VRF SYSTEM

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VRF SYSTEM

GENERAL® Royal

A Better Air Conditioner Supplier

CENTRALIZED COMMERCIAL AIR CONDITIONERS

R5X DIAMOND SERIES **R410A**

VRF 60Hz
R4+s/Mini VRF

NEW GENERATION OF QUALITY COMFORT

General Royal New Generation of products solutions, that fits for our growing nation.

OUR MISSION

To supply quality air conditioning products using the latest technology, environmentally harmless, backed up with reliable customer service in order to give the best satisfaction, comfort and pride for our customers.

OUR VISION

A better air conditioner supplier, respected in the industry, recommended by customers.

CONTENTS

OUTDOOR UNITS

INDOOR UNITS

CONTROL SYSTEMS

SELECTION SOFTWARE & BRANCH PIPE

OUTDOOR UNIT LINEUP

R5 X Diamond Series VRF/ V4 PLUS S SERIES & Mini VRF

Single Unit

8/10/12HP

NEW

14/16/18/20/22HP

8/10/18HP

Multi Combination

24-44HP

46-66HP

68-88HP

20-72HP

Mini VRF Series

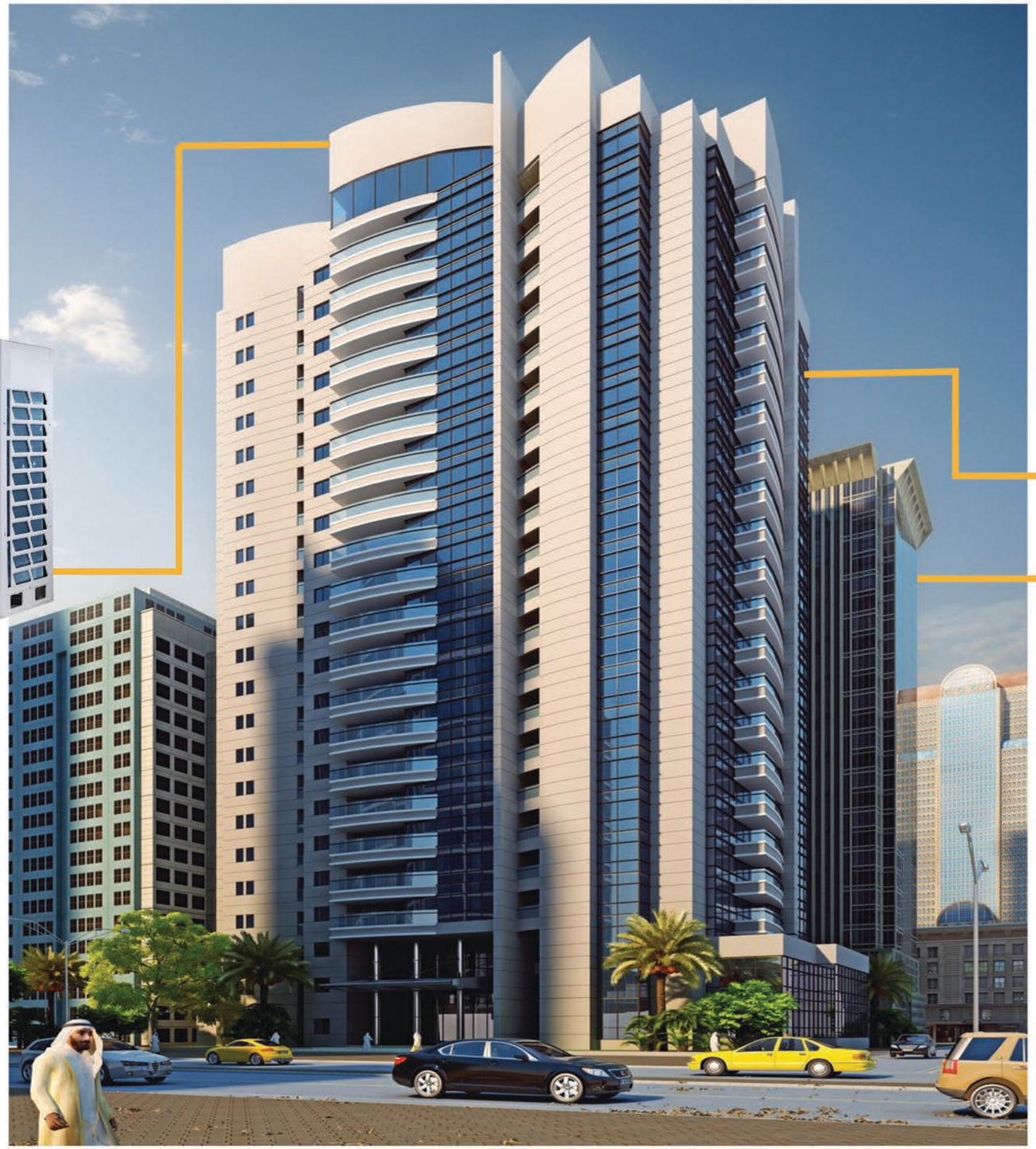
4, 4.5, 5-6HP

VRF SYSTEM

Product solutions for high-rise building establishments.

R5X Diamond Series

Max.4 modules can be combined
8-88HP
All DC inverter Compressor
All Dc fan motors



VRF R4 Plus S Series

Max.4 modules can be combined
8-72HP
All DC inverter Compressor
All Dc fan motors

Mini VRF Series

4-6HP
All DC inverter Compressor
All Dc fan motors

GENERAL® Royal

A Better Air Conditioner Supplier

INDOOR UNIT LINEUP R5X Diamond Series

Wide range of Connectable units

			kW	1.8	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	20.0	25.0	28.0	40.0	45.0	56.0
			Btu/h	6k	7k	9k	12k	15k	19k	24k	27k	30k	34k	38k	42k	48k	55k	68k	85k	96k	136k	154k	191k
Cassette	One-way cassette			●	●	●	●	●	●	●													
	Two-way cassette				●	●	●	●	●	●													
	Four-way cassette					● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●		● ●								
	Compact four-way cassette				● ●	● ●	● ●	● ●																
Duct	Low static pressure			● ●	● ●	● ●	● ●	● ●	● ●	● ●													
	Medium static pressure				● ●	● ●	● ●	● ●	● ●	● ●													
											● ●	● ●	● ●	● ●	● ●	● ●							
	High static pressure									● ●	● ●	● ●		● ●		● ●	● ●	● ●	● ●	● ●	●	●	●
	Fresh air processing unit														● ●	● ●		● ●	● ●	● ●			
Wall mounted					● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●											
Ceiling & floor							● ●	● ●	● ●	● ●	● ●	● ●		● ●		● ●	●						
Floor standing					● ●	● ●	● ●	● ●	●	●	●												
Console					●	●	●	●															

● AC Series ● DC Series

INDOOR LINEUP

GENERAL® Royal

A Better Air Conditioner Supplier

INDOOR UNIT LINEUP R4 Plus S Series

Wide range of Connectable units

			kW	1.8	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	20.0	25.0	28.0	40.0	45.0
			Btu/h	6k	7k	9k	12k	15k	19k	24k	27k	30k	34k	38k	42k	48k	55k	68k	85k	96k	136k	154k
Cassette	One-way cassette			●	●	●	●	●	●	●												
	Two-way cassette				○	○	○	○	○	○												
	Four-way cassette					●	●	●	●	●			●	●	●		●						
	Compact four-way cassette				○	○	○	○														
Duct	Low static pressure			●	●	●	●	●	●	●												
	Medium static pressure				○	○	○	○	○	○	○		○		○		○						
	High static pressure									●	●		●		●		●	●	●	●	●	●	●
	Fresh air processing unit															○	○		○	○	○		
Wall mounted				●	●	●	●	●	●	●		●										
Ceiling & floor						○	○	○	○	○		○										

Notes:
Fresh air processing unit is not available for V4+R and Mini VRF Series.

INDOOR LINEUP

OUTDOOR UNITS

- R5x Diamond Series VRF
- R4 Plus S Series
- Mini VRF

VRF R5X DIAMOND

The General Royal R5X Diamond Series is a range of high performance VRF outdoor units. With capacities ranging from 8HP to 88HP in 2HP increments, the R5 X brings high efficiency, high reliability cooling and heating to projects large and small.

The R5 X offers a variety of outstanding capabilities. Able to support piping lengths of up to 1000m and height differences of up to 110m, the R5 X rises to the challenge of today's tall buildings. Compatibility with a

R5X DIAMOND SERIES

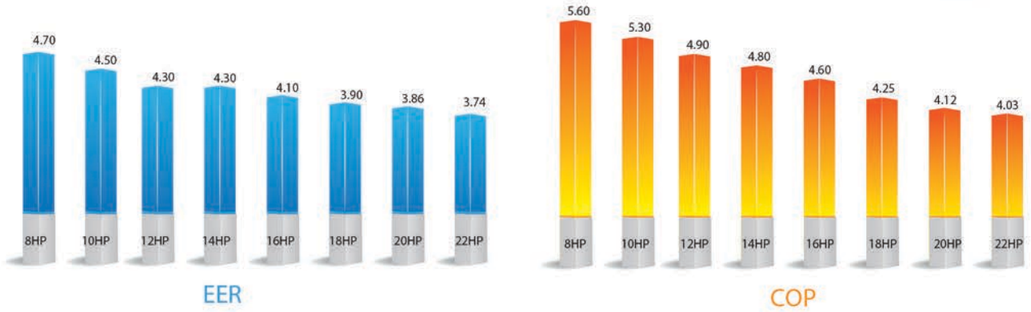
- High Efficiency
- Wide Application Range
- High Reliability
- Enhanced Comfort
- Easy Installation and Service
- Anti-corrosion Protection

New

HIGH EFFICIENCY

High EER and COP

DC compressors and fan motors together with a high-efficiency heat exchanger combine to give the R5 X Series top-class energy efficiency in cooling and heating.

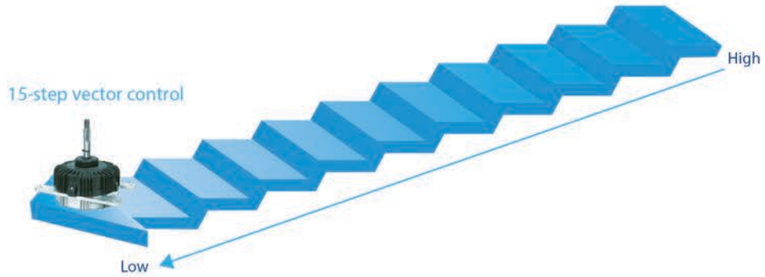


All DC Inverter Compressors

At the heart of the R5 X Series outdoor unit lies a world-leading DC inverter scroll compressor. The compressor's innovative design and numerous high performance features reduce power consumption by 25%.

All DC Fan Motors

Fan speed is controlled according to the system pressure and system load, minimizing energy consumption.

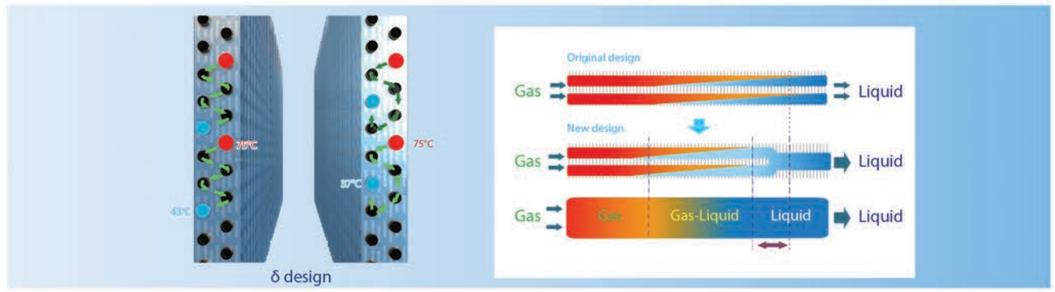


High Efficiency Heat Exchanger

Newly designed fins enlarge the heat exchange area and decrease air resistance, enhance heat exchange performance and save more energy.

Hydrophilic fins and internally threaded copper pipes optimize heat exchange efficiency.

δ design increases the degree of liquefaction in the condenser and improves heat-exchange efficiency.



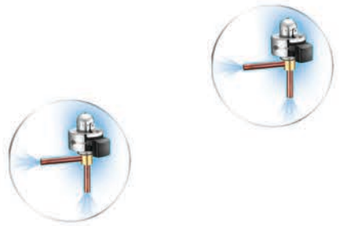
Newly Designed Fan

A new blade with sharp edges and a slight curve increases the airflow rate and lowers vibration and airflow resistance.

Multiple solenoid valves ensure precise temperature control, stable and efficient operation, and improved comfort.

Dual EXVs Control

Dual EXVs in one system, each EXV part achieves 480 Pulse rate to precisely adjust refrigerant flow.



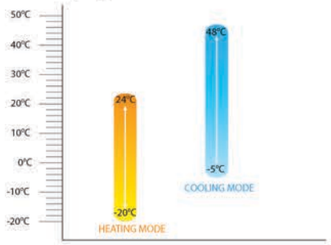
WIDE APPLICATION RANGE

Wide Range of Indoor Units

General Royal provides 12 types and more than 100 models of VRF indoor units to meet varied customer requirements in a wide range of locations including shopping malls, hospitals, office buildings, hotels and airports.

Wide Operation Range

R5X Series operates stably under extreme conditions, ranging from minus 20°C to 48°C.



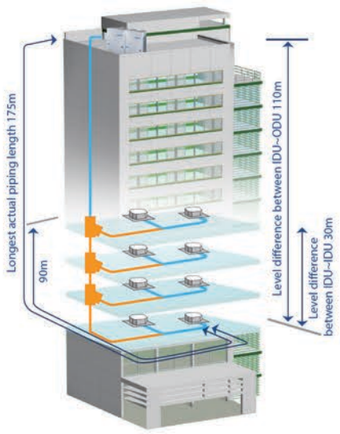
Wide Capacity Range

The R5 X series has an extensive range of capacities, from 8HP to 88HP, meeting all customer requirements from small to large buildings.

Long Piping Capability

Piping length	Capability
Total piping length	1000m
Longest length - actual (equivalent)	175m (200m)
Longest length after first branch	90m*
Largest height difference between indoor and outdoor units - ODU up (down)	90m (110m)
Largest height difference between indoor units	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 local Midea dealer for further information.



HIGH REALIBILITY

Duty Cycling

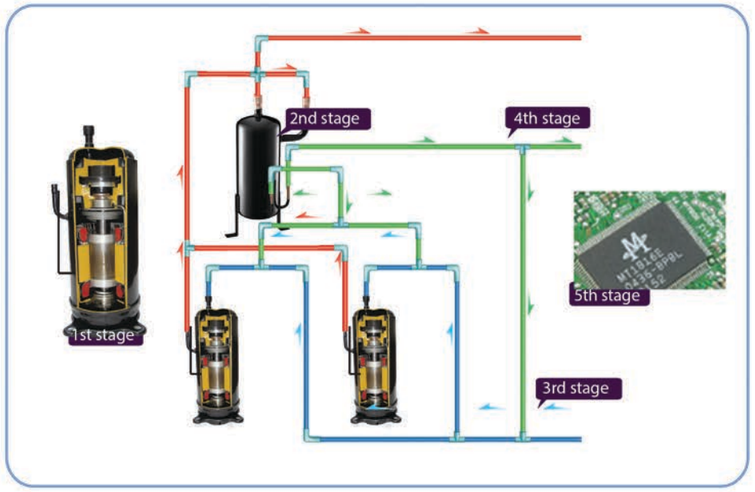
Duty cycling equalizes the running time of the outdoor units in a multiple-unit system and of the compressors in each unit, significantly extending compressor lifespan.

Back-up

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

Precise Oil Control Technology

Five stages of oil control technology ensure all outdoor compressor oil is always kept at a safe level, eliminating any compressor oil shortage problems.



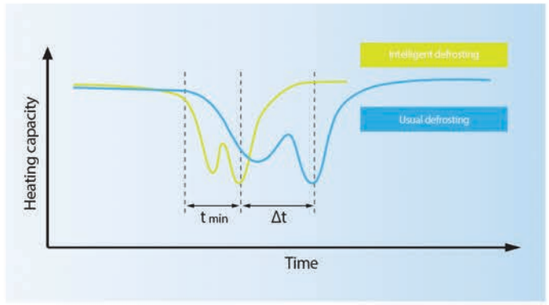
ENHANCE COMFORT

Night Silent Mode

The night silent mode feature, which is easily configured on the outdoor unit's PCB, includes various scheduling options that can be used to reduce noise levels at times when low noise operation is required.

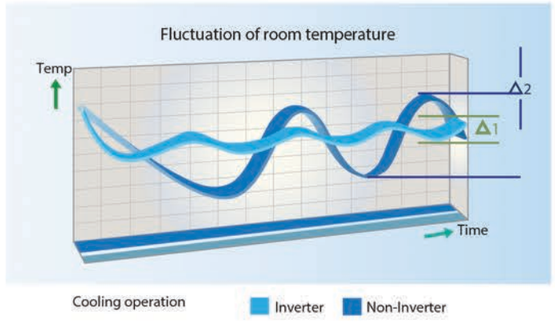
Intelligent Defrosting Technology

The intelligent defrosting program calculates the time required for defrosting according to the actual system status, eliminating heat losses from unnecessary defrosting. A specialized defrosting valve reduces time required for defrosting to as little at four minutes.



Rapid Cooling or Heating

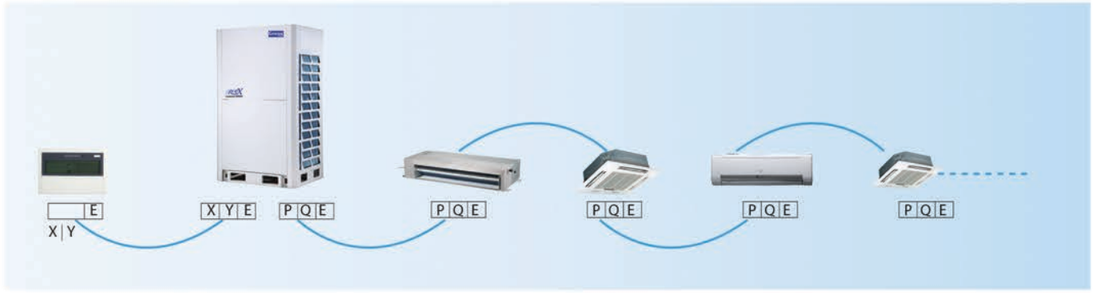
The DC inverter compressor reaches full capacity rapidly, providing quicker cooling or heating with lower levels of temperature fluctuation during the cooling/heating operation.



EASY INSTALLATION & SERVICE

Simple Communication Wiring

Indoor centralized controller can be connected to either the indoor or the outdoor units.
A single set of wiring can be used for system and network communication, making installation quicker and easier.

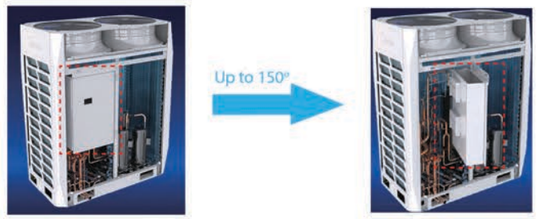


Auto Addressing

Outdoor unit can distribute addresses to indoor units automatically.
Remote and wired controllers can be used to query or modify each indoor unit's address.

Rotatable Electric Control Box

The newly designed rotating control box can be rotated up to 150 degrees to provide access to the pipeline system for inspection and maintenance without the need to remove the control box.



Easy Maintainence

Special features that increase ease of maintenance include a control box inspection window for viewing the system status, a self-diagnosis function that speeds fault analysis, and the positioning of the compressor adjacent to the casing, which simplifies inspection and enables valve or compressor parts to be replaced easily.

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 steel sheets, grills, coil fins, electric control box case and screws/bolts 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.

Motor

Standard products:
72h of neutral salt mist

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

Compressor / Motor Bolts

Standard products:
72h of neutral salt mist

Heavy anti-corrosion products:
168h of neutral salt mist

Heat Exchanger Aluminum Foil

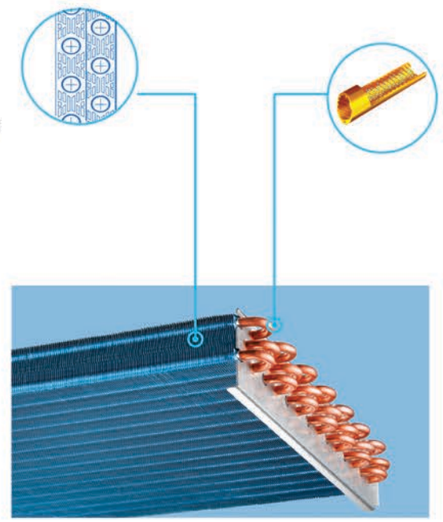
Standard products:
72h of neutral salt mist

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

Copper

Standard products:
24h of neutral salt mist

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



Screws / Bolts / Gaskets

Standard products:
300h of neutral salt mist

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

Electric Control Box Case

Standard products:
96h of neutral salt mist

Heavy anti-corrosion products:
240h 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

VRF R5X DIAMOND SERIES

380~415V-60Hz / 220V-60Hz

Capacity		HP	8	10	12	14
Model		380-415V	GRV5-X252W/V2GN1	GRV5-X280W/V2GN1	GRV5-X335W/V2GN1	GRV5-X400W/V2GN1
Model		220V	GV5-X252W/V2DN1	GRV5-X280W/V2DN1	GRV5-X335W/V2DN1	GRV5-X400W/V2DN1
Power supply			3 phase, 380-415V, 50/60Hz or 3 phase, 220V, 60Hz			
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	5.36	6.22	7.79	9.30
	EER		4.70	4.50	4.30	4.30
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	5.94	7.65	9.38
	COP		5.60	5.30	4.90	4.80
Connected indoor units	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		13	16	20	23
Compressors	Type		DC inverter			
	Quantity		1	1	1	2
Fan motors	Type		DC			
	Quantity		1	1	1	2
	Static pressure	Pa (in. W.G.)	0-20 (0-0.08) (default)			
		Pa (in. W.G.)	20-60 (0.08-0.24) (customized)			
Refrigerant	Type		R410A			
	Factory charge	kg (lbs.)	9 (20)	9 (20)	11 (24)	13 (29)
Pipe connections[3]	Liquid pipe	mm (in.)	Φ12.7 (Φ1/2)	Φ12.7 (Φ1/2)	Φ15.9 (Φ5/8)	Φ15.9 (Φ5/8)
	Gas pipe	mm (in.)	Φ25.4 (Φ1)	Φ25.4 (Φ1)	Φ28.6 (Φ1-1/8)	Φ31.8 (Φ1-1/4)
	Oil balance pipe	mm (in.)	Φ6.35 (Φ1/4)			
Air flow rate		m^3/h	12000	12000	12000	14000
Sound pressure level[4]		dB(A)	58	59	60	62
Net dimensions (W×H×D)		mm	990×1635×790			1340×1635×790
		in.	39×64-3/8×31-1/8			52-3/4×64-3/8×31-1/8
Packed dimensions (W×H×D)		mm	1055×1805×855			1405×1805×855
		in.	41-1/2×71-1/16×33-5/8			55-3/8×71-1/16×33-5/8
Net weight		kg (lbs.)	219 (483)	219 (483)	237 (523)	297 (655)
Gross weight		kg (lbs.)	234 (516)	234 (516)	252 (556)	315 (695)
Operating temperature range		°C (°F)	Cooling: -5 to 48 (23 to 118.4); Heating: -20 to 24 (-4 to 75.2)			

Capacity		HP	16	18	20	22
Model		380-415V	GRV5-X450W/V2GN1	GRV5-X500W/V2GN1	GRV5-X560W/V2GN1	GRV5-X615W/V2GN1
Model		220V	GRV5-X450W/V2DN1	GRV5-X500W/V2DN1	GRV5-X560W/V2DN1	GRV5-X615W/V2DN1
Power supply			3 phase, 380-415V, 50/60Hz or 3 phase, 220V, 60Hz			
Cooling[1]	Capacity	kW	45.0	50.0	56.0	61.5
		kBtu/h	153.5	170.6	191.1	209.8
	Power input	kW	10.98	12.82	14.51	16.44
	EER		4.10	3.90	3.86	3.74
Heating[2]	Capacity	kW	50.0	56.0	63.0	69.0
		kBtu/h	170.6	191.1	214.9	235.4
	Power input	kW	10.87	13.18	15.29	17.12
	COP		4.60	4.25	4.12	4.03
Connected indoor units	Total capacity		50-130% of outdoor unit capacity			
	Maximum quantity		26	29	33	36
Compressors	Type		DC inverter			
	Quantity		2			
Fan motors	Type		DC			
	Quantity		2			
	Static pressure	Pa (in. W.G.)	0-20 (0-0.08) (default)			
		Pa (in. W.G.)	20-60 (0.08-0.24) (customized)			
Refrigerant	Type		R410A			
	Factory charge	kg (lbs.)	13 (29)	13 (29)	16 (35)	16 (35)
Pipe connections[3]	Liquid pipe	mm (in.)	Φ15.9 (Φ5/8)	Φ19.1 (Φ3/4)	Φ19.1 (Φ3/4)	Φ19.1 (Φ3/4)
	Gas pipe	mm (in.)	Φ31.8 (Φ1-1/4)	Φ31.8 (Φ1-1/4)	Φ31.8 (Φ1-1/4)	Φ31.8 (Φ1-1/4)
	Oil balance pipe	mm (in.)	Φ6.35 (Φ1/4)			
Air flow rate		m^3/h	14000	16000	16000	16000
Sound pressure level[4]		dB(A)	62	63	63	63
Net dimensions (W×H×D)		mm	1340×1635×790			
		in.	52-3/4×64-3/8×31-1/8			
Packed dimensions (W×H×D)		mm	1405×1805×855			
		in.	55-3/8×71-1/16×33-5/8			
Net weight		kg (lbs.)	297 (655)	305 (673)	340 (750)	340 (750)
Gross weight		kg (lbs.)	315 (695)	323 (712)	358 (790)	358 (790)
Operating temperature range		°C (°F)	Cooling: -5 to 48 (23 to 118.4); Heating: -20 to 24 (-4 to 75.2)			

Notes:
1. Indoor temperature 27°C (80.6°F) DB, 19°C (66.2°F) WB; outdoor temperature 35°C (95.0°F) DB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
2. Indoor temperature 20°C (68.0°F) DB; outdoor temperature 7°C (44.6°F) DB, 6°C (42.8°F) WB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.

VRF R5X DIAMOND SERIES

380~415V-60Hz / 220V-60Hz

Capacity		HP	24	26	28	30	32	34
Model		380-415V	GRV5-X670W/V2GN1	GRV5-X730W/V2GN1	MV5-X780W/V2GN1	GRV5-X840W/V2GN1	GRV5-X895W/V2GN1	GRV5-X950W/V2GN1
Model		220V	GRV5-X670W/V2DN1	GRV5-X730W/V2DN1	MV5-X780W/V2DN1	GRV5-X840W/V2DN1	GRV5-X895W/V2DN1	GRV5-X950W/V2DN1
Combination			12HP×2	10HP+16HP	10HP+18HP	10HP+20HP	10HP+22HP	12HP+22HP
Power supply			3 phase, 380-415V, 50/60Hz or 3 phase, 220V, 60Hz					
Cooling[1]	Capacity	kW	67.0	73.0	78.0	84.0	89.5	95.0
		kBtu/h	228.6	249.0	266.1	286.6	305.3	324.1
	Power input	kW	15.58	17.20	19.04	20.73	22.67	24.23
	EER		4.30	4.24	4.10	4.05	3.95	3.92
Heating[2]	Capacity	kW	75.0	81.5	87.5	94.5	100.5	106.5
		kBtu/h	256.0	278.1	298.6	322.4	342.9	363.4
	Power input	kW	15.31	16.81	19.12	21.23	23.06	24.77
	COP		4.90	4.85	4.58	4.45	4.36	4.30
Connected indoor units	Total capacity		50-130% of outdoor unit capacity					
	Maximum quantity		39	43	46	50	53	56
Compressors	Type		DC inverter					
	Quantity		2	3	3	3	3	3
Fan motors	Type		DC					
	Quantity		2	3	3	3	3	3
Refrigerant	Type		R410A					
	Factory charge	kg (lbs.)	11×2 (24×2)	9+13 (20+29)	9+13 (20+29)	9+16 (20+35)	9+16 (20+35)	11+16 (24+35)
Pipe connections[3]	Liquid pipe	mm (in.)	Φ15.9 (Φ5/8)	Φ19.1 (Φ3/4)	Φ19.1 (Φ3/4)	Φ19.1 (Φ3/4)	Φ19.1 (Φ3/4)	Φ19.1 (Φ3/4)
	Gas pipe	mm (in.)	Φ28.6 (Φ1-1/8)	Φ31.8 (Φ1-1/4)	Φ31.8 (Φ1-1/4)	Φ31.8 (Φ1-1/4)	Φ31.8 (Φ1-1/4)	Φ31.8 (Φ1-1/4)
	Oil balance pipe	mm (in.)	Φ6.35 (Φ1/4)					
Air flow rate		m^3/h	24000	26000	28000	28000	28000	28000
Sound pressure level[4]		dB(A)	64	65	65	65	65	65
Net dimensions (W×H×D)		mm	(990×1635×790)×2	990×1635×790+1340×1635×790				
		in.	(39×64-3/8×31-1/8)×2	39×64-3/8×31-1/8+52-3/4×64-3/8×31-1/8				
Packed dimensions (W×H×D)		mm	(1055×1805×855)×2	1055×1805×855+1405×1805×855				
		in.	(41-1/2×71-1/16×33-5/8)×2	41-1/2×71-1/16×33-5/8+55-3/8×71-1/16×33-5/8				
Net weight		kg (lbs.)	237×2 (523×2)	219+297 (483+655)	219+305 (483+673)	219+340 (483+750)	219+340 (483+750)	237+340 (523+750)
Gross weight		kg (lbs.)	252×2 (556×2)	234+315 (516+695)	234+323 (516+712)	234+358 (516+790)	234+358 (516+790)	252+358 (556+790)
Operating temperature range		°C (°F)	Cooling: -5 to 48 (23 to 118.4); Heating: -20 to 24 (-4 to 75.2)					

Capacity		HP	36	38	40	42	44	46
Model		380-415V	GRV5-X1000W/V2GN1	GRV5-X1065W/V2GN1	GRV5-X1115W/V2GN1	GRV5-X1175W/V2GN1	MV5-X1230W/V2GN1	GRV5-X1285W/V2GN1
Model		220V	GRV5-X1000W/V2DN1	GRV5-X1065W/V2DN1	GRV5-X1115W/V2DN1	GRV5-X1175W/V2DN1	MV5-X1230W/V2DN1	GRV5-X1285W/V2DN1
Combination			18HP×2	16HP+22HP	18HP+22HP	20HP+22HP	22HP×2	12HP×2+22HP
Power supply			3 phase, 380-415V, 50/60Hz or 3 phase, 220V, 60Hz					
Cooling[1]	Capacity	kW	100.0	106.5	111.5	117.5	123.0	128.5
		kBtu/h	341.2	363.3	380.4	400.9	419.6	438.4
	Power input	kW	25.64	27.42	29.26	30.95	32.89	32.03
	EER		3.90	3.88	3.81	3.80	3.74	4.01
Heating[2]	Capacity	kW	112.0	119.0	125.0	132.0	138.0	144.0
		kBtu/h	382.2	406.0	426.5	450.3	470.8	491.4
	Power input	kW	26.35	27.99	30.30	32.41	34.24	32.43
	COP		4.25	4.25	4.13	4.07	4.03	4.44
Connected indoor units	Total capacity							
	Maximum quantity		59	63	64	64	64	64
Compressors	Type		DC inverter					
	Quantity		4					
Fan motors	Type		DC					
	Quantity		4					
Refrigerant	Type		R410A					
	Factory charge	kg (lbs.)	13×2 (29×2)	13+16 (29+35)	13+16 (29+35)	16×2 (35×2)	16×2 (35×2)	11×2+16 (24×2+35)
Pipe connections[3]	Liquid pipe	mm (in.)	Φ19.1 (Φ3/4)					
	Gas pipe	mm (in.)	Φ38.1 (Φ1-1/2)					
	Oil balance pipe	mm (in.)	Φ6.35 (Φ1/4)					
Air flow rate		m^3/h	32000	30000	32000	32000	32000	40000
Sound pressure level[4]		dB(A)	66					
Net dimensions (W×H×D)		mm	(1340×1635×790)×2					(990×1635×790)×2+ 1340×1635×790
		in.	(52-3/4×64-3/8×31-1/8)×2					(39×64-3/8×31-1/8)×2 +52-3/4×64-3/8×31-1/8
Packed dimensions (W×H×D)		mm	(1405×1805×855)×2					(1055×1805×855)×2+ 1405×1805×855
		in.	(55-3/8×71-1/16×33-5/8)×2					(41-1/2×71-1/16×33-5/8)×2 +55-3/8×71-1/16×33-5/8
Net weight		kg (lbs.)	305×2 (673×2)	297+340 (655+750)	305+340 (673+750)	340×2 (750×2)	340×2 (750×2)	237×2+340 (523×2+750)
Gross weight		kg (lbs.)	323×2 (712×2)	315+358 (695+790)	323+358 (712+790)	358×2 (790×2)	358×2 (790×2)	252×2+358 (556×2+790)
Operating temperature range		°C (°F)	Cooling: -5 to 48 (23 to 118.4); Heating: -20 to 24 (-4 to 75.2)					

Notes:
1. Indoor temperature 27°C (80.6°F) DB, 19°C (66.2°F) WB; outdoor temperature 35°C (95.0°F) DB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
2. Indoor temperature 20°C (68.0°F) DB; outdoor temperature 7°C (44.6°F) DB, 6°C (42.8°F) WB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.

VRF R5X DIAMOND SERIES

380~415V 50(60Hz) / 220V-60Hz

Capacity		HP	48	50	52	54	56
Model		380-415V	GRV5-X1345W/V2GN1	GRV5-X1395W/V2GN1	GRV5-X1455W/V2GN1	GRV5-X1510W/V2GN1	GRV5-X1565W/V2GN1
Model		220V	GRV5-X1345W/V2DN1	GRV5-X1395W/V2DN1	GRV5-X1455W/V2DN1	GRV5-X1510W/V2DN1	GRV5-X1565W/V2DN1
Combination			10HP+16HP+22HP	10HP+18HP+22HP	10HP+20HP+22HP	10HP+22HP×2	12HP+22HP×2
Power supply			3 phase, 380-415V, 50/60Hz or 3 phase, 220V, 60Hz				
Cooling[1]	Capacity	kW	134.5	139.5	145.5	151.0	156.5
		kBtu/h	458.8	475.9	496.4	515.1	533.9
	Power input	kW	33.64	35.49	37.17	39.11	40.68
	EER		4.00	3.93	3.91	3.86	3.85
Heating[2]	Capacity	kW	150.5	156.5	163.5	169.5	175.5
		kBtu/h	513.5	534.0	557.8	578.3	598.8
	Power input	kW	33.93	36.24	38.36	40.19	41.90
	COP		4.44	4.32	4.26	4.22	4.19
Connected indoor units	Total capacity		50-130% of outdoor unit capacity				
	Maximum quantity		64	64	64	64	64
Compressors	Type		DC inverter				
	Quantity		5	5	5	5	5
Fan motors	Type		DC				
	Quantity		5	5	5	5	5
Refrigerant	Type		R410A				
	Factory charge	kg (lbs.)	9+13+16 (20+29+35)	9+13+16 (20+29+35)	9+16×2 (20+35×2)	9+16×2 (20+35×2)	11+16×2 (24+35×2)
Pipe connections[3]	Liquid pipe	mm (in.)	Φ19.1 (Φ3/4)	Φ19.1 (Φ3/4)	Φ22.2 (Φ7/8)	Φ22.2 (Φ7/8)	Φ22.2 (Φ7/8)
	Gas pipe	mm (in.)	Φ38.1 (Φ1-1/2)	Φ38.1 (Φ1-1/2)	Φ41.3 (Φ1-5/8)	Φ41.3 (Φ1-5/8)	Φ41.3 (Φ1-5/8)
	Oil balance pipe	mm (in.)	Φ6.35 (Φ1/4)				
Air flow rate		m³/h	42000	44000	44000	44000	44000
Sound pressure level[4]		dB(A)	67	67	67	67	67
Net dimensions (W×H×D)		mm	990×1635×790+(1340×1635×790)×2				
		in.	39×64-3/8×31-1/8+(52-3/4×64-3/8×31-1/8)×2				
Packed dimensions (W×H×D)		mm	1055×1805×855+(1405×1805×855)×2				
		in.	41-1/2×71-1/16×33-5/8+(55-3/8×71-1/16×33-5/8)×2				
Net weight		kg (lbs.)	219+297+340 (483+655+750)	219+305+340 (483+673+750)	219+340×2 (483+750×2)	219+340×2 (483+750×2)	237+340×2 (523+750×2)
Gross weight		kg (lbs.)	234+315+358 (516+695+790)	234+323+358 (516+712+790)	234+358×2 (516+790×2)	234+358×2 (516+790×2)	252+358×2 (556+790×2)
Operating temperature range		°C (°F)	Cooling: -5 to 48 (23 to 118.4); Heating: -20 to 24 (-4 to 75.2)				

Capacity		HP	58	60	62	64	66	68
Model		380-415V	GRV5-X1615W/V2GN1	GRV5-X1680W/V2GN1	GRV5-X1730W/V2GN1	GRV5-X1790W/V2GN1	GRV5-X1845W/V2GN1	GRV5-X1900W/V2GN1
Model		220V	GRV5-X1615W/V2DN1	GRV5-X1680W/V2DN1	GRV5-X1730W/V2DN1	GRV5-X1790W/V2DN1	GRV5-X1845W/V2DN1	GRV5-X1900W/V2DN1
Combination			18HP×2+22HP	16HP+22HP×2	18HP+22HP×2	20HP+22HP×2	22HP×3	12HP×2+22HP×2
Power supply			3 phase, 380-415V, 50/60Hz or 3 phase, 220V, 60Hz					
Cooling[1]	Capacity	kW	161.5	168.0	173.0	179.0	184.5	190.0
		kBtu/h	551.0	573.1	590.2	610.7	629.4	648.2
	Power input	kW	42.08	43.86	45.71	47.40	49.33	48.47
	EER		3.84	3.83	3.78	3.78	3.74	3.92
Heating[2]	Capacity	kW	181.0	188.0	194.0	201.0	207.0	213.0
		kBtu/h	617.6	641.4	661.9	685.7	706.2	726.8
	Power input	kW	43.47	45.11	47.42	49.53	51.36	46.13
	COP		4.16	4.17	4.09	4.06	4.03	4.62
Connected indoor units	Total capacity		50-130% of outdoor unit capacity					
	Maximum quantity		64	64	64	64	64	64
Compressors	Type		DC inverter					
	Quantity		6	6	6	6	6	6
Fan motors	Type		DC					
	Quantity		6	6	6	6	6	6
Refrigerant	Type		R410A					
	Factory charge	kg (lbs.)	13×2+16 (29×2+35)	13+16×2 (29+35×2)	13+16×2 (29+35×2)	16×3 (35×3)	16×3 (35×3)	11×2+16×2 (24×2+35×2)
Pipe connections[3]	Liquid pipe	mm (in.)	Φ22.2 (Φ7/8)	Φ22.2 (Φ7/8)	Φ22.2 (Φ7/8)	Φ22.2 (Φ7/8)	Φ22.2 (Φ7/8)	Φ25.4 (Φ1)
	Gas pipe	mm (in.)	Φ41.3 (Φ1-5/8)	Φ41.3 (Φ1-5/8)	Φ41.3 (Φ1-5/8)	Φ41.3 (Φ1-5/8)	Φ41.3 (Φ1-5/8)	Φ44.5 (Φ1-3/4)
	Oil balance pipe	mm (in.)	Φ6.35 (Φ1/4)					
Air flow rate		m³/h	48000	46000	48000	48000	48000	56000
Sound pressure level[4]		dB(A)	68	68	68	68	68	68
Net dimensions (W×H×D)		mm	(1340×1635×790)×3					(990×1635×790)×2+(1340×1635×790)×2
		in.	(52-3/4×64-3/8×31-1/8)×3					(39×64-3/8×31-1/8)×2+(52-3/4×64-3/8×31-1/8)×2
Packed dimensions (W×H×D)		mm	(1405×1805×855)×3					(1055×1805×855)×2+(1405×1805×855)×2
		in.	(55-3/8×71-1/16×33-5/8)×3					(41-1/2×71-1/16×33-5/8)×2+(55-3/8×71-1/16×33-5/8)×2
Net weight		kg (lbs.)	305×2+340 (673×2+750)	297+340×2 (655+750×2)	305+340×2 (673+750×2)	340×3 (750×3)	340×3 (750×3)	237×2+340×2 (523×2+750×2)
Gross weight		kg (lbs.)	323×2+358 (712×2+790)	315+358×2 (695+790×2)	323+358×2 (712+790×2)	358×3 (790×3)	358×3 (790×3)	252×2+358×2 (556×2+790×2)
Operating temperature range		°C (°F)	Cooling: -5 to 48 (23 to 118.4); Heating: -20 to 24 (-4 to 75.2)					

Notes:
1. Indoor temperature 27°C (80.6°F) DB, 19°C (66.2°F) WB; outdoor temperature 35°C (95.0°F) DB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
2. Indoor temperature 20°C (68.0°F) DB; outdoor temperature 7°C (44.6°F) DB, 6°C (42.8°F) WB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.

SPECIFICATIONS

VRF R5X DIAMOND SERIES

380~415V 50(60Hz) / 220V-60Hz

Capacity		HP	70	72	74	76	78
Model		380-415V	GRV5-X1960W/V2GN1	GRV5-X2010W/V2GN1	GRV5-X2070W/V2GN1	GRV5-X2125W/V2GN1	GRV5-X2180W/V2GN1
Model		220V	GRV5-X1960W/V2DN1	GRV5-X2010W/V2DN1	GRV5-X2070W/V2DN1	GRV5-X2125W/V2DN1	GRV5-X2180W/V2DN1
Combination			10HP+16HP+22HP×2	10HP+18HP+22HP×2	10HP+20HP+22HP×2	10HP+22HP×3	12HP+22HP×3
Power supply			3 phase, 380-415V, 50/60Hz or 3 phase, 220V, 60Hz				
Cooling[1]	Capacity	kW	196.0	201.0	207.0	212.5	218.0
		kBtu/h	668.6	685.7	706.2	724.9	743.7
	Power input	kW	50.09	51.93	53.62	55.55	57.12
	EER		3.91	3.87	3.86	3.83	3.82
Heating[2]	Capacity	kW	219.5	225.5	232.5	238.5	244.5
		kBtu/h	748.9	769.4	793.2	813.7	834.2
	Power input	kW	51.06	53.36	55.48	57.31	59.02
	COP		4.30	4.23	4.19	4.16	4.14
Connected indoor units	Total capacity		50-130% of outdoor unit capacity				
	Maximum quantity		64	64	64	64	64
Compressors	Type		DC inverter				
	Quantity		7	7	7	7	7
Fan motors	Type		DC				
	Quantity		7	7	7	7	7
Refrigerant	Type		R410A				
	Factory charge	kg (lbs.)	9+13+16×2 (20+29+35×2)	9+13+16×2 (20+29+35×2)	9+16×3 (20+35×3)	9+16×3 (20+35×3)	11+16×3 (24+35×3)
Pipe connections[3]	Liquid pipe	mm (in.)	Φ25.4 (Φ1)	Φ25.4 (Φ1)	Φ25.4 (Φ1)	Φ25.4 (Φ1)	Φ25.4 (Φ1)
	Gas pipe	mm (in.)	Φ44.5 (Φ1-3/4)	Φ44.5 (Φ1-3/4)	Φ44.5 (Φ1-3/4)	Φ44.5 (Φ1-3/4)	Φ44.5 (Φ1-3/4)
	Oil balance pipe	mm (in.)	Φ6.35 (Φ1/4)				
Air flow rate		m³/h	58000	60000	60000	60000	60000
Sound pressure level[4]		dB(A)	69	69	69	69	69
Net dimensions (W×H×D)		mm	(990×1635×790)+(1340×1635×790)×3				
		in.	(39×64-3/8×31-1/8)+(52-3/4×64-3/8×31-1/8)×3				
Packed dimensions (W×H×D)		mm	(1055×1805×855)+(1405×1805×855)×3				
		in.	(41-1/2×71-1/16×33-5/8)+(55-3/8×71-1/16×33-5/8)×3				
Net weight		kg (lbs.)	219+297+340×2 (483+655+750×2)	219+305+340×2 (483+673+750×2)	219+340×3 (483+750×3)	219+340×3 (483+750×3)	237+340×3 (523+750×3)
Gross weight		kg (lbs.)	234+315+358×2 (516+695+790×2)	234+323+358×2 (516+712+790×2)	234+358×3 (516+790×3)	234+358×3 (516+790×3)	252+358×3 (556+790×3)
Operating temperature range		°C (°F)	Cooling: -5 to 48 (23 to 118.4); Heating: -20 to 24 (-4 to 75.2)				

Capacity		HP	80	82	84	86	88
Model		380-415V	GRV5-X2230W/V2GN1	GRV5-X2295W/V2GN1	GRV5-X2345W/V2GN1	GRV5-X2405W/V2GN1	GRV5-X2460W/V2GN1
Model		220V	GRV5-X2230W/V2DN1	GRV5-X2295W/V2DN1	GRV5-X2345W/V2DN1	GRV5-X2405W/V2DN1	GRV5-X2460W/V2DN1
Combination			18HP×2+22HP×2	16HP+22HP×3	18HP+22HP×3	20HP+22HP×3	22HP×4
Power supply			3 phase, 380-415V, 50/60Hz or 3 phase, 220V, 60Hz				
Cooling[1]	Capacity	kW	223.0	229.5	234.5	240.5	246.0
		kBtu/h	760.8	782.9	800.0	820.5	839.2
	Power input	kW	58.53	60.31	62.15	63.84	65.78
	EER		3.81	3.81	3.77	3.77	3.74
Heating[2]	Capacity	kW	250.0	257.0	263.0	270.0	276.0
		kBtu/h	853.0	876.8	897.3	921.1	941.6
	Power input	kW	60.60	62.23	64.54	66.66	68.49
	COP		4.13	4.13	4.07	4.05	4.03
Connected indoor units	Total capacity		50-130% of outdoor unit capacity				
	Maximum quantity		64	64	64	64	64
Compressors	Type		DC inverter				
	Quantity		8	8	8	8	8
Fan motors	Type		DC				
	Quantity		8	8	8	8	8
Refrigerant	Type		R410A				
	Factory charge	kg (lbs.)	13×2+16×2 (29×2+35×2)	13+16×3 (29+35×3)	13+16×3 (29+35×3)	16×4 (35×4)	16×4 (35×4)
Pipe connections[3]	Liquid pipe	mm (in.)	Φ25.4 (Φ1)	Φ25.4 (Φ1)	Φ25.4 (Φ1)	Φ25.4 (Φ1)	Φ25.4 (Φ1)
	Gas pipe	mm (in.)	Φ44.5 (Φ1-3/4)	Φ44.5 (Φ1-3/4)	Φ44.5 (Φ1-3/4)	Φ44.5 (Φ1-3/4)	Φ44.5 (Φ1-3/4)
	Oil balance pipe	mm (in.)	Φ6.35 (Φ1/4)				
Air flow rate		m³/h	64000	62000	64000	64000	64000
Sound pressure level[4]		dB(A)	70	70	70	70	70
Net dimensions (W×H×D)		mm	(1340×1635×790)×4				
		in.	(52-3/4×64-3/8×31-1/8)×4				
Packed dimensions (W×H×D)		mm	(1405×1805×855)×4				
		in.	(55-3/8×71-1/16×33-5/8)×4				
Net weight		kg (lbs.)	305×2+340×2 (673×2+750×2)	297+340×3 (655+750×3)	305+340×3 (673+750×3)	340×4 (750×4)	340×4 (750×4)
Gross weight		kg (lbs.)	323×2+358×2 (712×2+790×2)	315+358×3 (695+790×3)	323+358×3 (712+790×3)	358×4 (790×4)	358×4 (790×4)
Operating temperature range		°C (°F)	Cooling: -5 to 48 (23 to 118.4); Heating: -20 to 24 (-4 to 75.2)				

Notes:
1. Indoor temperature 27°C (80.6°F) DB, 19°C (66.2°F) WB; outdoor temperature 35°C (95.0°F) DB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
2. Indoor temperature 20°C (68.0°F) DB; outdoor temperature 7°C (44.6°F) DB, 6°C (42.8°F) WB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.

Indoor Units
VRF R4 Plus indoor units

Fresh Air Processing Unit
100% fresh air supply

Ventilation
Heat recovery ventilator

AHU Connection Kit
Connect to other brand AHU

Control Systems
Smart control systems

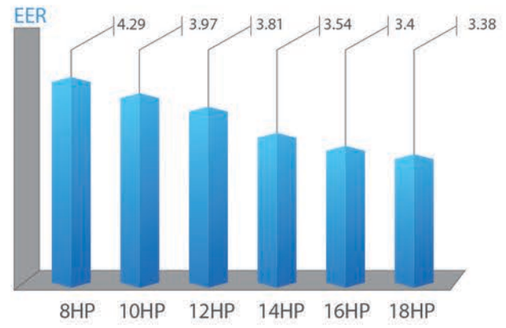
VRF R4 Plus S Series

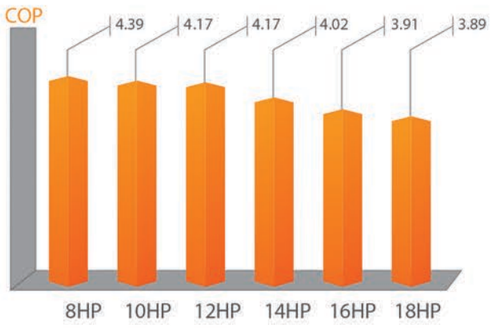
Optimized design for small to large buildings

ALL DC inverter compressors
ALL DC fan motors
Capacity up to 72HP
Connectable indoor units quantity up to 64
ESP up to 60Pa
Cycle duty operation
Backup operation
Precise oil control technology
Advanced silence technology
Intelligent defrosting technology
Simple communication wiring
Auto addressing
Easy maintenance

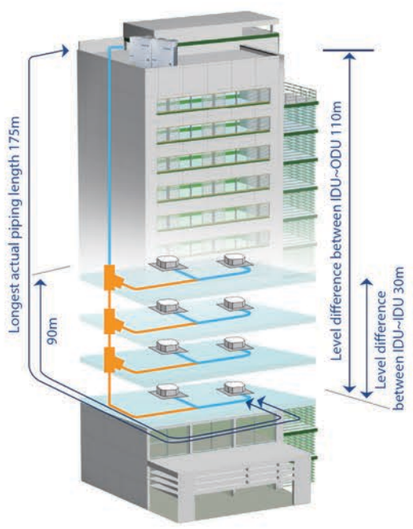
High EER and COP Values

R4 Plus S Series equipped with all DC compressors, all DC fan motors and high efficient heat exchanger. The cooling EER is up to 4.29 and the heating COP is up to 4.39 in the 8HP category.





Long Piping Length



Total piping length	1000m	3280ft.
Longest length actual (Equivalent)	175(200)m	574(656)ft.
Longest length after first branch	90*m	295*ft.
Level difference between indoor and outdoor units - ODU up (down)	70(110)m	230(361)ft.
Level difference between indoor units	30m	98ft.

*The longest piping length is 40m(131ft.) standard. It can be extended to 90m(295ft.). When the length is over 40m(131ft.), please contact your local Midea dealer for more information and

VRF R4 PLUS S SERIES

380~415V-60Hz / 220V-60Hz

HP			8	10	12	14	16	18
Model GRV-		380~415V	252(8)W/D2CN1(B)	280(10)W/D2CN1(B)	335(12)W/D2CN1(B)	400(14)W/D2CN1(B)	450(16)W/D2CN1(B)	500(18)W/D2CN1(B)
Model GRV-		220V	252(8)W/D2DN1(B)	280(10)W/D2DN1(B)	335(12)W/D2DN1(B)	400(14)W/D2DN1(B)	450(16)W/D2DN1(B)	500(18)W/D2DN1(B)
Power supply		V/Ph/Hz	380-415/3/60 & 220/3/60					
Cooling	Capacity	kW	25.2	28.0	33.5	40.0	45.0	50.0
		kBtu/h	86.0	95.5	114.3	136.5	153.5	170.6
	Power input	kW	5.88	7.05	8.79	11.30	13.25	14.79
	EER		4.29	3.97	3.81	3.54	3.40	3.38
Heating	Capacity	kW	27.0	31.5	37.5	45.0	50.0	56.0
		kBtu/h	92.1	107.5	128.0	153.5	170.6	191.1
	Power input	kW	6.15	7.55	8.99	11.19	12.79	14.40
	COP		4.39	4.17	4.17	4.02	3.91	3.89
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity					
	Max. quantity		13	16	20	23	26	29
Compressor	Type		DC inverter					
	Quantity		1	1	2	2	2	2
Fan motor	Type		DC motor					
	Quantity		1	1	2	2	2	2
	Static pressure	Pa(in. W.G.)	0-20(0-0.08) (default)					
		Pa(in. W.G.)	0-40(0-0.16) (customized)		0-60(0-0.24) (customized)		0-40(0-0.16) (customized)	
Refrigerant	Type		R410A					
	Factory charging (380~415V)	kg(lbs.)	10(22)	10(22)	12(26)	15(33)	15(33)	16(35)
	Factory charging (220V)	kg(lbs.)	9(20)	9(20)	11(24)	13(29)	13(29)	16(35)
Pipe connections	Liquid pipe	mm(in.)	Φ12.7(Φ1/2)	Φ12.7(Φ1/2)	Φ15.9(Φ5/8)	Φ15.9(Φ5/8)	Φ15.9(Φ5/8)	Φ19.1(Φ3/4)
	Gas pipe	mm(in.)	Φ25.4(Φ1)	Φ25.4(Φ1)	Φ31.8(Φ1-1/4)	Φ31.8(Φ1-1/4)	Φ31.8(Φ1-1/4)	Φ31.8(Φ1-1/4)
	Oil balance pipe	mm(in.)	Φ6(Φ1/4)					
Air flow rate		m³/h	11242	11242	13000	15620	15620	15620
Sound pressure level		dB(A)	57	57	59	61	62	62
Net dimension (W×H×D)		mm	960×1615×765		1250×1615×765			
		inch	37-25/32×63-9/16×30-1/8		49-7/32×63-9/16×30-1/8			
Packing size (W×H×D)		mm	1025×1790×830		1305×1790×820			
		inch	40-3/8×70-1/2×32-11/16		51-3/8×70-15/32×32-9/32			
Net weight	380~415V	kg(lbs.)	212(466)	212(466)	288(634)	288(634)	288(634)	310(682)
	220V	kg(lbs.)	202(444)	202(444)	285(627)	285(627)	288(634)	310(682)
Gross weight	380~415V	kg(lbs.)	227(499)	227(499)	308(678)	308(678)	308(678)	330(726)
	220V	kg(lbs.)	218(480)	218(480)	305(671)	305(671)	308(678)	330(726)
Operating temperature range		°C(°F)	Cooling: -5-48(23~118.4); Heating: -20-24(-4~75.2)					

HP			20	22	24	26	28
Model GRV-		380~415V	560(20)W/D2CN1(B)	615(22)W/D2CN1(B)	680(24)W/D2CN1(B)	730(26)W/D2CN1(B)	780(28)W/D2CN1(B)
Model GRV-		220V	560(20)W/D2DN1(B)	615(22)W/D2DN1(B)	680(24)W/D2DN1(B)	730(26)W/D2DN1(B)	780(28)W/D2DN1(B)
Combined type			10HP×2	10HP+12HP	10HP+14HP	10HP+16HP	10HP+18HP
Power supply		V/Ph/Hz	380-415/3/60 & 220/3/60				
Cooling	Capacity	kW	56.0	61.5	68.0	73.0	78.0
		kBtu/h	191.1	209.8	232.0	249.1	266.1
	Power input	kW	14.11	15.85	18.35	20.29	21.85
	EER		3.97	3.88	3.71	3.60	3.57
Heating	Capacity	kW	63.0	69.0	76.5	81.5	87.5
		kBtu/h	215.0	235.4	261.0	278.1	298.6
	Power input	kW	15.11	16.55	18.75	20.34	21.95
	COP		4.17	4.17	4.08	4.01	3.99
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity				
	Max. quantity		33	36	39	43	46
Compressor	Type		DC inverter				
	Quantity		2	3	3	3	3
Fan motor	Type		DC motor				
	Quantity		2	3	3	3	3
Refrigerant	Type		R410A				
	Factory charging (380~415V)	kg(lbs.)	10(22)×2	10+12(22+26)	10+15(22+33)	10+15(22+33)	10+16(22+35)
	Factory charging (220V)	kg(lbs.)	9(20)×2	9+11(20+24)	9+13(20+29)	9+13(20+29)	9+16(20+35)
Pipe connections	Liquid pipe	mm(in.)	Φ15.9(Φ5/8)	Φ15.9(Φ5/8)	Φ15.9(Φ5/8)	Φ19.1(Φ3/4)	Φ19.1(Φ3/4)
	Gas pipe	mm(in.)	Φ28.6(Φ1-1/8)	Φ28.6(Φ1-1/8)	Φ28.6(Φ1-1/8)	Φ31.8(Φ1-1/4)	Φ31.8(Φ1-1/4)
	Oil balance pipe	mm(in.)	Φ6(Φ1/4)				
Air flow rate		m³/h	11242×2	11242+13000	11242+15620	11242+15620	11242+15620
Sound pressure level		dB(A)	62	63	63	63	63
Net dimension (W×H×D)		mm	(960×1615×765)×2	(960×1615×765)+(1250×1615×765)			
Packing size(W×H×D)		mm	(1025×1790×830)×2	(1025×1790×830)+(1305×1790×820)			
Net weight	380~415V	kg(lbs.)	212×2(466×2)	212+288(466+634)	212+288(466+634)	212+288(466+634)	212+310(466+682)
	220V	kg(lbs.)	202×2(444×2)	202+285(444+627)	202+285(444+627)	202+288(444+634)	202+310(444+682)
Gross weight	380~415V	kg(lbs.)	227×2(499×2)	227+308(499+678)	227+308(499+678)	227+308(499+678)	227+330(499+726)
	220V	kg(lbs.)	218×2(480×2)	218+305(480+671)	218+305(480+671)	218+308(480+678)	218+330(480+726)
Operating temperature range		°C(°F)	Cooling: -5-48(23~118.4); Heating: -20-24(-4~75.2)				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB.
Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB/6°C(42.8°F) WB.
Piping length: Interconnecting piping length is 7.5m(24.6ft.), level difference is zero.
Connection piping diameter of single-unit is the stop valve diameter of the unit.
Connection piping diameter of multi-unit is the main pipe connecting to the first indoor branch joint, is case of the total equivalent liquid length is less than 90m(295ft.). If the total equivalent liquid length is more than 90m(295ft.), please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position of 1m(3.28ft.) in front of the unit and 1.3m(4.26ft.) above the floor.

VRF R4 PLUS S SERIES

380~415V-60Hz / 220V-60Hz

HP			30	32	34	36	38
Model GRV-		380~415V	850(30)W/D2CN1(B)	900(32)W/D2CN1(B)	950(34)W/D2CN1(B)	1000(36)W/D2CN1(B)	1060(38)W/D2CN1(B)
Model GRV-		220V	850(30)W/D2DN1(B)	900(32)W/D2DN1(B)	950(34)W/D2DN1(B)	1000(36)W/D2DN1(B)	1060(38)W/D2DN1(B)
Combined type			14HP+16HP	14HP+18HP	16HP+18HP	18HP×2	10HP×2+18HP
Power supply		V/Ph/Hz	380-415/3/60 & 220/3/60				
Cooling	Capacity	kW	85.0	90.0	95.0	100.0	106.0
		kBtu/h	290.0	307.1	324.1	341.2	361.7
	Power input	kW	24.53	26.09	28.03	29.59	28.90
	EER		3.46	3.45	3.39	3.38	3.67
Heating	Capacity	kW	95.0	101.0	106.0	112.0	119.0
		kBtu/h	324.1	344.6	361.7	382.1	406.0
	Power input	kW	23.98	25.59	27.18	28.79	29.50
	COP		3.96	3.95	3.90	3.89	4.03
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity				
	Max. quantity		50	53	56	59	63
Compressor	Type		DC inverter				
	Quantity		4				
Fan motor	Type		DC motor				
	Quantity		4				
Refrigerant	Type		R410A				
	Factory charging (380~415V)	kg(lbs.)	15×2(33×2)	15+16(33+35)	15+16(33+35)	16×2(35×2)	10×2+16(22×2+35)
	Factory charging (220V)	kg(lbs.)	13×2(29×2)	13+16(29+35)	13+16(29+35)	16×2(35×2)	9×2+16(20×2+35)
Pipe connections	Liquid pipe	mm(in.)	Φ19.1(Φ3/4)	Φ19.1(Φ3/4)	Φ19.1(Φ3/4)	Φ19.1(Φ3/4)	Φ19.1(Φ3/4)
	Gas pipe	mm(in.)	Φ31.8(Φ1-1/4)	Φ31.8(Φ1-1/4)	Φ38.1(Φ1-1/2)	Φ38.1(Φ1-1/2)	Φ38.1(Φ1-1/2)
	Oil balance pipe	mm(in.)	Φ6(Φ1/4)		Φ6		
Air flow rate		m³/h	15620×2				11242×2+15620
Sound pressure level		dB(A)	64				(960×1615×765)×2+(1250×1615×765)
Net dimension (W×H×D)		mm	(1250×1615×765)×2				(1025×1790×830)×2+(1305×1790×820)
Packing size(W×H×D)		mm	(1305×1790×820)×2				
Net weight	380~415V	kg(lbs.)	288×2(634×2)	288+310(634+682)	288+310(634+682)	310×2(682×2)	212×2+310(466×2+682)
	220V	kg(lbs.)	285+288(627+634)	285+310(627+682)	288+310(634+682)	310×2(682×2)	202×2+310(444×2+682)
Gross weight	380~415V	kg(lbs.)	308×2(678×2)	308+330(678+726)	308+330(678+726)	330×2(726×2)	227×2+330(499×2+726)
	220V	kg(lbs.)	305+308(671+678)	305+330(671+726)	308+330(678+726)	330×2(726×2)	218×2+330(480×2+726)
Operating temperature range		°C(°F)	Cooling: -5-48(23~118.4); Heating: -20-24(-4~75.2)				

HP			40	42	44	46	48
Model GRV-		380~415V	1130(40)W/D2CN1(B)	1180(42)W/D2CN1(B)	1230(44)W/D2CN1(B)	1280(46)W/D2CN1(B)	1350(48)W/D2CN1(B)
Model GRV-		220V	1130(40)W/D2DN1(B)	1180(42)W/D2DN1(B)	1230(44)W/D2DN1(B)	1280(46)W/D2DN1(B)	1350(48)W/D2DN1(B)
Combined type			10HP+14HP+16HP	10HP+16HP×2	10HP+16HP+18HP	10HP+18HP×2	14HP+16HP+18HP
Power supply		V/Ph/Hz	380-415/3/60 & 220/3/60				
Cooling	Capacity	kW	113.0	118.0	123.0	128.0	135.0
		kBtu/h	385.6	402.6	419.7	436.7	460.6
	Power input	kW	31.59	33.52	35.08	36.64	39.33
	EER		3.58	3.52	3.51	3.49	3.43
Heating	Capacity	kW	126.5	131.5	137.5	143.5	151.0
		kBtu/h	431.6	448.7	469.2	489.6	515.2
	Power input	kW	31.54	33.13	34.74	36.35	38.38
	COP		4.01	3.97	3.96	3.95	3.93
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity				
	Max. quantity		64				
Compressor	Type		DC inverter				
	Quantity		4				
Fan motor	Type		DC motor				
	Quantity		4				
Refrigerant	Type		R410A				
	Factory charging (380~415V)	kg(lbs.)	10+15×2(22+33×2)	10+15×2(22+33×2)	10+15+16(22+33+35)	10+16×2(22+35×2)	15×2+16(33×2+35)
	Factory charging (220V)	kg(lbs.)	9+13×2(20+29×2)	9+13×2(20+29×2)	9+13+16(20+29+35)	9+16×2(20+35×2)	13×2+16(29×2+35)
Pipe connections	Liquid pipe	mm(in.)					
	Gas pipe	mm(in.)					
	Oil balance pipe	mm(in.)	Φ6(Φ1/4)				
Air flow rate		m³/h	15620×2				
Sound pressure level		dB(A)	64				
Net dimension (W×H×D)		mm	(1250×1615×765)×2				
Packing size(W×H×D)		mm	(1305×1790×820)×2				
Net weight	380~415V	kg(lbs.)	212+288×2(466+634×2)	212+288×2(466+634×2)	212+288+310(466+634+682)	212+310×2(466+682×2)	288×2+310(634×2+682)
	220V	kg(lbs.)	202+285+288(444+627+634)	202+288×2(444+634×2)	202+288+310(444+634+682)	202+310×2(444+682×2)	285+288+310(627+634+682)
Gross weight	380~415V	kg(lbs.)	227+308×2(499+678×2)	227+308×2(499+678×2)	227+308+330(499+678+726)	227+330×2(499+726×2)	308×2+330(678×2+726)
	220V	kg(lbs.)	218+305+308(480+671+678)	218+308×2(480+678×2)	218+308+330(480+678+726)	218+330×2(480+726×2)	305+308+330(671+678+726)
Operating temperature range		°C(°F)	Cooling: -5-48(23~118.4); Heating: -20-24(-4~75.2)				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB.
Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB/6°C(42.8°F) WB.
Piping length: Interconnecting piping length is 7.5m(24.6ft.), level difference is zero.
Connection piping diameter of single-unit is the stop valve diameter of the unit.
Connection piping diameter of multi-unit is the main pipe connecting to the first indoor branch joint, is case of the total equivalent liquid length is less than 90m(295ft.). If the total equivalent liquid length is more than 90m(295ft.), please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position of 1m(3.28ft.) in front of the unit and 1.3m(4.26ft.) above the floor.

VRF R4 PLUS S SERIES

380~415V-60Hz / 220V-60Hz

HP			50	52	54
Model GRV-		380~415V	1400(50)W/D2CN1(B)	1450(52)W/D2CN1(B)	1500(54)W/D2CN1(B)
Model GRV-		220V	1400(50)W/D2DN1(B)	1450(52)W/D2DN1(B)	1500(54)W/D2DN1(B)
Combined type			14HP+18HP×2	16HP+18HP×2	18HP×3
Power supply		V/Ph/Hz		380-415/3/60 & 220/3/60	
Cooling	Capacity	kW	140.0	145.0	150.0
		kBtu/h	477.7	494.7	511.8
	Power input	kW	40.89	42.82	44.38
	EER		3.42	3.39	3.38
Heating	Capacity	kW	157.0	162.0	168.0
		kBtu/h	535.7	552.7	573.2
	Power input	kW	39.99	41.58	43.19
	COP		3.93	3.90	3.89
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity		
	Max. quantity		64		
Compressor	Type		DC inverter		
	Quantity		6		
Fan motor	Type		DC motor		
	Quantity		6		
Refrigerant	Type		R410A		
	Factory charging (380~415V)	kg(lbs.)	15+16×2(33+35×2)	15+16×2(33+35×2)	16×3(35×3)
	Factory charging (220V)	kg(lbs.)	13+16×2(29+35×2)	13+16×2(29+35×2)	16×3(35×3)
Pipe connections	Liquid pipe	mm(in.)	Φ22.2(Φ7/8)		
	Gas pipe	mm(in.)	Φ41.3(Φ1-5/8)		
	Oil balance pipe	mm(in.)	Φ6(Φ1/4)		
Air flow rate		m^3/h	15620×3		
Sound pressure level		dB(A)	66		
Net dimension (W×H×D)		mm	(1250×1615×765)×3		
Packing size (W×H×D)		mm	(1305×1790×820)×3		
Net weight	380~415V	kg(lbs.)	288+310×2(634+682×2)	288+310×2(634+682×2)	310×3(682×3)
	220V	kg(lbs.)	285+310×2(627+682×2)	288+310×2(634+682×2)	310×3(682×3)
Gross weight	380~415V	kg(lbs.)	308+330×2(678+726×2)	308+330×2(678+726×2)	330×3(726×3)
	220V	kg(lbs.)	305+330×2(671+726×2)	308+330×2(678+726×2)	330×3(726×3)
Operating temperature range		℃(℉)	Cooling: -5-48(23~118.4); Heating: -20-24(-4~75.2)		

HP			56	58	60
Model GRV-		380~415V	1560(56)W/D2CN1(B)	1630(58)W/D2CN1(B)	1680(60)W/D2CN1(B)
Model GRV-		220V	1560(56)W/D2DN1(B)	1630(58)W/D2DN1(B)	1680(60)W/D2DN1(B)
Combined type			10HP×2+18HP×2	10HP+14HP+16HP+18HP	10HP+14HP+18HP×2
Power supply		V/Ph/Hz		380-415/3/60 & 220/3/60	
Cooling	Capacity	kW	156.0	163.0	168.0
		kBtu/h	532.3	556.2	573.2
	Power input	kW	43.69	46.38	47.94
	EER		3.57	3.51	3.50
Heating	Capacity	kW	175.0	182.5	188.5
		kBtu/h	597.1	622.7	643.2
	Power input	kW	43.90	45.93	47.54
	COP		3.99	3.97	3.97
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity		
	Max. quantity		64		
Compressor	Type		DC inverter		
	Quantity		6	7	7
Fan motor	Type		DC motor		
	Quantity		6	7	7
Refrigerant	Type		R410A		
	Factory charging (380~415V)	kg(lbs.)	10×2+16×2(22×2+35×2)	10+15×2+16(22+33×2+35)	10+15+16×2(22+33+35×2)
	Factory charging (220V)	kg(lbs.)	9×2+16×2(20×2+35×2)	9+13×2+16(20+29×2+35)	9+13+16×2(20+29+35×2)
Pipe connections	Liquid pipe	mm(in.)	Φ22.2(Φ7/8)		
	Gas pipe	mm(in.)	Φ41.3(Φ1-5/8)		
	Oil balance pipe	mm(in.)	Φ6(Φ1/4)		
Air flow rate		m^3/h	11242×2+15620×2	11242+15620×3	11242+15620×3
Sound pressure level		dB(A)	66	67	67
Net dimension (W×H×D)		mm	(960×1615×765)×2+(1250×1615×765)×2	(960×1615×765)+(1250×1615×765)×3	
Packing size (W×H×D)		mm	(1025×1790×830)×2+(1305×1790×820)×2	(1025×1790×830)+(1305×1790×820)×3	
Net weight	380~415V	kg(lbs.)	212×2+310×2(466×2+682×2)	212+288×2+310(466+634×2+682)	212+288+310×2(466+634+682×2)
	220V	kg(lbs.)	202×2+310×2(444×2+682×2)	202+285+288+310(444+627+634+682)	202+285+310×2(444+627+682×2)
Gross weight	380~415V	kg(lbs.)	227×2+330×2(499×2+726×2)	227+308×2+330(499+678×2+726)	227+308+330×2(499+678+726×2)
	220V	kg(lbs.)	218×2+330×2(480×2+726×2)	218+305+308+330(480+671+678+726)	218+305+330×2(480+671+726×2)
Operating temperature range		℃(℉)	Cooling: -5-48(23~118.4); Heating: -20-24(-4~75.2)		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB.
Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB/6°C(42.8°F) WB.
Piping length: Interconnecting piping length is 7.5m(24.6ft.), level difference is zero.
Connection piping diameter of single-unit is the stop valve diameter of the unit.
Connection piping diameter of multi-unit is the main pipe connecting to the first indoor branch joint, is case of the total equivalent liquid length is less than 90m(295ft.). If the total equivalent liquid length is more than 90m(295ft.), please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position of 1m(3.28ft.) in front of the unit and 1.3m(4.26ft.) above the floor.

SPECIFICATIONS

VRF R4 PLUS S SERIES

380~415V-60Hz / 220V-60Hz

HP			62	64	66
Model GRV-		380~415V	1730(62)W/D2CN1(B)	1780(64)W/D2CN1(B)	1850(66)W/D2CN1(B)
Model GRV-		220V	1730(62)W/D2DN1(B)	1780(64)W/D2DN1(B)	1850(66)W/D2DN1(B)
Combined type			10HP+16HP+18HP×2	10HP+18HP×3	14HP+16HP+18HP×2
Power supply		V/Ph/Hz		380-415/3/60 & 220/3/60	
Cooling	Capacity	kW	173.0	178.0	185.0
		kBtu/h	590.3	607.3	631.2
	Power input	kW	49.87	51.43	54.12
	EER		3.47	3.46	3.42
Heating	Capacity	kW	193.5	199.5	207.0
		kBtu/h	660.2	680.7	706.3
	Power input	kW	49.13	50.74	52.77
	COP		3.94	3.93	3.92
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity		
	Max. quantity		64		
Compressor	Type		DC inverter		
	Quantity		7		8
Fan motor	Type		DC motor		
	Quantity		7		8
Refrigerant	Type		R410A		
	Factory charging (380~415V)	kg(lbs.)	10+15+16×2(22+33+35×2)	10+16×3(22+35×3)	15×2+16×2(33×2+35×2)
	Factory charging (220V)	kg(lbs.)	9+13+16×2(20+29+35×2)	9+16×3(20+35×3)	13×2+16×2(29×2+35×2)
Pipe connections	Liquid pipe	mm(in.)	Φ22.2(Φ7/8)	Φ22.2(Φ7/8)	Φ25.4(Φ1)
	Gas pipe	mm(in.)	Φ41.3(Φ1-5/8)	Φ41.3(Φ1-5/8)	Φ44.5(Φ1-3/4)
	Oil balance pipe	mm(in.)	Φ6(Φ1/4)		
Air flow rate		m^3/h	11242+15620×3		15620×4
Sound pressure level		dB(A)	67		68
Net dimension (W×H×D)		mm	(960×1615×765)+(1250×1615×765)×3		(1250×1615×765)×4
Packing size (W×H×D)		mm	(1025×1790×830)+(1305×1790×820)×3		(1305×1790×820)×4
Net weight	380~415V	kg(lbs.)	212+288+310×2(466+634×682×2)	212+310×3(466+682×3)	288×2+310×2(634×2+682×2)
	220V	kg(lbs.)	202+288+310×2(444+634×682×2)	202+310×3(444+682×3)	285+288+310×2(627+634+682×2)
Gross weight	380~415V	kg(lbs.)	227+308+330×2(499+678+726×2)	227+330×3(499+726×3)	308×2+330×2(678×2+726×2)
	220V	kg(lbs.)	218+308+330×2(480+678+726×2)	218+330×3(480+726×3)	305+308+330×2(671+678+726×2)
Operating temperature range		℃(℉)	Cooling: -5-48(23~118.4); Heating: -20-24(-4~75.2)		

HP			68	70	72
Model GRV-		380~415V	1900(68)W/D2CN1(B)	1950(70)W/D2CN1(B)	2000(72)W/D2CN1(B)
Model GRV-		220V	1900(68)W/D2DN1(B)	1950(70)W/D2DN1(B)	2000(72)W/D2DN1(B)
Combined type			14HP+18HP×3	16HP+18HP×3	18HP×4
Power supply		V/Ph/Hz		380-415/3/60 & 220/3/60	
Cooling	Capacity	kW	190.0	195.0	200.0
		kBtu/h	648.3	665.3	682.4
	Power input	kW	55.68	57.61	59.17
	EER		3.41	3.38	3.38
Heating	Capacity	kW	213.0	218.0	224.0
		kBtu/h	726.8	743.8	764.3
	Power input	kW	54.38	55.98	57.58
	COP		3.92	3.89	3.89
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity		
	Max. quantity		64		
Compressor	Type		DC inverter		
	Quantity		8		
Fan motor	Type		DC motor		
	Quantity		8		
Refrigerant	Type		R410A		
	Factory charging (380~415V)	kg(lbs.)	15+16×3(33+35×3)	15+16×3(33+35×3)	16×4(35×4)
	Factory charging (220V)	kg(lbs.)	13+16×3(29+35×3)	13+16×3(29+35×3)	16×4(35×4)
Pipe connections	Liquid pipe	mm(in.)	Φ25.4(Φ1)		
	Gas pipe	mm(in.)	Φ44.5(Φ1-3/4)		
	Oil balance pipe	mm(in.)	Φ6(Φ1/4)		
Air flow rate		m^3/h	15620×4		
Sound pressure level		dB(A)	68		
Net dimension (W×H×D)		mm	(1250×1615×765)×4		
Packing size (W×H×D)		mm	(1305×1790×820)×4		
Net weight	380~415V	kg(lbs.)	288+310×3(634+682×3)	288+310×3(634+682×3)	310×4(682×4)
	220V	kg(lbs.)	285+310×3(627+682×3)	288+310×3(634+682×3)	310×4(682×4)
Gross weight	380~415V	kg(lbs.)	308+330×3(678+726×3)	308+330×3(678+726×3)	330×4(726×4)
	220V	kg(lbs.)	305+330×3(671+726×3)	308+330×3(678+726×3)	330×4(726×4)
Operating temperature range		℃(℉)	Cooling: -5-48(23~118.4); Heating: -20-24(-4~75.2)		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB.
Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB/6°C(42.8°F) WB.
Piping length: Interconnecting piping length is 7.5m(24.6ft.), level difference is zero.
Connection piping diameter of single-unit is the stop valve diameter of the unit.
Connection piping diameter of multi-unit is the main pipe connecting to the first indoor branch joint, is case of the total equivalent liquid length is less than 90m(295ft.). If the total equivalent liquid length is more than 90m(295ft.), please refer to technical manual to choose the connection piping diameter.
Sound values are measured in a semi-anechoic room, at a position of 1m(3.28ft.) in front of the unit and 1.3m(4.26ft.) above the floor.

Control Systems
Smart control systems

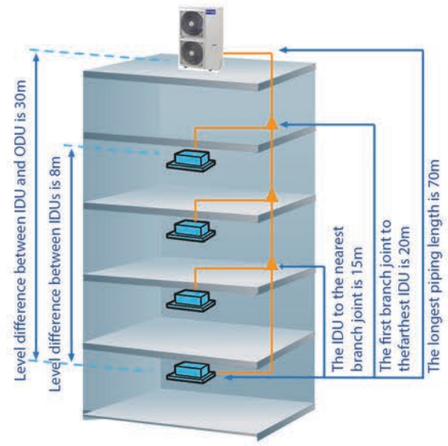
Indoor Units
VRF R4 Plus indoor units

Ventilation
Heat recovery ventilator

VRF R4 Plus Mini Series

Optimized design for small buildings

DC inverter compressor
DC fan motor
Capacity up to 18kW
Connectable indoor units quantity up to 9
Precise oil control technology
Advanced silence technology
Intelligent defrosting technology
Simple communication wiring
Auto addressing
Easy maintenance

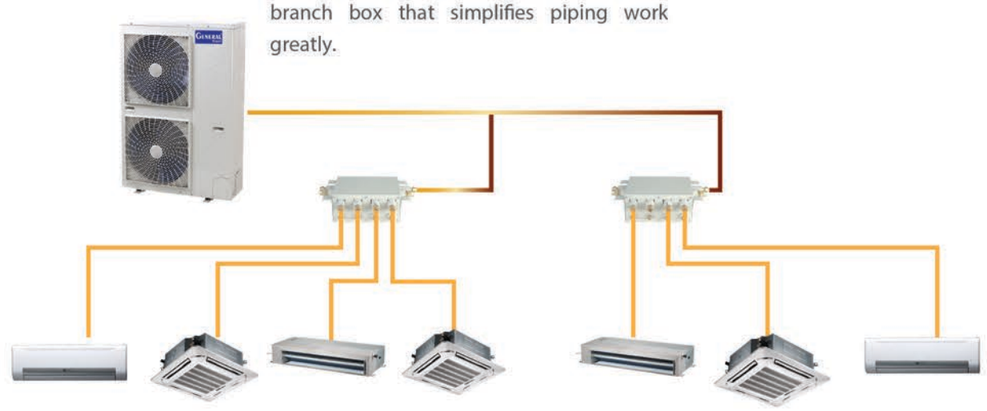


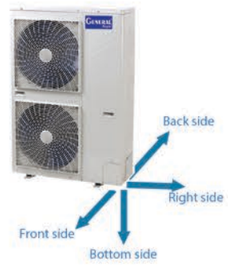
Long Piping Length

	10.5kW		12-16kW	
Total piping length	100m	328ft.	100m	328ft.
Longest length actual (Equivalent)	45(50)m	148(164)ft.	60(70)m	197(230)ft.
Longest length after first branch	20m	66ft.	20m	66ft.
Level difference between indoor and outdoor units - ODU up (down)	30(20)m	98(66)ft.	30(20)m	98(66)ft.
Level difference between indoor units	8m	26ft.	8m	26ft.

More Convenient Piping Connector – Branch Box

Easier and safer installation thanks to a branch box that simplifies piping work greatly.





Four-way Piping Connection

A four-direction space is available for connecting pipes and wiring in various installation sites.

VRF MINI SERIES

HP			4	4.5	5	6
Model GRV-			V105W/DVN1	V120W/DVN1	V140W/DVN1	V160W/DVN1
Power supply		V/Ph/Hz	208-230/1/60			
Cooling	Capacity	kW	10.5	12.0	14.0	15.5
		kBtu/h	35.8	40.9	47.8	52.9
	Power input	kW	2.68	3.25	3.95	4.52
	EER		3.92	3.69	3.54	3.43
Heating	Capacity	kW	11.5	13.2	15.4	17.0
		kBtu/h	39.2	45.0	52.5	58.0
	Power input	kW	2.90	3.47	4.16	4.77
	COP		3.97	3.80	3.70	3.56
Connectable indoor unit	Total capacity		45~130% of outdoor unit capacity			
	Max. quantity		5	6	6	7
Compressor	Type		Rotary			
	Quantity		1	1	1	1
Fan motor	Type		DC motor			
	Quantity		1	2	2	2
Refrigerant	Type		R410A			
	Factory charging	kg(lbs.)	3(6.6)	3.3(7.3)	3.9(8.6)	3.9(8.6)
Pipe connections	Liquid pipe	mm(in.)	Φ9.53(Φ3/8)	Φ9.53(Φ3/8)	Φ9.53(Φ3/8)	Φ9.53(Φ3/8)
	Gas pipe	mm(in.)	Φ15.9(Φ5/8)	Φ15.9(Φ5/8)	Φ15.9(Φ5/8)	Φ19.1(Φ3/4)
Air flow rate		m^3/h	5100	6000	6000	6000
Sound pressure level		dB(A)	57	57	57	57
Net dimension (W×H×D)		mm	1075x966x396	900x1327x400	900x1327x400	900x1327x400
		inch	42-21/64 x38-1/32 x15-19/32	35-7/14x52-1/4x15-3/4	35-7/14x52-1/4x15-3/4	35-7/14x52-1/4x15-3/4
Packing size (W×H×D)		mm	1120x1100x435	1030x1456x435	1030x1456x435	1030x1456x435
		inch	44-3/32 x43-5/16 x17-1/8	40-9/16x57-5/16x17-1/8	40-9/16x57-5/16x17-1/8	40-9/16x57-5/16x17-1/8
Net weight		kg(lbs.)	78(171.9)	95(209.4)	95(209.4)	102(224.9)
Gross weight		kg(lbs.)	85(187.3)	106(233.7)	106(233.7)	113(249.1)
Operating temperature range		℃(℉)	Cooling -15~43℃ (5~109.4℉) Heating -15～27℃(5~80.6℉)			

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB.
Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB/6°C(42.8°F) WB.
Piping length: Interconnecting piping length is 7.5m(24.6ft.), level difference is zero.
Sound values are measured in a semi-anechoic room, at a position of 1m(3.28ft.) in front of the unit and 1m(3.28ft.) above the floor.

VRF MINI SERIES

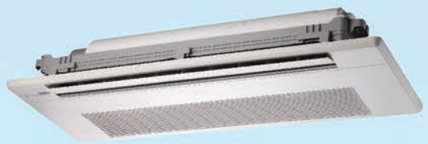
HP			4.5	5	6
Model GRV-			V120W/DCN1	V140W/DCN1	V160W/DCN1
Power supply		V/Ph/Hz	380-415/3/60		
Cooling	Capacity	kW	12.0	14.0	15.5
		kBtu/h	40.9	47.8	52.9
	Power input	kW	3.25	3.95	4.52
	EER		3.69	3.54	3.43
Heating	Capacity	kW	13.2	15.4	17.0
		kBtu/h	45.0	52.5	58.0
	Power input	kW	3.47	4.16	4.77
	COP		3.8	3.7	3.56
Connectable indoor unit	Total capacity		45~130% of outdoor unit capacity		
	Max. quantity		6	6	7
Compressor	Type		Rotary		
	Quantity		1	1	1
Fan motor	Type		DC motor		
	Quantity		2	2	2
Refrigerant	Type		R410A		
	Factory charging	kg(lbs.)	3.3(7.3)	3.9(8.6)	3.9(8.6)
Pipe connections	Liquid pipe	mm(in.)	Φ9.53(Φ3/8)	Φ9.53(Φ3/8)	Φ9.53(Φ3/8)
	Gas pipe	mm(in.)	Φ15.9(Φ5/8)	Φ15.9(Φ5/8)	Φ19.1(Φ3/4)
Air flow rate		m^3/h	6983	6500	6000
Sound pressure level		dB(A)	57	57	57
Net dimension (W×H×D)		mm	900x1327x400		
		inch	35-7/14x52-1/4x15-3/4		
Packing size (W×H×D)		mm	1030x1456x435		
		inch	40-9/16x57-5/16x17-1/8		
Net weight		kg(lbs.)	92(203)	95(209.4)	102(224.9)
Gross weight		kg(lbs.)	106(234)	106(233.7)	113(249.1)
Operating temperature range		℃(℉)	Cooling -15～43℃ (5~109.4℉) Heating -15～27℃(5~80.6℉)		

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27°C(80.6°F) DB/19°C(66.2°F) WB; Outdoor temperature 35°C(95°F) DB/24°C(75.2°F) WB.
Heating: Indoor temperature 20°C(68°F) DB/15°C(59°F) WB; Outdoor temperature 7°C(44.6°F) DB/6°C(42.8°F) WB.
Piping length: Interconnecting piping length is 7.5m(24.6ft.), level difference is zero.
Sound values are measured in a semi-anechoic room, at a position of 1m(3.28ft.) in front of the unit and 1m(3.28ft.) above the floor.

INDOOR UNITS

- One-way Cassette
- Two-way Cassette
- Four-way Cassette
- Low Static Pressure Duct
- Medium Static Pressure Duct (A5 Duct)
- High Static Pressure Duct
- Fresh Air Processing Unit
- Wall-mounted
- Ceiling & Floor

CASSETTE UNITS



One-way Cassette

Two-way Cassette

Compact Four-way Cassette

Four-way Cassette

ADVANCE FUNCTIONS

Auto Restart Function · Auto Addressing · Fresh Air · Auto Defrosting · Easy-cleaning Panel · Follow Me · Anti-cold Air Function · Built-in Drain Pump · LED Display · Built-in Filter · Independent Dehumidification · Timer · Auto Swing · Wired Controller

ONE-WAY CASSETTE

Only 153mm High • High-lift Drain Pump • Fresh Air Intake

TWO-WAY CASSETTE

Stylish Design and Slim Body • High-lift Drain Pump • Low Sound Level

FOUR-WAY / COMPACT CASSETTE

Fan Motor Options • 360° Airflow • High-lift Drain Pump • Sub Duct

• Multiple Airflow Patterns • Multiple Options

ONE-WAY CASSETTE

Model			GRV-D18Q1/VN1-D	GRV-D22Q1/VN1-D	GRV-D28Q1/VN1-D	GRV-D36Q1/VN1-D	GRV-D45Q1/VN1-D	GRV-D56Q1/VN1-D	GRV-D71Q1/VN1-D
Power supply			1-phase,208-230V,60Hz						
Cooling capacity		kW	1.8	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	6100	7500	9600	12300	15400	19100	24200
Heating capacity		kW	2.2	2.6	3.2	4.0	5.0	6.3	8.0
		Btu/h	7500	8900	10900	13600	17100	21500	27300
Power input	Cooling	W	41	41	41	41	54	60	75
	Heating	W	41	41	41	41	44	50	65
Airflow rate(H/M/L)		m^3/h	523/404/275	523/404/275	573/456/315	573/456/315	693/600/476	792/688/549	933/749/592
		CFM	308/238/162	308/238/162	337/268/185	337/268/185	408/353/280	466/405/323	549/441/349
Sound pressure level(H/M/L)		dB(A)	37/34/30	38/34/30	39/37/34	40/38/34	41/39/35	42/40/36	44/41/37
Main body	Net dim.(W×H×D)	mm(in.)	1054×153×425(41-1/2×6-1/32×16-47/64)				1275×189×450(50-13/64×7-7/16×17-23/32)		
	Packing dim.(W×H×D)	mm(in.)	1155×245×490(45-15/32×9-41/64×19-19/64)				1370×295×505(53-15/16×11-39/64×19-7/8)		
	Net/gross weight	kg(lbs.)	12.5/16(27.8/35.3)		13/16.5(28.8/36.4)		18.5/22.8(40.8/50.3)	18.8/23.1(41.4/50.9)	19.5/23.8(43.0/52.5)
Panel	Net dim.(W×H×D)	mm(in.)	1180×25×465(46-29/64×63/64×18-5/16)				1350×25×505(53-5/32×63/64×19-7/8)		
	Packing dim.(W×H×D)	mm(in.)	1232×107×517(48-1/2×4-7/32×20-23/64)				1410×95×560(55-33/64×3-47/64×22-3/64)		
	Net/gross weight	kg(lbs.)	3.5/5.2(7.7/11.5)				4/5.4(8.8/11.9)		
Piping connections	Liquid/gas pipe	mm(in.)	Φ6.35/Φ12.7(Φ1/4/Φ1/2)					Φ9.53/Φ15.9(Φ3/8/Φ5/8)	
	Drain pipe	mm(in.)	Φ25(OD 63/64)						
Standard controller			Wireless remote controller						

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°C(80.6°F)DB, 19°C(66.2°F)WB, outdoor temp.: 35°C(95°F)DB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°C(68°F)DB, outdoor temp.: 7°C (44.6°F)DB, 6°C(42.8°F)WB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
3. Sound Level is measured 1.4m(4.59ft.) below the unit.
4. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

TWO-WAY CASSETTE

Model			GRV-D22Q2/VN1	GRV-D28Q2/VN1T	GRDV-D36Q2/VN1	GRV-D45Q2/VN1	GRV-D56Q2/VN1	GRTV-D71Q2/VN1
Power supply			1-phase,208-230V,60Hz					
Cooling capacity		kW	2.2	2.8	3.6	4.5	5.6	7.1
		Btu/h	7500	9600	12300	15400	19100	24200
Heating capacity		kW	2.6	3.2	4.0	5.0	6.3	8.0
		Btu/h	8900	10900	13600	17100	21500	27300
Power input	Cooling	W	78	78	83	115	133	205
	Heating	W	78	78	83	115	133	205
Airflow rate(H/M/L)		m^3/h	674/509/381	674/509/381	740/577/435	878/689/561	941/776/654	1236/1110/864
		CFM	397/300/224	397/300/224	436/340/256	517/406/330	554/457/385	727/653/509
Sound pressure level(H/M/L)		dB(A)	33/29/24	36/32/29	36/32/29	39/35/30	39/35/30	44/40/34
Main body	Net dim.(W×H×D)	mm(in.)	1172×299×591(46-9/32×11-49/64×23-17/64)					
	Packing dim.(W×H×D)	mm(in.)	1355×400×675(53-11/32×15-3/4×26-37/64)					
	Net/gross weight	kg(lbs.)	34/42.5(75/94)				36.5/45(80.5/99)	
Panel	Net dim.(W×H×D)	mm(in.)	1430×53×680(56-19/64×2-3/32×26-49/64)					
	Packing dim.(W×H×D)	mm(in.)	1525×130×765(60-3/64×5-1/8×30-1/8)					
	Net/gross weight	kg(lbs.)	10.5/15(23/33)					
Piping connections	Liquid/gas pipe	mm(in.)	Φ6.35/Φ12.7(Φ1/4/Φ1/2)				Φ9.53/Φ15.9(Φ3/8/Φ5/8)	
	Drain pipe	mm(in.)	Φ32(OD 1-17/64)					
Standard controller			Wireless remote controller					

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°C(80.6°F)DB, 19°C(66.2°F)WB, outdoor temp.: 35°C(95°F)DB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°C(68°F)DB, outdoor temp.: 7°C (44.6°F)DB, 6°C(42.8°F)WB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).

FOUR-WAY CASSETTE

Model			GRDV-D28Q4/N1-D	GRDV-D36Q4/N1-D	GRDV-D45Q4/N1-D	GRDV-D56Q4/N1-D	GRDV-D71Q4/N1-D
Power supply			1-phase, 220-240V, 60Hz				
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
		Btu/h	9600	12300	15400	19100	24200
Heating capacity		kW	3.2	4.0	5.0	6.3	8.0
		Btu/h	10900	13600	17100	21500	27300
Power input	Cooling	W	90	90	90	90	115
	Heating	W	90	90	90	90	115
Airflow rate(H/M/L)		m^3/h	847/766/640	847/766/640	864/755/658	864/755/658	1157/955/749
		CFM	499/451/377	499/451/377	509/444/387	509/444/387	681/562/441
Sound pressure level(H/M/L)		dB(A)	42/38/35	42/38/35	42/38/35	42/38/35	45/42/39
Main body	Net dim.(W×H×D)	mm(in.)	904×230×840(35-19/32×9-1/16×33-5/64)				
	Packing dim.(W×H×D)	mm(in.)	955×260×955(37-19/32×10-15/64×37-19/32)				
	Net/gross weight	kg(lbs.)	24/28(53 /61.7)		26/30(57.3 /66.2)		
Panel	Net dim.(W×H×D)	mm(in.)	950×54.5×950(37-13/32×2-9/64×37-13/32)				
	Packing dim.(W×H×D)	mm(in.)	1035×90×1035(40-3/4×3-35/64×40-3/4)				
	Net/gross weight	kg(lbs.)	5/8(11.0/17.5)				
Piping connections	Liquid/gas pipe	mm(in.)	Φ6.35/Φ12.7(Φ1/4/Φ1/2)			Φ9.53/Φ15.9(Φ3/8/Φ5/8)	
	Drain pipe	mm(in.)	Φ32(OD 1-17/64)				
Standard controller			Wireless remote controller				

Model			GRDV-D80Q4/N1-D	GRDV-D90Q4/N1-D	GRDV-D100Q4/N1-D	GRDV-D112Q4/N1-D	GRDV-D140Q4/N1-D
Power supply			1-phase, 220-240V, 60Hz				
Cooling capacity		kW	8.0	9.0	10.0	11.2	14.0
		Btu/h	27300	30700	34100	38200	47800
Heating capacity		kW	9.0	10.0	11.1	12.5	15.0
		Btu/h	30700	34100	37900	42700	51200
Power input	Cooling	W	115	160	160	160	180
	Heating	W	115	160	160	160	180
Airflow rate(H/M/L)		m^3/h	1236/973/729	1590/1300/1090	1590/1300/1090	1590/1300/1090	1678/1358/1115
		CFM	727/573/429	936/765/642	936/765/642	936/765/642	988/799/656
Sound pressure level(H/M/L)		dB(A)	45/42/39	48/45/43	48/45/43	48/45/43	50/47/44
Main body	Net dim.(W×H×D)	mm(in.)	904×230×840(35-19/32×9-1/16×33-5/64)	904×300×840(35-19/32×11-13/16×33-5/64)			
	Packing dim.(W×H×D)	mm(in.)	955×260×955(37-19/32×10-15/64×37-19/32)	955×330×955(37-19/32×11-13/16×37-19/32)			
	Net/gross weight	kg(lbs.)	26/30(57.3/66)	32/37(70.5/81.6)			
Panel	Net dim.(W×H×D)	mm(in.)	950×54.5×950(37-13/32×2-9/64×37-13/32)				
	Packing dim.(W×H×D)	mm(in.)	1035×90×1035(40-3/4×3-35/64×40-3/4)				
	Net/gross weight	kg(lbs.)	5/8(11.0/17.6)				
Piping connections	Liquid/gas pipe	mm(in.)	Φ9.53/Φ15.9(Φ3/8/Φ5/8)				
	Drain pipe	mm(in.)	Φ32(OD 1-17/64)				
Standard controller			Wireless remote controller				

COMPACT FOUR-WAY CASSETTE

Model			GRV-D22Q4/VN1-A3	GRV-D28Q4/VN1-A3	GRV-D36Q4/VN1-A3	GRV-D45Q4/VN1-A3
Power supply			1-phase,208-230V,60Hz			
Cooling capacity		kW	2.2	2.8	3.6	4.5
		Btu/h	7500	9600	12300	15400
Heating capacity		kW	2.4	3.2	4.0	5.0
		Btu/h	8200	10900	13600	17100
Power input	Cooling	W	51	52	58	58
	Heating	W	43	44	50	51
Airflow rate(H/M/L)		m^3/h	397/292/215	408/310/231	496/359/263	496/359/263
		CFM	234/172/127	240/182/136	292/211/155	292/211/155
Sound pressure level(H/M/L)		dB(A)	35.8/33.4/23.4	35.8/33.4/23.4	41.5/35.6/28.8	41.5/35.6/28.8
Main body	Net dim.(W×H×D)	mm(in.)	570×260×570(22-7/16×10-15/64×22-7/16)			
	Packing dim.(W×H×D)	mm(in.)	675×285×675(26-9/16×11-7/32×26-9/16)			
	Net/gross weight	kg(lbs.)	16/20(35.3/44.1)		18/22(39.7/48.5)	
Panel	Net dim.(W×H×D)	mm(in.)	647×50×647(25-15/32×1-31/32×25-15/2)			
	Packing dim.(W×H×D)	mm(in.)	715×123×715(28-5/32×4-27/32×28-5/32)			
	Net/gross weight	kg(lbs.)	2.5/4.5(5.5/9.9)			
Piping connections	Liquid/gas pipe	mm(in.)	Φ6.35/Φ12.7(Φ1/4/Φ1/2)			
	Drain pipe	mm(in.)	Φ25(OD 63/64)			
Standard controller			Wireless remote controller			

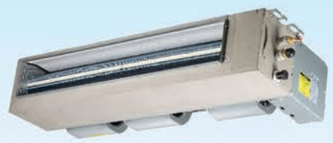
FOUR-WAY CASSETTE SILENT TYPE

Model			GRDV-D28Q4/VN1-E	GRDV-D36Q4/VN1-E	GRDV-D45Q4/VN1-E	GRDV-D56Q4/VN1-E	GRDV-D71Q4/VN1-E
Power supply			1-phase,208-230V,60Hz				
Cooling capacity		kW	2.8	3.6	4.5	5.6	7.1
		Btu/h	9600	12300	15400	19100	24200
Heating capacity		kW	3.2	4.0	5.0	6.3	8.0
		Btu/h	10900	13600	17100	21500	27300
Power input	Cooling	W	80	80	88	88	105
	Heating	W	80	80	88	88	105
Airflow rate(H/M/L)		m^3/h	791/674/596	791/674/596	942/777/662	942/777/662	1235/1013/805
		CFM	465/396/351	465/396/351	554/457/389	554/457/389	726/596/474
Sound pressure level(H/M/L)		dB(A)	30/25/22	30/25/22	35/31/27	35/31/27	43/37/31
Main body	Net dim.(W×H×D)	mm(in.)	840×230×840(33-1/16×9-1/16×33-1/16)				
	Packing dim.(W×H×D)	mm(in.)	955×260×955(37-19/32×10-1/4×37-19/32)				
	Net/gross weight	kg(lbs.)	21.5/26.7(47.3/58.7)		23.7/28.9(52.1/63.6)		
Panel	Net dim.(W×H×D)	mm(in.)	950×54.5×950(37-13/32×2-9/64×37-13/32)				
	Packing dim.(W×H×D)	mm(in.)	1035×90×1035(40-3/4×3-9/16×40-3/4)				
	Net/gross weight	kg(lbs.)	6/9(13.2/19.8)				
Piping connections	Liquid/gas pipe	mm(in.)	Φ6.35/Φ12.7(Φ1/4/Φ1/2)			Φ9.53/Φ15.9(Φ3/8/Φ5/8)	
	Drain pipe	mm(in.)	Φ32(OD 1-17/64)				
Standard controller			Wireless remote controller				

Model			GRDV-D80Q4/VN1-E	GRDV-D90Q4/VN1-E	GRDV-D100Q4/VN1-E	GRDV-D112Q4/VN1-E	GRDV-D140Q4/VN1-E
Power supply			1-phase,208-230V,60Hz				
Cooling capacity		kW	8.0	9.0	10.0	11.2	14.0
		Btu/h	27300	30700	34100	38200	47800
Heating capacity		kW	9.0	10.0	11.1	12.5	15.0
		Btu/h	30700	34100	37900	42700	51200
Power input	Cooling	W	120	187	200	200	220
	Heating	W	120	187	200	200	220
Airflow rate(H/M/L)		m^3/h	1235/1013/805	1333/1158/957	1634/1219/1139	1634/1219/1139	1634/1219/1139
		CFM	726/596/474	784/681/563	961/717/670	961/717/670	995/731/681
Sound pressure level(H/M/L)		dB(A)	43/37/31	43/38/32	45/37/35	45/37/35	46/38/37
Main body	Net dim.(W×H×D)	mm(in.)	840×230×840(33-1/16×9-1/16×33-1/16)	840×300×840(33-1/16×11-13/16×33-1/16)			
	Packing dim.(W×H×D)	mm(in.)	955×260×955(37-19/32×10-15/64×37-19/32)	955×330×955(37-19/32×11-13/16×37-19/32)			
	Net/gross weight	kg(lbs.)	23.7/28.9(52.1/63.6)	28.7/34.1(63.1/75)			30.9/36.3(68/79.9)
Panel	Net dim.(W×H×D)	mm(in.)	950×54.5×950(37-13/32×2-9/64×37-13/32)				
	Packing dim.(W×H×D)	mm(in.)	1035×90×1035(40-3/4×3-35/64×40-3/4)				
	Net/gross weight	kg(lbs.)	6/9(13.2/19.8)				
Piping connections	Liquid/gas pipe	mm(in.)	Φ9.53/Φ15.9(Φ3/8/Φ5/8)				
	Drain pipe	mm(in.)	Φ32(OD 1-17/64)				
Standard controller			Wireless remote controller				

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°C(80.6°F)DB, 19°C(66.2°F)WB, outdoor temp.: 35°C(95°F)DB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°C(68°F)DB, outdoor temp.: 7°C (44.6°F)DB, 6°C(42.8°F)WB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
3. Sound Level is measured 1.4m(4.59ft.) below the unit.
4. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

DUCT SERIES



Medium Static Pressure Duct A5

Low Static Pressure Duct

High Static Pressure Duct

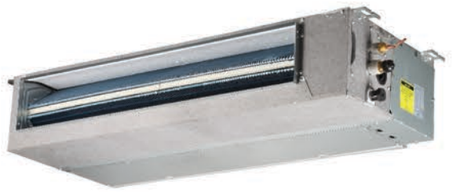
ADVANCE FUNCTIONS

Auto Restart Function
Auto Addressing
Fresh Air
Auto Defrosting
Easy-cleaning Panel
Follow Me
Anti-cold Air Function
Built-in Drain Pump
LED Display
Built-in Filter
Independent Dehumidification
Timer
Auto Swing
Wired Controller

LOW STATIC PRESSURE DUCT

V-shaped Evaporator

A V-shaped evaporator design enhances heat exchanging efficiency by 22%.



Fan Motor Options

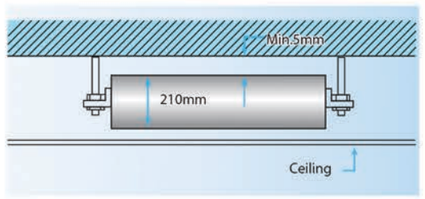
Choose either AC or DC fan motors.

Low Sound Level

The Low Static Pressure Duct indoor unit utilizes centrifugal blowers, reducing noise levels to as low as 24dB(A), and is an excellent choice for hotels and other noise-sensitive locations.

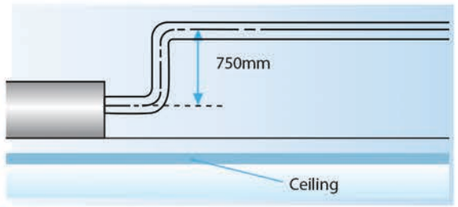
Compact Design

A compact design, with a uniform height of 210mm, enables installation even where ceiling space is limited.



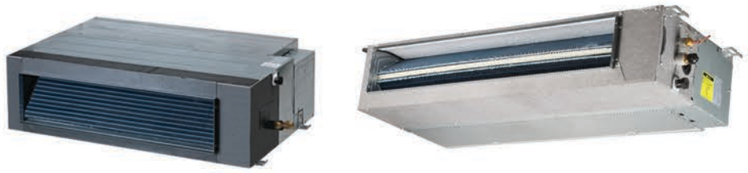
Drain Pump

A drain pump with a 750mm pump head is available as a customization option.



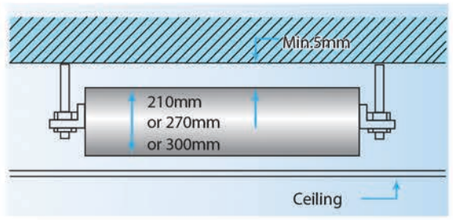
Auto Restart Function · Auto Addressing · Independent Dehumidification · Auto Defrosting · Follow Me · Anti-cold Air Function · Timer · Wired Controller

MEDIUM STATIC PRESSURE DUCT A5



Compact Design

Models 22 to 71 are just 210mm high whilst models 80 to 112 are 270mm high and model 140 is 300mm high.



Fan Motor Options

Choose either AC or DC fan motors.

High-lift Drain Pump

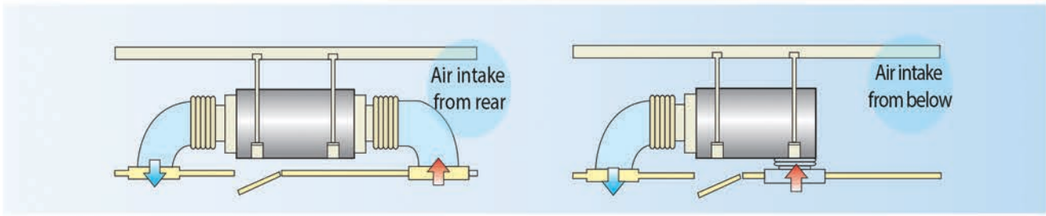
A drain pump with a 750mm pump head is fitted as standard, simplifying installation of the drain piping.

Easy Maintenance Access, Flexible Control

As a customization option, for ease of access the electric control box can be separated from the unit by up to 1m. Functional ports including remote on/off dry contact and 220V alarm signal output are included as standard, providing control flexi-

Flexibility

To provide the flexibility to adapt to differing installation situations, the air inlet may be positioned either on the underside or the rear of the unit.



Auto Restart Function · Auto Addressing · Fresh Air · Auto Defrosting · Built-in Filter · Follow Me · Anti-cold Air Function · Built-in Drain Pump · Timer · Independent Dehumidification · Wired Controller · Super High Air Flow

GENERAL® Royal

A Better Air Conditioner Supplier

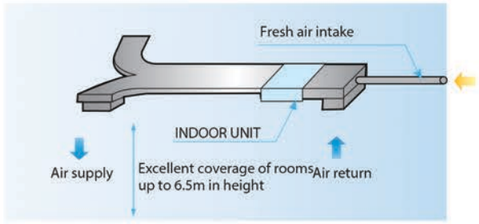
HIGH STATIC PRESSURE DUCT

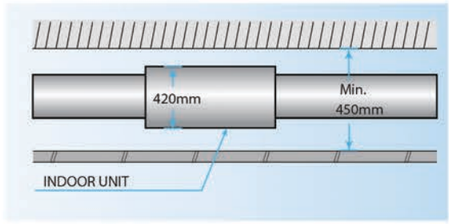
Fan Motor Options

Choose either AC or DC fan motors.

Flexible Duct Design

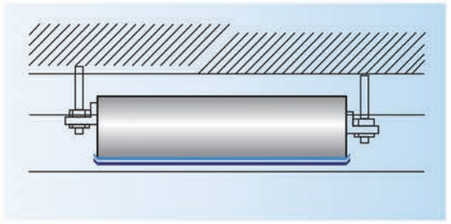
The High Static Pressure Duct indoor unit offers external static pressures of up to 196Pa (models 71 to 160) or 280Pa (models 200 to 560), allowing air supply duct lengths of up to 14m at a height of 6.5m. With a height of just 420mm (models 71 to 160), only 450mm of ceiling space is required.





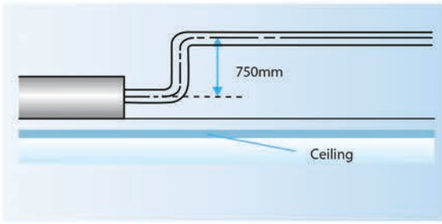
Double-skin Drainage Pan

A double-skin drainage pan provides double protection for ceilings (models 71 to 160 and models 400 to 560).



Drain Pumpn

A drain pump with a 750mm pump head is available as a customization option (models 71 to 160).



Easy Installation

Flanges for air inlet/outlet ducts are fitted as standard on the High Static Pressure Duct. On models 71 to 160, the expansion valve is fitted inside the unit, requiring no extra connection.

Easy Maintenance Access, Flexible Control

The wired remote controller is provided as standard and the wireless remote controller is available as a customization option. Functional ports including remote on/off dry contact are included as standard, providing additional control flexibility. For ease of installation, the electric control box's display board is factory-fitted and the filter can be accessed either from the rear of from below.

Auto Restart Function | Auto Addressing | Independent Dehumidification | Auto Defrosting | Built-in Filter | Follow Me | Anti-cold Air Function | Wired Controller | Timer | Built-in Drain Pump

Specifications

Model			GRDV-D71T1/VN1-B	GRDV-D80T1/VN1-B	GRDV-D901T1/VN1-EGRDV-D112T1/VN1-B		GRDV-D140T1/VN1-B	GRDV-D160T1/VN1-B
Power supply			1-phase,208-230V,60Hz					
Cooling capacity		kW	7.1	8	9	11.2	14	16
		Btu/h	24200	27300	30700	38200	47800	54600
Heating capacity		kW	8	9	10	12.5	16	16.5
		Btu/h	27300	30700	34100	42700	54600	56300
Power input	Cooling	W	414	402	409	409	527	532
	Heating	W	414	402	409	409	527	532
Airflow rate(H/M/L)		m³/h	1720/1532/1338	1690/1560/1320	2252/2030/1610	2198/1978/1570	2969/2694/2469	2969/2694/2469
		CFM	1012/902/788	994/918/777	1326/1195/948	1294/1164/924	1746/1586/1453	1746/1586/1453
External static pressure(Min/Std/Max)		Pa	25/25/196	37/37/196	37/37/196	50/50/196	50/50/196	50/50/196
Sound pressure level(H/M/L)		dB(A)	48/46/44.5	48/46/44.5	52/49/47	52/49/47	53/50/48	54/52/50
Net dimension(W×H×D)		mm(in.)	952×420×690(37-31/64×16-17/32×27-11/64)				1300×420×691(51-3/16×15-3/4×27-13/64)	
Packing dimension(W×H×D)		mm(in.)	1090×440×768(42-29/32×17-21/64×30-15/64)				1436×450×768(56-17/32×17-23/32×30-15/64)	
Net/gross weight		kg(lbs.)	46.5/52(102.6/114.7)		50/56.5(110.3/124.6)		68/70(149.9/154.3)	69.5/76(153.3/167.6)
Piping connections	Liquid/gas pipe	mm(in.)	Φ9.53/Φ15.9(Φ3/8/Φ5/8)					
	Drain piping	mm(in.)	Φ25(OD 63/64)					
Standard controller			Wired controller					

Model			GRDV-D200T1/N1-B	GRDV-D250T1/N1-B	GRDV-D280T1/N1-B	GRDV-D400T1/N1	GRDV-D450T1/N1
Power supply			1-phase,208-230V,60Hz				
Cooling capacity		kW	20.0	25.0	28.0	40.0	45.0
		Btu/h	68200	85300	95500	136500	153500
Heating capacity		kW	22.5	26.0	31.5	45.0	50.0
		Btu/h	76800	88700	107500	153500	170600
Power input	Cooling	W	1516	1516	1516	1600	1600
	Heating	W	1516	1516	1516	1600	1600
Airflow rate(H/M/L)		m³/h	4700/4100/3599	4700/4100/3599	4700/4100/3599	7180/6150/4600	7180/6150/4600
		CFM	2766/2413/2118	2766/2413/2118	2766/2413/2118	4226/3620/2708	4226/3620/2708
External static pressure(Min/Std/Max)		Pa	50/200/280	50/200/280	50/200/280	50/200/280	50/200/280
Sound pressure level(H/M/L)		dB(A)	59/55/52	59/55/52	59/55/52	61/59/56	61/59/56
Net dimension(W×H×D)		mm(in.)	1440×505×925(56-11/16×19-7/8×36-27/6)			1970×668×902.5(77-9/16×15-3/4×35-17/32)	
Packing dimension(W×H×D)		mm(in.)	1509×550×990(59-13/32×21-21/32×38-31/32)			2095×800×964(82-31/64×31-1/2×37-61/64)	
Net/gross weight		kg(lbs.)	115/129(254/284)			235/250(518/551)	
Piping connections	Liquid/gas pipe	mm(in.)	Φ9.53/Φ15.9×2/(Φ3/8/Φ5/8)×2			Φ9.53/Φ22.2×2/(Φ3/8/Φ7/8)×2	
	Drain piping	mm(in.)	Φ32(OD 1-17/64)				
Standard controller			Wired controller				

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°C(80.6°F)DB, 19°C(66.2°F)WB, outdoor temp.: 35°C(95°F)DB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°C(68°F)DB, outdoor temp.: 7°C (44.6°F)DB, 6°C(42.8°F)WB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
3. Sound Level is measured 1.4m(4.59ft.) below the unit.
* External static pressure is based on high speed indoor air flow.
4. Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments.

WALL MOUNTED

M9

M3

M10

Various selections

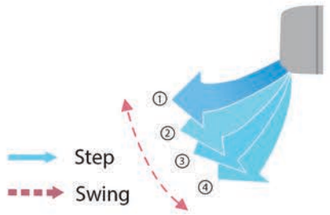
M panel M9, M3, M10

High efficiency and low sound operation

M type products adopt DC brushless fan motor. The units operate in higher efficiency and lower sound level.

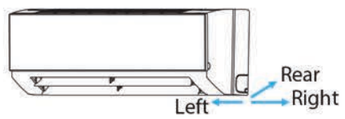
Auto swing louver

The Auto Swing Louver function ensures that the air direction corresponds to the mode selected.



Convenient installation

Multi-directional refrigerantoutlet pipe: left\right\rear, more flexible for installation.
EXV is built-in the indoor unit, compact size.
Adopts new type fixing plate, stable and easy to install.



Precise flow control

A 2000-stage element mechanical expansion valve ensures precise flow control whilst generating little modulation noise.

Specifications

M panel

Model			GRI-22G/DHN1-M	GRI-28G/DHN1-M	GRI-36G/DHN1-M	GRI-45G/DHN1-M
Power supply			1-phase,220-240V,50/60Hz			
Capacity	Cooling	kW	2.2	2.8	3.6	4.5
	Heating	kW	2.4	3.2	4	5
Power input	Cooling	W	8	9	19	19
	Heating	W	8	9	19	19
Airflow rate (H/M/L)		m^3/h	422/393/356	417/370/316	656/573/488	594/507/424
Sound pressure level (H/M/L)		dB(A)	31/30/29	31/30/29	33/32/30	35/33/31
Net dimension (W×H×D)		mm	835×280×203	835×280×203	990×315×223	990×315×223
Packing dimension (W×H×D)		mm	935×385×320	935×385×320	1085×420×335	1085×420×335
Net/ Gross weight		kg	8.4/12.1	9.5/13.1	11.4/15.5	12.8/16.9
Piping connections	Liquid/gas pipe	mm	Φ6.35/Φ12.7			
	Drain pipe	mm	OD Φ16.5			
Standard controller			Wireless remote controller			

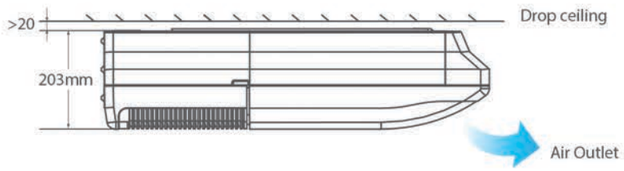
Model			GRI-56G/DHN1-M	GRI-71G/DHN1-M	GRI-80G/DHN1-M	GRI-90G/DHN1-M
Power supply			1-phase,220-240V,50/60Hz			
Capacity	Cooling	kW	5.6	7.1	8	9
	Heating	kW	6.3	8	9	10
Power input	Cooling	`W	27	49	53	82
	Heating	W	27	49	53	82
Airflow rate (H/M/L)		m^3/h	747/648/547	1195/1005/809	1195/1005/809	1421/1067/867
Sound pressure level (H/M/L)		dB(A)	38/36/34	44/39/36	44/39/36	48/43/38
Dimension (W×H×D)		mm	990×315×223	1194×343×262	1194×343×262	1194×343×262
Packing (W×H×D)		mm	1085×420×335	1290×375×460	1290×375×460	1290×375×460
Net/ Gross weight		kg	12.8/16.9	17/22.4	17/22.4	17/22.4
Piping connections	Liquid/gas pipe	mm	Φ9.53/Φ15.9	Φ9.53/Φ15.9	Φ9.53/Φ15.9	Φ9.53/Φ15.9
	Drain pipe	mm	OD Φ16.5			
Standard controller			Wireless remote controller			

Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°C(80.6°F)DB, 19°C(66.2°F)WB, outdoor temp.: 35°C(95°F)DB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°C(68°F)DB, outdoor temp.: 7°C (44.6°F)DB, 6°C(42.8°F)WB, equivalent ref. piping: 7.5m (24.6ft.)

CEILING & FLOOR

Convenient Installation

The slim and sleek structure design ensures easy installation.
It can be installed into a corner of the ceiling even if the ceiling is very narrow.



The unit can be installed either horizontally on the ceiling or vertically against the wall.

Auto Swing and Wide Angle Air Flow

Two direction auto swing - vertical and horizontal.
The range of horizontal air discharge is widened which secures wider air flow distribution to provide more comfortable air circulation no matter where the unit is set up.
Three air flow speeds: low, medium and high; double air guides.

Auto Swing & Wide-angle Airflow

More Comfortable

Adopts electrical expansion valve, ensuring precise flow control, lower modulation noise when EXV is operating.
Low noise operations; minimum 36 dB(A).
Smoother airflow and less turbulence due to the multi-blade fan and the air guide design.

Specifications

Model			GRDV-D36DL/N1-C	GRDV-D45DL/N1-C	GRDV-D56DL/N1-C	GRDV-D71DL/N1-C
Power supply			1-phase, 220-240V, 60Hz			
Cooling capacity		kW	3.6	4.5	5.6	7.1
		Btu/h	12300	15400	19100	24200
Heating capacity		kW	4.0	5.0	6.3	8.0
		Btu/h	13600	17100	21500	27300
Power input	Cooling	W	50	148	148	148
	Heating	W	50	148	148	148
Airflow rate(H/M/L)		m^3/h	600/480/400	750/650/550	750/650/550	750/650/550
		CFM	353/283/235	441/383/324	441/383/324	441/383/324
Sound pressure level(H/M/L)		dB(A)	40/38/36	43/41/38	43/41/38	43/41/38
Net dimension(W×H×D)		mm(in.)	990×203×660(38-31/32×7-63/64×25-63/64)			
Packing dimension(W×H×D)		mm(in.)	1089×296×744(42-7/8×11-21/32×29-9/32)			
Net/gross weight		kg(lbs.)	26/32(57.3/70.6)	28/34(61.7/75.0)	28/34(61.7/75.0)	28/34(61.7/75.0)
Piping connections	Liquid/gas pipe	mm(in.)	Φ6.35/Φ12.7(Φ1/4/Φ1/2)		Φ9.53/Φ15.9(Φ3/8/Φ5/8)	
	Drain piping	mm(in.)	Φ25(OD 63/64)			
Standard controller			Wireless remote controller			

Model			GRDV-D80DL/N1-C	GRDV-D90DL/N1-C	GRDV-D112DL/N1-C	GRDV-D140DL/N1-C	GRDV-D160DL/N1-C
Power supply			1-phase, 220-240V, 60Hz				
Cooling capacity		kW	8.0	9.0	11.2	14.0	16.0
		Btu/h	27300	30700	38200	47800	54600
Heating capacity		kW	9.0	10.0	12.5	15.0	18.0
		Btu/h	30700	34100	42700	51200	61400
Power input	Cooling	W	183	183	245	245	378
	Heating	W	183	183	245	245	378
Airflow rate(H/M/L)		m^3/h	1,200/900/700	1,200/900/700	1,980/1,860/1,730	1,980/1,860/1,730	2,300/2,100/1,800
		CFM	706/530/412	706/530/412	1,165/1,095/1,018	1,165/1,095/1,018	1,354/1,236/1,060
Sound pressure level(H/M/L)		dB(A)	45/43/40	45/43/40	47/45/42	47/45/42	47/45/42
Net dimension(W×H×D)		mm(in.)	1280×203×660(50-25/64×7-63/64×25-63/64)		1670×244×680(65-3/4×9-39/64×26-49/64)		1670×285×680(65-3/4×11-7/32×26-49/64)
Packing dimension(W×H×D)		mm(in.)	1379×296×744(54-19/64×11-21/32×29-19/64)		1764×329×760(69-29/64×12-61/64×29-59/64)		1775×377×760(69-7/8×14-27/32×29-59/64)
Net/gross weight		kg(lbs.)	34.5/41(76.1/90.4)		54/59(119.0/130.1)		57.5/63.5(126.5/139.7)
Piping connections	Liquid/gas pipe	mm(in.)	Φ9.53/Φ15.9(Φ3/8/Φ5/8)				
	Drain piping	mm(in.)	Φ25(OD 63/64)				
Standard controller			Wireless remote controller				

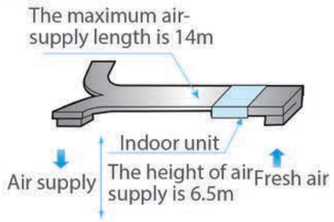
Notes:
1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°C(80.6°F)DB, 19°C(66.2°F)WB, outdoor temp.: 35°C(95°F)DB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°C(68°F)DB, outdoor temp.: 7°C (44.6°F)DB, 6°C(42.8°F)WB, equivalent ref. piping: 7.5m (24.6ft.)
(horizontal).

FRESH AIR PROCESSING UNIT

100% Fresh Air Processing Unit

Both fresh air filtration and heating/cooling can be achieved in a single system.

Indoor units and fresh air processing unit can be connected to the same refrigerant system, increasing design flexibility and greatly reducing total system costs.



High External Static Pressure

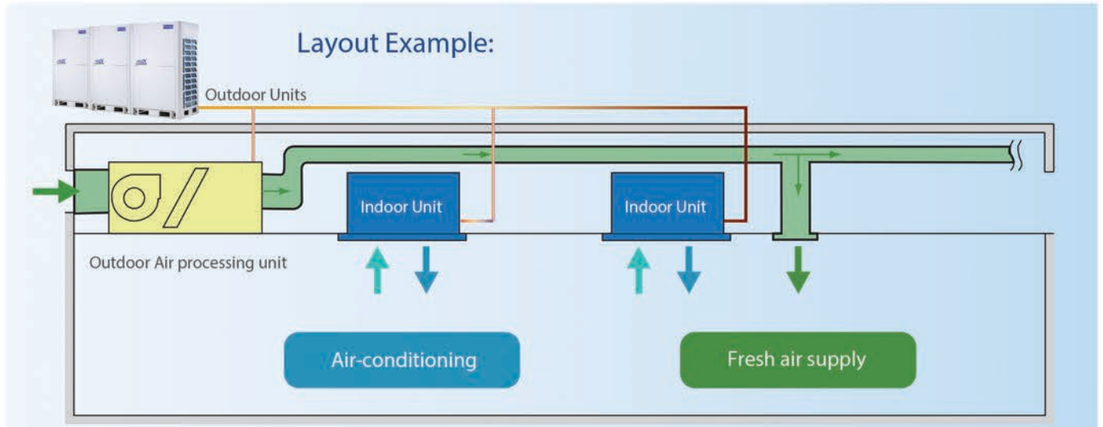
External static pressure can be up to 196Pa(models 125 to 140) and 280Pa(models 200 to 280) for more flexible duct applications. The maximum length of air supply is around 14m(45.9ft) and the maximum height of air supply is about 6.5m(21.3ft).

Healthy and Comfortable

Fresh air is imported, providing a healthy and comfortable living environment.

Four speed fan motor(model 125&140).

Innovative air supply technology for excellent room temperature control



Specifications

Model			GRDV-D125T1/VN1-FA	GRDV-D140T1/VN1-FA	GRDV-D200T1/VN1-FA	GRDV-D250T1/VN1-FA	GRDV-D280T1/VN1-FA
Power supply			1-phase,208-230V,60Hz				
Cooling capacity		kW	12.5	14.0	20.0	25.0	28.0
		Btu/h	42600	47800	68200	85300	95500
Heating capacity		kW	10.5	12.0	18.0	20.0	22.0
		Btu/h	36000	41000	61400	68200	75000
Power input	Cooling	W	455	455	1060×2	1126×2	1126×2
	Heating	W	455	455	1060×2	1126×2	1126×2
Airflow rate(H/M/L)		m^3/h	2142/1870/1611	2142/1870/1611	2870/2620/2150	3005/2700/2250	3005/2700/2250
		CFM	1261/1101/948	1261/1101/948	1689/1542/1265	1766/1589/1324	1766/1589/1324
External static pressure(Min/Std/Max)		Pa	30/50/196	30/50/196	50/200/280	50/200/280	50/200/280
Sound pressure level(H/M/L)		dB(A)	54/52/50	53/50/48	54/53/51	55/54/52	55/54/52
Net dimension(W×H×D)		mm(in.)	1300×420×690(51-3/16×16-17/32×27-11/64)		1440×505×925(56-11/16×19-7/8×36-27/6)		
Packing dimension(W×H×D)		mm(in.)	1436×450×768(56-17/32×17-23/32×30-1/4)		1509×550×990(59-13/32×21-21/32×38-31/32)		
Net/gross weight		kg(lbs.)	69.5/76(153.2/167.5)		114/124(251/274)		
Piping connections	Liquid/gas pipe	mm(in.)	Φ9.53/Φ15.9/(Φ3/8/Φ5/8)				
	Drain piping	mm(in.)	Φ25(OD 63/64)		Φ32(OD 1-17/64)		
Standard controller			Wired controller				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°C(80.6°F)DB, 19°C(66.2°F)WB, outdoor temp.: 35°C(95°F)DB, equivalent ref. piping: 7.5m (24.6ft.) (horizontal).
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°C(68°F)DB, outdoor temp.: 7°C (44.6°F)DB, 6°C(42.8°F)WB, equivalent ref. piping: 7.5m (24.6ft.) (horizontal).
3. Sound Level is measured 1.4m(4.59ft.) below the unit.

* External static pressure is based on high speed indoor air flow.

Connection Conditions:

The following restrictions must be observed in order to maintain the indoor units connection to the same system.

* When outdoor-air processing units are connected, the total connection capacity must be within 50% to 100% of that of the outdoor units.
* When outdoor-air processing units and standard indoor units are connected, the total connection capacity of the outdoor-air processing units must not exceed 30% that of the outdoor units.
* Outdoor-air processing units can be used without indoor units.

HEAT RECOVERY VENTILATOR

Alternative fan motor

Versions for AC/DC fan motors.

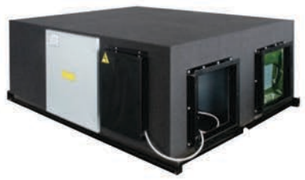
Enhanced Efficiency

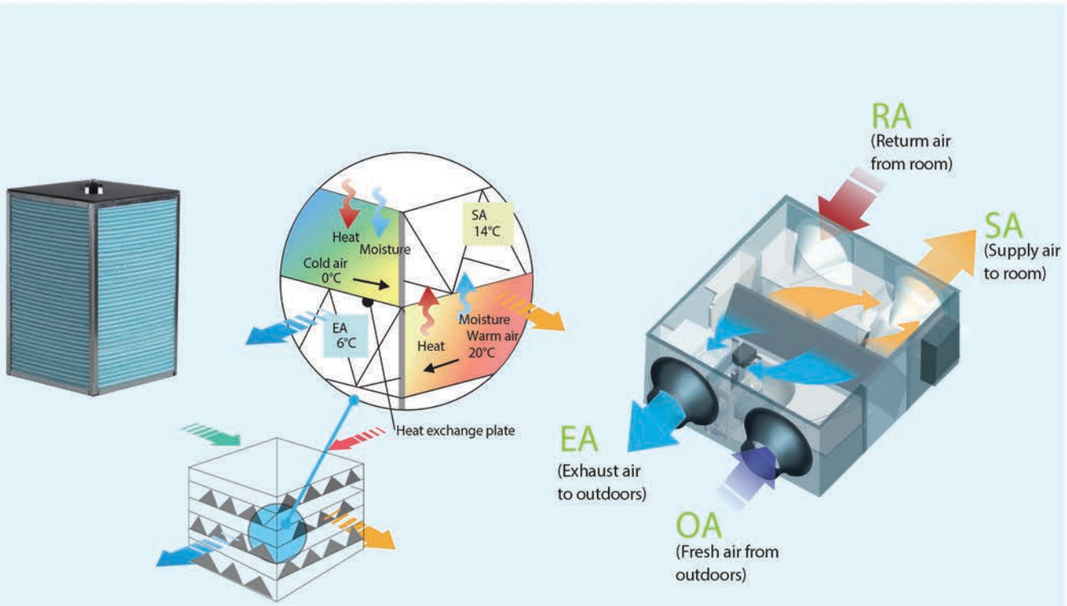
The Midea heat recovery ventilator (HRV) can greatly reduce energy losses and room temperature fluctuations caused by the ventilation process. The General Royal HRV's strong performance is a result of the advanced technology incorporated into its design. The heat exchanger core is made of specially treated paper which gives enhanced temperature and humidity control. Temperature exchange efficiency is over 65% and enthalpy exchange efficiency is 50-65%.

Model Names

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

HRV-1500
HRV-2000

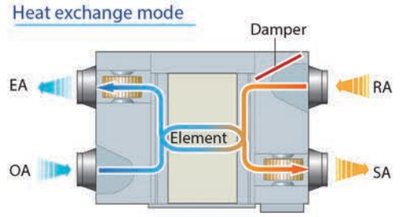




Multiple Modes

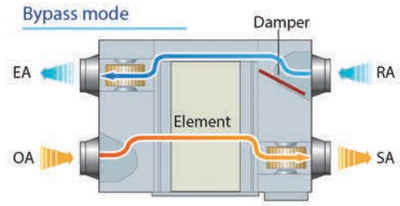
Heat exchange mode

The flows of incoming and outgoing air pass close to each other, allowing heat transfer between the two channels.
During summer, incoming air is cooled by the indoor air being exhausted and in winter, incoming air is warmed.



Bypass mode

In mild climates or seasons, where temperature and humidity differences between indoors and outdoors are small, the HRV can work as a conventional ventilation fan. In standard bypass mode the supply and exhaust fans run at the same speed.



Air supply mode

Air supply mode is a form of bypass mode where the supply fan is set to run faster than the exhaust fan, which is useful in mild climate installations with high fresh air ventilation requirements.

Exhaust mode

Exhaust mode is a form of bypass mode where the exhaust fan is set to run faster than the supply fan, which is useful in mild climate installations with large amounts of exhaust air to be expelled.

Auto mode

The controller chooses heat exchange mode or bypass mode according to the temperature difference between outdoors and indoors . Both fans are set to run at low speed.

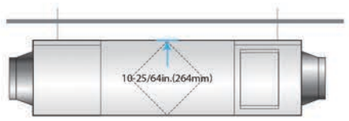
HRV UNIT

FLEXIBLE CONTROL

HRV can be controlled together with other indoor units.

Flexibility

Heights starting from as little as 264mm and weights from as little as 23kg mean that the General Royal HRV can be easily installed even where space is limited.



Low noise

Soundproofing is used to guarantee quiet operation.

Specifications

Model				HRV-400	HRV-500	HRV-800
Power supply			V/Ph/Hz	220/1/60	220/1/60	220/1/60
Cooling	Temperature exchange efficiency	High	%	55	55	55
		Medium	%	55	55	55
		Low	%	60	60	60
	Enthalpy exchange efficiency	High	%	50	50	50
		Medium	%	50	50	50
		Low	%	55	55	55
Heating	Temperature exchange efficiency	High	%	60	65	65
		Medium	%	60	65	65
		Low	%	65	70	70
	Enthalpy exchange efficiency	High	%	60	60	60
		Medium	%	60	60	60
		Low	%	65	65	65
Sound pressure level	Heat exchange mode	High	dB(A)	32	35	39
		Medium	dB(A)	31	34	38
		Low	dB(A)	25	28	32
	Bypass mode	High	dB(A)	33	36	40
		Medium	dB(A)	32	35	39
		Low	dB(A)	27	30	34
Net dimension (W×D×H)			mm	944×927×270	1038×1026×270	1286×1006×388
			inch	37-3/16×36-1/2×10-5/8	40-7/8×40-3/8×10-5/8	50-5/8×39-5/8×15-1/4
Packing size (W×D×H)			mm	1020×1020×452	1120×1120×452	1380×1100×573
			inch	40-5/32×40-5/32×17-3/4	40-5/32/40-5/32/8×17-13/16	54-5/16×43-5/16×22-9/16
Net/gross weight			kg(lbs)	31/52(68.3/114.4)	41/64(90.4/140.8)	62/88(136.7/193.6)
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(CFM)	400(235.6)	500(294.5)	800(471.1)
		Medium	m³/h(CFM)	400(235.6)	500(294.5)	800(471.1)
		Low	m³/h(CFM)	300(176.7)	375(220.8)	600(353.4)
	ESP	High	Pa	80	80	100
		Medium	Pa	65	68	82
		Low	Pa	43	45	54
	Motor output		W	80	120	360
Duct diameter			mm(in.)	Φ144(5-5/8)	Φ194(7-5/8)	Φ242(9-1/2)
Operating temperature range			℃	-7~43 DB, 80% RH or less		
			℉	19.4~109.4 DB, 80% RH or less		

Model				HRV-1000	HRV-1500	HRV-2000
Power supply			V/Ph/Hz	220/1/60	220/3/60	220/3/60
Cooling	Temperature exchange efficiency	High	%	55	55	55
		Medium	%	55	/	/
		Low	%	60	/	/
	Enthalpy exchange efficiency	High	%	50	50	50
		Medium	%	50	/	/
		Low	%	55	/	/
Heating	Temperature exchange efficiency	High	%	65	65	65
		Medium	%	65	/	/
		Low	%	70	/	/
	Enthalpy exchange efficiency	High	%	60	60	60
		Medium	%	60	/	/
		Low	%	65	/	/
Sound pressure level	Heat exchange mode	High	dB(A)	40	51	53
		Medium	dB(A)	39	/	/
		Low	dB(A)	33	/	/
	Bypass mode	High	dB(A)	41	52	54
		Medium	dB(A)	40	/	/
		Low	dB(A)	35	/	/
Net dimension (W×D×H)			mm	1286×1256×388	1600×1270×540	1650×1470×540
			inch	50-5/8×49-7/16×15-1/4	63×50×21-1/4	65×57-7/8×21-1/4
Packing size (W×D×H)			mm	1400×1370×573	1710×1410×720	1760×1610×720
			inch	55-1/8×53-15/16×22-9/16	67-21/64×55-33/64×28-11/32	69-19/64×63-25/64×28-11/32
Net/gross weight			kg(lbs)	79/110(173.8/242)	163/224(358.6/492.8)	182/247(400.4/543.4)
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(CFM)	1000(588.2)	1500(882.4)	2000(1176.5)
		Medium	m³/h(CFM)	1000(588.2)	/	/
		Low	m³/h(CFM)	750(441.2)	/	/
	ESP	High	Pa	100	160	170
		Medium	Pa	85	/	/
		Low	Pa	58	/	/
	Motor output		W	360	450	450
Duct diameter			mm(in.)	Φ242(9-1/2)	346×326(13-5/8×12-7/8)	346×326(13-5/8×12-7/8)
Operating temperature range			℃	-7~43 DB, 80% RH or less		
			℉	19.4~109.4 DB, 80% RH or less		

Note:
1. For the units model of HRV (400-1000), 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(80.6°F) DB,19.5°C(67.1°F) WB., Fresh Air Temp. 35°C(95°F) DB,28°C(82.4°F) WB.
* Heating Condition: Air Exhaust Temp. 21°C(69.8°F) DB,13°C(55.4°F) WB., Fresh Air Temp. 5°C(41°F) DB,2°C(35.6°F) WB.

GENERAL® Royal

A Better Air Conditioner Supplier

CONTROL SYSTEMS

Wireless Remote Controllers
RM02
RM05

Wired Controllers
KJR-29B
KJR-90D
KJR-86C
KJR-12B
KJR-120B
KJR-120C
KJR-27B

Centralized Controllers and Monitors
CCM30
MD-CCM03
MD-CCM09
KJR-90B
MD-CCM02

Network Control Software and Gateways
IMM Software & M-Interface
Data Converter CCM15
KNX Gateway MD-KNX
BACnet Gateway MD-CCM08
LonWorks Gateway LonGW64
Modbus Gateway CCM-18A

Accessories
Hotel Key Card Interface Module MD-NIM05/E
Infrared Sensor Controller MD-NIM09
3-Phase Protector
Digital Power Meter
Indoor Unit Group Controller KJR-150A
Remote Alarm Controller KJR-32B
Network Electricity Distribution Module MD-NIM10
AHU Control Box
General Royal Outdoor Unit Diagnosis

CONTROL SYTEMS

GENERAL® Royal

A Better Air Conditioner Supplier

WIRELESS REMOTE CONTOLLER

RM05

Auto Mode

Auto mode is specially designed for V4+R system.
Can automatically switch the cooling and heating mode through the temperature difference between the indoor temperature and the setting temperature.

* For the 2-pie system, it runs cooling mode olny.

Background Light

The background light allows users to operate the device in a dark room. The device lights up when a button is pressed, and turns off when a given operation is

Address Setting

Besides the machine's auto addressing function, users can set the indoor unit's address on the wireless remote controller

RM02

Follow Me

With the follow me function, temperature sensor built-in the remote controller will automatically adjusts temperature and send it to the indoor unit to make the room more comfortable.

*Follow me function is available for RM02.

Auto mode | Dry mode | Heat mode | Cool mode | Fan mode | 24h Timer | Lock | Address setting | Follow Me

Benefits

Model name	 RM02	 RM05
Mode change	●	●
Temp. setting	●	●
Fan speed control	●	●
Keyboard lock	●	●
Eco operation	●	●
Swing function	●	●
Air direction	●	●
24h timer	●	●
Clock display	–	●
Address setting	●	●
Follow me function	●	–
26°C shortcut setting	●	–
Background light	●	●

Notes:

1. ECO function needs to match with the corresponding indoor units.
2. ● : available controller functions; – : not available controller functions

Specifications

Model	RM02	RM05
Dimensions (H×W×D)(mm)	150×60×15	150×65×20
Power (V)		1.5V(LR03/AAA)×2

CONTROL SYTEMS

WIRED CONTROLLER

KJR-86C

KJR-29B

KJR-90D

- Clean Filter Reminder
- Silent Mode
- One-key 26°C
- Keyboard Lock
- Follow Me
- Address Setting
- Remote Signal Receiver

KJR-10B

- Keyboard Lock
- Follow Me
- Addresses Setting
- Easy Connection

KJR-12B

KJR-120B

V4 PLUS R WIRED CONTROLLER

- Auto Mode
- Error Display
- Filter Cleaning Reminder
- Silent Mode

KJR-120C

WEEKLY SCHEDULE TIMER

- Simple Design
- Weekly Schedule Timer
- °F/°C Switch
- Delay Function
- Error Display

KJR-27B

HRV WIRED CONTROLLER

- Built-in Timer

CENTRALIZED CONTROLLER

- Centralized Control
- Air Filter Cleaning Reminding Function
- Single/Unified Control Mode
- Stylish Design

Specifications

Model	KJR-29B	KJR-90C	KJR-86C	KJR-12B	KJR-27B	KJR-120B	KJR-120C
Dimensions (H×W×D)(mm)	120×120×20	86×86×16.5	86×86×18	120×120×15	120×120×15	120×120×20	120×120×20
Power (V)	DC 5V (Supplied by indoor unit)						DC 12V by IDU

Benefits

Model name	 KJR-12B	 KJR-29B	 KJR-90D	 KJR-86C	 KJR-120B	 KJR-120C
Fan speed control	●	●	●	●	●	●
Mode change	●	●	●	●	●	●
Auto mode for V4+R	—	—	—	—	●	—
Eco mode	●	—	●	—	—	—
Keyboard lock	●	●	●	—	●	●
Swing function	●	●	●	—	●	●
Background-light	●	●	●	●	●	●
24h timer	●	●	●	—	●	●
Clock display	—	●	●	—	●	●
Address setting	—	●	●	—	—	—
Receiving remote signal	—	●	●	—	—	—
Clean filter reminder	—	●	●	—	●	—
Follow me function	●	●	●	—	—	—
Silent mode	—	●	●	●	●	—
26°C shortcut setting	—	—	—	●	—	—
Display indoor temp.	—	—	—	●	—	—
°F/°C initial setting	—	●	●	—	●	●
Weekly schedule timer	—	—	—	—	—	●
Delay function	—	—	—	—	—	●
Auto restart	—	●	●	●	●	●
Error code display	—	—	—	—	●	●

Notes:

1. ECO function needs to match with the corresponding indoor units.
2. ● : available — : unavailable

Benefits

Model	 CCM30	 MD-CCM03	 MD-CCM09
Max. number of indoor units	64	64	64
Group control	●	●	●
Individual control	●	●	●
Fan speed control	●	●	●
Mode selection	●	●	●
Mode lock	●	●	●
Remote controller lock	●	●	●
Keyboard lock	●	●	●
Weekly schedule timer	—	—	●
24h timer	●	●	●
Error check	●	●	●
Emergency start	●	●	●
Emergency stop	●	●	●
Background light	●	●	●
Swing function	●	●	●
Air filter cleaning reminder	●	—	—
Parameter query	●	●	●
BMS access	●	●	—

Notes:

● : available — : unavailable

Specifications

Model	MD-CCM03	CCM30	MD-CCM09
Dimensions	179×119×74	180×122×78 and 180×122×68	179×119×74
(H*W*D)(mm)	198-242V(50/60Hz)		

UNIFIED ON/OFF CONTROLLER

KJR-90B

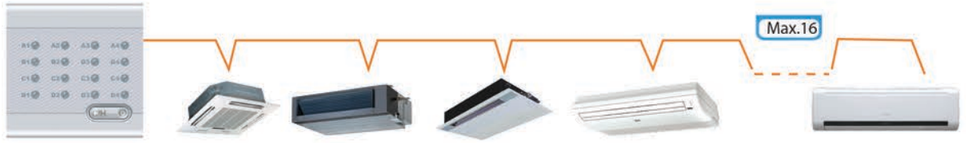
Stylish unified controller design with a clear panel.
Can control single or group indoor units.

Unified Control

KJR-90B offers on/off and heating/cooling functions for indoor units based on preset temperatures to ensure easy management.

Centralized Control

KJR-90B can be used to centrally control up to 16 indoor units.



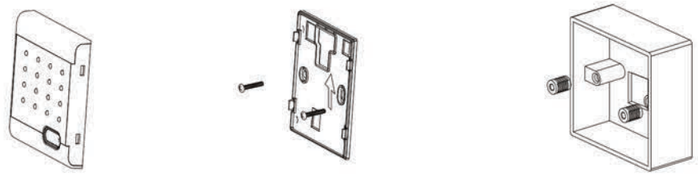
Light Indicator

The LEDs on KJR-90B indicate indoor units' running status for easy fault detection. The lights switch off automatically to save energy once an action is completed. The indicators are as follows:

Light	Blue	Red	Flash
Single On/Off key	Cooling/Fan	Heating	IDU Error
Unified On/Off key			EEPROM Error

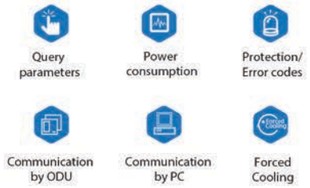
Easy Installation

KJR-90B can be easily mounted on the built-in cabinet:



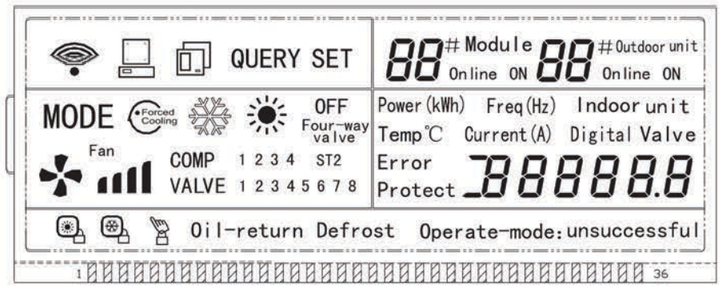
OUTDOOR CENTRALIZED MONITOR

MD-CCM02



ODU Parameters Display

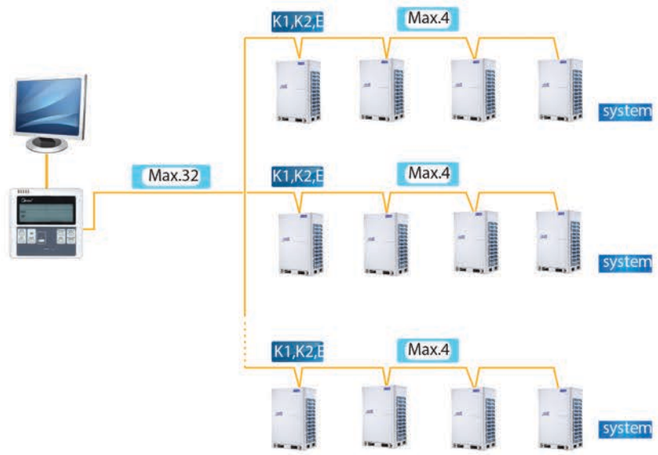
MD-CCM02 enables users to easily check outdoor units' running status, including frequency, temperature, current, pressure, protection codes and error codes.



Graph 2 LCD Screen

Access to Network Monitoring

MD-CCM02 can connect up to 8 refrigerant systems and 32 outdoor units to the network system.



Specifications

Model	MD-CCM02
Dimensions(H×W×D)(mm)	120×120×15
Power (V)	198-242V(50/60Hz)

CONTROLLER

Wireless Remote Controllers

Model	Appearance	Function Descriptions	Applicable FCUs
RM05		❖ LCD display screen ❖ Mode control ❖ Fan speeds control ❖ Time setting / Temp. setting / Swing setting	4-way Cassette (standard) 1-way Cassette (standard)
RM02			Compact 4-way cassette (standard) Wall-mounted (standard)

Wired Controllers

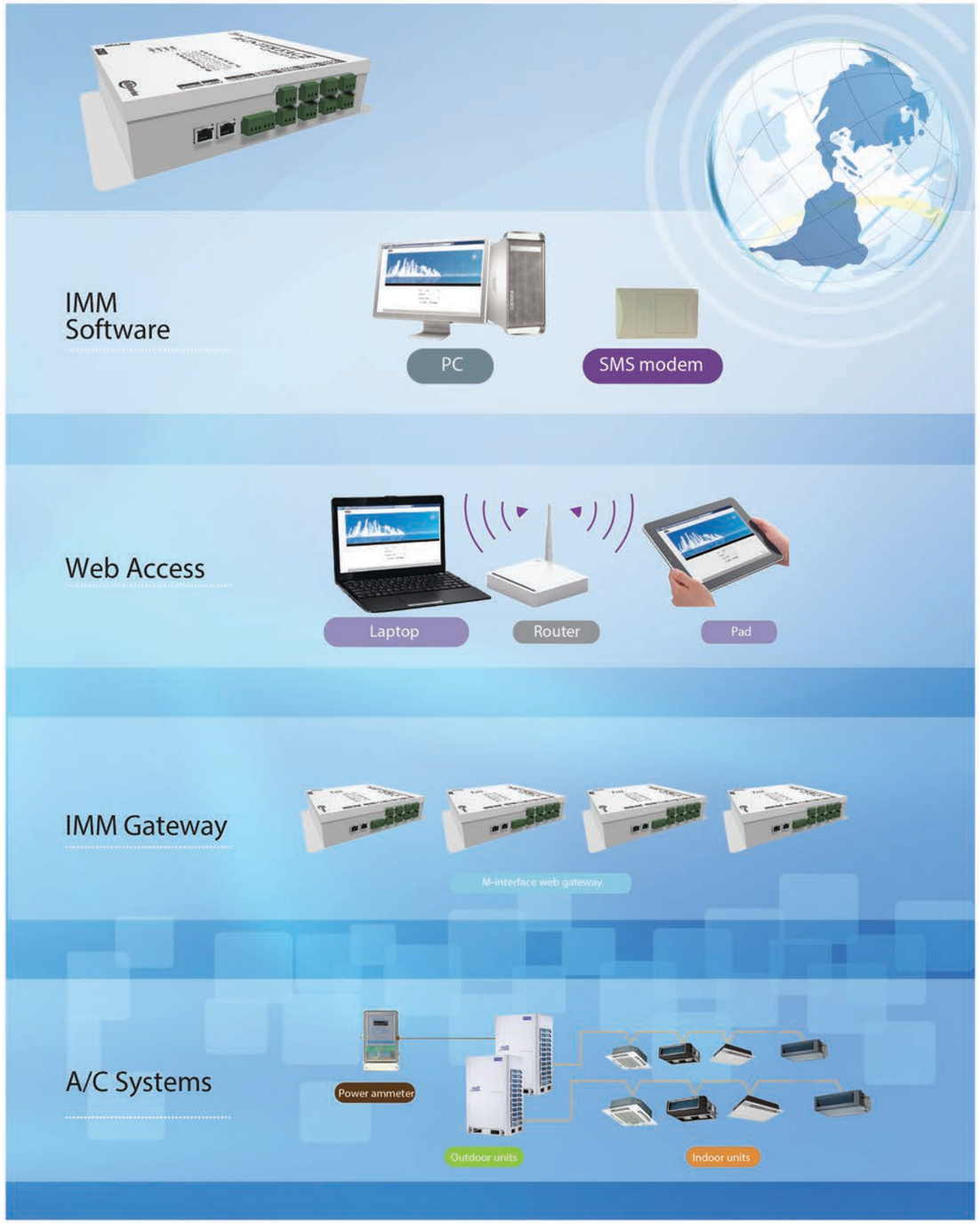
Model	Appearance	Function Descriptions	Applicable FCUs
KJR-90C		❖ LCD display screen ❖ Mode control ❖ Fan speeds control ❖ Timer setting / Temp. setting	Duct without electric heater (optional)
KJR-29B		❖ Mechanical thermostat ❖ Mode control ❖ Fan speeds control ❖ Temp. setting	Duct without electric heater (optional)
KJR-86C		❖ LCD display screen ❖ Mode control / Fan speeds control ❖ Electric heater control ❖ Temp. setting	Duct with electric heater (optional)
KJR-10B		❖ LCD display screen ❖ Mode control ❖ Fan speeds control ❖ Temperature display in °F or °C	Floor-standing / Ceiling&Floor (optional)
KJR-12B		❖ Receiving remote signal ❖ Mode control ❖ Fan speeds control ❖ Temp. setting	Cassette / Wall-mounted (optional)

Centralized Controllers

Indoor Controller

Model	Appearance	Function Descriptions	Applicable FCUs
CCM03		❖ Large LCD display screen ❖ Max. of 64 FCUs can be controlled by a CCM03 ❖ Mode control / fan speed control ❖ Time setting / temp. setting / swing setting	All FCUs (1-way cassette and compact 4-way cassette FCUs need adding NIM01 module, non-PCB FCUs need adding PC board control kit)
CCM09		❖ Weekly schedule function ❖ Basic functions are same as CCM03	
CCM30		❖ Touch-style keys ❖ Basic functions are same as CCM03	

NETWORK CONTROL SOFTWARE & GATEWAYS



GENERAL® Royal

A Better Air Conditioner Supplier

NETWORK CONTROL SOFTWARE AND GATEWAYS

IMM software

General Royal 4th Generation Network Control System

Up to 4 M-interface gateways, 64 refrigerant systems, 1,024 indoor units, and 256 outdoor units can be controlled by one PC
User-friendly
Web access for M-interface gateway
Central building monitoring and control
Energy management
Zone management
Warning message

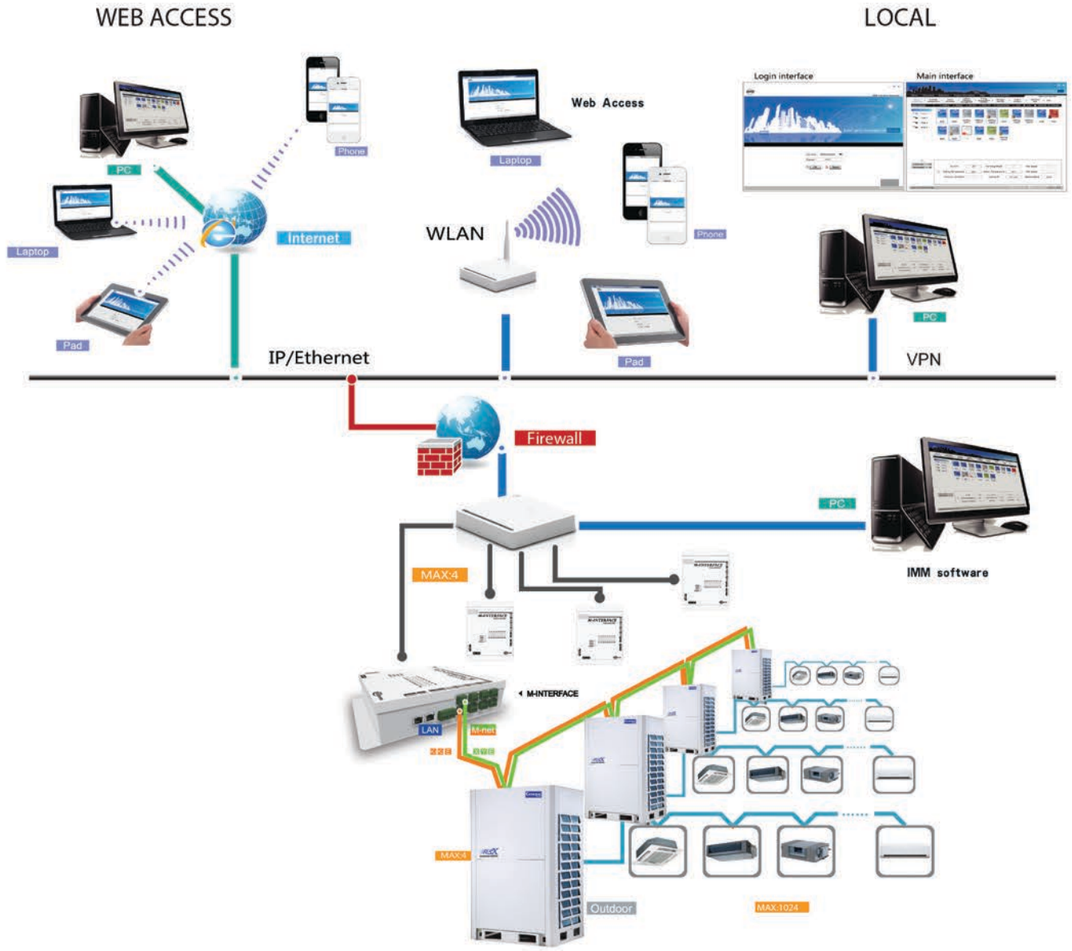
M-interface Gateway

Electricity charge distribution
Annual schedule management
Low-load operation indicator
Operational history reports (daily, weekly)
Fault display
Clean filter reminder
Emergency stop and Alarm signal output
Multiple languages

Web Access function | Energy Management | Schedule Management | Visual Navigation | Warning Message | Data Backup | Multiple Languages | Electricity Charge Distribution

Network Control Application

Compatible with Windows XP 32 bit, Windows 7 32/64 bit and Windows 8
Browser-based access on a PC, tablet computer or smart phone
Remote access via VPN link to network allows anytime, anywhere monitoring and control
Full support for access via IE, Firefox, Safari and Chrome



Simple Operation and Management

Flexible and highly efficient centralized management system
User-friendly 'click and operate' interface allows non-experts to easily run the building management system

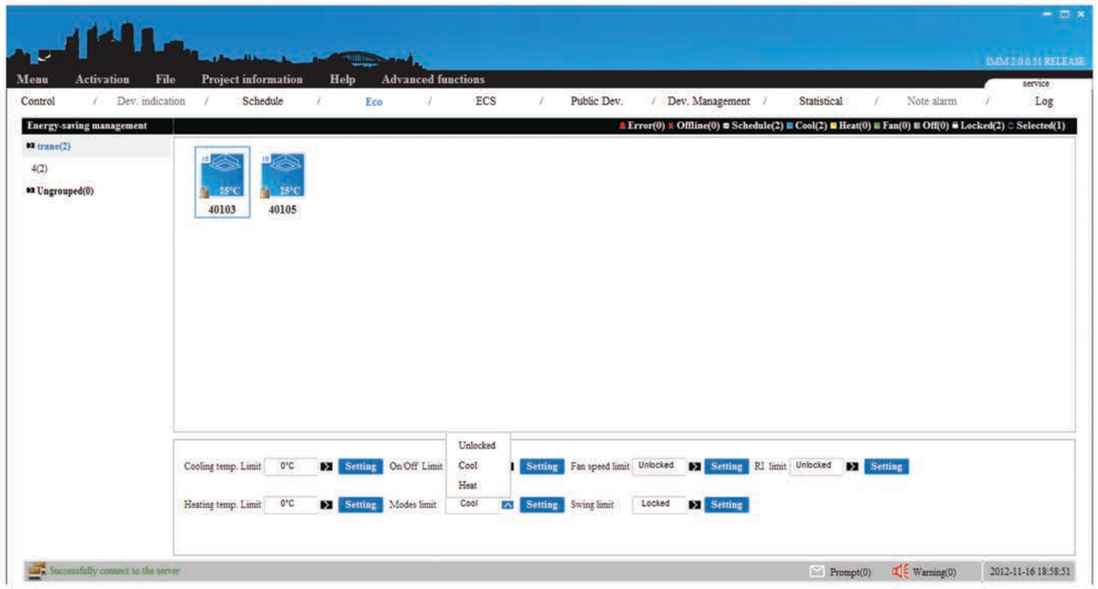
Visual Schematic

By importing floor plans into IMM and using the drag and drop interface to position the indoor units on the floor plan, users can create a tailored system schematic which enables monitoring and control of each unit's status and parameters through a clear visual representation of the system layout.

Energy Management

Based on a predetermined schedule, the Intelligent Manager executes capacity control and intermittent operations on all air conditioning units to maintain a high comfort index.
User can set a limit on any running unit, any parameter, such as cooling temp., heating temp., fan speed, operation mode, and so on.

* 1. Meet with the <Public building energy efficiency management regulations>.
  2. Matches the corresponding indoor units.



Schedule Management

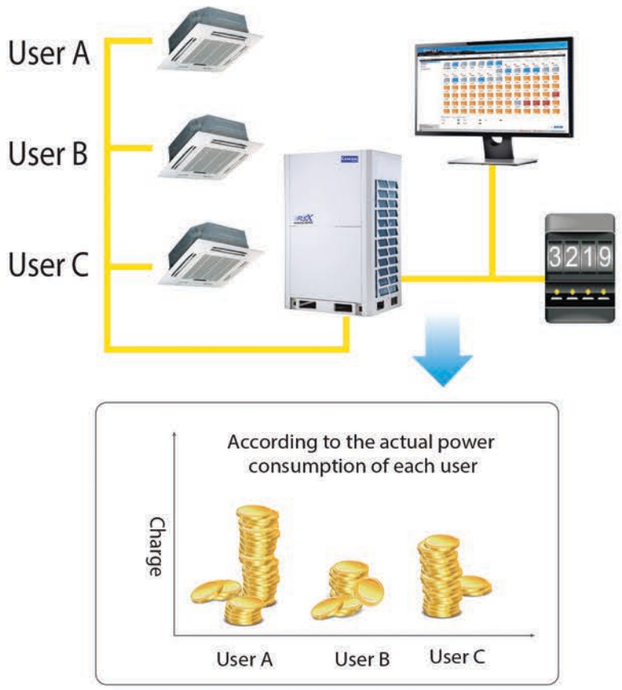
Automatically performs facility start/stop control, switches the operating mode, sets temperatures and enables/disables the remote control according to the present time schedule.

Users can set up day/week task for running periodically.

Users can choose indoor units and assign task times as required.

Except for the conventional setup, the system offers all kinds of energy conservation options.

Electricity Charge Distribution (Patented)



Electricity Charge Distribution (Patented)

Provides information on proportional electrical power distribution to optimize electricity consumption management.

Uses software to calculate electric power proportional distribution. The software also outputs and saves electricity consumption data for each indoor unit (or group) connected to the intelligent manager.

Applies the patented General Royal Calculation Method to calculate consumption rates according to the capacity demand based on various parameters: temperature setting, room temperature, running mode, rated HP, public areas, unused rooms, and nighttime use. It outputs this information on a charge calculation sheet to evenly divide power consumption charges among tenants.

Electricity charges can be easily divided when billing users for air conditioning power charges; for example, for

DATA CONVERTER

The cloud server controller enables remote control on the VRF system through the Internet.

Smart phones, tablets, laptops, and desktop PCs can serve as a web controller for up to 64 indoor units.

CCM15

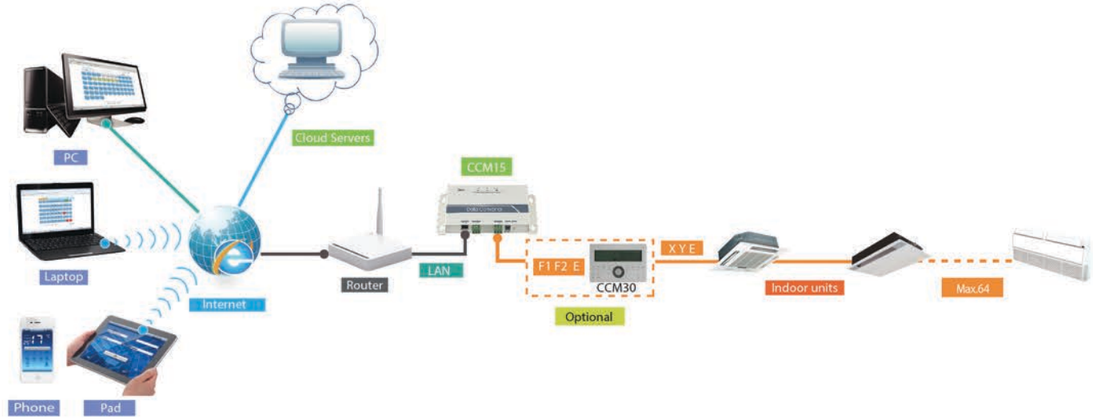
Network Example

Can directly connect to the XYE port of indoor/outdoor units.

Can connect up to 64 indoor units.

CCM03/CCM30 is optional, and can be connected with CCM15 through F1F2E ports.

The system comprises an A/C system, data converter CCM15, router, cloud server and control terminal.



Simple Control Interface

Software control/ Cloud server control (WEB access).

Click & Operate: the user-friendly interface.

Allows single and group control.

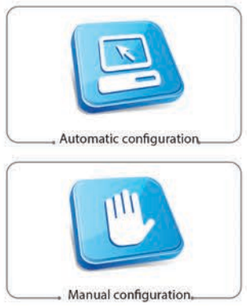
Simplified user control interface.

Color indication and icons makes it easy to recognize unit status.

Includes a full-screen display, and allows temperature adjustment by swiping.

Automatic & Manual Topology

With automatic topology mode and manual topology mode.



Each M-interface gateway can support up to 4 refrigerant systems, 16 outdoor units and 256 indoor units.

Each M-interface gateway can support up to 16 refrigerant systems, 64 outdoor units and 256 indoor units.

Warning Message

The system can receive error messages from air conditioning units in more than one building on public phone lines. If a particular factor influences normal operations, the system will send a message to technicians as an early warning.

*Requires the Midea "SMS Modem" to send automatic warning messages to designated phone numbers.

Zone Management

Zones can be set up to enable the easy management of areas with differing heating/cooling requirements such as offices, restaurants, gyms and lobbies.

Data Backup

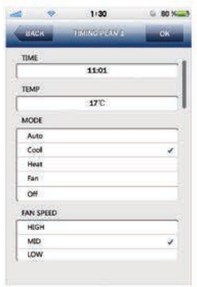
Double data backup stored on the M-interface and IMM database.
The M-interface gateway automatically backs up power data for 1 or 2 months if a system failure occurs.
Examples: if there is a PC power failure or a system crash, the M-interface will automatically backup the data to the gateway.
IMM software also stores running data on the software database.

Multiple Language Options

Nine languages are supported and can be selected by the user.

Weekly Schedule Control

Users can set a weekly schedule either for specific units or for groups of units. Each day may be divided into multiple sections. The controller automatically controls each units' on/off status, operating mode and temperature settings according to the schedule.



Cloud Server Access

Query and control a single unit or group.
Weekly schedule setting: can set multiple sections in each day for a single unit or group.
Group user control: you can use the same ID to manage hundreds of CCM15 when you select the As group user button on the login page.
Historical errors: easy service and management with a history error function.

Added Convenience

The air conditioner can be remote controlled by a phone or tablet.
Query and control the running state of the A/C anytime, anywhere, and schedule queries and actions in advance.
Remotely turn off the air conditioner to avoid wasting power.

Intelligent Control

The air conditioner can be remote controlled by a phone or tablet.
Query and control the running state of the A/C anytime, anywhere, and schedule queries and actions in advance.
Remotely turn off the air conditioner to avoid wasting power.

BMS

KNX Gateway

CCM-18A/N
CCM-18A/N-U

Modbus® Gateway

MD-CCM08

BACnet® Gateway

LonGW64

LonWorks® Gateway

BMS Integration

Monitoring and control of General Royal VRF air conditioners can be integrated into building management systems, enabling air conditioning to be monitored alongside lighting, power, fire, access and security systems. General Royal gateway devices provide full compatibility with the four leading BMS protocols: BACnet, LonWorks, Modbus and KNX.

MD-KNX

KNX Gateway

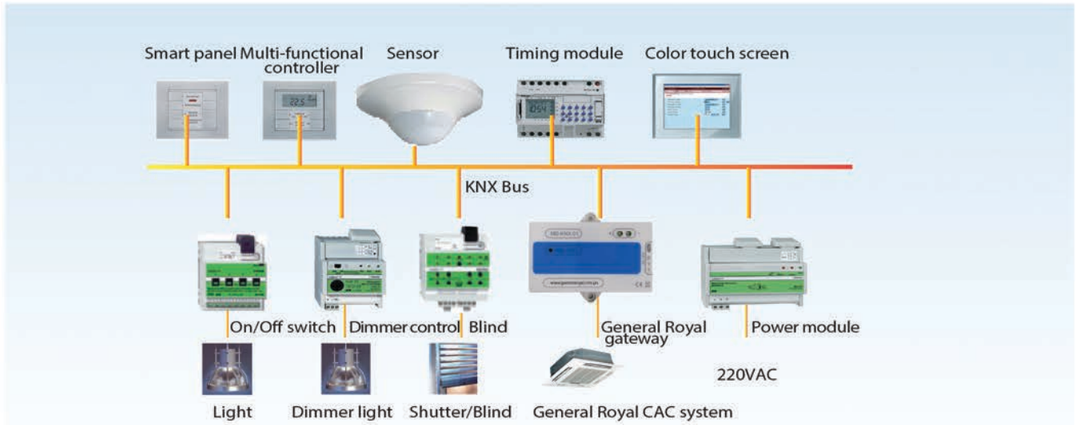
Specially designed to allow monitoring and bidirectional control on the parameters and functionality of the General Royal air conditioner from KNX installations

Key features:

Compatible with all General Royal VRF products
External power not required
Full KNX compatibility, configured using ETS
Multiple parameters can be set
Easy to install - connects directly with indoor units using RS485
Connects directly to the KNX bus
KNX certification

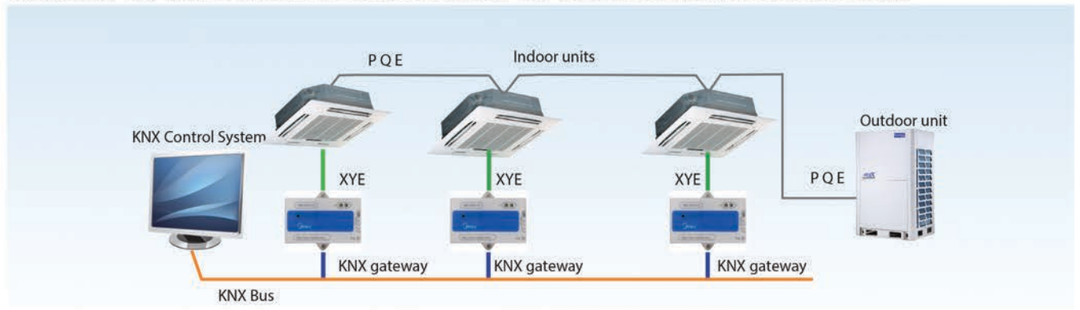
Broad Integration

Being compatible with the KNX protocol means that General Royal VRF air conditioners can be integrated into control systems alongside the wide range of KNX compatible products that are available.



Electrical Wiring

One gateway only can be connected to one indoor unit. Can only connect to the XYE port of the indoor unit.



Modbus® Gateway

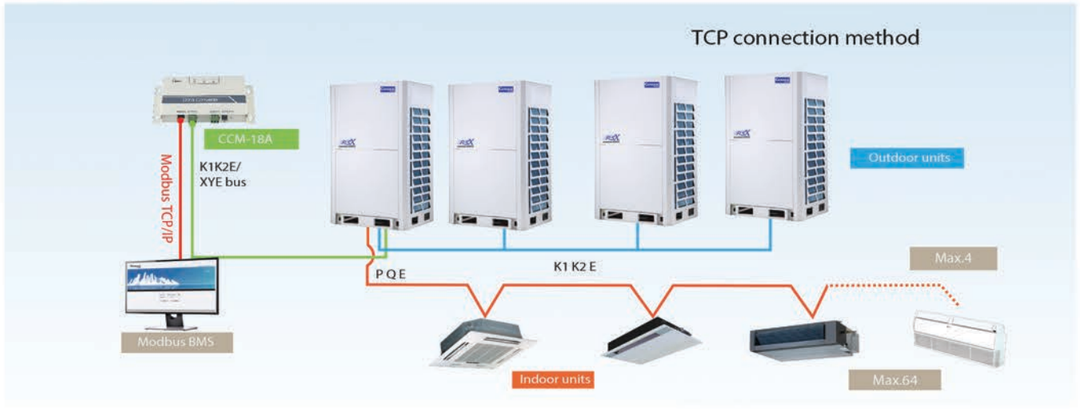
Modbus is a serial communications protocol originally published by Modicon (now Schneider Electric) in 1979 for use with its programmable logic controllers (PLCs). Modbus is often used to connect a supervisory computer with a remote terminal unit (RTU) in

Key features:

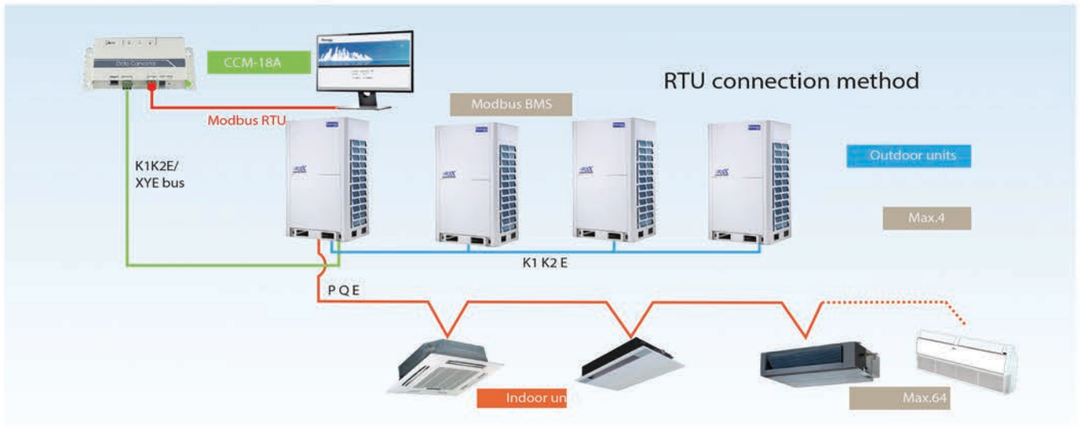
Supports Modbus protocol networks
Bridges the General Royal central A/C system to the BMS
Built-in WEB server function
Connect to the BMS system through TCP/IP or RTU
Two models: CCM-18A/N & CCM-18A/N-U
Model CCM-18A/N-U can only connect up to 16 indoor units.
Model CCM-18A/N can connect up to 64 indoor units and 4 outdoor units.

Network Example

1) TCP connection method



2) RTU connection method



LonGW64

LonWorks® Gateway

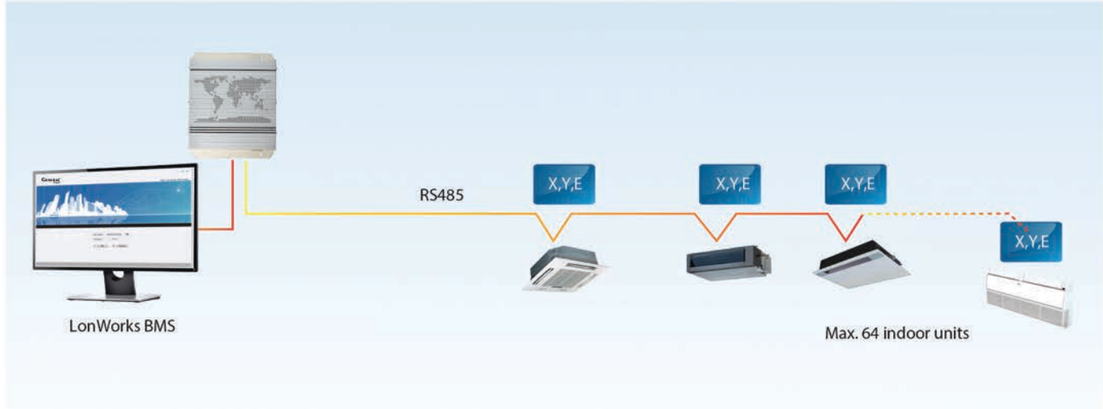
LonWorks (local operating network) is a networking platform specifically created to address the needs of control applications. The platform is built on a protocol created by Echelon Corporation for networking devices over media such as twisted pairs, power lines, fiber optics, and RF.
LonWorks networks are recognized worldwide as the de facto standard

Key features:

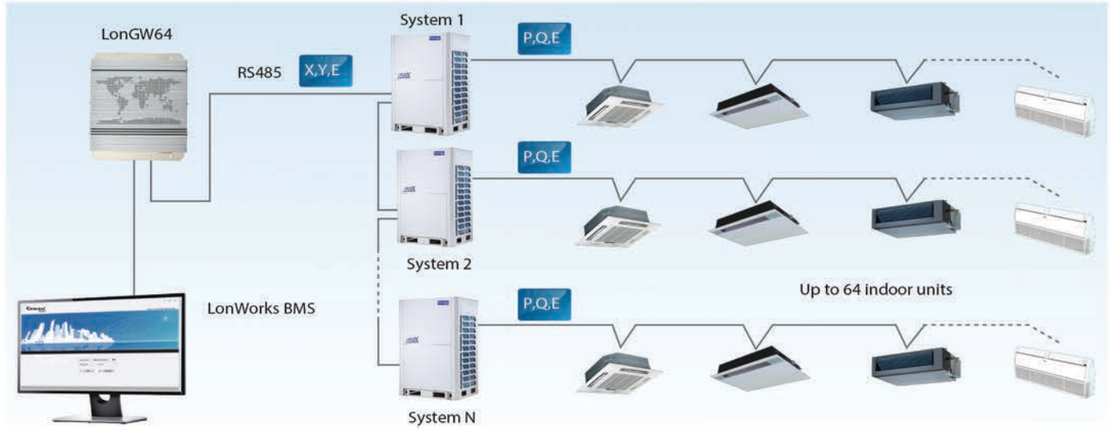
Connect to use LonWorks® protocol and General Royal air conditioner protocol
Compliance with LonMark protocol enables the management and control of A/C system Control various types of equipment from the customer's own PC
Connect up to 64 indoor units to the BMS
Option for large projects
Easy and fast installation

Network Example

Connection method 1: suitable for all air conditioning systems and can connect up to 64 indoor units.



Connection method 2: only suitable for the V4 plus system and can connect up to 64 indoor units.



*If it connects to XYE ports of the master ODU, the ODU must be set to auto addressing mode.

BACnet® Gateway

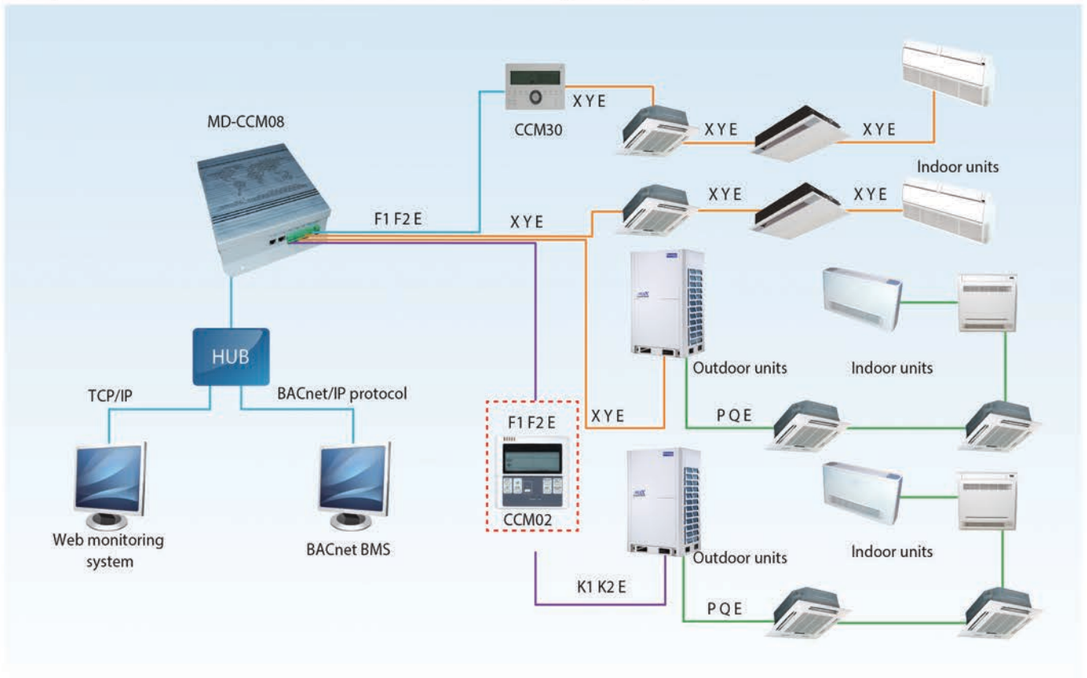
BACnet is a communications protocol for building automated control networks. BACnet was designed to allow building automation and control systems for applications to communicate; e.g., heating, ventilation, air conditioning control, lighting control, access control, and fire detection systems and their associated

Key features:

Precise and efficient monitoring and control of the General Royal VRF system
Connect up to 256 indoor units or 128 outdoor units to the BMS
Choose whether or not to connect to the BMS
Built-in WEB function
BTL certification

Quick & Easy Installation

Each port can connect to IDU/ODU XYE ports or outdoor units' K1K2E ports.
Each port can also connect to one CCM03 or one CCM02 through F1F2E ports.



Monitoring Units Online

MD-CCM08 allows users to track units' running status and change their running parameters on Internet Explorer for maximum control convenience.

Wide Compatibility

The MD-CCM08 is fully compatible with a wide range of leading building management systems.

	Company	BMS software	Brand
1	SIMENS	APOGEE	
2	TRANE	Tracer Summit	
3	Honeywell	Alerton	
4	Schneider	Andover	
5	Johnson	METASYS	

Specifications

LonWorks® Gateway

Model	LonGW64/E
Power supply	AC 220V~50/60Hz
Dimensions (HxWxD)(mm)	319×251×61

BACnet® Gateway

Model	MD-CCM08
Dimensions (HxWxD)(mm)	319×251×61
Power supply	AC 220V~50/60Hz

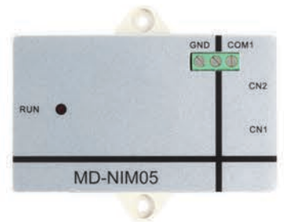
Modbus® Gateway

Model	CCM-18A
Dimensions (HxWxD)(mm)	319×251×61
Power supply	AC 220V~50/60Hz

CONTROLLING & MONITORING

Controlling	Monitoring	
— Operation mode setting — Temperature setting — Fan speed setting — Swing running for web — Lock remote controller	— Operation mode status report — Set temperature status report — Fan speed status report — RC locking status — Online quantity — Timer status — Error status — Room temperature display	BACnet® Gateway
– Operation mode setting – Temperature setting – Fan speed setting	– Operation mode status report – Set temperature status report – Timer status – Fan speed status report – RC locking status – Online/offline status – Error status – Room temperature display	Modbus® Gateway
– On/Off command – Operation mode setting – Temperature setting – Fan speed setting	– Operation mode status report – Set temperature status report – Fan speed status report – Online/offline status – Online quantity – Error status – Room temperature display	LonWorks® Gateway

HOTEL KEY CARD INTERFACE MODULE



MD-NIM05/E

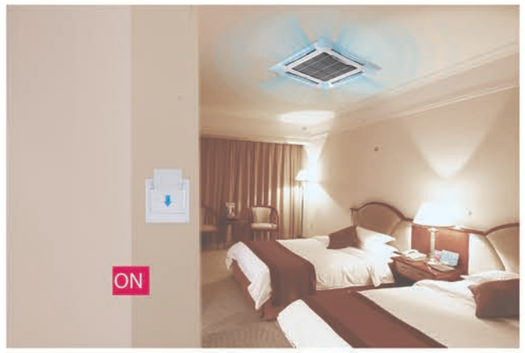
MD-NIM05B/E

Key Features :

MD-NIM05 is specially designed for hotel guest rooms, restaurants and so on. It works with a hotel card system
Simple, compact, and easy to operate; suitable for hotel rooms
Key card cooperates with wired controller to control the A/C
Eliminates the need for high voltage power, making the device safe and reliable
Includes a build-in auto-restart function
Remote controller or wired controller can control indoor units
Two types are available: MD-NIM05/E and MD-NIM05B/E

Application Example

The unit can be turned on or off when inserting or removing the key card.
When the key card is in place, the air conditioner is activated. When the key card is removed, the system can remember the previous setting and stop operation. If the key card is reinserted, the unit enters standby or runs in the same state as the previously. It can stop cooling an unoccupied room to save energy.



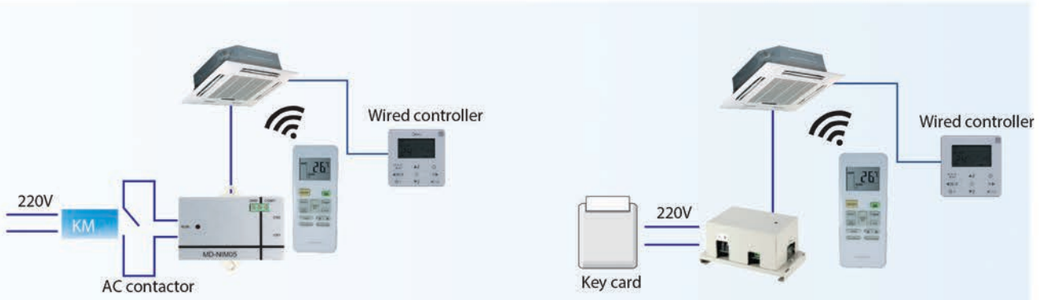
Installation Example

Easy installation and remote controller or wired controller can control indoor units.

Electrical Wiring

For MD-NIM05/E, users need to buy a high voltage relay for installation.

For MD-NIM05B/E, it can be directly connected to the hotel card-insert system (AC 220V) without a high voltage relay.



Specifications

Model	MD-NIM05/E	MD-NIM05B/E
Dimensions (H×W×D) (mm)	15.5×86×72.8	87×150×70
Power (V)	DC 5V (Supplied by indoor unit)	AC 220V

INFRARED SENSOR CONTROLLER

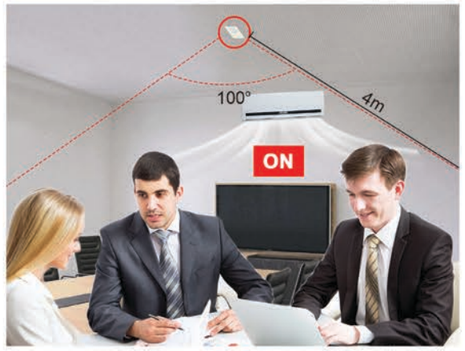
Infrared sensors can induct human activities in certain areas. Indoor units will be automatically turned on or off by sensing if the room is unoccupied.
It is suitable for hotels, offices, conference rooms, residences, etc.

- Automatically adjusts the room environment.
- Automatically extends the shut down time to avoid frequent ON/OFF.
- Stylish appearance accommodates itself to different buildings.

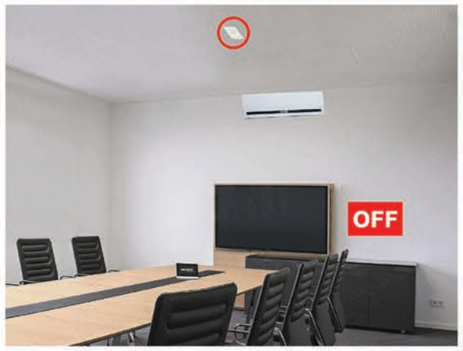
MD-NIM09

Accurate & Comfortable Sensor

It detects motion and automatically starts the air conditioner if motion is detected.
This function will save energy since it minimizes unnecessary energy usage by powering off when the area is empty.
The infrared sensor can be installed on the ceiling or wall of well-used areas.

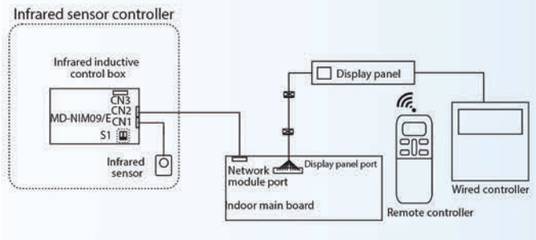


Install on the ceiling



Installation Example

Remote controller or wired controller can control indoor unit.



Electrical Wiring

Specifications

Model	MD-NIM09
Dimensions (H×W×D)(mm)	Sensor part: 46×30×25.6, Control box: 86×72.8×15.5
Power	DC 5V (Supplied by indoor unit)

3-PHASE PROTECTOR

HWUA/DPB71CM48

Detects power status and takes protective action to stop the compressor from being damaged.
Automatically distinguishes abnormal power supply conditions and automatically recovers.

HWUA

DPB71CM48

Excellent Reliability

The protector protects the entire system from power supply problems, and auto restarts after recovery.

Specifications

Model	With over/under voltage function				Without over/under voltage function
	HWUA	DPA53CM23	HWUA	DPB71CM48	DPA51CM44
Power supply	220~480V-3N 50/60Hz	208~480V-3N 50/60Hz	220~480V-3N 50/60Hz	380~480V-3N 50/60Hz	208~480V-3N 50/60Hz
Temp. range	-20°C~50°C	50Hz: -20°C~60°C 60Hz: -20°C~50°C	-20°C~50°C	-20°C~50°C	50Hz: -20°C~60°C 60Hz: -20°C~50°C
Rated operational power	2.9 VA	7 VA	2.9 VA	13 VA	13 VA
Over voltage	12%	12%	18%	18%	/
Under voltage	-12%	-12%	-12%	-12%	
Phase imbalance	8%	/	8%	8%	
Dimensions(W×H×D)(mm)	90×69×35	81×67.2×17.5	90×69×35	81×67×35	81×67.2×17.5

DIGITAL POWER AMMETER

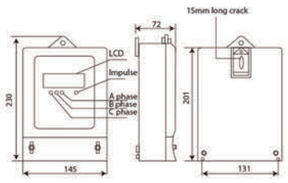
Calculates power consumption.
Does not need adjusting after long-term use.
Corresponds one outdoor unit to one digital power meter.

DTS634
DTS636

Low Power Consumption

The digital power meter consumes minimal energy.
Voltage circuit: less than 2W/10VA
Current circuit: less than 2.5VA

Indications & Installation



The digital power meter is tested after manufacture so it can be immediately deployed and used on-site. The LED indicators and installation schematic are shown in the figure on the left.

Specifications

Model	DTS634/DTS636
Dimensions (H×W×D)(mm)	230×145×72
Power (V)	200V-500V(50/60Hz)

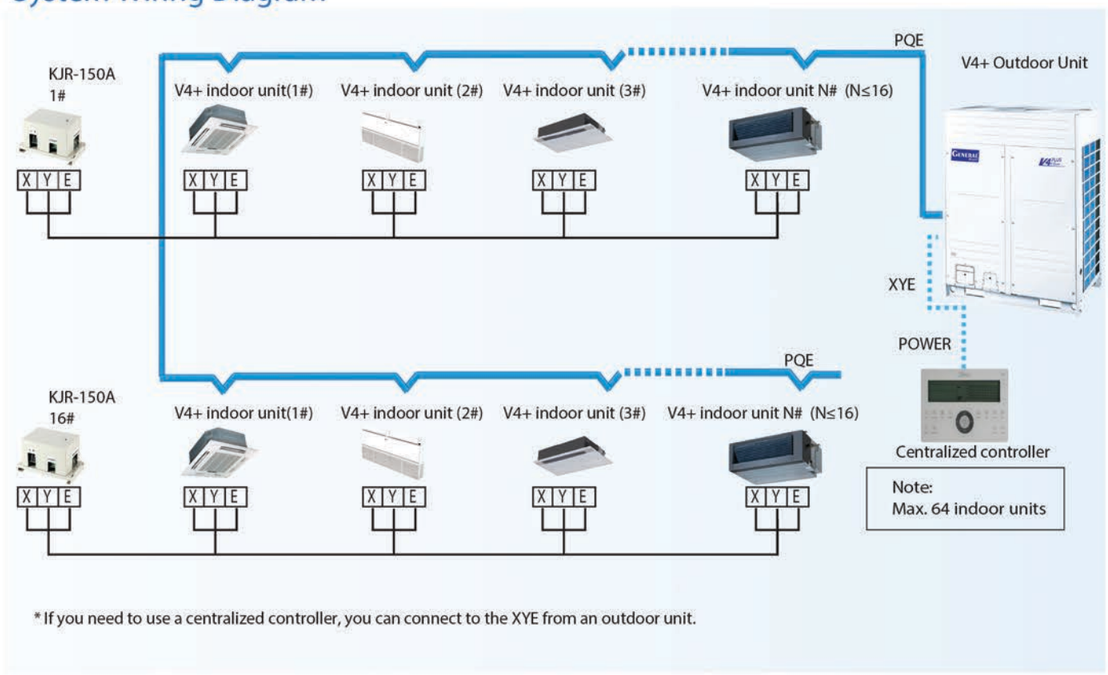
INDOOR UNIT GROUP CONTROLLER

KJR-150A

Simple Design

KJR-150A is a indoor group controller designed specifically for R4 plus indoor units.
It can connect up to 16 indoor units through XYE ports.
With a display panel connected to KJR-150A, signals from a wired controller and remote controller can control a group of indoor units simultaneously. All indoor units will run at the same setting parameters. You can also control indoor units separately in each room by remote controller. The indoor units will run as previously set.

System Wiring Diagram



* If you need to use a centralized controller, you can connect to the XYE from an outdoor unit.

Model	KJR-150A
Dimensions (HXWXD)(mm)	85X150X70
Power (V)	198-242V(50/60Hz)

REMOTE ALARM CONTROLLER

KJR-32B

Simple Design

KJR-32B is specially designed for engineering applications. It does not display the ODU's working parameters parameters. However, it can connect to the alarm device when the ODU is working abnormally, in which case the RUN light will flash.

Specifications

Model	KJR-32B
Dimensions (H×W×D)(mm)	85X150X70
Power (V)	198-242V(50/60Hz)

NETWORK ELECTRICITY DISTRIBUTION MODULE

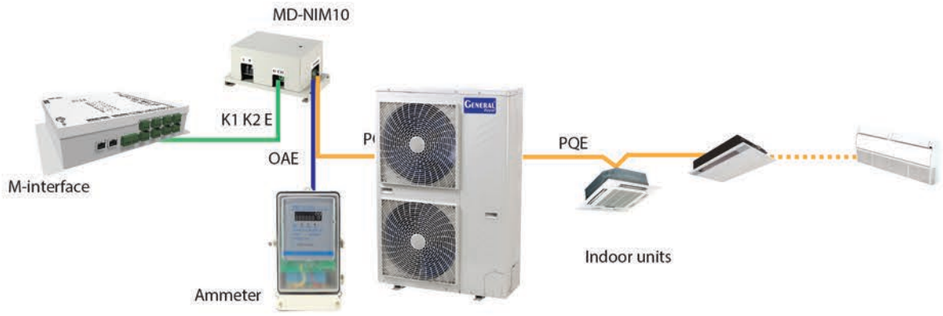
MD-NIM10

Simple Design

- External contact interface module
- Designed specifically for Mini VRF
- Provides the OAE ports for Mini VRF to connect with the IMM network control system, and distributes electricity across the network.

Wiring Diagram

OAE ports: connects to the OAE port of the ammeter.
PQE ports: connects to the PQE port of the outdoor unit.
Each port on M-interface gateway can only be connected with one MD-NIM10 through K1K2E ports.



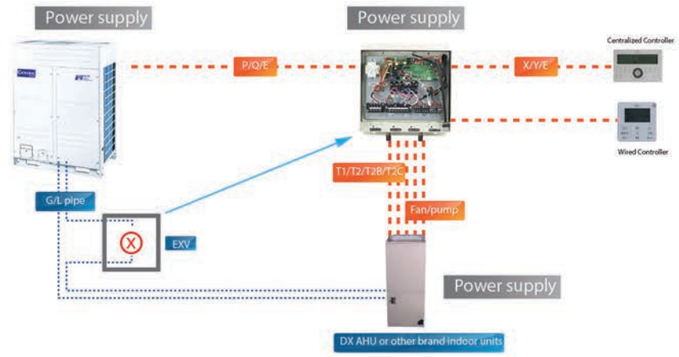
AHU CONTROL BOX

AHUKZ-01A AHUKZ-01B
AHUKZ-02A AHUKZ-02B
AHUKZ-03A AHUKZ-03B

Introduction

AHU Kit can be used to connect VRF outdoor units with DX AHU or other brand indoor units with AC fan motor.
A Series and B Series are supplied. These can connect with the General Royal VRF System (except R4+R& V5 Series). The A Series is an independent control box. For the B Series, up to four control boxes can be combined. The capacity reaches up to 224kW (80HP), and it's easy to create a solution for large projects.

Wiring Example



Specifications

Model	AHUKZ-01A/AHUKZ-02A/AHUKZ-03A
	AHUKZ-01B/AHUKZ-02B/AHUKZ-03B
Dimensions(H×W×D)(mm)	335×375×150
Power (V)	220-240V~ 50Hz 208-230V~ 60Hz

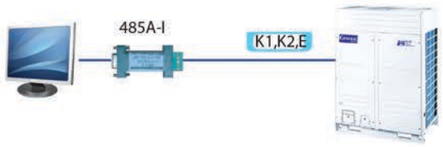
General Royal Outdoor Unit Diagnosis Software

Display the outdoor units' real-time running conditions.
Automatically outputs running status charts.
Supports V3, V4, V4+, D3, D4, V4+S and V4+R outdoor

MCAC-DIAG/E

Wiring Diagram

The diagnostic software applies to K1, K2, E of the outdoor units. The corresponding wiring diagram is shown in the figure on the right.



Recommended Config

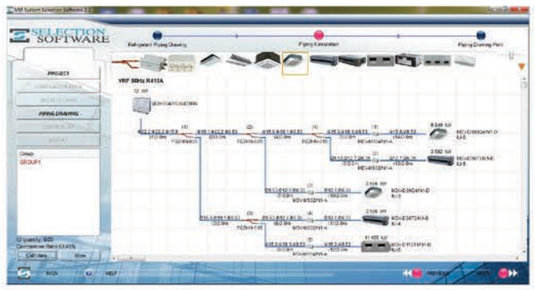
Operating system	WIN XP SP4/WIN 7
CPU	Pentium 4 2G or above
HDD	30G free space
Interface port	RS-232 terminal

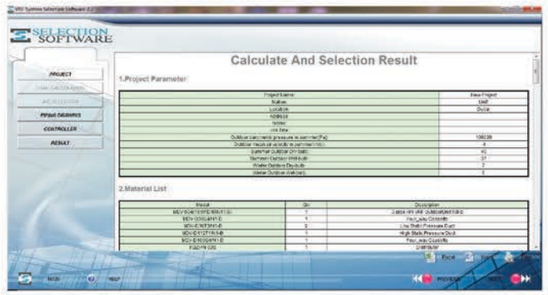
SELECTION SOFTWARE

To meet consultants' and distributors' requirements, General Royal has developed an advanced design automation tool that can be used in AutoCAD-based CAD version or Windows-based Sales version. The software provides quick and convenient selectable options for users, supports multiple languages, and greatly improves the selection process.

Windows Version

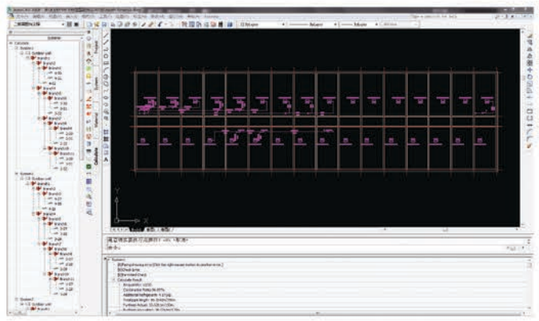
Load calculation: provides two calculation methods (detailed room load calculation and rough load calculation).
Indoor & outdoor units: choose from versatile indoor units and different outdoor units.
Piping drawing: displays the detailed layout of the A/C system and the parameters for piping and branch distributors.
Controller selection: provides a selection of controllers for indoor units and outdoor units, including wireless and remote controllers for indoor units.
Report output: outputs a comprehensive selection report as a Word or PDF document.

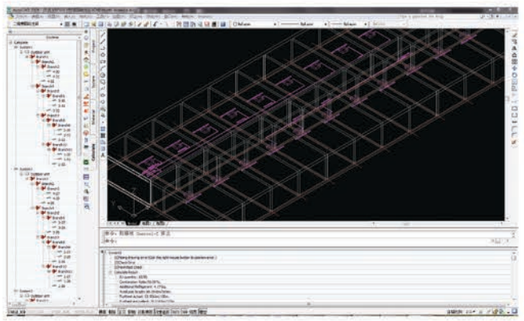




CAD Version

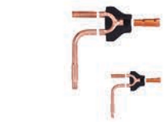
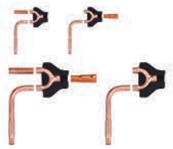
AutoCAD add-on software
Automatic Calculation: refrigerant & drain pipe size
Automatic Selection: distributor kit & branch joint
System Check: installation regulations & adding refrigerant
Automatic Report: piping installation diagram, equipment list & quotation





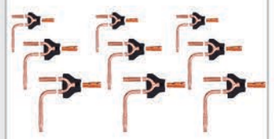
BRANCH PIPE

Branch joints of two-pipe refrigerant system

Model	Appearance	Model name	Packing Size in.(mm)	Gross Weight lbs.(kg)	Description
Branch joint for 410A outdoor unit		FQZHW-02N1D	10-1/16×5-7/8×7-1/4 (255×150×185)	3.3(1.5)	For two outdoor units connection
		FQZHW-03N1D	13-9/16×6-5/16×11-1/4 (345×160×285)	7.48(3.4)	For three outdoor units connection
		FQZHW-04N1D	18-3/4×6-1/2×11-3/4 (475×165×300)	10.56(4.8)	For four outdoor units connection
Branch joint for R410A indoor unit		FQZHN-01D	11-7/16×4-1/8×4 (290×105×100)	0.88(0.4)	A*<16.6kW
		FQZHN-02D	11-7/16×4-1/8×4 (290×105×100)	1.32(0.6)	16.6≤A*<33kW
		FQZHN-03D	12-3/16×5-1/8×4-15/16 (310×130×125)	1.98(0.9)	33kW≤A*<66kW
		FQZHN-04D	13-25/32×7-3/32×6-11/16 (350×180×170)	3.3(1.5)	66kW≤A*<92kW
		FQZHN-05D	14-3/8×7-11/16×8-15/32 (365×195×215)	4.18(1.9)	92kW≤A*

A*:The total capacity of indoor units which is connected to this branch joint

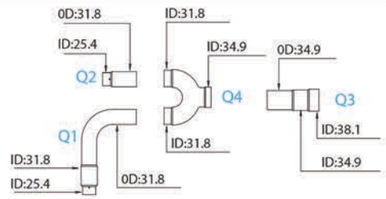
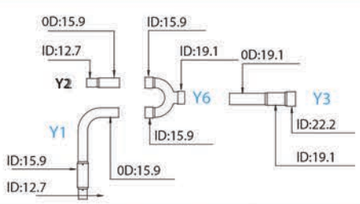
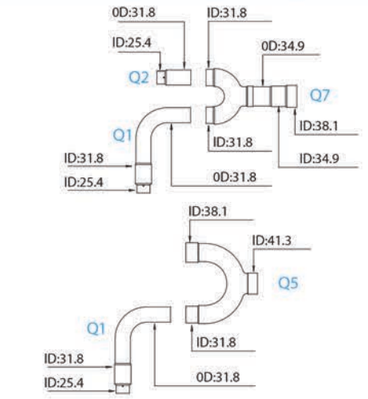
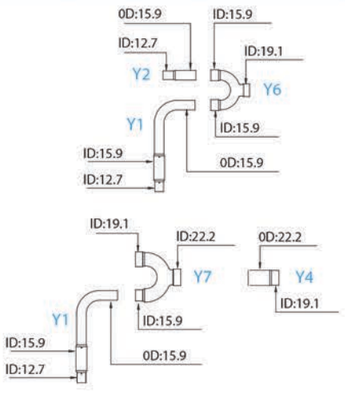
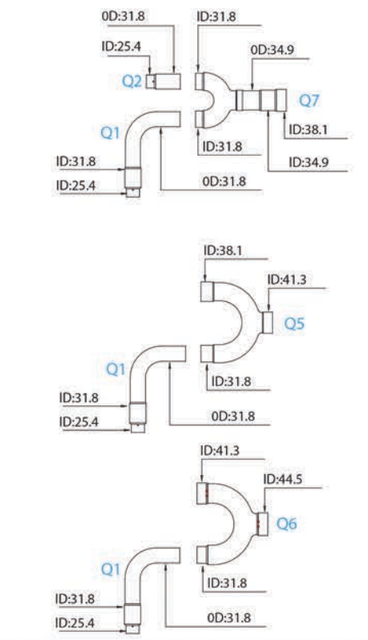
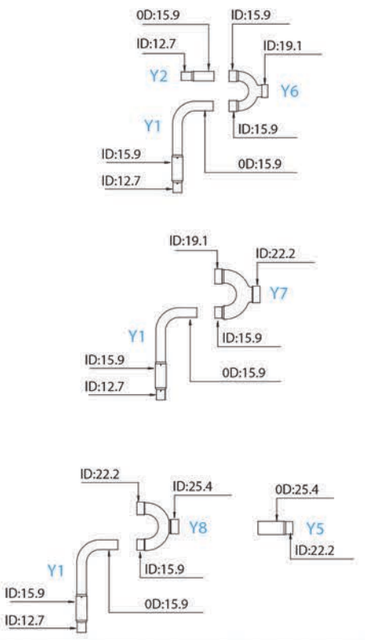
Branch joints of three-pipe refrigerant system

Model	Appearance	Model name	Packing Size in.(mm)	Gross Weight lbs.(kg)	Description
Branch joint between outdoor unit		FQZHW-02SB	10-11/16×6-9/16×9-1/8 (272×167×232)	4.84(2.2)	For two outdoor units connection
		FQZHW-03SB	18-9/16×6-3/16×12-9/32 (472×157×312)	11(5.0)	For three outdoor units connection
		FQZHW-04SB	29-5/16×6-5/16×13-3/16 (745×160×335)	16.5(7.5)	For four outdoor units connection
Branch joint between MS unit and outdoor unit		FQZHN-01SB	10-1/8×5×4-7/32 (257×127×107)	1.76(0.8)	A*<16.6kW
		FQZHN-02SB	11-5/16×5-3/8×4-7/32 (287×137×107)	1.98(0.9)	16.6≤A*<33kW
		FQZHN-03SB	11-11/16×6-9/16×6-31/32 (297×167×177)	3.08(1.4)	33kW≤A*<66kW
		FQZHN-04SB	14-5/8×7-3/4×7-3/8 (372×197×187)	5.06(2.3)	66kW≤A*<92kW
		FQZHN-05SB	17-1/64×8-3/4×8-15/16 (432×222×227)	7.26(3.3)	92kW≤A*
Branch joint between MS unit and indoor unit		FQZHN-01D	11-7/16×4-1/8×4 (290×105×100)	0.88(0.4)	A*<16.6kW

A*:The total capacity of indoor units which is connected to this branch joint

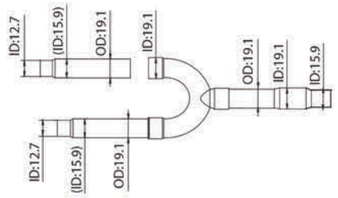
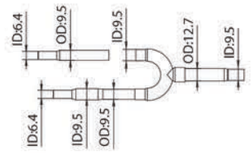
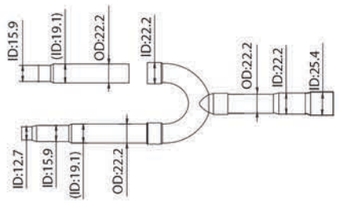
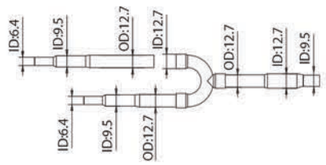
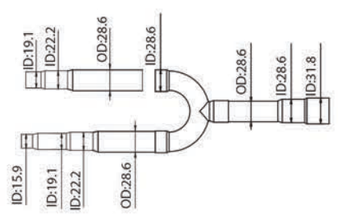
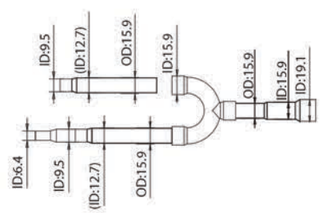
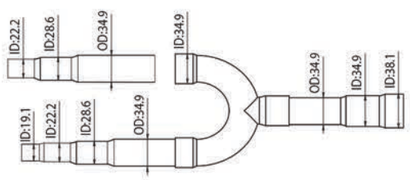
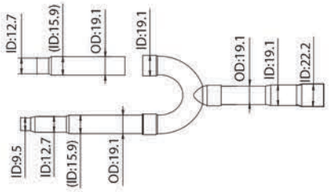
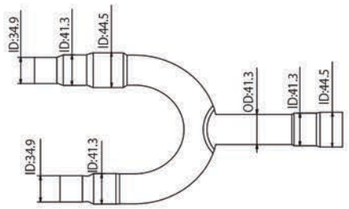
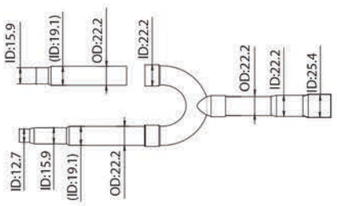
DIMENSIONS

Outdoor branch joints

Branch model	Gas side joints	Liquid side joints
FQZHW-02N1D		
FQZHW-03N1D		
FQZHW-04N1D		

DIMENSIONS

Indoor branch joints

Branch model	Gas side joints	Liquid side joints
FQZHN-01D		
FQZHN-02D		
FQZHN-03D		
FQZHN-04D		
FQZHN-05D		

NOTES