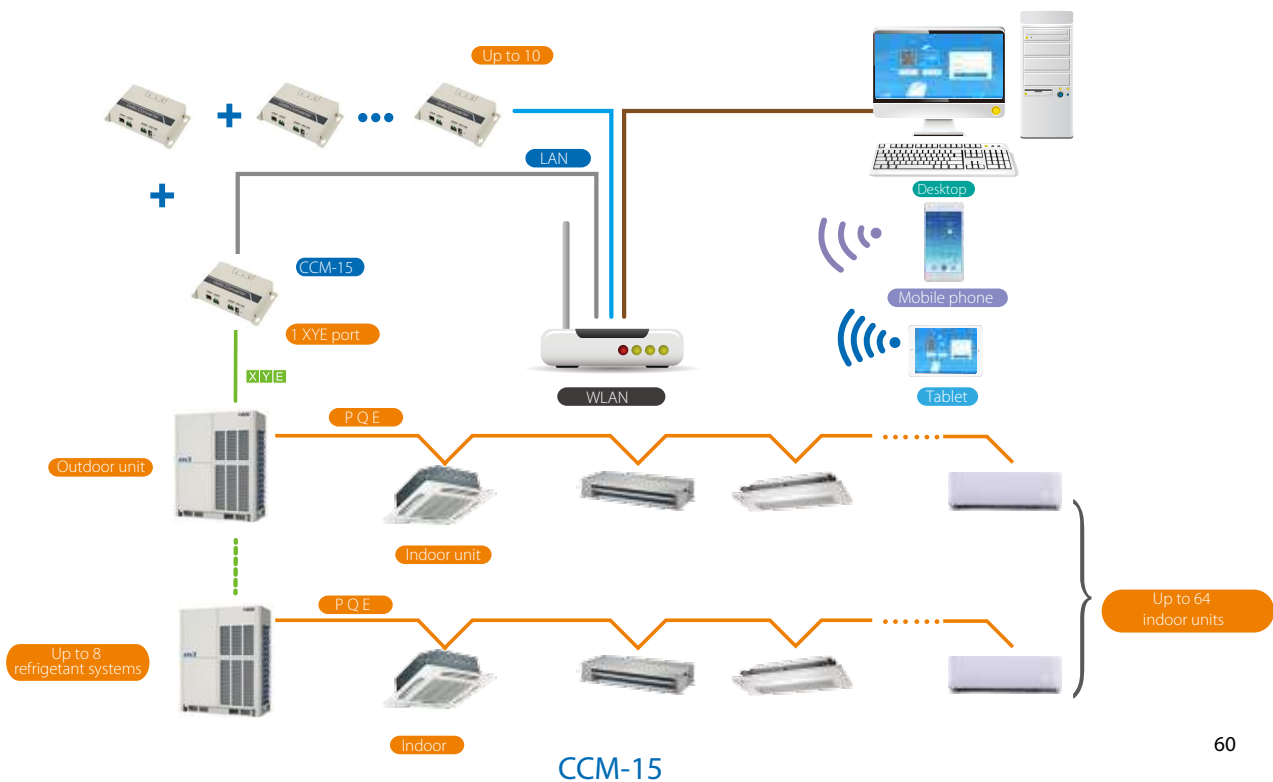
Multiple Language Options

Supports multiple languages so that users of different languages can operate easily.



Flexibility

The Data Converter can be connected directly to a network of indoor/outdoor units.



Network Control System



Features

Software model	 IMMP-S		 IMM
Hardware model	 IMMP-BAC	 CCM-270B/WS	 M-interface
Max. number per software system	10	10	4
Max. number of indoor units	2560	3840	1024
Max. number of refrigerant systems	320	480	16
Temperature setting	● (0.5°C steps)	● (0.5°C steps)	● (1°C steps)
7-speed fan control*	●	●	— (3-speed)
Auto swing	●	●	●
5-step swing louver*	●	●	—
Outdoor unit Eco mode setting	●	●	—
Holiday setting	●	●	—
Schedule management	●	●	●
Clock display	●	●	●
2 permission levels	●	●	●
Unit model recognition	●	●	—
Electricity charge distribution	●	●	●
Visual schematic	●	●	●
Energy management	●	●	●
Group management	●	●	●
Error check function	●	●	●
System parameter querying	●	●	●
Report output	●	●	●
Operation log	●	●	●
LAN access	●	●	●
Languages supported	English	English	9 languages
Dimensions (W×H×D) (mm)	251×319×61	270×183×27	251×319×66
Power supply	1 phase, 100-240V, 50/60Hz	24V AC	1 phase, 100-240V, 50/60Hz
Outdoor unit series	ERV2/ERV3/ERVc		ERV1/ERVm

Note: *means this function is only available for ERV2/ERV3/ERVc I(10-12HP) outdoor unit connected to 2nd generation DC indoor unit.

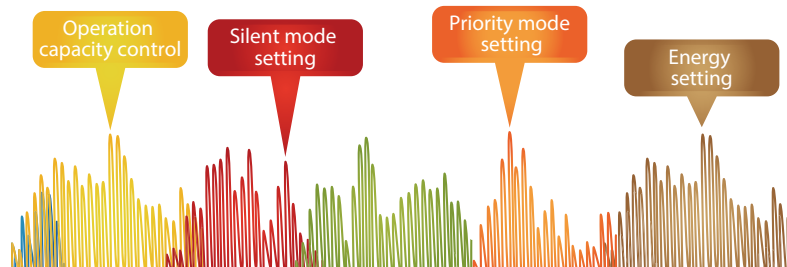
User-friendly Interface

Simple, practical user interface makes for a user-friendly experience even for first-time users.



Outdoor Unit Configuration

Outdoor unit configuration and settings can be monitored and controlled without having to go outdoors.



Note: This function is only available for ERV2/ERV3/ERV outdoor unit.

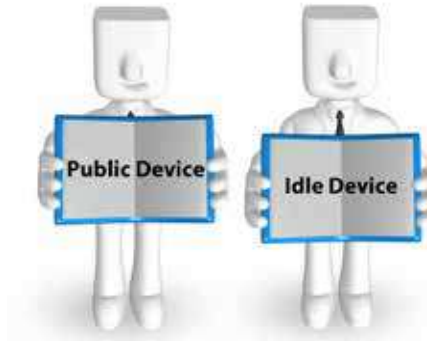
Electricity Charge Distribution

The IMMPRO uses the patented **Eminent** Calculation Method to estimate the electricity consumption of the outdoor units and then divide it among the indoor units so that the electricity charges can be equitably divided among building occupants.



Public and Idle Devices

Marking a unit as a public device or idle device ensures the electricity charge distribution is more accurate and reasonable.



Visual Schematic

By importing floor plans and then dragging and dropping the indoor units to their actual positions on the floor plan, users can create a tailored system schematic which enables monitoring and control of the indoor units through a clear visual representation of the system layout.



Schedule Management

Daily, weekly or annual schedules can be used to set unit settings such as on/off, operating mode, set temperature, fan speed and swing.

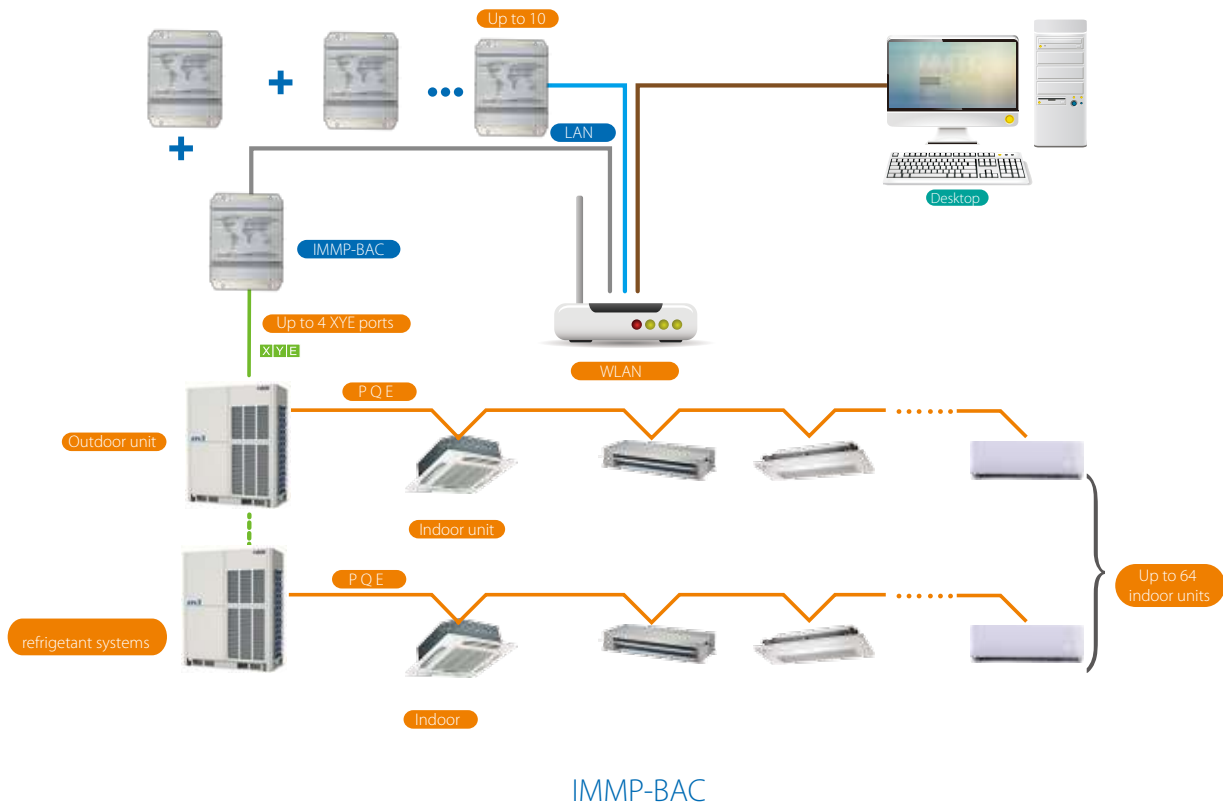


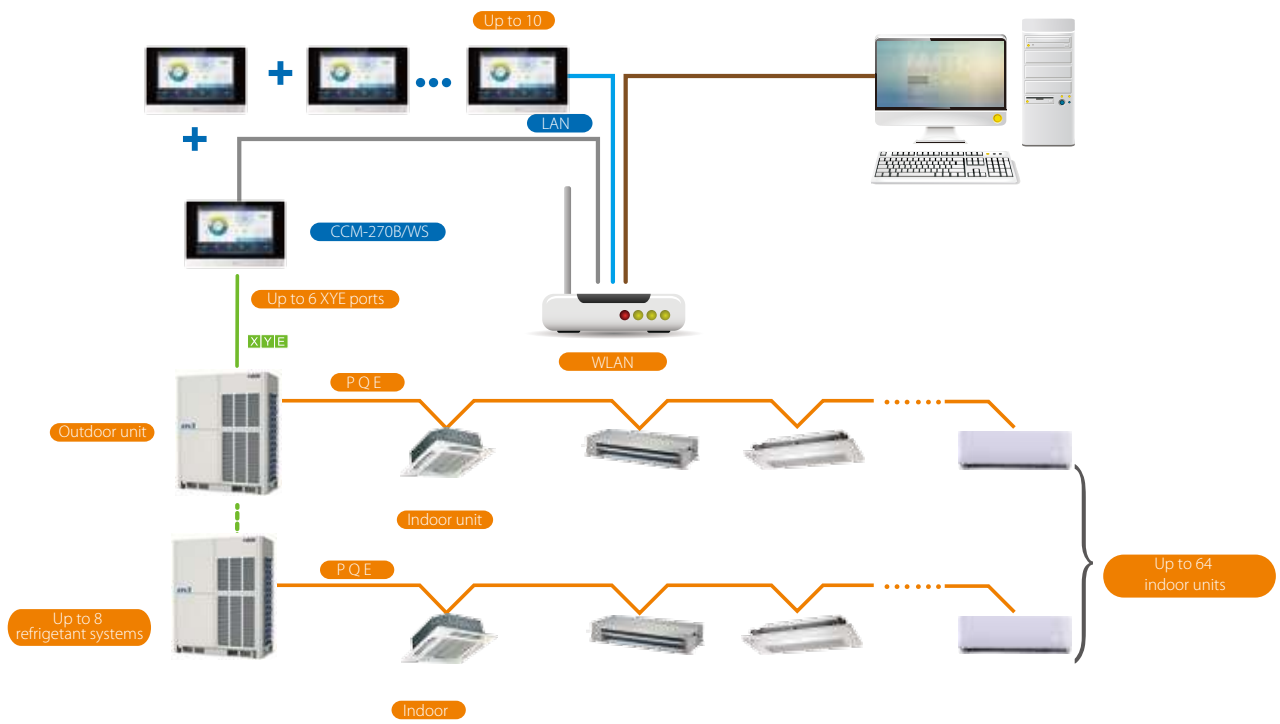
Xpress Installation

With the Xpress Installation wizard, IMMPRO can be installed quickly and easily without requiring support from a technical support engineer.



Network Flexibility






CCM-270B/WS

Monitor and Diagnose

Eminent's VRF Diagnosis Software tool is used to monitor VRF systems and diagnose system errors.

System settings and operating parameters can be accessed easily and data logs can be reviewed for fault prevention purposes.

Features

Model		 <p>MCAC-DIAG-B</p>	
Max. number of indoor units		64	
Max. number of refrigerant systems		1	
Control	Mode selection	●	
	Temperature setting	●	
	Fan speed	●	
Outdoor unit monitoring	Operating mode	●	
	Capacity	●	
	Compressor operating frequency	●	
	Operating current	●	
	Error status	●	
	Temperatures	T3,T4,Tp (See note 1)	
	Valve statuses	SV4, SV5, SVX, ST1 (See note 2)	
	EXV position	●	
Indoor unit monitoring	Operating mode	●	
	Capacity	●	
	Fan speed	●	
	Address	●	
	Temperatures	T1, T2, T2B, TS (See note 3)	
	EXV position	●	
Error codes		●	
Toubleshooting		●	
Data logs		●	
Diagrams		System schematic, refrigerant flow diagram, parameter chart	
Languages supported		English	

Notes:

1. Heat exchanger temperature, outdoor ambient temperature, discharge temperature.

2. Oil return valve, defrosting valve, EXV bypass valve, four-way valve.

3. Indoor ambient temperature, indoor heat exchanger mid-point temperature, indoor heat exchanger outlet temperature, set temperature.

Expert Diagnosis

VRF Diagnosis Software is specially designed to allow after-sales engineers, to understand the operating status of the system at a glance.



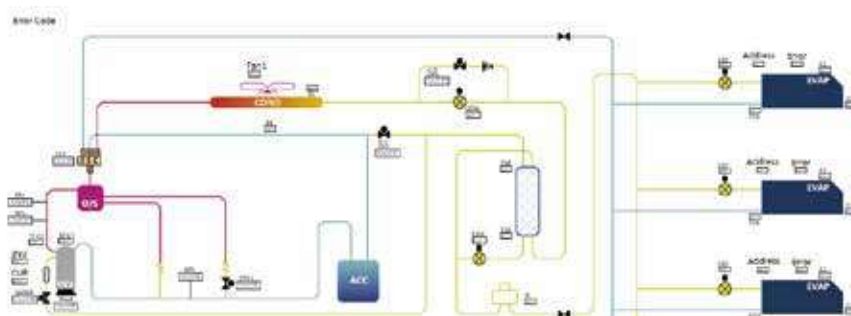
Use-friendly Interface

A stylish and simple interface with rich graphical representations makes diagnosing system issues quick and convenient.



Diagrams

A system schematic, refrigerant flow diagram and parameter chart can be generated to provide a graphical interpretation of the system status.



Parameter Querying

Access all the system parameters easily.

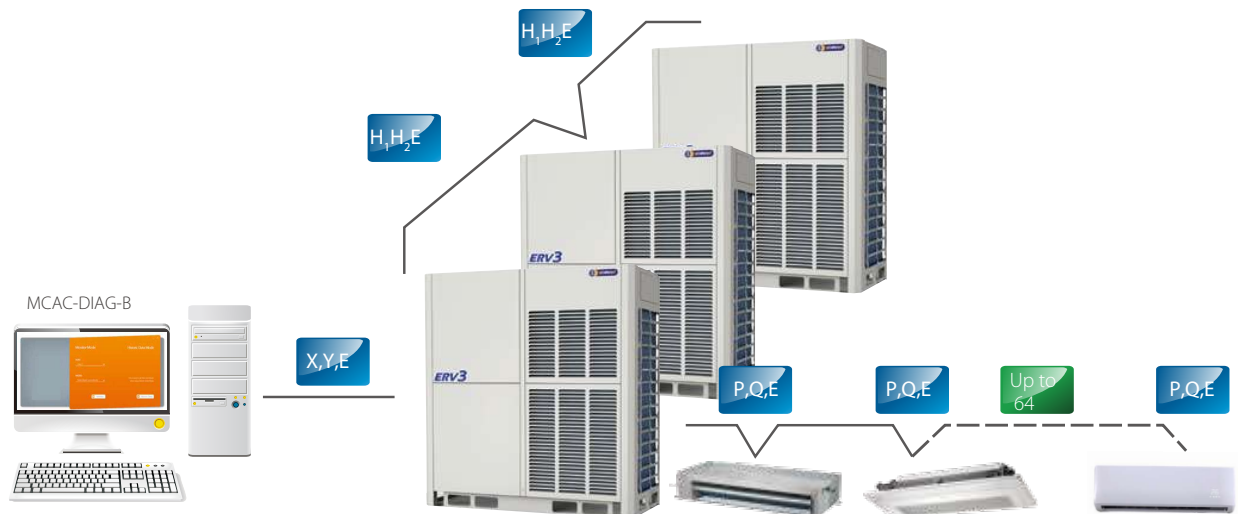


Data Logs

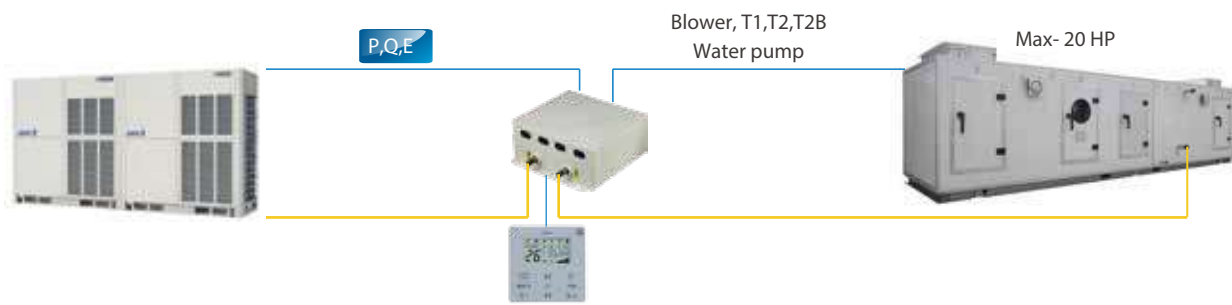
Data logs including operating records and error reports are saved by the software which is useful for discovering system issues.



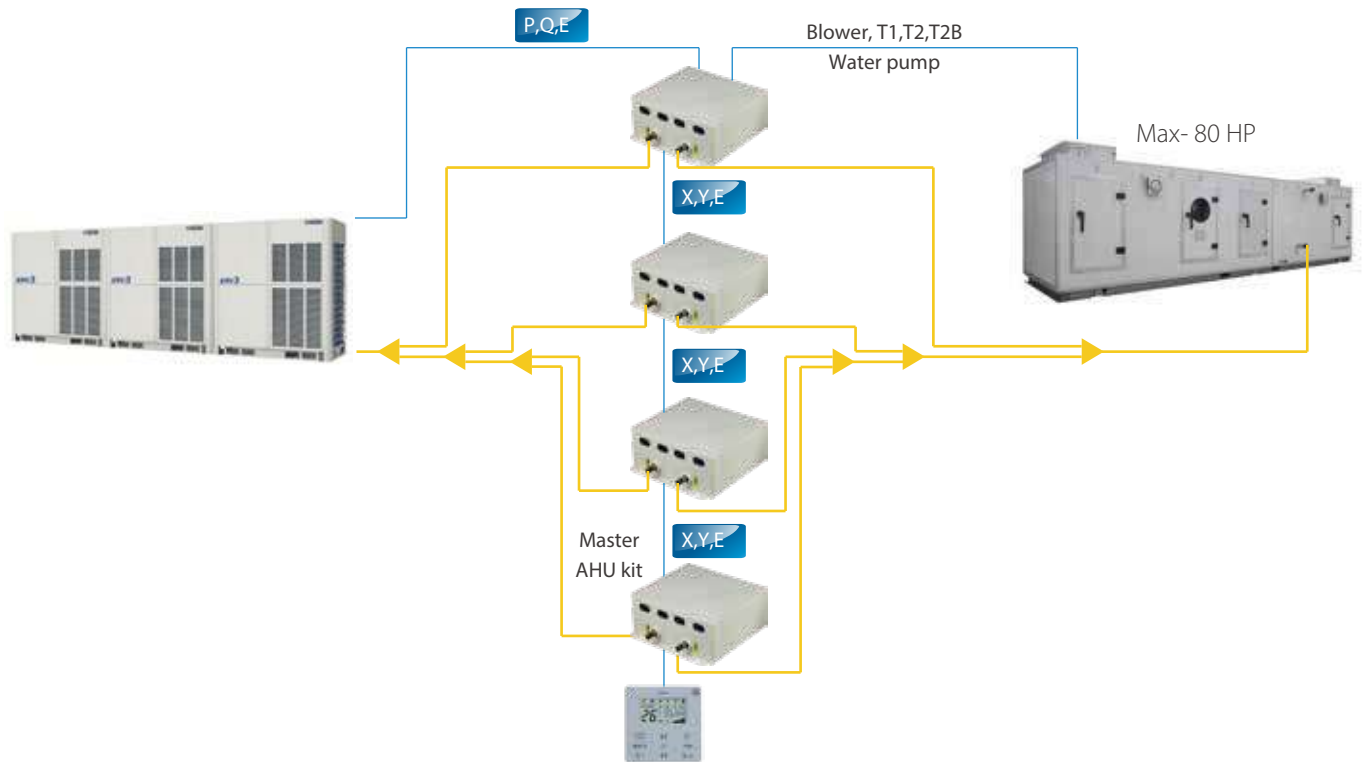
Wiring Schematic



Single AHU Control Box Connection



Multi AHU Control Boxes Connection



Specifications

Model		AHUKZ-01B	AHUKZ-02B	AHUKZ-03B
Capacity	HP	3.2-6	8-12	14-20
Power supply		1 phase, 220-240V, 50Hz; 1 phase, 208-230V, 60Hz		
Refrigerant			R410A	
Pipe connections (inlet and outlet)	mm	Ø8	Ø12.7	Ø15.9
Net dimensions (WxHxD)	mm	350x150x375		
Packed dimensions (WxHxD)	mm	420x240x490		
Net weight	kg	8.4	8.7	8.9
Gross weight	kg	11.4	11.7	11.9
Operating modes		Cooling, heating and fan only		
Standard controller		Wired controller		
Optional controller		Wireless remote controller; SIEMENS controller		



Eminent Air (Thailand) Co., Ltd.

405 Moo 5 Soi Soonthonvasu,
Bhudharaksa Road, Preakasamai,
Muang, Samutprakarn ,10280 Thailand

Tel. +662 083-5555

Fax: +662 033-6234 or 35

E-mail: info@eminent.co.th

Website: www.eminent.co.th



@Eminent Air