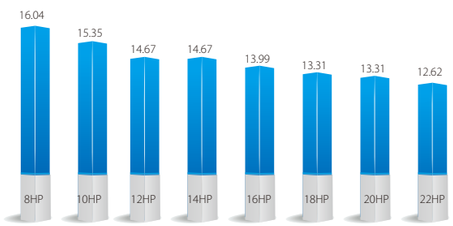
X-Power Full DC Inverter
Super Plus Series

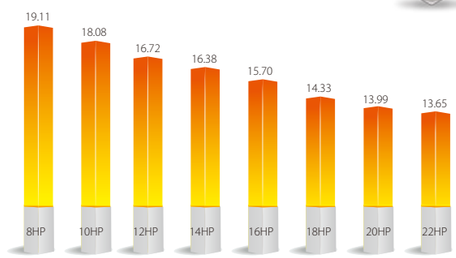
High Efficiency

High EER and COP

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



EER



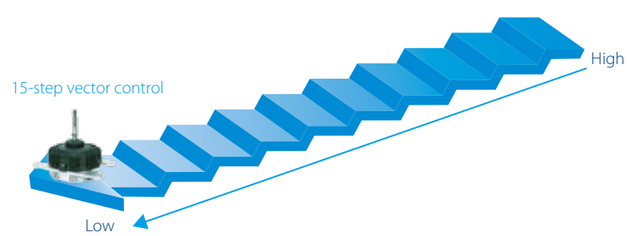
COP

All DC Inverter Compressors

At the heart of the Super Plus 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.

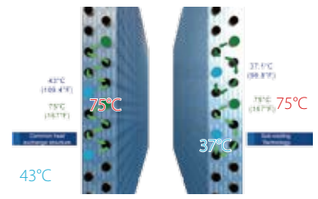


High Efficiency Heat Exchanger

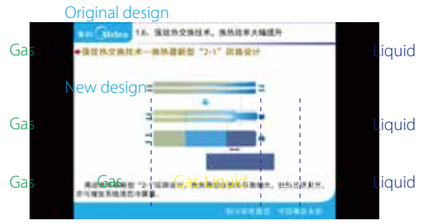
Newly designed fins enlarge the heat exchange area and decrease air resistance, enhance heat exchange performance and save more energy.

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.



δ design



Newly Designed Fan

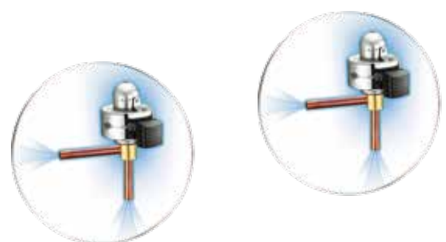
A new blade with sharp edges and a slight curve increases the airflow rate and lowers vibration and airflow resistance.

Precise Control

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.



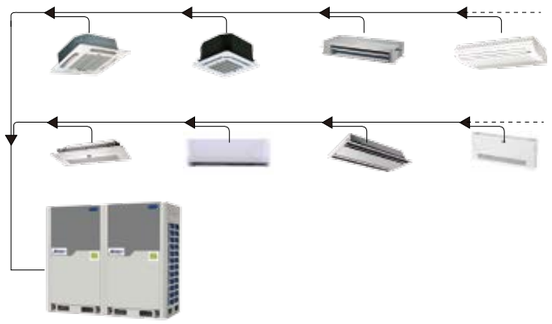
Wide Application Range

Wide Capacity Range

The Super Plus series has an extensive range of capacities, from 8HP to 88HP(max.72HP for tropical model combination), meeting all customer requirements from small to large buildings.

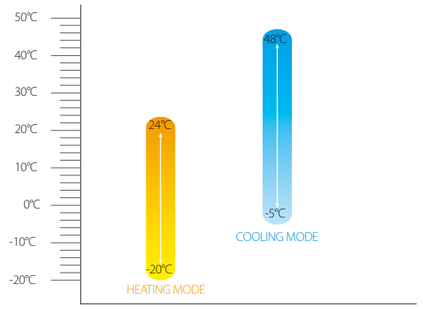
Wide Range of Indoor Units

Carrier 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

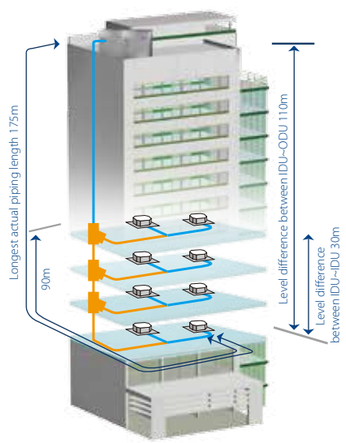
Super Plus Series operates stably under extreme conditions, ranging from minus 20° C to 48° C. (-20° C to 54°C for tropical model).



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 Carrier sales companies for further information.



High Reliability

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.

Backup

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.

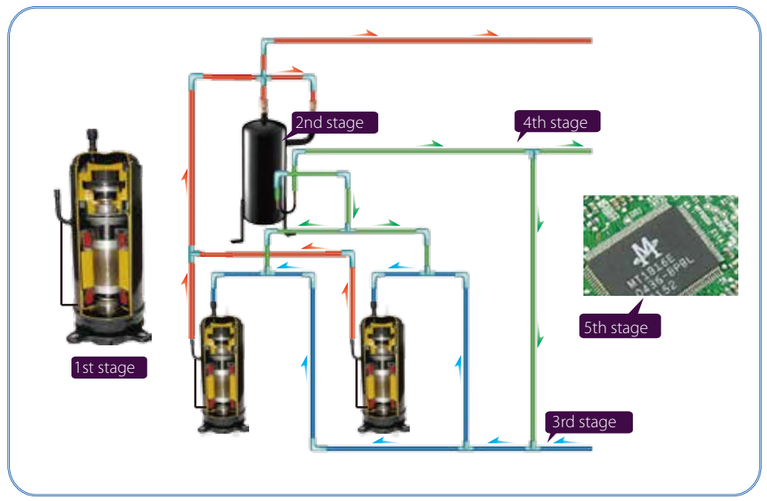
The 1st stage: Compressor internal oil separation.

The 2nd stage: High-efficiency centrifugal oil separator (with separation efficiency of up to 99%) ensures that oil is separated from the discharge gas and returned to the compressors in a timely fashion.

The 3rd stage: Oil balance pipes between compressors ensure even oil distribution to keep compressors running normally.

The 4th stage: Oil balance pipes among modules ensure even oil distribution among modules.

The 5th stage: Auto oil return program monitors the running time and system status to ensure reliable oil return.



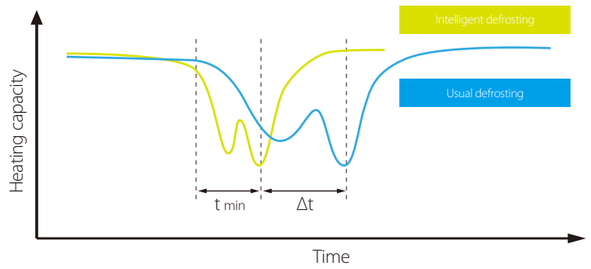
Enhanced Comfort

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.

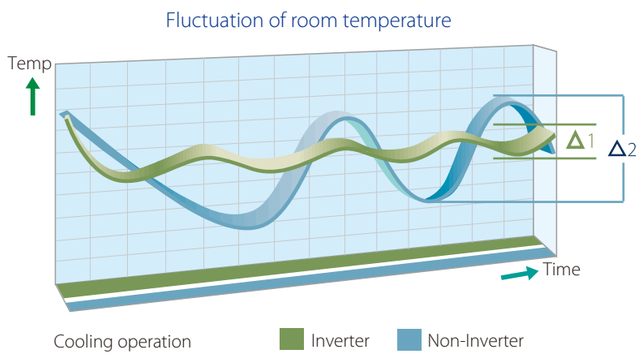
Intelligent Defrosting Technology

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.



Anti-corrosion Protection

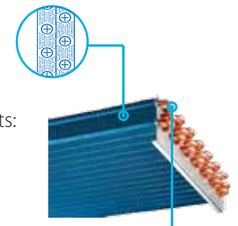
Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anti-corrosion treatment on steel sheets, grills, coil fins, electric control box case and screws/bolts for surface protection against corrosive air, acid rain and saline air (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.

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



Motor

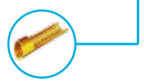
Standard products:
72h of neutral salt mist

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

Copper

Standard products:
24h of neutral salt mist

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



Painted Sheet Metal

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

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

Electric Control Box Case

Standard products:
96h of neutral salt mist

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

Screws / Bolts / Gaskets

Standard products:
300h of neutral salt mist

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

Compressor / Motor Bolts

Standard products:
72h of neutral salt mist

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

Specifications

8-12HP

Model name			38VF008H119015 38VF008H117015	38VF010H119015 38VF010H117015	38VF012H119015 38VF012H117015	38VF014H119015 38VF014H117015
Power supply		V/Ph/Hz	380-415/3/50(60) 220/3/60			
Cooling	Capacity	kW	25.2	28.0	33.5	40.0
		kBtu/h	86.0	95.6	114.3	136.5
	Power input	kW	5.36	6.22	7.79	9.30
	EER	KBtu/h/kW	16.04	15.35	14.67	14.67
	IPLV	KBtu/h/kW	27.30	27.80	26.61	26.27
Heating	Capacity	kW	27.0	31.5	37.5	45.0
		kBtu/h	92.1	107.5	128.0	153.6
	Power input	kW	4.82	5.94	7.65	9.38
	COP	KBtu/h/kW	19.11	18.08	16.72	16.38
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity			
	Max. quantity		13	16	20	23
Compressor	Type		DC inverter			
	Quantity		1	1	1	2
	Crankcase heater	W	27.6×2	27.6×2	27.6×2	27.6×4
	Refrigerant oil type		FVC68D			
	Refrigerant oil charge	ml(gal.)	500(0.132)	500(0.132)	500(0.132)	500(0.132)×2
Fan motor	Type		DC motor			
	Quantity		1	1	1	2
	Insulation class		E			
	Safe class		IP23			
	Static pressure	Pa(in. W.G.)	0-20(0-0.08) (default)			
		Pa(in. W.G.)	20-60(0.08-0.24) (customized)			
Fan	Material		Plastic			
	Type		Axial			
	Quantity		1	1	1	2
Outdoor coil	Number of rows		2	2	3	2
	Fin type		Hydrophilic aluminum			
	Tube OD	mm(in.)	Φ7.94(Φ5/16)			
	Tube type		Inner-grooved			
	Number of circuits		22			
Refrigerant	Type		R410A			
	Factory charging	kg(lbs.)	9(20)	9(20)	11(24)	13(29)
Pipe connection	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.)	Φ8(Φ5/16)			
Design pressure(High/low)		MPa	4.4/2.6			
		PSI	640/380			
Air flow rate		m3/h	12000	12000	12000	14000
Sound pressure level		dB(A)	58	59	60	62
Net dimension (W×H×D)		mm	990×1635×790			1340×1635×790
		inch	39×64-3/8×31-1/8			52-3/4×64-3/8×31-1/8
Packing size (W×H×D)		mm	1055×1805×855			1405×1805×855
		inch	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		℃(℉)	Cooling: -5~48(23~118.4); Heating: -20~24(-4~75.2)			

Notes:
1. Indoor temperature 27℃ (80.6℉) DB, 19℃ (66.2℉) WB; outdoor temperature 35℃ (95.0℉) DB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
2. Indoor temperature 20℃ (68.0℉) DB; outdoor temperature 7℃ (44.6℉) DB, 6℃ (42.8℉) WB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
3. Diameters given are those of the unit's stop valve.
4. Sound pressure level is measured at a position 1m (3.28ft) in front of the unit and 1.3m (4.3ft) above the floor in a semi-anechoic chamber.
5. The data in this catalogue may be changed without notice for further improvement on quality and performance.
6. IPLV are complied with GB 21454 - 2008.
7.Super plus series will not launch in Mexico/Colombia/Puerto Rico/Costa Rica/Salvador/Dominica/Honduras/Bolivia.

14-22HP

Model name			38VF016H119015 38VF016H117015	38VF018H119015 38VF018H117015	38VF020H119015 38VF020H117015	38VF022H119015 38VF022H117015
Power supply		V/Ph/Hz	380-415/3/50(60) 220/3/60			
Cooling	Capacity	kW	45.0	50.0	56.0	61.5
		kBtu/h	153.6	170.6	191.1	209.9
	Power input	kW	10.98	12.82	14.51	16.44
	EER	KBtu/h/kW	13.99	13.31	13.31	12.62
	IPLV	KBtu/h/kW	25.93	25.93	25.59	25.25
Heating	Capacity	kW	50.0	56.0	63.0	69.0
		kBtu/h	170.6	191.1	215.0	235.5
	Power input	kW	10.87	13.18	15.29	17.12
	COP	KBtu/h/kW	15.70	14.33	13.99	13.65
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity			
	Max. quantity		26	29	33	36
Compressor	Type		DC inverter			
	Quantity		2			
	Crankcase heater	W	27.6×4			
	Refrigerant oil type		FVC68D			
	Refrigerant oil charge	ml(gal.)	500(0.132)×2			
Fan motor	Type		DC motor			
	Quantity		2			
	Insulation class		E			
	Safe class		IP23			
	Static pressure	Pa(in. W.G.)	0-20(0-0.08) (default)			
		Pa(in. W.G.)	20-60(0.08-0.24) (customized)			
Fan	Material		Plastic			
	Type		Axial			
	Quantity		2			
Outdoor coil	Number of rows		2	2	3	3
	Fin type		Hydrophilic aluminum			
	Tube OD	mm(in.)	Φ7.94(Φ5/16)			
	Tube type		Inner-grooved			
	Number of circuits		22			
Refrigerant	Type		R410A			
	Factory charging	kg(lbs.)	13(29)	13(29)	16(35)	16(35)
Pipe connection	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.)	Φ8(Φ5/16)			
Design pressure(High/low)		MPa	4.4/2.6			
		PSI	640/380			
Air flow rate		m3/h	14000	16000	16000	16000
Sound pressure level		dB(A)	62	63	63	63
Net dimension (W×H×D)		mm	1340×1635×790			
		inch	52-3/4×64-3/8×31-1/8			
Packing size (W×H×D)		mm	1405×1805×855			
		inch	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		℃(℉)	Cooling: -5~48(23~118.4); Heating: -20~24(-4~75.2)			

Notes:
1. Indoor temperature 27℃ (80.6℉) DB, 19℃ (66.2℉) WB; outdoor temperature 35℃ (95.0℉) DB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
2. Indoor temperature 20℃ (68.0℉) DB; outdoor temperature 7℃ (44.6℉) DB, 6℃ (42.8℉) WB; equivalent refrigerant piping length 7.5m (24.6ft.) with zero level difference.
3. Diameters given are those of the unit's stop valve.
4. Sound pressure level is measured at a position 1m (3.28ft) in front of the unit and 1.3m (4.3ft) above the floor in a semi-anechoic chamber.
5. The data in this catalogue may be changed without notice for further improvement on quality and performance.
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7.Super plus series will not launch in Mexico/Colombia/Puerto Rico/Costa Rica/Salvador/Dominica/Honduras/Bolivia.

Recommended combination table

Model	No. of Outdoor Units	No. of Compressors	Outdoor Unit Combination								Max No. of Connectable Indoor Unit	Capacity			
												Cooling		Heating	
			8	10	12	14	16	18	20	22		kW	kBtu/h	kW	kBtu/h
8	1	1	●								13	25.2	86.0	27	92.1
10	1	1		●							16	28	95.5	31.5	107.5
12	1	1			●						20	33.5	114.3	37.5	128.0
14	1	2				●					23	40	136.5	45	153.5
16	1	2					●				26	45	153.5	50	170.6
18	1	2						●			29	50	170.6	56	191.1
20	1	2							●		33	56	191.1	63	215.0
22	1	2								●	36	61.5	209.8	69	235.4
24	2	2			●●						39	67	228.6	75	255.9
26	2	3		●			●				43	73	249.1	81.5	278.1
28	2	3		●				●			46	78	266.1	87.5	298.6
30	2	3		●					●		50	84	286.6	94.5	322.4
32	2	3		●						●	53	89.5	305.4	100.5	342.9
34	2	3			●					●	56	95	324.1	106.5	363.4
36	2	4						●●			59	100	341.2	112	382.1
38	2	4					●			●	63	106.5	363.4	119	406.0
40	2	4						●		●	64	111.5	380.4	125	426.5
42	2	4							●	●	64	117.5	400.9	132	450.4
44	2	4								●●	64	123	419.7	138	470.9
46	3	4			●●					●	64	128.5	438.4	144	491.3
48	3	5		●			●			●	64	134.5	458.9	150.5	513.5
50	3	5		●				●		●	64	139.5	476.0	156.5	534.0
52	3	5		●					●	●	64	145.5	496.4	163.5	557.9
54	3	5		●						●●	64	151	515.2	169.5	578.3
56	3	5			●					●●	64	156.5	534.0	175.5	598.8
58	3	6						●●		●	64	161.5	551.0	181	617.6
60	3	6					●			●●	64	168	573.2	188	641.5
62	3	6						●		●●	64	173	590.3	194	661.9
64	3	6							●	●●	64	179	610.7	201	685.8
66	3	6								●●●	64	184.5	629.5	207	706.3
68	4	6			●●					●●	64	190	648.3	213	726.8
70	4	7		●			●			●●	64	196	668.8	219.5	748.9
72	4	7		●				●		●●	64	201	685.8	225.5	769.4
74	4	7		●					●	●●	64	207	706.3	232.5	793.3
76	4	7		●						●●●	64	212.5	725.1	238.5	813.8
78	4	7			●					●●●	64	218	743.8	244.5	834.2
80	4	8						●●		●●	64	223	760.9	250	853.0
82	4	8					●			●●●	64	229.5	783.1	257	876.9
84	4	8						●		●●●	64	234.5	800.1	263	897.4
86	4	8							●	●●●	64	240.5	820.6	270	921.2
88	4	8								●●●●	64	246	839.4	276	941.7

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

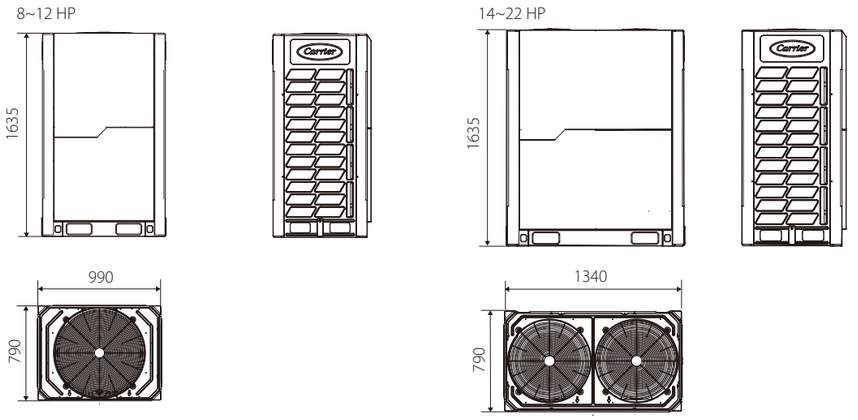
Piping length: Interconnecting piping length is 7.5m(24.6ft), level difference is zero.

The above combination models are factory-recommended models

Dimensions

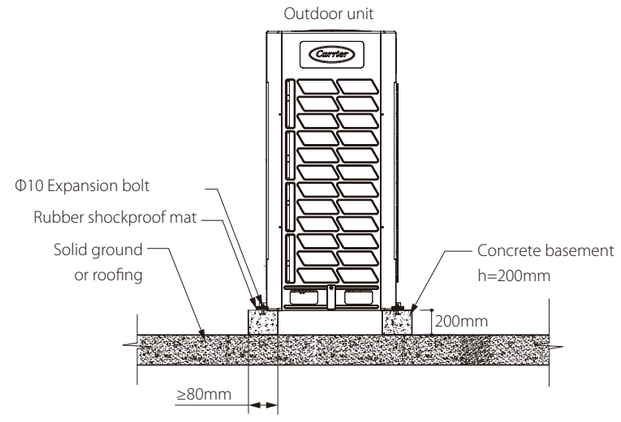
Body dimension

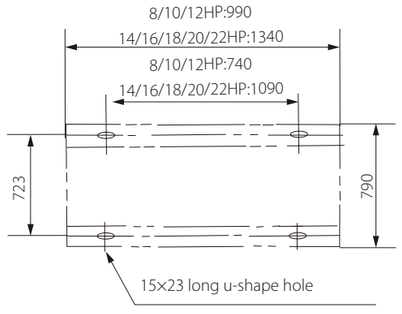
Unit: in.(mm)



Installation dimension

Unit: in.(mm)





X-Power Full Inverter
Super S Series

Features

Wide Application Range

Wide range of outdoor units

The outdoor units capacity range from 8HP up to 72HP in 2HP increment. Maximum 64 indoor units with capacity up to 130% of total outdoor units can be connected in one refrigeration system.

8, 10HP

12, 14, 16HP

18HP

18, 20, 22, 24, 26, 28, 30, 32HP

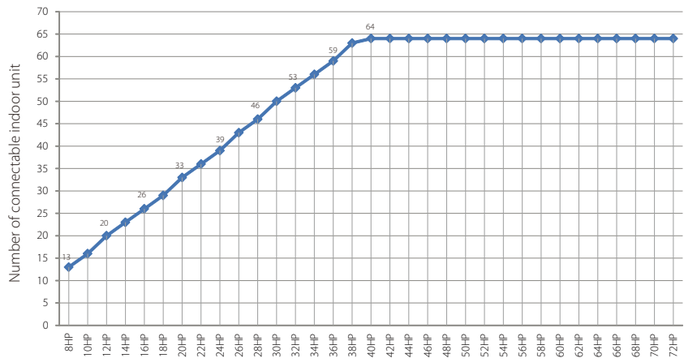
34,36, 38, 40, 42, 44, 46, 48HP

50, 52, 54, 56, 58, 60, 62, 64HP

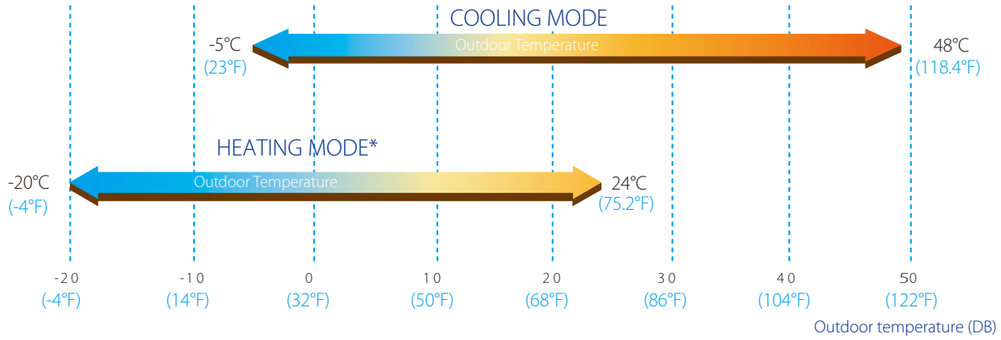
66, 68, 70, 72HP

Large connectable indoor units quantity

The large quantity of connectable units is suitable for large buildings and projects.

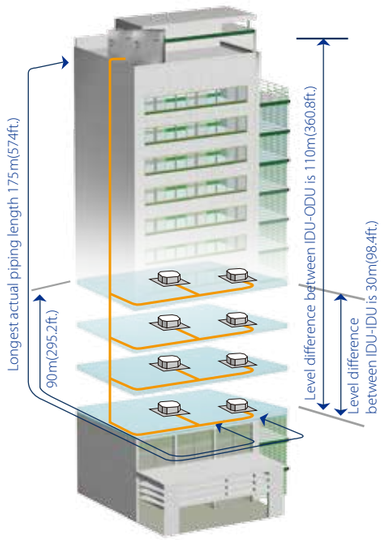


Wide operation range



The X-Power series system operates stably at extreme temperatures ranging from -20℃(-4°F) to 48℃(118.4°F).

Long piping length

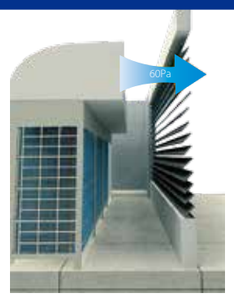


			Permitted value	
			m	ft.
Piping length	Total piping length (Actual)		1000*	3280*
	Longest piping	Actual length	175	574
		Equivalent length	200	656
	Equivalent piping length from the farthest IDU to the first indoor branch joint		40/90*	131.2/295.2*
Level difference	Level difference between IDU~ODU	Outdoor unit up	70	229.6
		Outdoor unit down	110	360.8
	Level difference between IDU~IDU		30	98.4

*Total pipe length is equal to two times ~~pipe~~ length plus.
*When the piping length from the farthest IDU to the first indoor branch joint is more than 40m(131.2ft.), it needs to meet specific conditions according to the installation part of the technical manual to achieve 90m(295.2ft.).

High external static pressure

Max. 60Pa(0.24" W.G.) external static pressure can be customized for the outdoor unit, flexible to build-in installation.
A standard 0-20Pa(0-0.08" W.G.) external static pressure is equipped by default for all outdoor units. 0-40Pa(0-0.16" W.G.) external static pressure can be customized for 8, 10, 14, 16HP outdoor units, and 0-60Pa(0-24" W.G.) can be customized for 12HP outdoor unit.

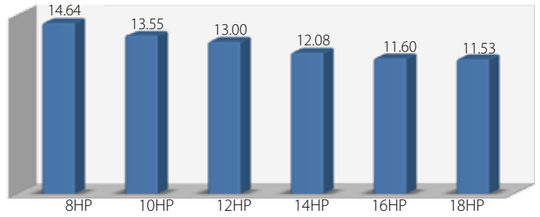


High Efficiency

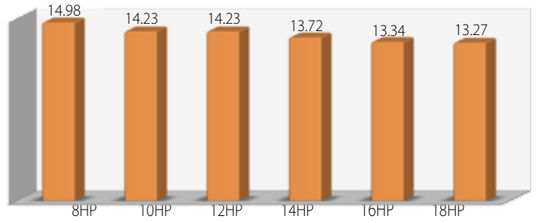
High COP/EER values

The cooling EER up to 14.64 and the heating COP up to 14.98 in the 8HP category.

EER



COP



All DC inverter technology

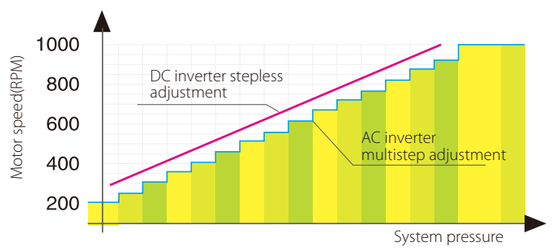
All DC inverter compressors make the capacity output better distributed, and always work at 60-120Hz which is the most efficient range. It makes the efficiency more than 30% higher than the normal.

All DC Inverter Compressors

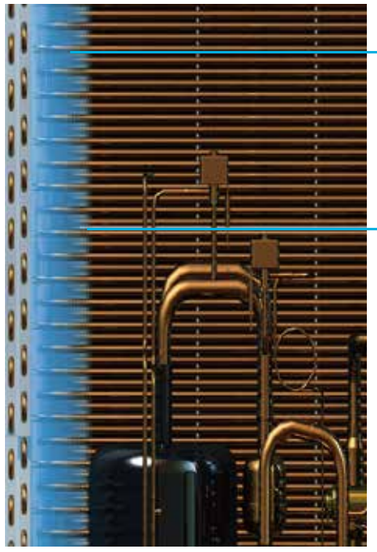
- New structure enhances mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves the low frequency band performance

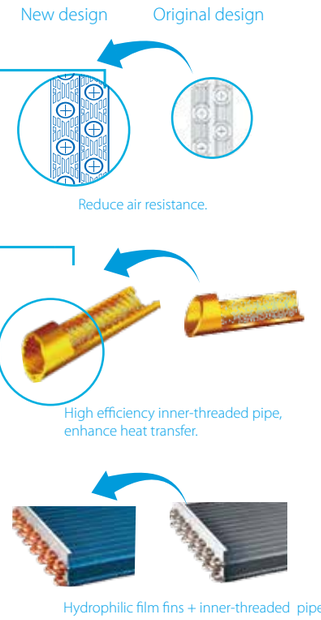
All DC Fan Motors

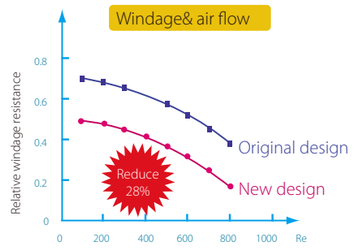
According to the running load and system pressure, the system controls the speed of DC fan to achieve the minimum energy consumption and best performance.

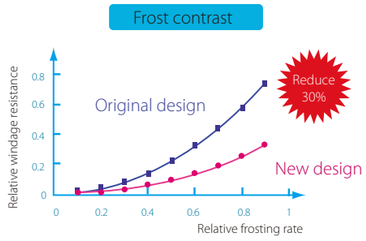


High performance heat exchanger

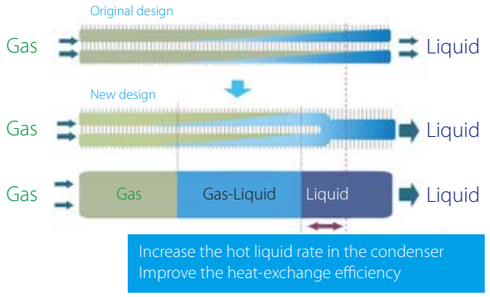


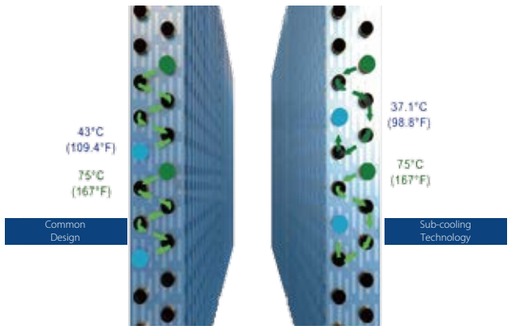






- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.





- Innovative designed high efficiency heat exchanger, which can reach up to 12°C(21.6°F) subcooling degree, reduces the system resistance and improves reliability.
- When the outdoor temperature is 35°C(95°F), the refrigerant can be cooled down to 37.1°C(98.8°F), thus achieving high heat-exchanging efficiency with only 2.1°C(3.8°F) temperature difference.

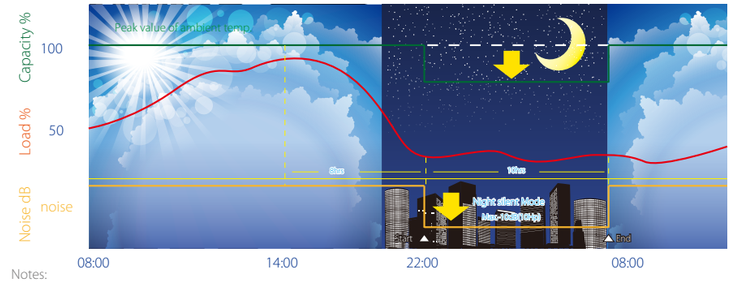
Enhanced Comfort

Night silent operation mode

High comfort outdoor unit's multi-choice of silent mode during the night.
Super silent operation mode can reduce sound level further, minimum 45dB (A).

Night silent operation will be activated X hours after the peak temperature during daytime, and it will go back to normal operation after Y hours.

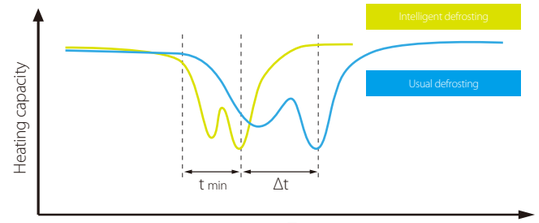
-Mode 1→X: 6 hours, Y: 10 hours
-Mode 2→X: 8 hours, Y: 10 hours
-Mode 3→X: 6 hours, Y: 12 hours
-Mode 4→X: 8 hours, Y: 8 hours



Notes:
This function can be activated by setting at site. Temperature(load) curve shown in the graph is just an example.

Intelligent defrosting technology

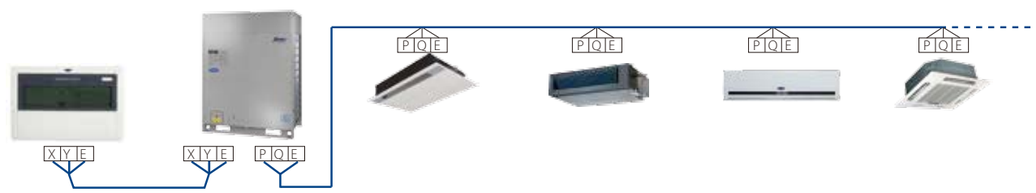
Intelligent defrosting program will judge the defrosting time according to the system real requirement, reduce the heating loss by unnecessary defrosting and make the indoor side more comfortable.
Defrosting time can be shortened to 4 min. due to the specialized defrosting valve.



Easier Installation and Service

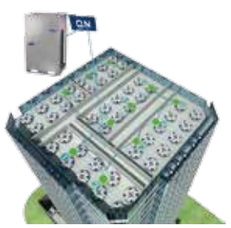
Simple signal line connection

Centralized controller (CRF-10-CM or CRF-30-CM) can be connected from indoor side or outdoor side (XYE terminals) at will. Only one group of communication wire of PQE, achieved both of communication for indoor & outdoor unit. It's more convenient for communication wiring.



Auto addressing

Outdoor unit can distribute addresses for indoor unit automatically.
Wireless and wired controllers can query and modify each indoor unit's address.



Specifications

X-Power Full Inverter Super S Series

Model			38VF008H117010 38VF008H117010-E 38VF008H118010	38VF010H117010 38VF010H117010-E 38VF010H118010	38VF012H117010 38VF012H117010-E 38VF012H118010
Power supply		V-Ph-Hz	208/230V 3~60Hz 220V 3~50Hz	208/230V 3~60Hz 220V 3~50Hz	208/230V 3~60Hz 220V 3~50Hz
Cooling (*1)	Capacity	kW	25.2	28	33.5
		RT	7.2	8	9.6
	Input	kW	5.88	7.05	8.79
	EER	KBtu/h/kW	14.64	13.55	13.00
	IPLV	KBtu/h/kW	19.11	19.45	19.11
Heating (*2)	Capacity	kW	27	31.5	37.5
		RT	7.7	9.0	10.7
	Input	kW	6.15	7.55	8.99
	COP	KBtu/h/kW	14.98	14.23	14.23
Connectable indoor unit	Total capacity	%	50-130%	50-130%	50-130%
	Max.quantity		13	16	20
Outdoor sound level (*3)		dB(A)	57	57	59
Pipe connections	Liquid side	mm	Φ12.7	Φ12.7	Φ15.9
	Gas side	mm	Φ25.4	Φ25.4	Φ31.8
	Oil balance pipe	mm	Φ6.35	Φ6.35	Φ6.35
Compressor	Quantities		1	1	1+1
	Type		DC	DC	DC
	Capacity	Btu/h(W)	31.59	31.59	31.59 +11.80
		Btu/h	107800	107800	107800+40300
	Input	W	10340	10340	10340+3665
	Crankcase	W	27.6×2	27.6×2	27.6×4
	Refrigerant oil	Type	FVC68D	FVC68D	FVC68D
		ml	500	500	500+500
Fan Motor	Type		DC motor	DC motor	DC motor
	Quantities		1	1	2
	Air flow rate	CFM	6620	6620	7660
		m3/h	11242	11242	13000
	Output	W	420(rated)	420(rated)	210×2(rated)
	ESP.	pa	0-20 (Default) 0-40 (Customize)	0-20 (Default) 0-40 (Customize)	0-20 (Default) 0-60 (Customize)
Charged refrigerant	Dimension(W×H×D)	mm	960×1615×765	960×1615×765	1250×1615×765
	Packing(W×H×D)	mm	1025×1790×830	1025×1790×830	1305×1790×820
	Net/Gross weight	kg	202/218	202/218	285/305
	type		R410A	R410A	R410A
	volume	kg	9	9	11
Throttle type			EXV	EXV	EXV
Design pressure (High/low)		Mpa	4.4/2.6	4.4/2.6	4.4/2.6
Ambient temperature range	Cooling	℃	-5~48	-5~48	-5~48
	Heating	℃	-20~24	-20~24	-20~24

1. IPLV are complied with GB 21454 - 2008.

Specifications

X-Power Full Inverter Super S Series

Model			38VF014H117010 38VF014H117010-E 38VF014H118010	38VF016H117010 38VF016H117010-E 38VF016H118010	38VF018H117010 38VF018H118010
Power supply		V-Ph-Hz	208/230V 3~60Hz 220V 3~50Hz	208/230V 3~60Hz 220V 3~50Hz	208/230V 3~60Hz 220V 3~50Hz
Cooling (*1)	Capacity	kW	40	45	50
		RT	11.4	12.9	14.3
	Input	kW	11.30	13.25	14.79
	EER	KBtu/h/kW	12.08	11.60	11.53
	IPLV	KBtu/h/kW	18.77	18.42	19.79
Heating (*2)	Capacity	kW	45	50	56
		RT	12.9	14.3	16.0
	Input	kW	11.20	12.79	14.4
	COP	KBtu/h/kW	13.72	13.34	13.27
Coneectable indoor unit	Total capacity	%	50-130%	50-130%	50-130%
	Max.quantity		23	26	29
Outdoor sound level (*3)		dB(A)	61	62	62
Pipe connections	Liquid side	mm	Φ15.9	Φ15.9	Φ19.1
	Gas side	mm	Φ31.8	Φ31.8	Φ31.8
	Oil balance pipe	mm	Φ6.35	Φ6.35	Φ6.35
Compressor	Quantities		1+1	1+1	2
	Type		DC	DC	DC
	Capacity	Btu/h(W)	31.59 +11.80	31.59 +11.80	31.59 +31.59
		Btu/h	107800+40300	107800+40300	107800+107800
	Input	W	10340+3665	10340+3665	10340 +10340
	Crankcase	W	27.6×4	27.6×4	27.6×4
	Refrigerant oil	Type	FVC68D	FVC68D	FVC68D
		ml	500+500	500+500	500 + 500
Fan Motor	Type		DC motor	DC motor	DC motor
	Quantities		2	2	2
	Air flow rate	CFM	9200	9200	9200
		m^3/h	15620	15620	15620
	Output	W	360×2(rated)	360×2(rated)	360×2
	ESP.	pa	0-20 (Default) 0-40 (Customize)	0-20 (Default) 0-40 (Customize)	0-20 (Default) 0-40 (Customize)
Charged refrigerant	Dimension(W×H×D)	mm	1250×1615×765	1250×1615×765	1250×1615×765
	Packing(W×H×D)	mm	1305×1790×820	1305×1790×820	1305×1790×820
	Net/Gross weight	kg	285/305	288/308	310/330
	type		R410A	R410A	R410A
	volume	kg	13	13	16
Throttle type			EXV	EXV	EXV
Design pressure (High/low)		Mpa	4.4/2.6	4.4/2.6	4.4/2.6
Ambient temperature range	Cooling	℃	-5~48	-5~48	-5~48
	Heating	℃	-20~24	-20~24	-20~24

1. IPLV are complied with GB 21454 - 2008.

Specifications

X-Power Full Inverter Super S Series

Model			38VF008H116010	38VF010H116010	38VF012H116010	38VF014H116010	38VF016H116010
Power supply		V-Ph-Hz	460V 3Ph ~ 60Hz	460V 3Ph ~ 60Hz	460V 3Ph ~ 60Hz	460V 3Ph ~ 60Hz	460V 3Ph ~ 60Hz
Cooling	Capacity	kW	25.2	28	33.5	40.0	45.0
		Btu/h	86000	95500	114300	136500	153500
	Input	kW	5.88	7.05	8.79	11.30	13.25
	EER	KBtu/h/kW	14.64	13.55	13.00	12.08	11.60
	IPLV	KBtu/h/kW	19.11	19.45	19.11	18.77	18.42
Heating	Capacity	kW	27	31.5	37.5	45.0	50.0
		Btu/h	92100	107500	128000	153500	170600
	Input	kW	6.15	7.55	8.99	11.19	12.79
	COP	KBtu/h/kW	14.98	14.23	14.23	13.72	13.34
Compressor	Quantities		1	1	1+1	1+1	1+1
	Capacity	Btu/h(W)	107800(31590)	107800(31590)	107800(31590) +40300(11800)	107800(31590) +40300(11800)	107800(31590) +40300(11800)
	Input	W	10340	10340	10340+3665	10340+3665	10340+3665
	Crankcase	W	27.6×2	27.6×2	27.6×4	27.6×4	27.6×4
	Refrigerant oil	gal.(ml)	FVC68D / 0.132(500)	FVC68D / 0.132(500)	FVC68D / 0.132(500)+ FVC68D / 0.132(500)	FVC68D / 0.132(500)+ FVC68D / 0.132(500)	FVC68D / 0.132(500)+ FVC68D / 0.132(500)
Fan motor	Type		DC inverter	DC inverter	DC inverter	DC inverter	DC inverter
	Quantities		1	1	2	2	2
	Insulation class		E	E	E	E	E
	Safe class		IPX4	IPX4	IPX4	IPX4	IPX4
	Output	W	420	420	210×2	360×2	360×2
Outdoor air flow		CFM(m^3/h)	6604(11242)	6604(11242)	7647(13000)	9185(15620)	9185(15620)
External static pressure		Pa	0~20 (default)	0~20 (default)	0~20 (default)	0~20 (default)	0~20 (default)
			0~40 (optional)	0~40(optional)	0~60 (optional)	0~40 (optional)	0~40 (optional)
Outdoor sound level		dB(A)	57	57	59	61	62
Outdoor unit	Dimension (W×H×D)	in.(mm)	37-25/32x63-9/16x30-1/8	37-25/32x63-9/16x30-1/8	49-7/32x63-9/16x30-1/8	49-7/32x63-9/16x30-1/8	49-7/32x63-9/16x30-1/8
			(960×1615×765)	(960×1615×765)	(1250×1615×765)	(1250×1615×765)	(1250×1615×765)
	Packing(W×H×D)	in.(mm)	40-3/8x70-1/2x32-11/16	40-3/8x70-1/2x32-11/16	51-3/8x70-1/2x32-11/16	51-3/8x70-1/2x32-11/16	51-3/8x70-1/2x32-11/16
			(1025×1790×830)	(1025×1790×830)	(1305×1790×820)	(1305×1790×820)	(1305×1790×820)
	Net/Gross weight	lbs.(kg)	466/485(212/227)	466/485(212/227)	634/678(288/308)	634/678(288/308)	634/678(288/308)
Charged refrigerant type and volume		lbs.(kg)	R410A/ 22(10)	R410A/ 22(10)	R410A/ 26(12)	R410A/ 33(15)	R410A/ 33(15)
Throttle type			EXV	EXV	EXV	EXV	EXV
Excessive operating pressure		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Liquid side/ Gas side		in.(mm)	1/2(Φ12.7)/1(Φ25.4)	1/2(Φ12.7)/1(Φ25.4)	5/8(Φ15.9)/1-1/4(Φ31.8)	5/8(Φ15.9)/1-1/4(Φ31.8)	5/8(Φ15.9)/1-1/4(Φ31.8)
Oil balance pipe		in.(mm)	1/4(Φ6.35)	1/4(Φ6.35)	1/4(Φ6.35)	1/4(Φ6.35)	1/4(Φ6.35)
Ambient temperature range	Cooling	°F(°C)	23~118.4(-5~48)	23~118.4(-5~48)	23~118.4(-5~48)	23~118.4(-5~48)	23~118.4(-5~48)
	Heating	°F(°C)	-4~75.2(-20~24)	-4~75.2(-20~24)	-4~75.2(-20~24)	-4~75.2(-20~24)	-4~75.2(-20~24)

IPLV are complied with GB 21454 - 2008.

Recommended combination table

Model	N° of Outdoor Units	N° of Compressors	Outdoor Unit Combination						Maximum N° of Connectable Indoor Units	Capacity			
			8HP	10HP	12HP	14HP	16HP	*18HP		Cooling		Heating	
										kW	kBtu/h	kW	kBtu/h
8HP	1	1	1						13	25.2	86.0	27.0	92.1
10HP	1	1		1					16	28.0	95.5	31.5	107.5
12HP	1	2			1				20	33.5	114.3	37.5	128.0
14HP	1	2				1			23	40.0	136.5	45.0	153.5
16HP	1	2					1		26	45.0	153.5	50.0	170.6
*18HP	1	2						1	29	50.0	170.6	56.0	191.1
20HP	2	2		2					33	56.0	191.1	63.0	215.0
22HP	2	3		1	1				36	61.5	209.8	69.0	235.4
24HP	2	3		1		1			39	68.0	232.0	76.5	261.0
26HP	2	3		1			1		43	73.0	249.1	81.5	278.1
28HP	2	3		1				1	46	78.0	266.1	87.5	298.6
30HP	2	4				1	1		50	85.0	290.0	95.0	324.1
32HP	2	4				1		1	53	90.0	307.1	101.0	344.6
34HP	2	4					1	1	56	95.0	324.1	106.0	361.7
36HP	2	4						2	59	100.0	341.2	112.0	382.1
38HP	3	4		2				1	63	106.0	361.7	119.0	406.0
40HP	3	5		1		1	1		64	113.0	385.6	126.5	431.6
42HP	3	5				3			64	120.0	409.4	135.0	460.6
44HP	3	5		1			1	1	64	123.0	419.7	137.5	469.2
46HP	3	5		1				2	64	128.0	436.7	143.5	489.6
48HP	3	6				1	1	1	64	135.0	460.6	151.0	515.2
50HP	3	6				1		2	64	140.0	477.7	157.0	535.7
52HP	3	6					1	2	64	145.0	494.7	162.0	552.7
54HP	3	6						3	64	150.0	511.8	168.0	573.2
56HP	4	6		2				2	64	156.0	532.3	175.0	597.1
58HP	4	7		1		1	1	1	64	163.0	556.2	182.5	622.7
60HP	4	7		1		1		2	64	168.0	573.2	188.5	643.2
62HP	4	7		1			1	2	64	173.0	590.3	193.5	660.2
64HP	4	7		1				3	64	178.0	607.3	199.5	680.7
66HP	4	8				1	1	2	64	185.0	631.2	207.0	706.3
68HP	4	8				1		3	64	190.0	648.3	213.0	726.8
70HP	4	8					1	3	64	195.0	665.3	218.0	743.8
72HP	4	8						4	64	200.0	682.4	224.0	764.3

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.

The above combination models are factory-recommended models.

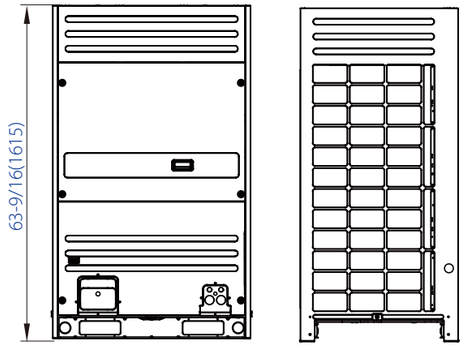
*18HP model is customize

Dimensions

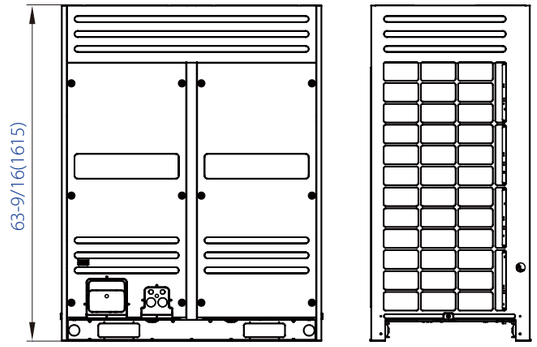
Body dimension

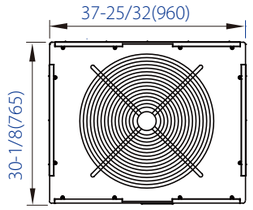
Unit: in.(mm)

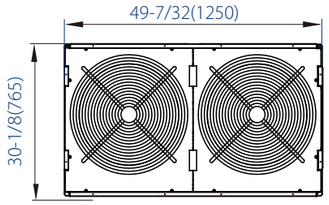
8/10 HP



12/14/16 HP

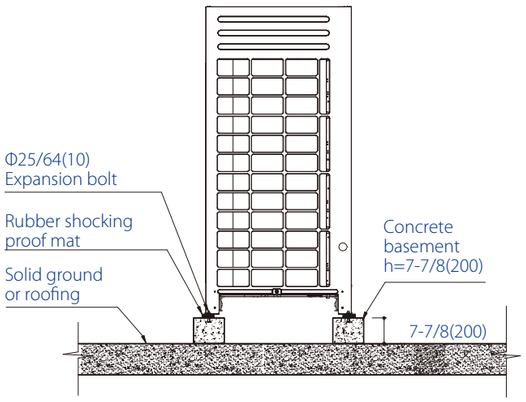




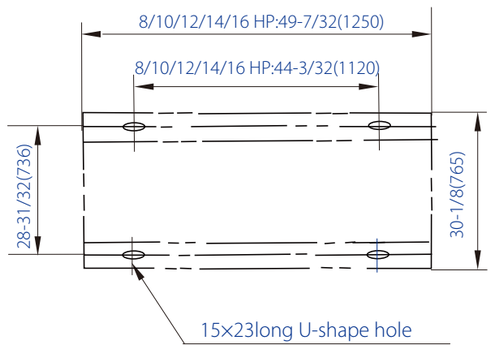


Installation dimension

Unit: in.(mm)



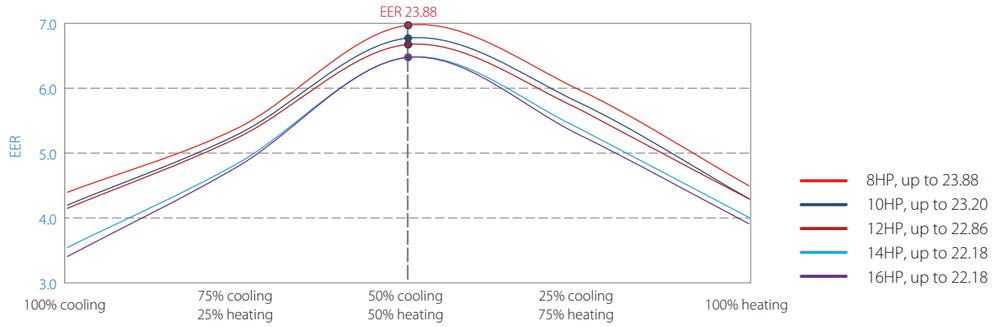
Screw bolt position



X-Power Full DC Inverter Heat Recovery Series

Heat Recovery, EER up to 23.88

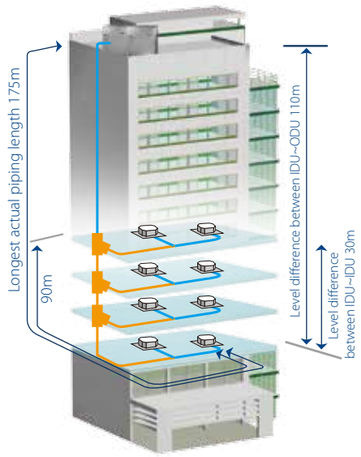
Heat recovery is achieved by diverting exhaust heat from indoor units in cooling mode to areas requiring heating, maximizing energy efficiency, reducing electricity costs and leading to high partload efficiencies (up to 7.0 in the 8HP category).



EER in simultaneous cooling and heating mode are based on the following condition:

Outdoor temperature 7°CDB/6°CWB, indoor temperature 27°CDB/19°CWB for cooling, indoor temperature 20°CDB for heating.

Long Piping Length

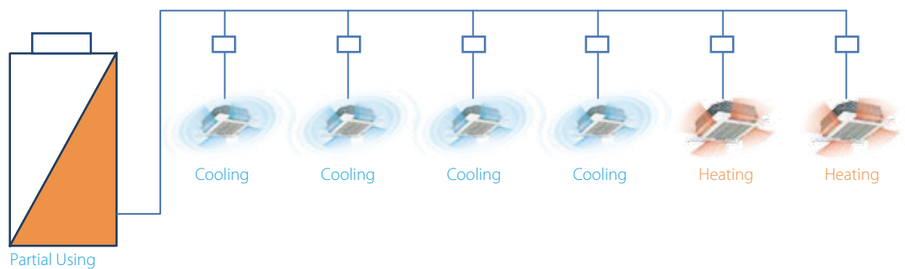


Total piping length	1000m
Longest length actual (Equivalent)	175(200)m
Longest length after first branch	90*m
Longest length from MS to its downstream indoor unit	40m
Level difference between indoor and outdoor units - ODU up (down)	70(110)m
Level difference between indoor units	30m

*The longest piping length is 40m standard. It can be extended to 90m. When the length is over 40m, please contact your local Carrier sales company for more information and restrictions.

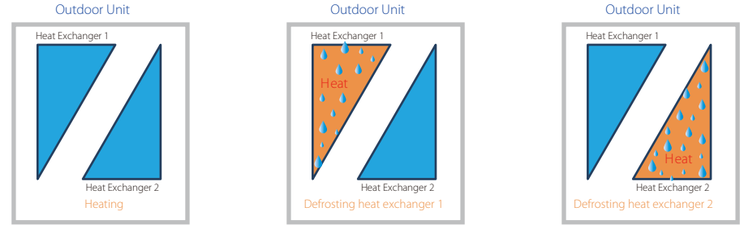
Adjustable Outdoor Heat Exchanger

Two parts condenser individual design, the unit can distribute a part of evaporator to be as condensing area according to the heating load requirement to improve the utilization rate of the condenser.



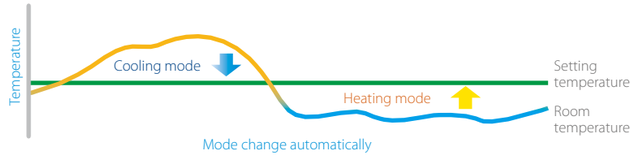
Continuous Heating During Defrost Operation

Each heat exchanger is defrosted by using heat transferred from one heat exchanger to the other in the outdoor unit. Defrost has no impact on the indoor unit on heating mode.



Auto Mode Control

Under the Auto Mode, the indoor unit can change the operation mode automatically, to keep the indoor temperature at a constant level.



Note: Auto Mode can be activated only with wired controller WR-120B-CM.

Innovative Mode Switch (MS) Box

Simultaneous cooling and heating achieved for new designed MS (Mode Switch) box.

- Low noise operation for precise control of multiple solenoid valves;
- Max. 24 indoor units connect to a MS box;
- Max. 56kW indoor units connect to a MS box;

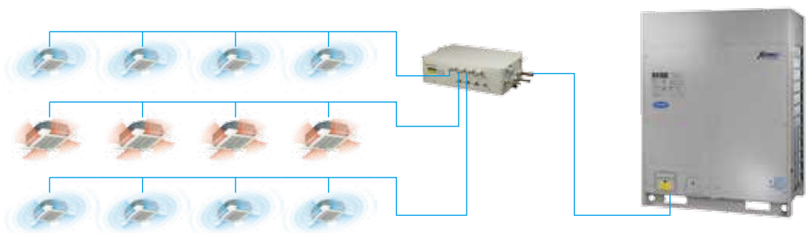
One group pipe with max. 4 indoor units connection

Two group pipes with max. 8 indoor units connection

Four group pipes with max. 16 indoor units connection

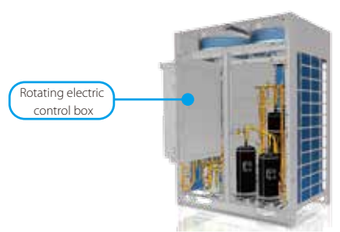
Six group pipes with max. 24 indoor units connection

- Indoor units connected to a same MS can realize simultaneous cooling and heating operation.



Rotatable Control Box

Newly designed rotating control box can rotate in a wide angle. It is convenient for the inspection and maintenance of the pipeline system and greatly reduces the dismount time of the electric control box.



Xpower Heat Recovery Series

Capacity(HP)			8	10	12	14	16
Model 38VR			38VF008T119010 38VF008T118010	38VF010T119010 38VF010T118010	38VF012T119010 38VF012T118010	38VF014T119010 38VF014T118010	38VF016T119010 38VF016T118010
Power supply		V/Ph/Hz	380-415/3/50 380-415/3/60				
Cooling	Capacity	kW	25.2	28	33.5	40	45
	Power input	kW	5.73	6.67	8.07	11.3	13.24
	EER	KBtu/h/kW	15.01	14.33	14.16	12.08	11.60
Heating	Capacity	kW	27	31.5	37.5	45	50
	Power input	kW	6	7.33	8.72	11.19	12.79
	COP	KBtu/h/kW	15.35	14.67	14.67	13.72	13.34
Connectable indoor unit	Total capacity		50~130% of outdoor unit capacity				
	Max. quantity		13	16	20	23	26
Compressor	Type		DC inverter				
	Quantity		1	1	1	2	2
Fan motor	Type		DC motor				
	Quantity		2	2	2	2	2
	Static pressure	Pa	0-20 (default)				
		Pa	20-40 (customized)		20-60 (customized)	20-40 (customized)	
Refrigerant	Type		R410A				
	Factory charging	kg	10	10	10	13	13
Pipe connections	Liquid pipe	mm	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9
	Low pressure gas pipe	mm	Φ22.2	Φ22.2	Φ25.4	Φ28.6	Φ28.6
	High pressure gas pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ22.2	Φ22.2
	High pressure gas balance pipe	mm	Φ19.1	Φ19.1	Φ19.1	Φ19.1	Φ19.1
	Oil balance pipe	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
Air flow rate		m^3/h	12000	12000	13000	15000	15000
Sound pressure level		dB(A)	57	57	58	60	60
Net dimension (W×H×D)		mm	1250×1615×765				
Packing size (W×H×D)		mm	1305×1790×820				
Net weight		kg	255	255	255	303	303
Gross weight		kg	273	273	273	322	322
Operating temperature range		℃	Cooling: -5~48; Heating: -20~24; Simultaneous Cooling and Heating: -5~24				

Notes:
Capacities are based on the following conditions:
Cooling: Indoor temperature 27oC DB/19oC WB; Outdoor temperature 35oC DB/24oC WB; Heating: Indoor temperature 20oC DB/15oC WB; Outdoor temperature 7oC DB/6oC WB.
Piping length: Interconnecting piping length is 7.5m, level difference is zero.
Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1.3m above the floor.

Xpower Heat Recovery Series - MS Box

Model				MSFT-01C-CM	MSFT-02C-CM	MSFT-04C-CM	MSFT-06C-CM	MSFT-02E-CM	MSFT-04E-CM
Applicable indoor units				All VRF indoor units except high static pressure duct				Only high static pressure duct	
Max. indoor unit groups				1	2	4	6	1	1
Max. number of each group of indoor units				4	4	4	4	1	1
Max. number of downstream indoor units				4	8	16	24	1	1
Max. capacity of each group of indoor units			kW	16	16	16	16	20/25/28	40/45/56
Max. total capacity of all downstream indoor units			kW	16	28	45	45	20-28	40-56
Piping connections	Connected to outdoor unit	Liquid pipe	mm	Φ9.53	Φ12.7	Φ15.9	Φ15.9	Φ12.7	Φ15.9
		High pressure gas pipe	mm	Φ15.9	Φ19.1	Φ22.2	Φ22.2	Φ19.1	Φ22.2
		Low pressure gas pipe	mm	Φ19.1	Φ25.4	Φ31.8	Φ31.8	Φ25.4	Φ31.8
	Connected to indoor unit	Liquid pipe	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53	Φ9.53
		Gas pipe	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
Sound pressure level			dB(A)	33	33	33	40	33	33
Net dimension (W×H×D)			mm	630×225×600	630×225×600	960×225×600	960×225×600	630×225×600	960×225×600
Packing size (W×H×D)			mm	725×325×685	725×325×685	1055×325×685	1055×325×685	725×325×685	1055×325×685
Net weight			kg	18	19.5	31	35	19.5	31
Gross weight			kg	25	27	40	44.5	27	40

Note:
Sound values are measured in a semi-anechoic room, at a position 1m below the MS equipment in mode switch condition.
It is not recommended to install in a place where low noise performance is required.

Recommended combination table

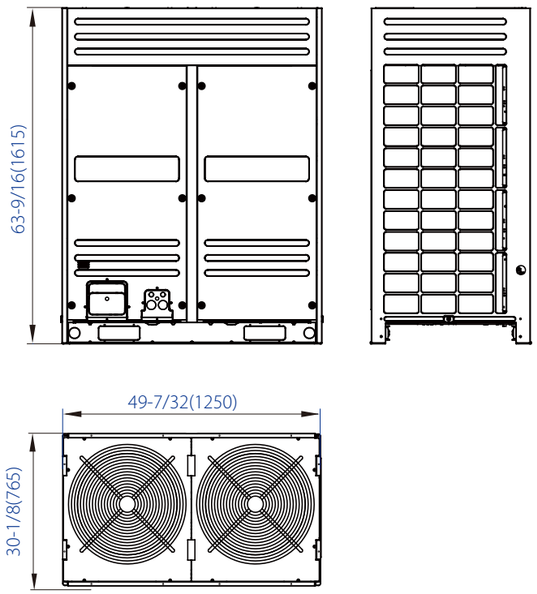
Model	No. of units	No.of compressor	Modules[1]					Max No. of connectable indoor unit	Cooling capacity		Heating capacity	
HP			8	10	12	14	16		kW	kBtu/h	kW	kBtu/h
8	1	1	●					13	25.2	86.0	27.0	92.1
10	1	1		●				16	28	95.5	31.5	107.5
12	1	1			●			20	33.5	114.3	37.5	128.0
14	1	2				●		23	40	136.5	45.0	153.5
16	1	2					●	26	45	153.5	50.0	170.6
18	2	2	●	●				29	50	170.6	58.5	199.6
20	2	2		●●				33	56	191.1	63.0	215.0
22	2	2		●	●			36	61.5	209.8	69.0	235.4
24	2	3		●		●		39	67	228.6	76.5	261.0
26	2	3		●			●	43	73	249.1	81.5	278.1
28	2	4				●●		46	78.5	267.8	90.0	307.1
30	2	4				●	●	50	85	290.0	95.0	324.1
32	2	4					●●	53	90	307.1	100.0	341.2
34	3	4		●●		●		56	95	324.1	108.0	368.5
36	3	4		●●			●	59	101.5	346.3	113.0	385.6
38	3	4		●	●		●	63	106.5	363.4	119.0	406.0
40	3	5		●		●	●	64	112	382.1	126.5	431.6
42	3	6				●●●		64	117.5	400.9	112.5	383.9
44	3	6				●●	●	64	123	419.7	125.0	426.5
46	3	6				●	●●	64	128.5	438.4	145.0	494.7
48	3	6					●●●	64	134.5	458.9	150.0	511.8
50	4	6	●	●			●●	64	140	477.7	158.5	540.8
52	4	6		●●			●●	64	146	498.2	163.0	556.2
54	4	6		●	●		●●	64	151.5	516.9	169.0	576.6
56	4	7		●		●	●●	64	157	535.7	176.5	602.2
58	4	8				●●●	●	64	163.5	557.9	185.0	631.2
60	4	8				●●	●●	64	168.5	574.9	190.0	648.3
62	4	8				●	●●●	64	175	597.1	195.0	665.3
64	4	8					●●●●	64	180	614.2	200.0	682.4

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.
The above combination models are factory-recommended models

Body dimension

Unit: in.(mm)

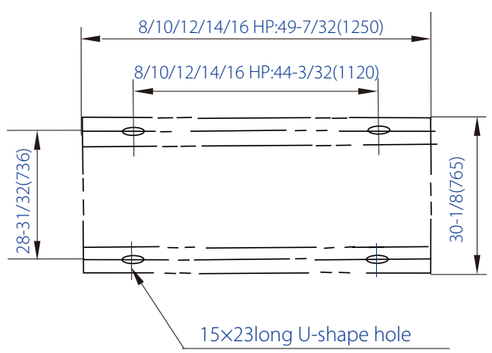
8/10/12/14/16 HP



Installation dimension

Unit: in.(mm)

Screw bolt position



X-Power Full DC Inverter
Mini H Series

NEW Fashion Design

R-410A

DC Inverter

Features

Wide Application Range

Wide range of outdoor units

The outdoor units' capacity range from 8kW(27,3kBtu/h) to 45kW(153,5kBtu/h) which is ideal for small offices, villas, apartment and shops, making it perfect for commercial and residential application.

8kW; 10kW (27,3BkBtu/h;35,8kBtu/h)	12kW; 14kW; 16kW (40,9kBtu/h; 47,8kBtu/h; 52,9kBtu/h)	20kW; 22.4kW; 26kW; 33.5kW (68.2kBtu/h; 76,4kBtu/h; 88,7kBtu/h114.3kBtu/h)	40kW; 50kW (136,5kBtu/h; 153,5kBtu/h)
			

Flexible indoor units connection

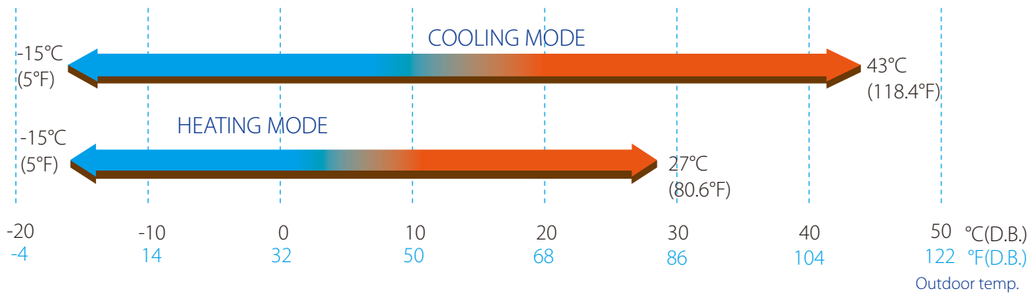
Mini VRF with intelligent control gives you independent zoning control with maximum flexibility.
A single outdoor unit supports up to nine indoor units, freeing up considerable space outside. Use your backyard more wisely with much more space available created by less number of outdoor units.

- Max. 7 indoor units for a 16kW(52,900Btu/h) outdoor unit installation
- Max. 6 indoor units for a 14kW(47,800Btu/h) outdoor unit installation
- Max. 6 indoor units for a 12kW(40,900Btu/h) outdoor unit installation
- Max. 5 indoor units for a 10.5kW(35,800Btu/h) outdoor unit installation

* For 20-45KW unit, please check the information in the specifications.

Wide operation temperature range

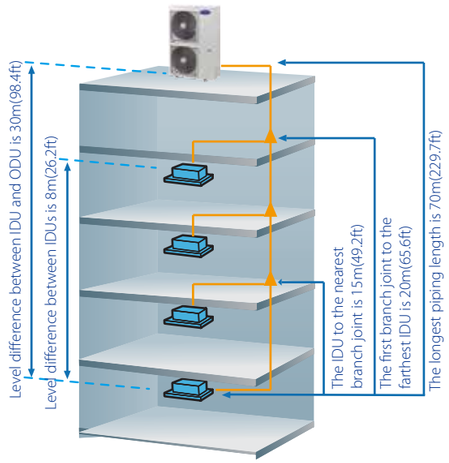
Mini VRF system operates stably at extreme temperature range from minus 15°C (5°F) to 43°C(118.4°F).



*For 20-45KW unit, please check the information in the following specifications.

Flexible piping design

The Mini VRF provides a total piping length possibility of 250m(820.2ft), a maximum height difference between outdoor and indoor units of 30m(98.4ft). The height difference between indoors unit can be up to 8m(26.2ft). These generous allowances facilitate an extensive array of system designs.

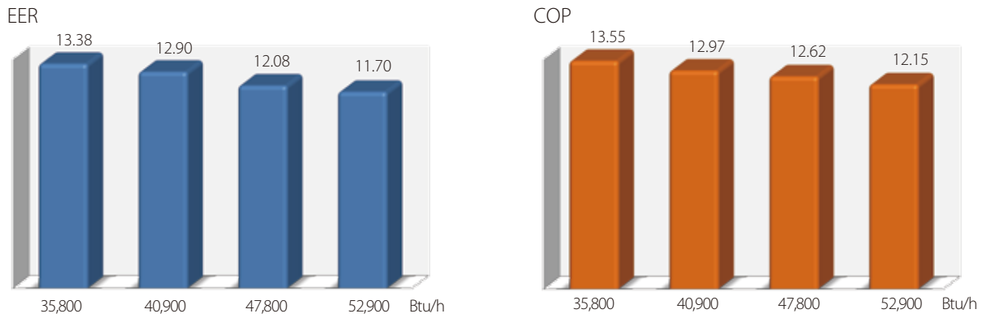


Permitted value			8/10kW (27.3/35.8kBtu/h)	12/14/16/18kW (40.9/47.8/ 52.9 kBtu/h)	20/22.4/26/28/ 33.5kW(68.2/76.4/ 88.7/114.3kBtu/h)	40/45kW 136.5/153.5kBtu/h
Piping length	Total piping length (Actual)		100m(328ft)	100m(328ft)	120m(393.7ft)	250m(820.2ft)
	Longest piping (L)	Actual length	45m(146.7ft)	60m(196.9ft)	60m(196.9ft)	100m(328ft)
		Equivalent length	50m(164ft)	70m(229.7ft)	70m(229.7ft)	120m(393.7ft)
Level difference	Equivalent piping length (from the farthest IDU to the frst indoor branch joint)		20m(65.6ft)	20m(65.6ft)	20m(65.6ft)	40m(131.2)
	Level difference between IDU~ODU	Outdoor unit up	30m(98.4ft)	30m(98.4ft	30m(98.4ft)	30m(98.4ft
		Outdoor unit down	20m(65.6ft)	20m(65.6ft)	20m(65.6ft)	20m(65.6ft)
	Level difference between IDU~IDU		8m(26.2ft)	8m(26.2ft)	8m(26.2ft)	8m(26.2ft)

1 Total pipe length is equal to all the liquid pipe or all the gas pipe length.
2 When the total equivalent pipe length of liquid side plus gas side is more than 90m(295.2ft), it needs to meet the specific conditions according to the installation part of the technical manual.
3 *For 20-45KW unit, please check the information in the specifications.

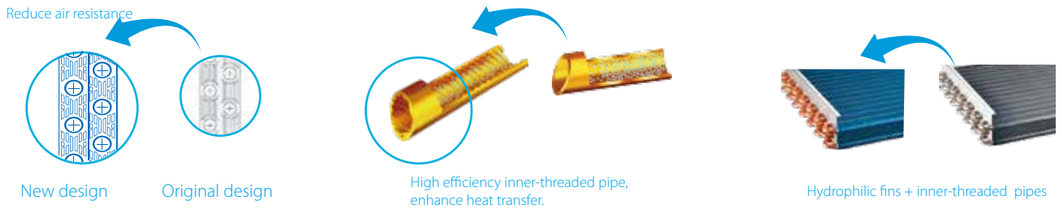
High Efficiency

High COP and EER values



*For 20-45KW unit, please check the information in the specifications.

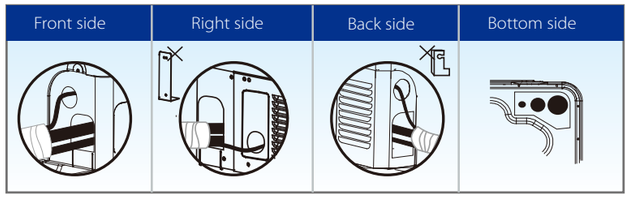
High performance heat exchanger

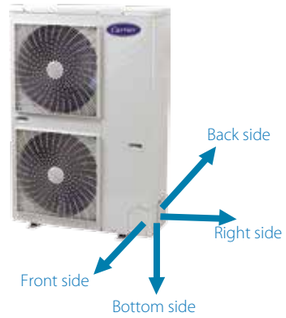


- The new designed window fins enlarge the heat-exchanging area , decrease the air resistance, save more power and enhance heat exchange performance.
- Hydrophilic film fins and inner-threaded copper pipes optimize heat exchange efficiency.
- The specially coated blue fins enhance durability and protect against corrosion from air, water and other corrosive agents, assures a longer coil service life.

More convenience in installation

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





More convenient piping connector - branch box

Easier and safer installation thanks to a branch box that simplifies piping work and the adoption of screw connection.

Both left and right pipe flare connection from outdoor unit to branch box is reserved, which greatly simplifies field installation.

Two sets of pipe size converter are packed with branch box to transfer the pipe size from Φ6.35mm(Φ1/4in) to Φ9.53mm(Φ3/8in) and from Φ12.7mm(Φ1/2in) to Φ15.9mm(Φ5/8in).

Low noise

The branch pipe is linear expansion design regulates the flow of refrigerant and reduces the noise. By locating the branch box in the ceiling or outside ,noise generated by the branch box can be kept clear of living spaces, thus makes noise level to a minimum.

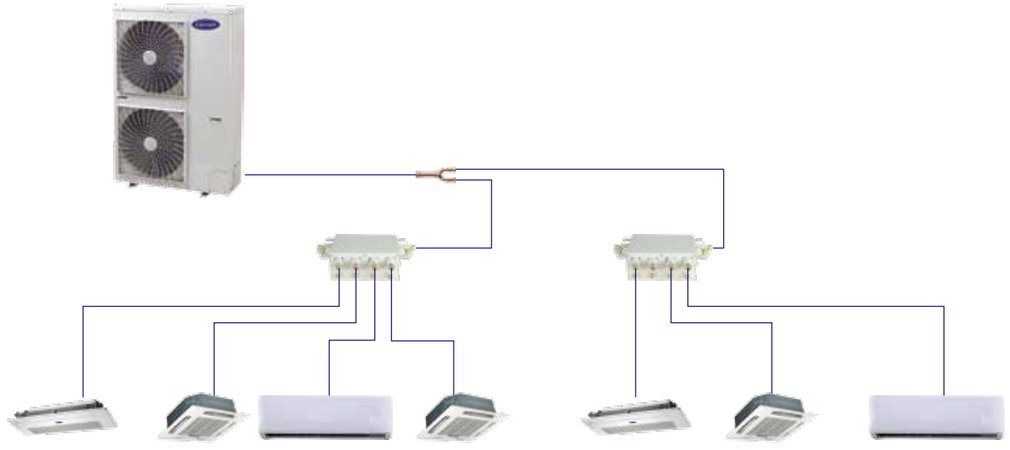
Brazing-free quick installation

All the piping leading to and from the branch box is connected using screw joints,which can be installed quickly and easily.

Indoor installation

The branch box can be installed in the ceiling rather than outside. Removing the side and bottom covers provides easy access for maintaining inner components such as circuit boards.

New piping connection design

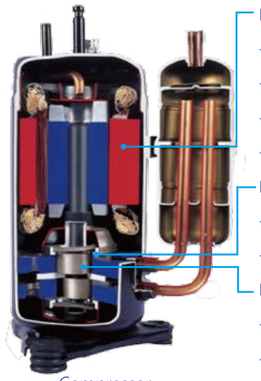


*40/45KW unit can not connect branch box

Advanced Technologies

Full DC inverter technology

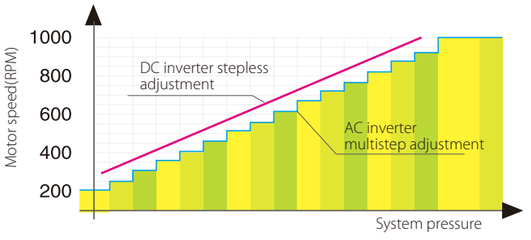
At the heart of our system is a highly intelligent inverter driven compressor. This advanced technology enables the output of the outdoor unit to be modulated by the cooling or heating demands of the zone that it controls. This advanced system ensures precise temperature regulation and highly efficient energy usage, making a significant contribution to the limiting the impact on the environment.



Compressor
(Twin Rotary) structure

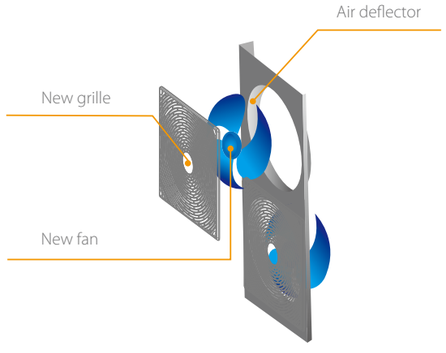
- Highly Efficient DC Motor:
  - Creative motor core design
  - High density neodymium magnet
  - Concentrated type stator
  - Wider operating frequency range
- Better balance and Extremely Low Vibration:
  - Twin eccentric cams
  - 2 balance weights
- Highly Stable Moving Parts:
  - Optimal material matching rollers and vanes
  - Optimize compressor drive technology
  - Highly robust bearings
  - Compact structure

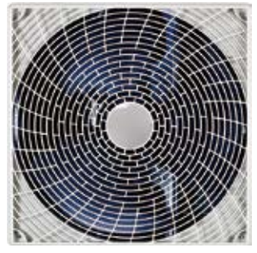
High efficiency DC fan motor saved power up to 50%.



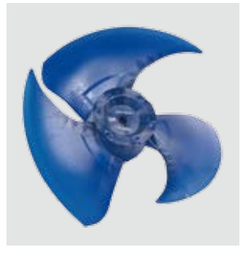
Noise reducing design

Optimally designed fan shape and air discharge grille increases air volume and reduces running noise.





Newly Designed Fan Guard



Powerful Large Propeller

Specifications 50Hz

Sales Model			38VR007H119010	38VR008H11901S	38VR010H11901S	38VR012H11901S	38VR014H11901S	38VR016H11901S
Power supply		V-Ph-Hz	380-415V-3N~50Hz	380-415V-3N~50Hz	380-415V-3N~50Hz	380-415-3N~50	380-415-3N~50	380-415-3N~50
Cooling	Capacity	kW	20	22.4	26	33.5	40	45
		RT	5.7	6.4	7.4	9.5	11.4	12.9
	Input	kW	6.1	6.8	7.6	9.85	11.9	13.6
	EER	KBtu/h/kW	11.19	11.23	11.67	11.6	11.43	11.33
Heating	Capacity	kW	22	24.5	28.5	33.5	45	50
		RT	6.29	7	8.1	9.5	12.86	14.3
	Input	kW	6.1	5.9	6.8	8.38	11.1	12.7
	COP	KBtu/h/kW	12.32	14.16	14.30	13.65	13.82	13.41
Outdoor sound level(*3)		dB(A)	59	59	60	62	62	62
Pipe connections	Liquid side	mm	Φ9.53	Φ9.53	Φ9.53	Φ12.7	Φ12.7	Φ12.7
	Gas side	mm	Φ19.1	Φ19.1	Φ22.2	Φ22.2	Φ22.2	Φ25.4
Connectable	Total capacity	%	50-130%	50-130%	50-130%	50-130%	50-130%	50-130%
	Max.quantity		10	11	12	13	14	15
Compressor	Type		Rotary	Rotary	Rotary	Rotary	Rotary	Rotary
	Brand		MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI
	Capacity	Btu/h	13980	16860	16860	57526	13980×2	16860×2
	Crankcase	W	25	25	25	5.2	25×2	25×2
	Refrigerant oil	Type	FV50S	FV50S	FV50S	FV50S	FV50S	FV50S
	Refrigerant oil	ml	1400+1300	1700+1500	1700+1500	1700+1500	1400×2+2500	1700×2+3600
Fan Motor	Type		DC motor	DC motor	DC motor	DC	DC+AC	DC+AC
	Quantity		2	2	2	2	1+1	1+1
	Output	W	210/160	200/150	200/150	220+180	560/320	560/320
	Airflow	CFM	6470	6173	6173	6374	9750	9750
		m^3/h	10999	10494	10494	10837	16575	16575
Outdoor unit	Dimension(W x H x D)	mm	1120×1558×528	1120×1558×528	1120×1558×528	1120×1558×528	1360×1650×540	1460×1650×540
	Net/Gross weight	kg	137/153	146.5/162.5	147/163	157/173	240/260	275/290
Refrigerant	Type		R410A	R410A	R410A	R410A	R410A	R410A
	Charged volume	g	4800	6200	6200	3750	9000	12000
Throttle type			EXV					
Design pressure		MPa	4.4/2.6					
Ambient temp		°F(℃)	-15~46	-15~46	-15~46	-5~48	-5~48	-5~48
			-15~24	-15~24	-15~24	-15~24	-15~24	-15~24

Note:
1. The cooling conditions: indoor temp.: 27℃ DB(80.6 °F), 19 ℃ WB(60°F) outdoor temp.: 35℃ DB(95°F) equivalent pipe length: 5m drop length: 0m.
2. The heating conditions: indoor temp.: 20℃ DB(68°F), 15℃ WB(44.6°F) outdoor temp.: 7 ℃ DB(42.8°F) equivalent pipe length: 5m drop length: 0m.
3. Sound level: Anechoic chamber conversion value, measured at a point 1 m(3.28ft) in front of the unit at a height of *m(1m(3.28ft) for 105 model,1.2m(3.94ft) for 120~160model). During actual operation, sound level might be affected by ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.

Outdoor Unit

208/230V~1Ph~60Hz
38VR004H11301S
38VR004H113010
38VR005H113010
38VR006H113010

220-240V~1Ph~50Hz
38VR003H112010
38VR004H11201S
38VR004H112010
38VR005H112010
38VR006H112010

Specifications 60Hz&50Hz

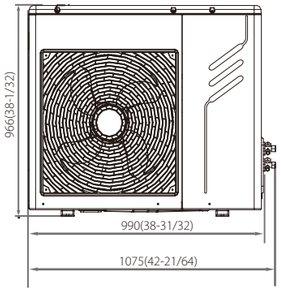
Sale Model			38VR004H11301S	38VR004H113010	38VR005H113010	38VR006H113010
Power supply		V-Ph-Hz	208-230V-1Ph~60Hz	208-230V-1Ph~60Hz	208-230V-1Ph~60Hz	208-230V-1Ph~60Hz
Cooling	Capacity	kW	10.5	12	14	15.5
		RT	3	3.4	4.0	4.4
	Input	kW	2.68	3.25	3.95	4.52
	EER	KBtu/h/kW	13.38	12.59	12.08	11.70
Heating	Capacity	kW	11.5	13.2	15.4	17
		RT	3.3	3.8	4.4	4.9
	Input	kW	2.9	3.47	4.16	4.77
	COP	KBtu/h/kW	13.55	12.97	12.62	12.15
Coneectable indoor unit	Total capacity	%	50-130%	50-130%	50-130%	50-130%
	Max.quantity		5	6	6	7
Outdoor sound level (*3)		dB(A)	57	57	57	57
Pipe connections	Liquid side	mm	Φ9.53	Φ9.53	Φ9.53	Φ9.53
	Gas side	mm	Φ15.9	Φ15.9	Φ15.9	Φ19.1
Compressor	Type		Rotary	Rotary	Rotary	Rotary
	Brand		MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI
	Capacity	Btu/h	24330	33710	33710	47713
	Input	W	2200	3010	3010	4240
	Crankcase	W	25	27	25	20
	Refrigerant oil	Type	FV50S	FV50S	FV50S	FV50S
		ml	670	870	870	1400
Fan Motor	Type		DC motor	DC motor	DC motor	DC motor
	Quantity		1	2	2	2
	Output	W	170	2 x 85	2 x 85	2 x 85
	Air floor rate	CFM	3000	3531	3531	3531
		m^3/h	5100	6000	6000	6000
Outdoor unit	Dimension (W x H x D)	mm	1075x966x396	900x1327x400		
	Packing (W x H x D)	mm	1120x1100x435	1030x1456x435		
	Net/Gross weight	kg	78/85	95/106	95/106	102/113
Refrigerant	Type		R410a			
	Charged volume	kg	3	3.3	3.9	3.9
Throttle type			EXV	EXV	EXV	EXV
Design pressure		MPa	4.4/2.6	4.4/2.6	4.4/2.6	4.4/2.6
Ambient temperature range	Cooling	℃	-15~43℃			
	Heating	℃	-15~27℃			

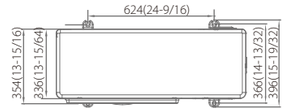
Note:
1. The cooling conditions: indoor temp.: 27℃ DB(80.6°F), 19℃ WB(60 °F) outdoor temp.: 35℃ DB(95°F) equivalent pipe length: 5m drop length: 0m.
2. The heating conditions: indoor temp.: 20℃ DB(68°C), 15℃ WB(44.6°F) outdoor temp.: 7℃ DB(42.8°F) equivalent pipe length: 5m drop length: 0m.
3. Sound level: Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of *m(0.9m for 80model, 1m for 105 model,1.2m for 120~160model). During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.

Dimension

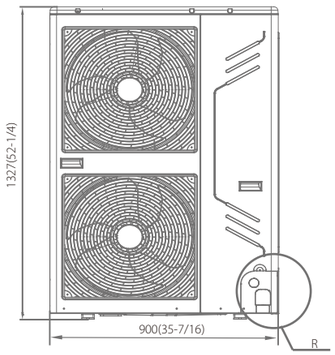
Unit Dimensions, unit: mm(in)

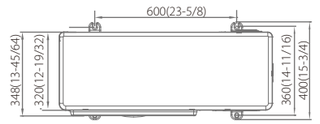
8/10.5kW

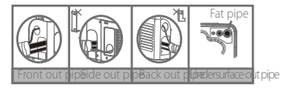




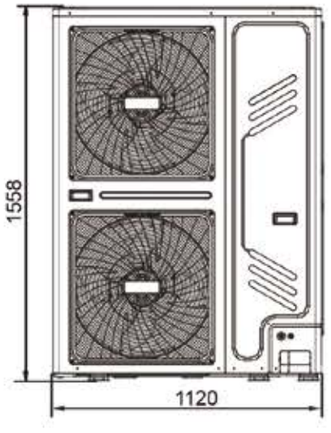
12/14/16kW

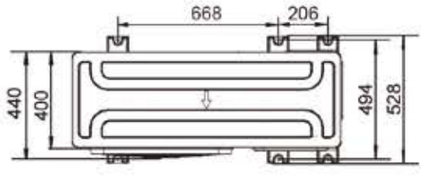




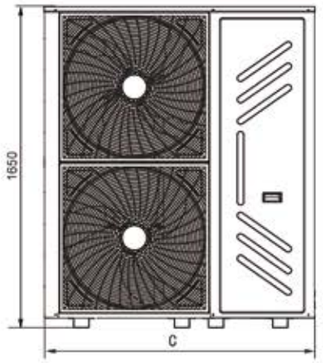


18/20/24/26kW





40/45kW



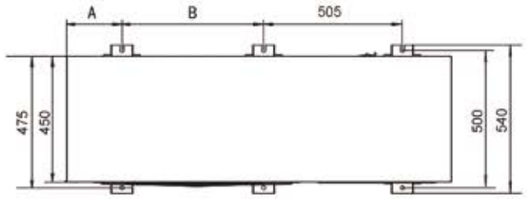
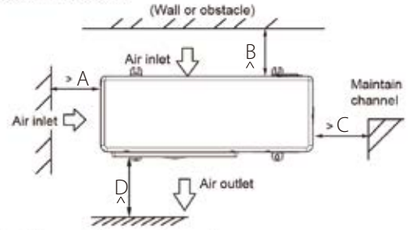


Table 4-1

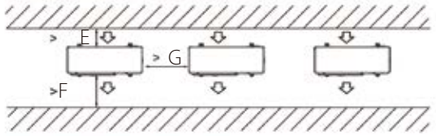
Model \ Size	A	B	C
40kW	175	505	1360
45kW	225	555	1460

Unit installation : mm

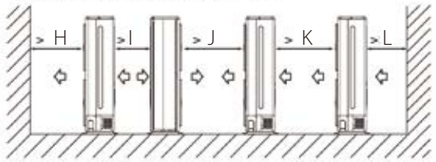
- Single unit installation



- Parallel connect the two units or above



- Parallel connect the front with rear sides



Model (kW)	A	B	C	D	E	F	G	H	I	G	K	L
8-18kW	300	300	600	2000	300	2000	600	2000	500	3000	3000	300
20-26kW	300	300	600	3000	300	3000	600	3000	1000	6000	4000	300
40-15kW	400	400	600	4000	400	4000	600	4000	1000	8000	6000	400

2nd Generation VRF DC INDOOR UNITS

2nd Generation VRF DC INDOOR UNITS

Wide Application Range

Wide Range of Indoor Units

With 11 types and more than 100 models,CarrierVRF indoor units meet varied customer requirements in a wide range of locations including shopping malls, hospitals, office buildings, hotels and airports.

Multiple Appearance Options

For Four-way Cassette and Compact Four-way Cassette Units, interchangeable 360° airflow and four-way airflow panels are available.

360° airflow

Four-way airflow

For Floor Standing Units, the F3B (concealed) unit is designed to be concealed in walls while the F4 (front air intake) and F5 (underside air intake) offer a choice of air intake options.

F3B (concealed)

F4 (front air intake)

F5 (underside air intake)

Comfort and Efficiency

High Efficiency DC Fan Motor

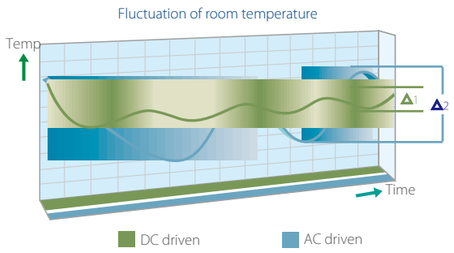
The power consumption of DC fan motor can be reduced greatly in comparison to corresponding AC type.

Quiet Operation

The low sound operation DC fan motor and optimized fan blades guarantees the air discharge smoothly and provides a quiet living environment.

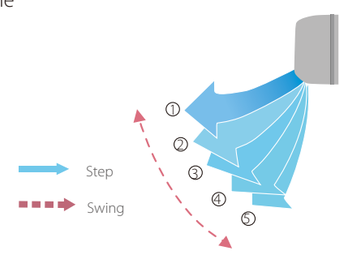
Constant Level of Indoor Air Temperature

Plate Heat Exchanger as a secondary intercooler to gain up to 18°C subcooling and improves 10% energy efficiency.



5-step Swing Louver

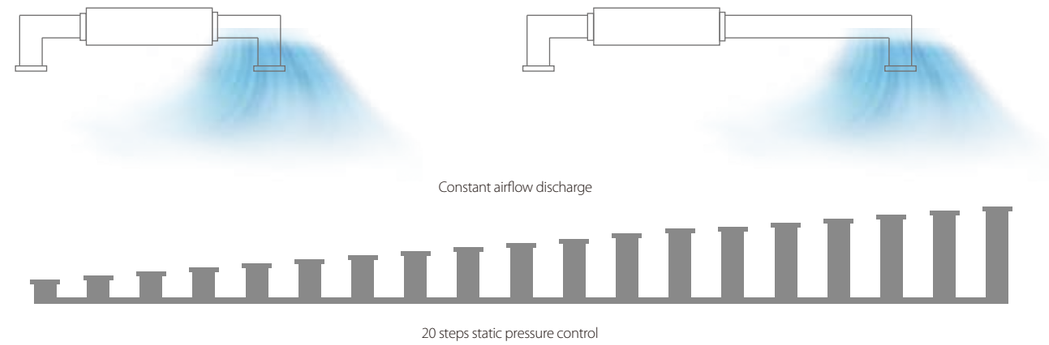
The air is comfortably spread upwards and downwards thanks to the 5-step swing louver that can be programmed via the controller.



Comfort and Efficiency

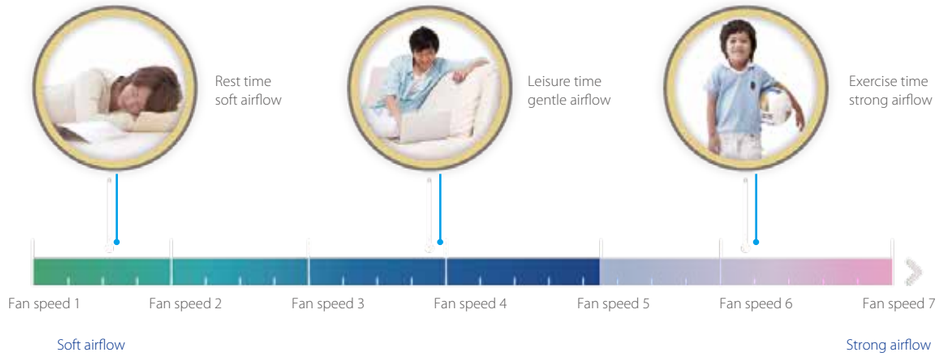
Static Pressure 20 Steps Control (Duct Unit)

Depending on the installation environment, medium static pressure duct is controlled the static pressure up to 10 steps and high static pressure duct is controlled the static pressure up to 20 steps via wired remote controller, for providing comfortable environment suitable for any environment.



7-Speed Fan Control

7 indoor fan speeds provide control flexibility to meet the needs of different indoor conditions.



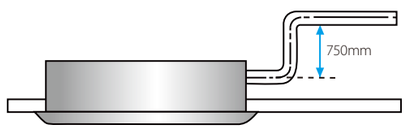
Fresh Air Intake

On selected models, a reserved outside air intake port allows outdoor air to be introduced directly into the unit, negating the need for a separate ventilation system.

Convenience

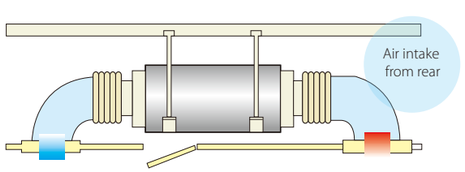
High-lift Drain Pump

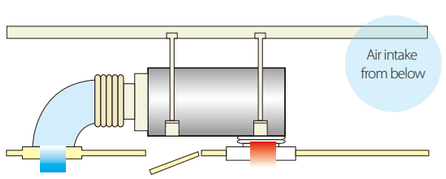
A drain pump with a 750mm or 500mm pump head is fitted as standard or optional, simplifying installation of the drain piping.



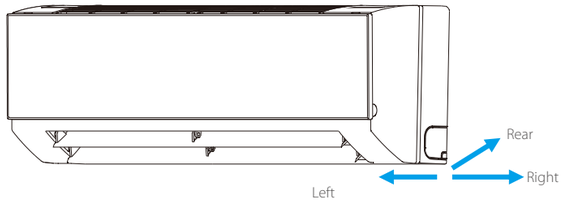
Flexible Installation

For Medium Static Pressure Duct Units, 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.

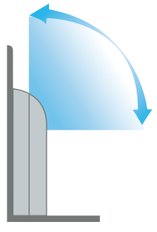




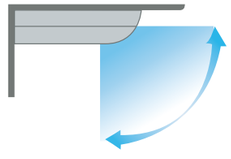
For Wall Mounted Units, the refrigerant outlet direction can be left, right or rear as the installation situation requires. A new fixing plate design speeds installation and provides extra stability.



Ceiling / Floor Units can be installed either on the ceiling or the floor, providing flexibility to accommodate a wide range of room designs.



Floor installation



Ceiling installation

One-way Cassette

- Fresh air intake
- One-way air discharge, ideal for corner locations
- Drain pump with 750mm pump head fitted as standard

Standard controller

WL-12B-CM

Optional controller

WL-12D-CM

WR-86KD-CM

WR-120G-CM

Model			40VZ006H11500016	40VZ007H11500016	40VZ009H11500016	40VZ012H11500016
Power supply			1-phase, 220-240V, 50/60Hz			
Cooling[1]	Capacity	kW	1.8	2.2	2.8	3.6
		kBtu/h	6.1	7.5	9.6	12.3
	Power input	W	25	25	30	30
Heating[2]	Capacity	kW	2.2	2.6	3.2	4.0
		kBtu/h	7.5	8.9	10.9	13.6
	Power input	W	25	25	30	30
Air flow rate [3]		m^3/h	523/482/448/404/360/312/275		573/531/492/456/420/364/315	
Sound pressure level[4]		dB(A)	37/36/35/34/32/31/30		39/38/37/36/35/35/34	
Main body	Net dimensions[5] (WxHxD)	mm	1054×153×425			
	Packed dimensions (WxHxD)	mm	1155×245×490			
	Net/Gross weight	kg	11.8/15.3		12.3/15.8	
Panel	Net dimensions (WxHxD)	mm	1180×25×465			
	Packed dimensions (WxHxD)	mm	1232×107×517			
	Net/Gross weight	kg	3.5/5.2			
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7			
	Drain pipe	mm	OD Φ32			

Model			40VZ016H11500016	40VZ020H11500016	40VZ024H11500016
Power supply			1-phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	4.5	5.6	7.1
		kBtu/h	15.4	19.1	24.2
	Power input	W	40	48	60
Heating[2]	Capacity	kW	5.0	6.3	8.0
		kBtu/h	17.1	21.5	27.3
	Power input	W	40	48	60
Air flow rate [3]		m^3/h	693/662/638/600/556/510/476	792/763/728/688/643/589/549	933/873/815/749/689/637/592
Sound pressure level[4]		dB(A)	41/40/39/38/37/36/35	42/41/40/39/38/37/36	44/43/42/41/39/38/37
Main body	Net dimensions[5] (WxHxD)	mm	1275×189×450		
	Packed dimensions (WxHxD)	mm	1370×295×505		
	Net/Gross weight	kg	16.1/20.4	16.4/20.7	17.6/22.4
Panel	Net dimensions (WxHxD)	mm	1350×25×505		
	Packed dimensions (WxHxD)	mm	1410×95×560		
	Net/Gross weight	kg	4/5.4		
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	Φ9.53/Φ15.9	
	Drain pipe	mm	OD Φ32		

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

Two-way Cassette

- Two-way air discharge, perfect for limited ceiling space applications
- Drain pump with 750mm pump head fitted as standard
- Fresh air intake

Standard controller

Optional controller

WL-12B-CM WL-12D-CM WR-86KD-CM WR-120G-CM

Model			40VT007H11500016	40VT009H11500016	40VT012H11500016
Power supply			1-phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	2.2	2.8	3.6
		kBtu/h	7.5	9.6	12.3
	Power input	W	35	40	40
Heating[2]	Capacity	kW	2.6	3.2	4.0
		kBtu/h	8.9	10.9	13.6
	Power input	W	35	40	40
Air flow rate [3]		m^3/h	654/612/571/530/488/449/410		725/679/641/591/554/509/458
Sound pressure level [4]		dB(A)	33/31/30/29/27/25/24		35/33/32/30/29/27/25
Main body	Net dimensions[5] (WxHxD)	mm	1172×299×591		
	Packed dimensions (WxHxD)	mm	1355×400×675		
	Net/Gross weight	kg	33.5/42.0		
Panel	Net dimensions (WxHxD)	mm	1430×53×680		
	Packed dimensions (WxHxD)	mm	1525×130×765		
	Net/Gross weight	kg	10.5/15		
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7		
	Drain pipe	mm	OD Φ32		

Model			40VT016H11500016	40VT020H11500016	40VT024H11500016
Power supply			1-phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	4.5	5.6	7.1
		kBtu/h	15.4	19.1	24.2
	Power input	W	50	69	98
Heating[2]	Capacity	kW	5.0	6.3	8.0
		kBtu/h	17.1	21.5	27.3
	Power input	W	50	69	98
Air flow rate [3]		m^3/h	850/792/731/670/631/592/550	980/925/855/800/755/702/670	1200/1115/1068/1000/921/808/770
Sound pressure level [4]		dB(A)	37/36/35/34/32/31/30	39/37/36/35/33/31/30	44/42/41/40/38/36/34
Main body	Net dimensions[5] (WxHxD)	mm	1172×299×591		
	Packed dimensions (WxHxD)	mm	1355×400×675		
	Net/Gross weight	kg	35/43.5		
Panel	Net dimensions (WxHxD)	mm	1430×53×680		
	Packed dimensions (WxHxD)	mm	1525×130×765		
	Net/Gross weight	kg	10.5/15		
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	Φ9.53/Φ15.9	
	Drain pipe	mm	OD Φ32		

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

Compact Four-way Cassette

360° airflow allows for even, wide-range cooling and heating
Drain pump with 500mm pump head fitted as standard

Standard controller

Optional controller

WL-12B-CM WL-12D-CM WR-86KD-CM WR-120G-CM

Model			40VX007H11500016	40VX009H11500016	40VX012H11500016	40VX016H11500016
Power supply			1-phase, 220-240V, 50/60Hz			
Cooling[1]	Capacity	kW	2.2	2.8	3.6	4.5
		kBtu/h	7.5	9.6	12.3	15.4
	Power input	W	35	35	40	50
Heating[2]	Capacity	kW	2.4	3.2	4.0	5.0
		kBtu/h	8.2	10.9	13.6	17.1
	Power input	W	35	35	40	50
Air flow rate [3]		m^3/h	576/552/524/503/462/441/405		604/573/541/516/478/434/400	
Sound pressure level [4]		dB(A)	35/34/33/29/26/23/22		41/38/35/32/30/29/28	
Main body	Net dimensions[5] (WxHxD)	mm	630×260×570			
	Packed dimensions (WxHxD)	mm	700×330×660			
	Net/Gross weight	kg	18/23.5		19.2/24.7	
Panel	Net dimensions (WxHxD)	mm	647×50×647			
	Packed dimensions (WxHxD)	mm	715×123×715			
	Net/Gross weight	kg	2.5/4.5			
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7			
	Drain pipe	mm	OD Φ32			

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

Four-way Cassette

- Fresh air intake
- Four-way airflow, allows wide-angle, equal distribution of cooling and heating
- Drain pump with 750mm pump head fitted as standard
- Brand-new, elegant panel with four independently controlled louvers

Standard controller

WL-12B-CM

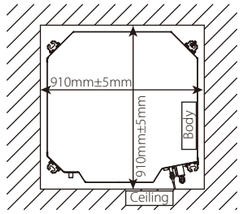
Optional controller

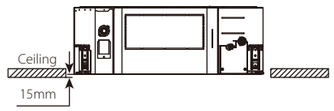
WL-12D-CM

WR-86KD-CM

WR-120G-CM

New panel appearance





New panel installation dimensions

Model			40VK009H11500016	40VK012H11500016	40VK016H11500016	40VK020H11500016	40VK024H11500016
Power supply			1 phase, 220-240V, 50/60Hz				
Cooling[1]	Capacity	kW	2.8	3.6	4.5	5.6	7.1
		kBtu/h	9.6	12.3	15.4	19.1	24.2
	Power input	W	25	25	31	31	46
Heating[2]	Capacity	kW	3.2	4.0	5.0	6.3	8.0
		kBtu/h	10.9	13.6	17.1	21.5	27.3
	Power input	W	25	25	31	31	46
Air flow rate [3]		m^3/h	801/751/711/658/637/611/542		893/866/804/744/714/698/635		977/937/864/800/778/738/671
Sound pressure level[4]		dB(A)	32/31/30/28/28/26/23		35/34/31/31/30/28/26		35/35/34/31/30/28/27
Main body	Net dimensions[5] (WxHxD)	mm	840×230×840				
	Packed dimensions (WxHxD)	mm	955×260×955				
	Net/Gross weight	kg	21.3/25.8		23.2/27.6		
Panel	Net dimensions (WxHxD)	mm	950×54.5×950				
	Packed dimensions (WxHxD)	mm	1035×90×1035				
	Net/Gross weight	kg	5/8				
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7			Φ9.53/Φ15.9	
	Drain pipe	mm	OD Φ32				

Model			40VK028H11500016	40VK030H11500016	40VK034H11500016	40VK036H11500016	40VK048H11500016
Power supply			1 phase, 220-240V, 50/60Hz				
Cooling[1]	Capacity	kW	8.0	9.0	10.0	11.2	14.0
		kBtu/h	27.3	30.7	34.1	38.2	47.8
	Power input	W	48	75	75	75	94
Heating[2]	Capacity	kW	9.0	10.0	11.0	12.5	16.0
		kBtu/h	30.7	34.1	37.5	42.7	54.6
	Power input	W	48	75	75	75	94
Air flow rate [3]		m^3/h	1203/1131/1064/ 977/912/840/774	1349/1294/1230/ 1201/1111/1029/970	1641/1544/1431/ 1309/1225/1198/1143		1662/1574/1448/ 1348/1253/1219/1170
Sound pressure level[4]		dB(A)	36/35/34/31/31/29/28	37/35/34/31/31/30/28	38/36/35/34/31/31/30		39/37/36/35/34/31/31
Main body	Net dimensions[5] (WxHxD)	mm	904×230×840	840×230×840			
	Packed dimensions (WxHxD)	mm	955×260×955	955×330×955			
	Net/Gross weight	kg	23.2/27.6	28.4/33.8			30.7/35.8
Panel	Net dimensions (WxHxD)	mm	950×54.5×950				
	Packed dimensions (WxHxD)	mm	1035×90×1035				
	Net/Gross weight	kg	5/8				
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9				
	Drain pipe	mm	OD Φ32				

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

Medium Static Pressure Duct

Fresh air intake
6-step static pressure control on 2.2kW to 7.1kW models and 10-step static pressure control on 8kW to 14kW units (requires latest generation wired controllers)
Drain pump with 750mm pump head fitted as standard
Flexible installation for the air inlet may be positioned either on the underside or the rear of the unit

Optional controller

WL-12B-CM

WL-12D-CM

WR-86KD-CM

WR-120G-CM

Model			42VD007H115003016	42VD009H115003016	42VD012H115003016
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	2.2	2.8	3.6
		kBtu/h	7.5	9.6	12.3
	Power input	W	40	40	45
Heating[2]	Capacity	kW	2.6	3.2	4.0
		kBtu/h	8.2	10.9	13.6
	Power input	W	40	40	45
Air flow rate [3]		m^3/h	520/480/440/400/360/330/300		580/540/500/460/430/400/370
External static pressure		Pa	10 (0~50)		
Sound pressure level[4]		dB(A)	32/31/29/28/26/25/23		33/32/31/30/28/27/25
Unit	Net dimensions[5] (WxHxD)	mm	780×210×500		
	Packed dimensions (WxHxD)	mm	870×285×525		
	Net/Gross weight	kg	18/21		
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/ Φ12.7		
	Drain pipe	mm	OD Φ25		

Model			42VD016H115003016	42VD020H115003016	42VD024H115003016
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	4.5	5.6	7.1
		kBtu/h	15.4	19.1	24.2
	Power input	W	92	92	98
Heating[2]	Capacity	kW	5.0	6.3	8.0
		kBtu/h	17.1	21.5	27.3
	Power input	W	92	92	98
Air flow rate [3]		m^3/h	800/740/680/620/540/480/400	830/760/720/680/640/600/560	1000/960/900/840/780/720/680
External static pressure		Pa	10 (0~50)		
Sound pressure level[4]		dB(A)	36/34/32/31/29/27/25	36/34/33/32/30/29/28	37/35/33/32/30/29/28
Unit	Net dimensions[5] (WxHxD)	mm	1000x210x500		1220x210x500
	Packed dimensions (WxHxD)	mm	1115x285x525		1335x285x525
	Net/Gross weight	kg	21.5/25		27.5/31.5
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/ Φ12.7	Φ9.53/Φ15.9	
	Drain pipe	mm	OD Φ25		

Model			42VD028H115003016	42VD030H115003016	42VD036H115003016	42VD048H115003016
Power supply			1 phase, 220-240V, 50/60Hz			
Cooling[1]	Capacity	kW	8.0	9.0	11.2	14.0
		kBtu/h	27.3	30.7	38.2	47.8
	Power input	W	110	120	200	250
Heating[2]	Capacity	kW	9.0	10.0	12.5	15.5
		kBtu/h	30.7	34.1	42.7	52.9
	Power input	W	110	120	200	250
Air flow rate [3]		m^3/h	1260/1180/1100/1020/940/860/780		1500/1430/1360/1290/1210/1140/1080	1960/1860/1760/1660/1560/1460/1360
External static pressure		Pa	20 (10~100)			40 (30~150)
Sound pressure level[4]		dB(A)	37/35/34/33/31/29/28		39/38/38/37/35/34/33	41/39/38/37/36/35/33
Unit	Net dimensions[5] (WxHxD)	mm	1230×270×775			1290×300×865
	Packed dimensions (WxHxD)	mm	1355×350×795			1400×375×925
	Net/Gross weight	kg	36.5/44.5	37/45		46.5/55.5
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9			
	Drain pipe	mm	OD Φ25			

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

High Static Pressure Duct

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

Optional controller

WL-12B-CM WL-12D-CM WR-86KD-CM WR-120G-CM

Model			42VD024H115011016	42VD028H115011016	42VD030H115011016
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	7.1	8.0	9.0
		kBtu/h	24.2	27.3	30.7
	Power input	W	180	180	220
Heating[2]	Capacity	kW	8.0	9.0	10.0
		kBtu/h	27.3	30.7	34.1
	Power input	W	180	180	220
Air flow rate[3]		m^3/h	1360/1327/1293/1260/1227/1193/1160	1360/1327/1293/1260/1227/1193/1160	1420/1373/1327/1280/1233/1187/1140
External static pressure		Pa	100 (30~ 200)		
Sound pressure level[4]		dB(A)	46/46/45/45/44/43/42	46/46/45/45/44/43/42	50/49/48/48/47/46/45
Unit	Net dimensions[5] (WxHxD)	mm	952×420×690		
	Packed dimensions (WxHxD)	mm	1090×440×768		
	Net/Gross weight	kg	41/47		51/57
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9		
	Drain pipe	mm	OD Φ25		

Model			42VD036H115011016	42VD048H115011016	42VD054H115011016	42VD070H115011016
Power supply			1 phase, 220-240V, 50/60Hz			
Cooling[1]	Capacity	kW	11.2	14.0	16.0	20.0
		kBtu/h	38.2	47.8	54.6	68.2
	Power input	W	380	420	700	990
Heating[2]	Capacity	kW	12.5	16.0	17.0	22.5
		kBtu/h	42.7	54.6	58.0	76.8
	Power input	W	380	420	700	990
Air flow rate[3]		m^3/h	1870/1783/1697/1610/ 1523/1437/1350	2240/2133/2027/1920/ 1813/1707/1600	2660/2530/2400/2270/ 2140/2010/1880	4330/4230/4130/4030/ 3930/3830/3730
External static pressure		Pa	100 (30~ 200)			170 (20~250)
Sound pressure level[4]		dB(A)	50/50/49/48/47/46/45	53/52/51/51/50/49/48	54/54/53/52/51/50/50	57/56/55/54/53/52/50
Unit	Net dimensions[5] (WxHxD)	mm	952×420×690	1300×420×690		1440×505×925
	Packed dimensions (WxHxD)	mm	1090×440×768	1436×450×768		1509×550×990
	Net/Gross weight	kg	51/57	63/70		130/142
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ19.1			Φ12.7/Φ22.2
	Drain pipe	mm	OD Φ25			OD Φ32

Model			42VD085H115011016	42VD096H115011016	42VD140H115011016	42VD160H115011016	42VD190H115011016
Power supply			1 phase, 220-240V, 50/60Hz				
Cooling[1]	Capacity	kW	25.0	28.0	40.0	45.0	56
		kBtu/h	85.3	95.5	136.5	153.6	191.1
	Power input	W	1200	1200	1800	1800	2272
Heating[2]	Capacity	kW	26.0	31.5	45.0	56.0	63
		kBtu/h	88.7	107.5	153.6	191.1	215
	Power input	W	1200	1200	1800	1800	2272
Air flow rate[3]		m^3/h	4330/4230/4130/4030/3930/3830/3730		6500/6150/5800/5450/ 5100/4750/4400		7400/7000/6600/6200/ 5800/5400/5000
External static pressure		Pa	170 (20~250)		300(100~400)		300 (100~400)
Sound pressure level[4]		dB(A)	57/56/55/54/53/52/50		60/59/58/57/55/54/52		59/58/57/56/55/53/51
Unit	Net dimensions[5] (WxHxD)	mm	1440×505×925		2005×929×670		2005×929×670
	Packed dimensions (WxHxD)	mm	1509×550×990		2095×964×800		2095×964×800
	Net/Gross weight	kg	130/142		210/235		218/248
Pipe connections	Liquid/Gas pipe	mm	Φ12.7/Φ22.2		Φ15.9/Φ28.6		Φ15.9/Φ28.6
	Drain pipe	mm	OD Φ32		OD Φ32		OD Φ32

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

All specifications are measured at standard external static pressure.

Fresh Air Processing Unit

- 100% fresh air processing unit, both fresh air filtration and heating/cooling can be achieved in a single system
- External static pressure up to 400Pa facilitates extensive duct and grille network
- 20-step static pressure control on all models (requires latest generation wired controllers)
- Water pump box is available as a customization option

Optional controller

WL-12B-CM WL-12D-CM WR-86KD-CM WR-120G-CM

Model			42VD042H115211016	42VD048H115211016
Power supply			1 phase, 220-240V, 50/60Hz	
Cooling[1]	Capacity	kW	12.5	14.0
		kBtu/h	42.6	47.8
	Power input	W	370	370
Heating[2]	Capacity	kW	10.5	12.0
		kBtu/h	36.0	41.0
	Power input	W	370	370
Air flow rate[3]		m^3/h	2000/1917/1833/1750/1667/1583/1500	
External static pressure		Pa	180 (30~200)	
Sound pressure level[4]		dB(A)	48/47/46/45/44/43/42	
Unit	Net dimensions[5] (WxHxD)	mm	1300×420×690	
	Packed dimensions (WxHxD)	mm	1436×450×768	
	Net/Gross weight	kg	63/70	
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ19.1	
	Drain pipe	mm	OD Φ25	

Model			42VD070H115211016	42VD085H115211016	42VD096H115211016	42VD160H115211016	42VD190H115211016
Power supply			1 phase, 220-240V, 50/60Hz				
Cooling[1]	Capacity	kW	20.0	25.0	28.0	45.0	56
		kBtu/h	68.2	85.3	95.5	153.6	191
	Power input	W	615	670	670	1080	2272
Heating[2]	Capacity	kW	18.0	20.0	22.0	28.0	39
		kBtu/h	61.4	68.2	75.0	95.6	133
	Power input	W	615	670	670	1080	2272
Air flow rate[3]		m^3/h	3000/2833/2667/2500/2333/2167/2000			4200/3967/3733/3500 /3267/3033/2800	7400/7000/6600/6200/ 5800/5400/5000
External static pressure		Pa	200 (30~250)			300(100~ 400)	
Sound pressure level[4]		dB(A)	50/49/48/47/46/44/43			58/56/55/53/51/49/48	59/58/57/56/54/53/51
Unit	Net dimensions[5] (WxHxD)	mm	1450×505×925			2005×929×670	
	Packed dimensions (WxHxD)	mm	1509×550×990			2095×964×800	
	Net/Gross weight	kg	130/142			195/215	218/248
Pipe connections	Liquid/Gas pipe	mm	Φ12.7/Φ22.2			Φ15.9/Φ28.6	
	Drain pipe	mm	OD Φ32			OD Φ32	

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

All specifications are measured at standard external static pressure.

Wall Mounted Unit

- Three interchangeable panels allow units to blend easily with any interior decoration, perfect for rooms with no false ceilings or free floor space
- Refrigerant outlet direction can be left, right or rear as the installation situation requires

Standard controller

WL-12B-CM

Optional controller

WL-12D-CM

WR-86KD-CM

WR-120G-CM

Model			42VH007H115000106	42VH009H115000106
Power supply			1 phase, 220-240V, 50/60Hz	
Cooling[1]	Capacity	kW	2.2	2.8
		kBtu/h	7.5	9.6
	Power input	W	28	28
Heating[2]	Capacity	kW	2.4	3.2
		kBtu/h	8.2	10.9
	Power input	W	28	28
Air flow rate [3]		m^3/h	422/411/402/393/380/368/356	417/402/386/370/353/338/316
Sound pressure level [4]		dB(A)	31/30/30/30/29/29/29	31/30/30/30/29/29/29
Unit	Net dimensions[5] (WxHxD)	mm	835×280×203	
	Packed dimensions (WxHxD)	mm	935×385×320	
	Net/Gross weight	kg	8.4/12.1	9.5/13.1
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	
	Drain pipe	mm	OD Φ16	

Model			42VH012H115000106	42VH016H115000106	42VH020H115000106
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	3.6	4.5	5.6
		kBtu/h	12.3	15.4	19.1
	Power input	W	30	40	45
Heating[2]	Capacity	kW	4.0	5.0	6.3
		kBtu/h	13.6	17.1	21.5
	Power input	W	30	40	45
Air flow rate [3]		m^3/h	656/628/591/573/544/515/488	594/563/535/507/478/450/424	747/713/685/648/613/578/547
Sound pressure level [4]		dB(A)	33/32/32/31/31/30/30	35/34/33/33/32/31/31	38/37/36/36/35/34/34
Unit	Net dimensions[5] (WxHxD)	mm	990×315×223		
	Packed dimensions (WxHxD)	mm	1085×420×335		
	Net/Gross weight	kg	11.4/15.5	12.8/16.9	
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7		Φ9.53/Φ15.9
	Drain pipe	mm	OD Φ16		

Model			42VH024H115000106	42VH028H115000106	42VH030H115000106
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	7.1	8.0	9.0
		kBtu/h	24.2	27.3	30.7
	Power input	W	55	55	82
Heating[2]	Capacity	kW	8.0	9.0	10.0
		kBtu/h	27.3	30.7	34.1
	Power input	W	55	55	82
Air flow rate [3]		m^3/h	1195/1130/1065/1005/940/875/809	1195/1130/1065/1005/940/875/809	1421/1300/1125/1067/1005/934/867
Sound pressure level [4]		dB(A)	44/43/42/39/38/37/36	44/43/42/39/38/37/36	48/46/45/43/41/40/38
Unit	Net dimensions[5] (WxHxD)	mm	1194×343×262		
	Packed dimensions (WxHxD)	mm	1290×375×460		
	Net/Gross weight	kg	17.0/22.4		
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9		
	Drain pipe	mm	OD Φ16		

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

Ceiling / Floor

Can be installed either on the ceiling or floor

Standard controller

WL-12B-CM

Optional controller

WL-12D-CM

WR-86KD-CM

WR-120G-CM

Model			42VF012H115000016	42VF016H115000016	42VF020H115000016	42VF024H115000016
Power supply			1 phase, 220-240V, 50/60Hz			
Cooling[1]	Capacity	kW	3.6	4.5	5.6	7.1
		kBtu/h	12.3	15.4	19.1	24.2
	Power input	W	49	115	115	115
Heating[2]	Capacity	kW	4.0	5.0	6.3	8.0
		kBtu/h	13.6	17.1	21.5	27.3
	Power input	W	49	115	115	115
Air flow rate [3]		m^3/h	550/525/500/480/460/440/420	930/895/860/830/792/755/720		
Sound pressure level [4]		dB(A)	40/39/38/38/37/36/36	43/42/41/41/39/38/38		
Unit	Net dimensions[5] (WxHxD)	mm	990×660×203			
	Packed dimensions (WxHxD)	mm	1089×744×296			
	Net/Gross weight	kg	26/32	28/34		
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7		Φ9.53/Φ15.9	
	Drain pipe	mm	OD Φ16			

Model			42VF028H115000016	42VF030H115000016	42VF036H115000016	42VF048H115000016
Power supply			1 phase, 220-240V, 50/60Hz			
Cooling[1]	Capacity	kW	8.0	9.0	11.2	14.0
		kBtu/h	27.2	30.7	38.2	47.8
	Power input	W	130	130	180	180
Heating[2]	Capacity	kW	9.0	10.0	12.5	15.0
		kBtu/h	30.7	34.1	42.7	51.2
	Power input	W	130	130	180	180
Air flow rate [3]		m^3/h	1280/1245/1210/1170/1130/1085/1050		1890/1830/1765/1700/1660/1620/1580	
Sound pressure level [4]		dB(A)	45/44/43/43/42/41/40		47/46/45/45/44/43/42	
Unit	Net dimensions[5] (WxHxD)	mm	1280×660×203		1670×680×244	
	Packed dimensions (WxHxD)	mm	1379×744×296		1915×760×330	
	Net/Gross weight	kg	35/41		48/58	
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9			
	Drain pipe	mm	OD Φ16			

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

Floor Standing Unit (Concealed)

- Designed to be concealed in walls with only the suction and discharge grills visible

Standard controller

WL-12B-CM

Optional controller

WL-12D-CM

WR-86KD-CM

WR-120G-CM

Model			42VS007H115003016	42VS009H115003016
Power supply			1 phase, 220-240V, 50/60Hz	
Cooling[1]	Capacity	kW	2.2	2.8
		kBtu/h	7.5	9.6
	Power input	W	40	45
Heating[2]	Capacity	kW	2.4	3.2
		kBtu/h	8.2	10.9
	Power input	W	40	45
Air flow rate[3]		m^3/h	530/504/478/456/439/418/400	569/540/515/485/462/443/421
Sound pressure level[4]		dB(A)	36/35/34/33/31/30/29	36/35/34/33/31/30/29
Unit	Net dimensions[5] (WxHxD)	mm	840×545×212	
	Packed dimensions (WxHxD)	mm	925×639×305	
	Net/Gross weight	kg	21/25.5	
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	
	Drain pipe	mm	Φ16	

Model			42VS012H115003016	42VS016H115003016
Power supply			1 phase, 220-240V, 50/60Hz	
Cooling[1]	Capacity	kW	3.6	4.5
		kBtu/h	12.3	15.4
	Power input	W	55	60
Heating[2]	Capacity	kW	4.0	5.0
		kBtu/h	13.6	17.1
	Power input	W	55	60
Air flow rate[3]		m^3/h	624/591/557/522/473/420/375	660/625/583/542/501/475/440
Sound pressure level[4]		dB(A)	37/36/35/34/32/31/30	37/36/35/34/32/31/30
Unit	Net dimensions[5] (WxHxD)	mm	1036×639×305	
	Packed dimensions (WxHxD)	mm	1125×639×305	
	Net/Gross weight	kg	25.5/30.5	
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	
	Drain pipe	mm	Φ16	

Model			42VS020H115003016	42VS024H115003016	42VS028H115003016
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	5.6	7.1	8.0
		kBtu/h	19.1	24.2	27.3
	Power input	W	88	110	130
Heating[2]	Capacity	kW	6.3	8.0	9.0
		kBtu/h	21.5	27.3	30.7
	Power input	W	88	110	130
Air flow rate[3]		m^3/h	1150/1094/1028/970/925/886/830	1380/1290/1205/1100/1033/955/870	1380/1290/1205/1100/1033/955/870
Sound pressure level[4]		dB(A)	41/39/37/35/33/32/31	44/42/40/39/37/35/33	44/42/40/39/37/35/33
Unit	Net dimensions[5] (WxHxD)	mm	1340×545×212		
	Packed dimensions (WxHxD)	mm	1425×639×305		
	Net/Gross weight	kg	30.5/35.5		32/37
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9		
	Drain pipe	mm	Φ16		

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

All specifications are measured at 10Pa external static pressure.

Floor Standing Unit (Exposed)

The F4 (front air intake) and F5 (underside air intake) offer a choice of air intake options

front air intake

underside air intake

Standard controller

WL-12B-CM

Optional controller

WL-12D-CM

WR-86KD-CM

WR-120G-CM

Model			42VS007H115002016 42VS007H115001016	42VS009H115002016 42VS009H115001016
Power supply			1 phase, 220-240V, 50/60Hz	
Cooling[1]	Capacity	kW	2.2	2.8
		kBtu/h	7.5	9.6
	Power input	W	40	45
Heating[2]	Capacity	kW	2.4	3.2
		kBtu/h	8.2	10.9
	Power input	W	40	45
Air flow rate[3]		m^3/h	530/504/478/456/439/418/400	569/540/515/485/462/443/421
Sound pressure level[4]		dB(A)	36/35/34/33/31/30/29	36/35/34/33/31/30/29
Unit	Net dimensions[5] (WxHxD)	mm (F4)	1000×596×225	
		mm (F5)	1000×677×220	
	Packed dimensions (WxHxD)	mm (F4)	1089×683×312	
		mm (F5)	1182×683×312	
	Net/Gross weight	kg (F4)	28/33	
		kg (F5)	28/35	
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	
	Drain pipe	mm	Φ16	

Model			42VS012H115002016 42VS012H115001016	42VS016H115002016 42VS016H115001016
Power supply				
Cooling[1]	Capacity	kW	3.6	4.5
		kBtu/h	12.3	15.4
	Power input	W	55	60
Heating[2]	Capacity	kW	4.0	5.0
		kBtu/h	13.6	17.1
	Power input	W	55	60
Air flow rate[3]		m^3/h	624/591/557/522/473/420/375	660/625/583/542/501/475/440
Sound pressure level[4]		dB(A)	37/36/35/34/32/31/30	37/36/35/34/32/31/30
Unit	Net dimensions[5] (WxHxD)	mm (F4)	1200×596×225	
		mm (F5)	1200×677×220	
	Packed dimensions (WxHxD)	mm (F4)	1289×683×312	
		mm (F5)	1382×683×312	
	Net/Gross weight	kg (F4)	33/38.6	
		kg (F5)	33/40.7	
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7	
	Drain pipe	mm	Φ16	

Model			42VS020H115002016 42VS020H115001016	42VS024H115002016 42VS024H115001016	42VS028H115002016 42VS028H115001016
Power supply			1 phase, 220-240V, 50/60Hz		
Cooling[1]	Capacity	kW	5.6	7.1	8.0
		kBtu/h	19.1	24.2	27.3
	Power input	W	88	110	130
Heating[2]	Capacity	kW	6.3	8.0	9.0
		kBtu/h	21.5	27.3	30.7
	Power input	W	88	110	130
Air flow rate[3]		m^3/h	1150/1094/1028/970/925/886/830	1380/1290/1205/1100/1033/955/870	1380/1290/1205/1100/1033/955/870
Sound pressure level[4]		dB(A)	41/39/37/35/33/32/31	44/42/40/39/37/35/33	44/42/40/39/37/35/33
Unit	Net dimensions[5] (WxHxD)	mm (F4)	1500×596×225		
		mm (F5)	1500×677×220		
	Packed dimensions (WxHxD)	mm (F4)	1589×683×312		
		mm (F5)	1682×683×312		
	Net/Gross weight	kg (F4)	40/46		41.5/47.5
		kg (F5)	40.4/48.6		41.5/49.5
Pipe connections	Liquid/Gas pipe	mm	Φ9.53/Φ15.9		
	Drain pipe	mm	Φ16		

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

Console

- Combination of four air inlets and two air outlets ensures that cooling and heating are distributed in all directions.

Standard controller

WL-12B-CM

Optional controller

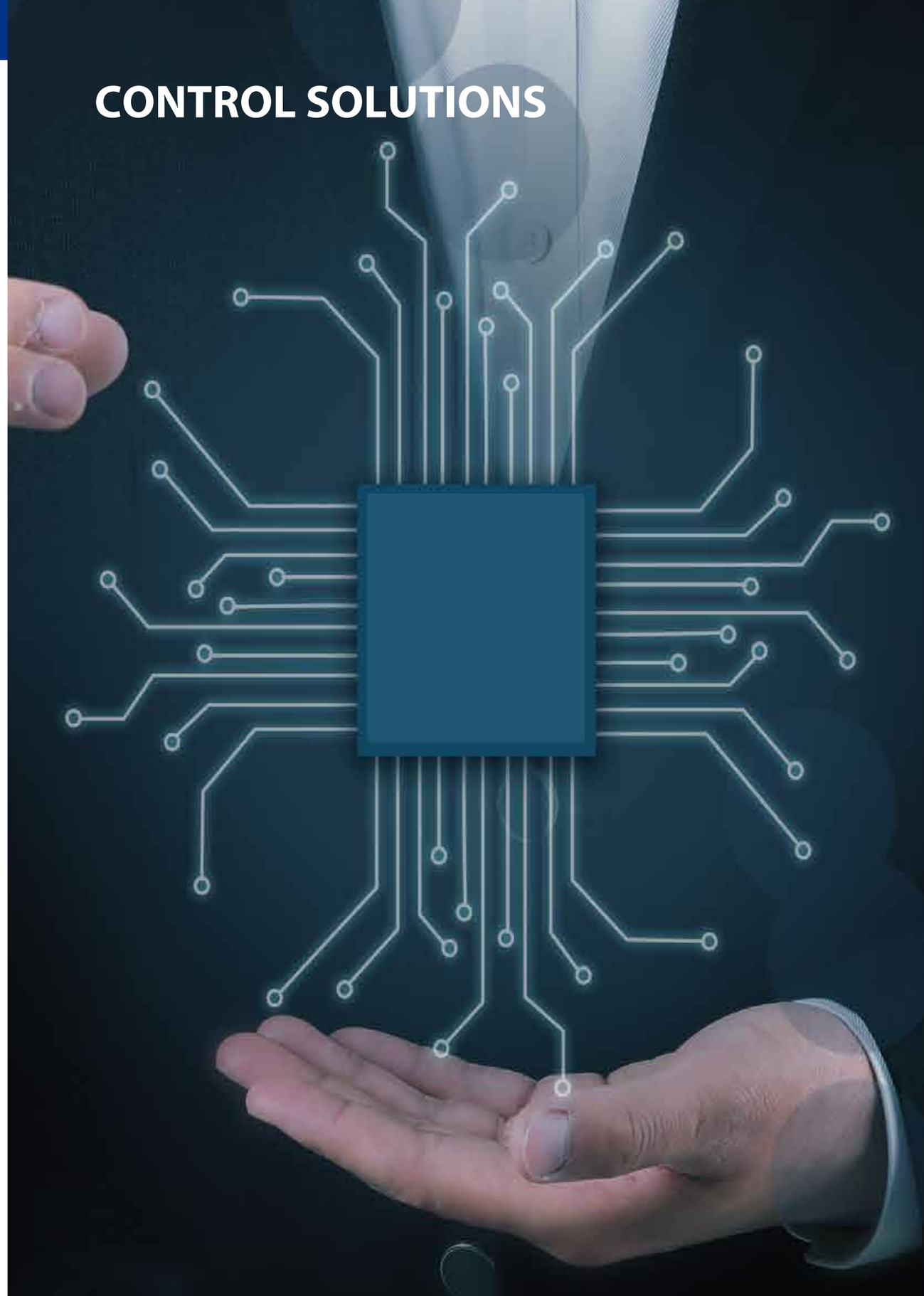
WL-12D-CM

WR-86KD-CM

WR-120G-CM

Model			42VC007H115000016	42VC009H115000016	42VC012H115000016	42VC016H115000016
Power supply			1 phase, 220-240V, 50/60Hz			
Cooling[1]	Capacity	kW	2.2	2.8	3.6	4.5
		kBtu/h	7.5	9.6	12.3	15.4
	Power input	W	20	25	25	35
Heating[2]	Capacity	kW	2.6	3.2	4.0	5.0
		kBtu/h	8.9	10.9	13.4	17.1
	Power input	W	20	25	25	35
Air flow rate [3]		m^3/h	430/401/374/345/302/268/229	510/482/456/430/355/286/229		660/614/561/512/478/436/400
Sound pressure level [4]		dB(A)	38/36/34/32/28/27/26	39/37/35/33/31/29/27		42/41/40/39/37/36/36
Unit	Net dimensions[5] (WxHxD)	mm	700×600×210			
	Packed dimensions (WxHxD)	mm	810×710×305			
	Net/Gross weight	kg	14/19	15/20		
Pipe connections	Liquid/Gas pipe	mm	Φ6.35/Φ12.7			
	Drain pipe	mm	OD Φ16			

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



CONTROLLER LINEUP

Wireless Remote Controllers	Wired Controllers	Centralized Controllers		Network Control System	BMS Gateways	Accessories
WL-12B-CM 	WR-86K-CM 	CRF-180A-CM 		4GNS-20-CM Phased out on 31 Dec 2019  **OR**  4GNS-BAC-CM **OR**  CRF-270B-CM **+**  4GNS-20-IF **=** Intelligent Management System	NW-BAC-CM Phased out on 31 Dec 2019 	Hotel Key Card Interface Module  CA-NIM05/E  CA-NIM05B/E
WL-12D-CM 	WR-86KD-CM 	CRF-270B-CM 			GW-LON 	Infrared Sensor Controller  CA-NIM09
	WR-120G-CM 				NW-MOD-CM 	Diagnosis software  VRF-DIAG-B

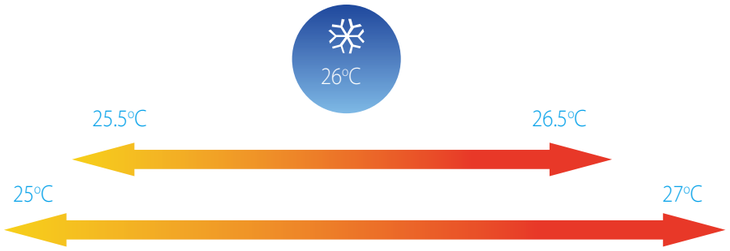
Wireless Remote Controllers

Features

Model	 WL-12B-CM	 WL-12D-CM
On / Off	●	●
Mode selection	●	●
Temperature setting	● (0.5℃ or 1℃ steps)	● (0.5℃ or 1℃ steps)
7-speed fan control	●	●
Auto swing	●	●
5-step swing louver	●	●
Address setting	●	●
Follow me	▬	●
Eco mode	●	●
Night silent mode	●	●
Display shut-off	●	●
Daily timer	●	●
Keyboard lock	●	●
Background light	●	●
Dimensions (H×W×D) (mm)	150×65×20	170×48×20
Batteries	1.5V (LR03/AAA) × 2	

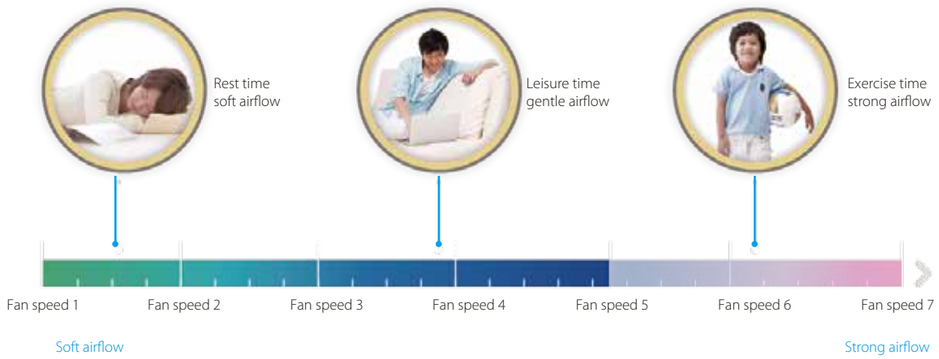
Temperature Setting

Set temperature can be adjusted in 0.5℃ or 1℃ steps, enabling precise comfort control.



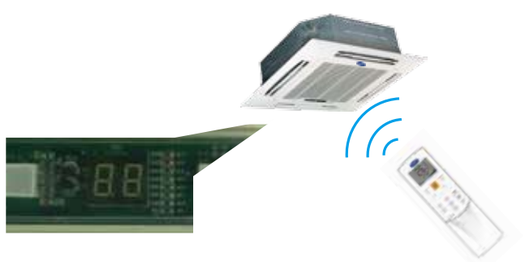
7-Speed Fan Control

7 indoor fan speeds provide control flexibility to meet the needs of different indoor conditions.



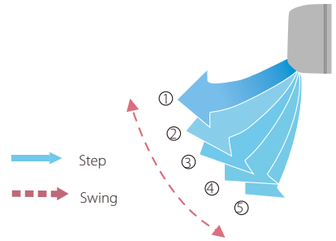
Dispaly Shut-off

Indoor unit displays can be shut off at night, creating a better environment for rest.



5-step Swing Louver

The air is comfortably spread upwards and downwards thanks to the 5-step swing louver that can be programmed via the controller.



Follow Me

With the follow me function, the indoor unit responds to the temperature measured by the temperature sensor built-in to the wireless remote controller, rather than the temperature sensor in the indoor unit itself, enabling more precise control of the temperature in the user's immediate environment.

Eco Mode

Eco mode saves energy whilst retaining a comfortable indoor environment.

Wired Controllers

Features

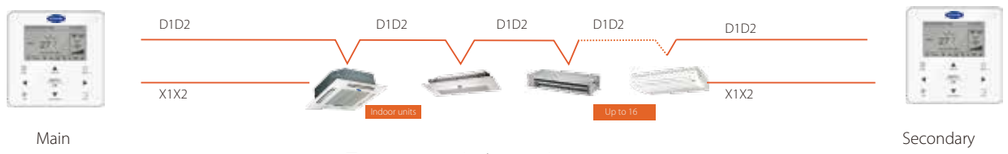
Model	 WR-86KD-CM	 WR-86K-CM	 WR-120G-CM
On / Off	●	●	●
Mode selection	●	●	●
Temperature setting	● (0.5℃ or 1℃ steps)	● (0.5℃ or 1℃ steps)	● (0.5℃ or 1℃ steps)
Dual temperature set points	●	—	●
7-speed fan control	●	●	●
Auto swing	●	●	●
5-step swing louver	●	●	●
Address setting	●	●	●
Follow me	●	●	●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

Group Control

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

Main or Secondary Controller Setting

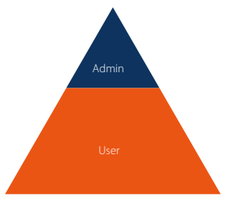
Two controllers can be used together, with the indoor units' operating mode and settings being set according to the most recent instruction received. The controller display screens are synchronized so that both displays update when a setting is adjusted.



Two or more indoor units

2 Permission Levels

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

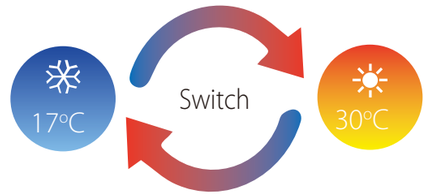


Extension Function

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

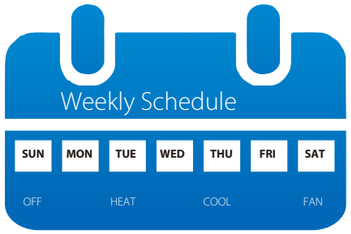
Dual Temperature Set Points

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



Weekly Schedule Timer

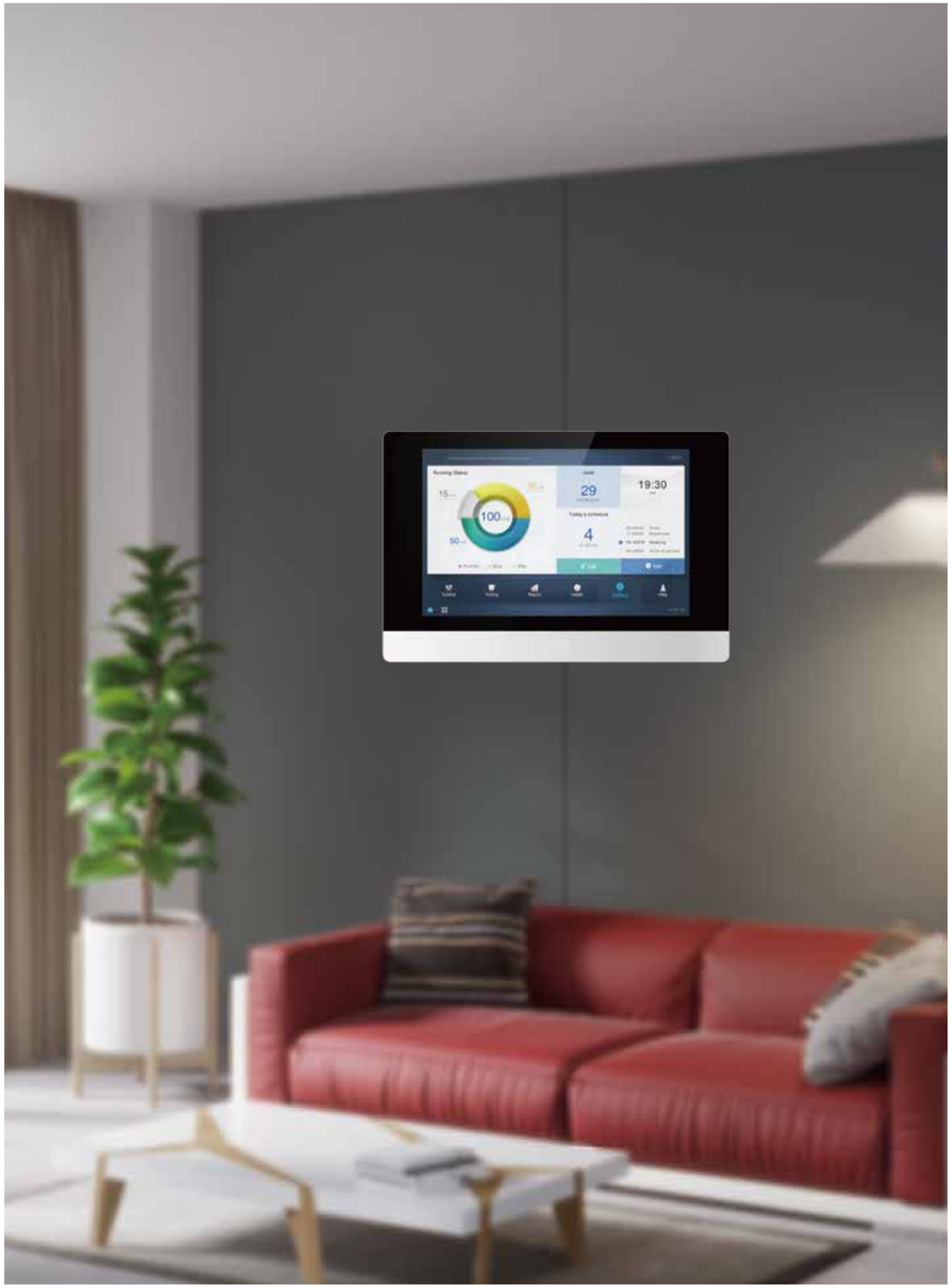
The weekly schedule timer allows users to set multiple schedules each with its own operating mode, temperature settings and fan speeds.



Bi-directional Communication

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

Centralized Controllers



Features

Model	 CRF-180A-CM	 CRF-270B-CM
Max. number of indoor units	64	384
Max. number of outdoor units	32	192
Max. number of refrigerant systems	8	48
Touch screen	● (6.2-inch)	● (10.1-inch)
On / Off	●	●
Mode selection	●	●
Temperature setting	● (0.5℃ or 1℃ steps)	● (0.5℃ steps)
Dual temperature set points	●	●
7-speed fan control	●	●
Auto swing	●	●
5-step swing louver	●	●
Room temperature display	—	●
Outdoor unit Eco mode setting	●	●
Holiday setting	●	●
℃/℉ display	●	●
Schdule management	●	●
Clock display	●	●
2 permission levels	●	●
Extension function	●	—
Unit model recognition	●	●
Electricity charge distribution	—	●
Visual schematic	—	●
Energy management	●	●
Group management	●	●
Error check function	●	●
System parameter querying	●	—
USB output	Error report	Error report, operation record and electricity consumption report
Report display		
Operation log	—	●
LAN access	—	●
languages supported	English	English
Dimensions (W×H×D) (mm)	182x123x34	270x183x27
Power supply	12V DC	24V AC

Touch Screen

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

Electricity Charge Distribution

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

Energy Management

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

Visual Schematic

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

Group Management

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

Outdoor Unit Configuration

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

Unit Model Recognition

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

Schedule Management

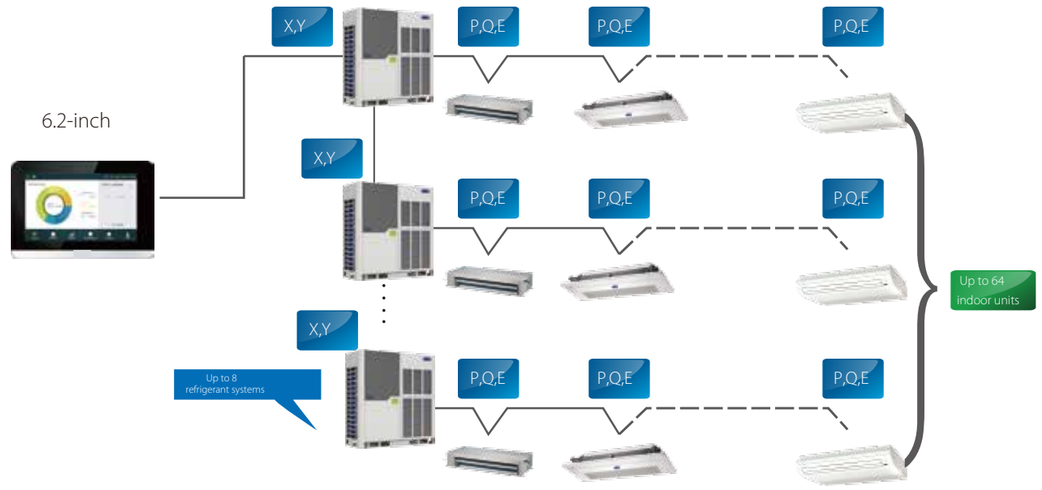
Daily, weekly or annual schedules can be used to set unit settings such as on/off, operating mode, set temperature, fan speed and swing.

LAN Access

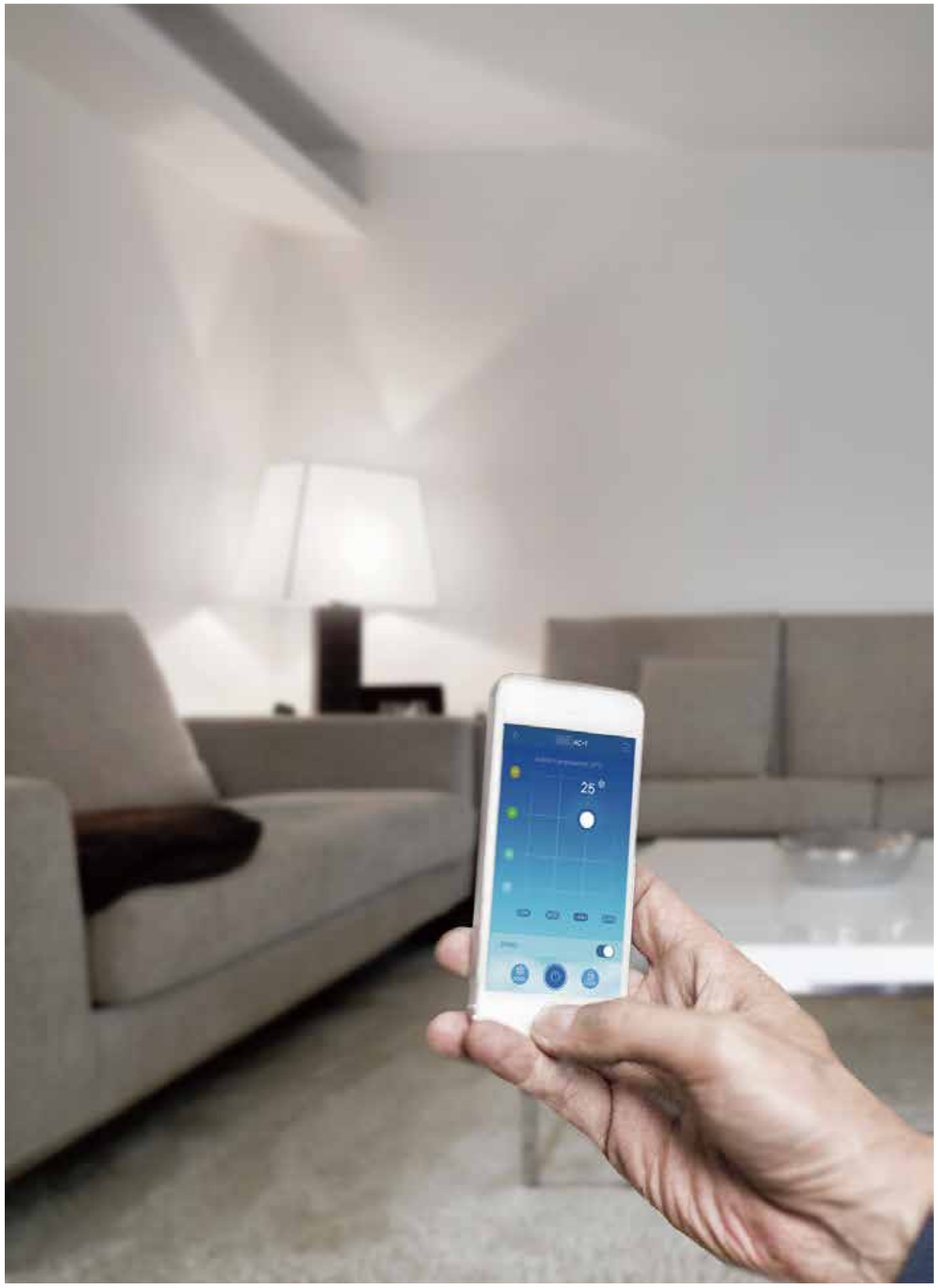
A desktop or laptop PC can be used for browser-based access via a LAN connection.

Wiring Flexibility

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



Data Converter



Features

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

High Compatibility

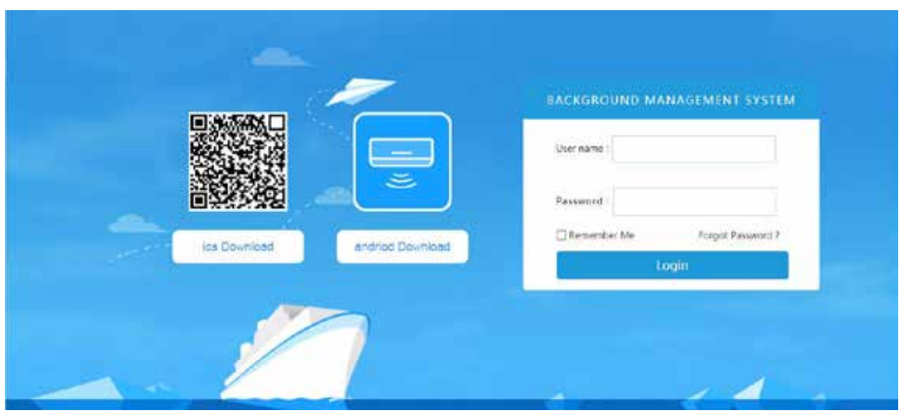
Compatible with a variety of operating systems.

User Friendly Interface

Clear, stylish interface designed by leading industrial designers.

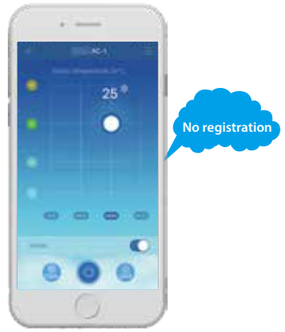
Cloud Server Website

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



Virtual Experience

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



Easy Configuration

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

Convenient Operation

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

Anytime Control

Remote access to CIF-15A-CM allows anytime, anywhere control.

Clear Icons

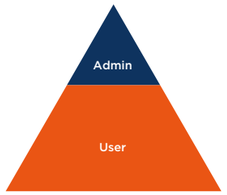
Clear, color-coded icons allow unit operating states to be viewed at a glance.

Group Management

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

2 Permission Levels

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

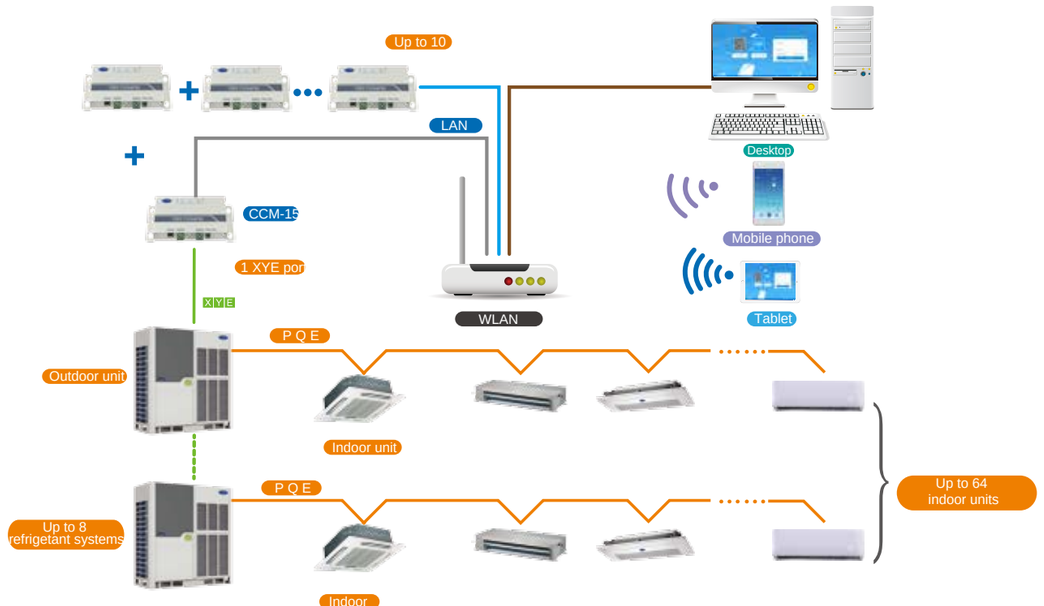


Multiple Language Options

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

Flexibility

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



CIF-15A-CM

Network Control System

Features

Software model	4GNS-20-IF	
Hardware model	  4GNS-20-CM 4GNS-BAC-CM	 CRF-270A-CM
Max. number per IMM system	10	10
Max. number of indoor units	2560	3840
Max. number of outdoor units	1280	1920
Max. number of refrigerant systems	320	480
Temperature setting	● (0.5℃ steps)	● (0.5℃ steps)
Dual temperature set points	●	●
7-speed fan control	●	●
Auto swing	●	●
5-step swing louver	●	●
Outdoor unit Eco mode setting	●	●
Holiday setting	●	●
Schedule management	●	●
Clock display	●	●
2 permission levels	●	●
Unit model recognition	●	●
Electricity charge distribution	●	●
Visual schematic	●	●
Energy management	●	●
Group management	●	●
Error check function	●	●
System parameter querying	●	●
Report output	●	●
Operation log	●	●
LAN access	●	●
Data backup	●	●
Remote VPN access	●	●
Languages supported	English, French, Spanish	English, French, Spanish
Dimensions (W×H×D) (mm)	251x319x66	270x183x27
Power supply	1 phase, 100-240V, 50/60Hz	24V AC

User-friendly Interface

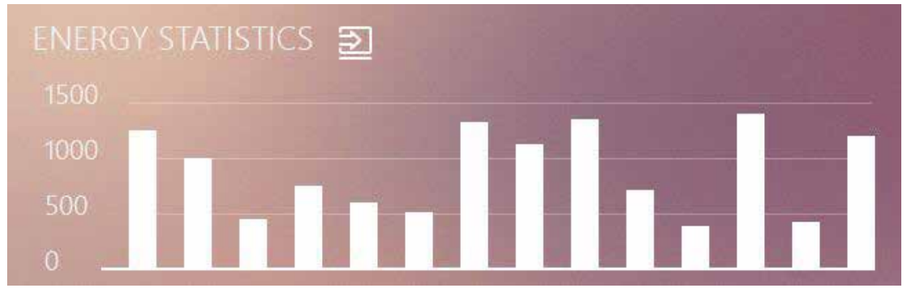
Simple, practical user interface makes for a user-friendly experience even for first-time users.

Outdoor Unit Configuration

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

Electricity Charge Distribution

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



Public and Idle Devices

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

Visual Schematic

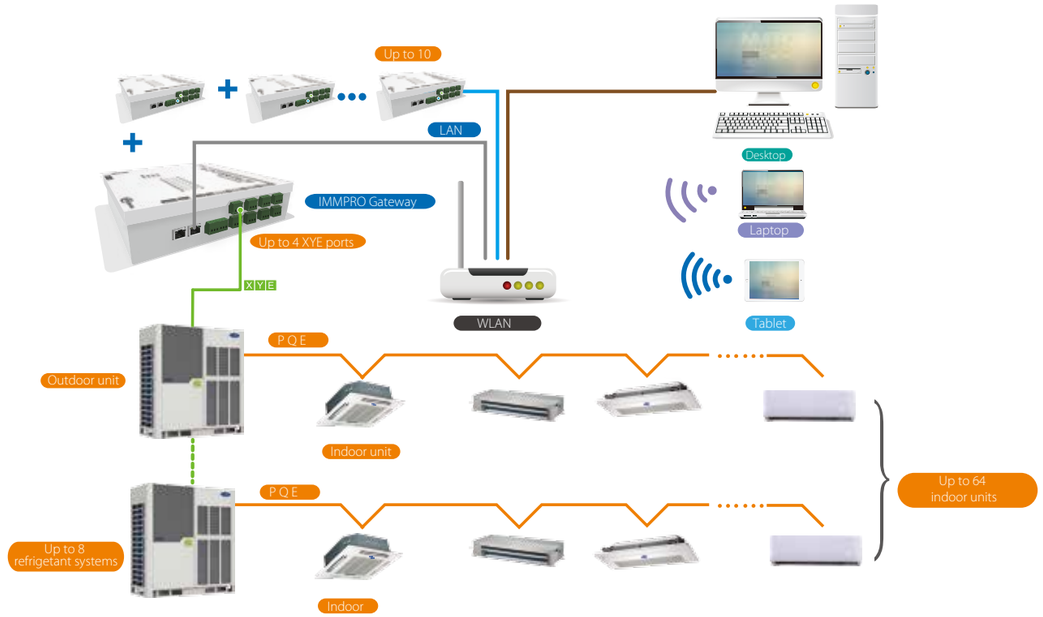
By importing floor plans and then dragging and dropping the indoor units to their actual positions on the floor plan, users can create a tailored system schematic which enables monitoring and control of the indoor units through a clear visual representation of the system layout.

Schedule Management

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

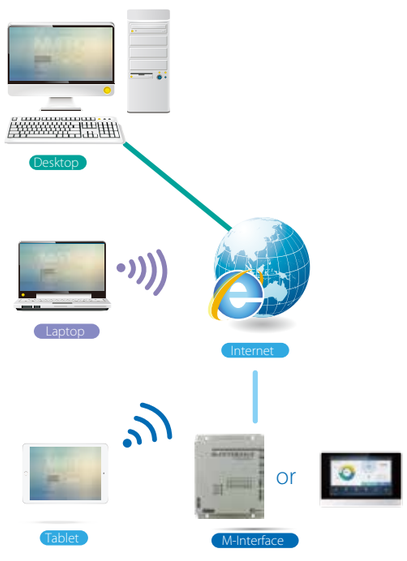
Xpress Installation

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

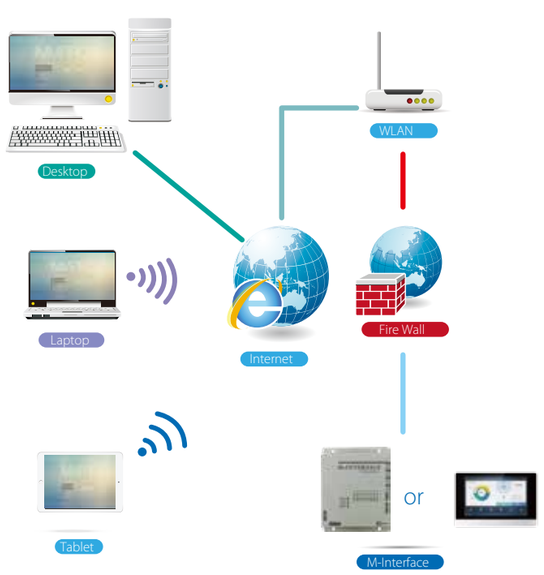


4GNS-20-CM

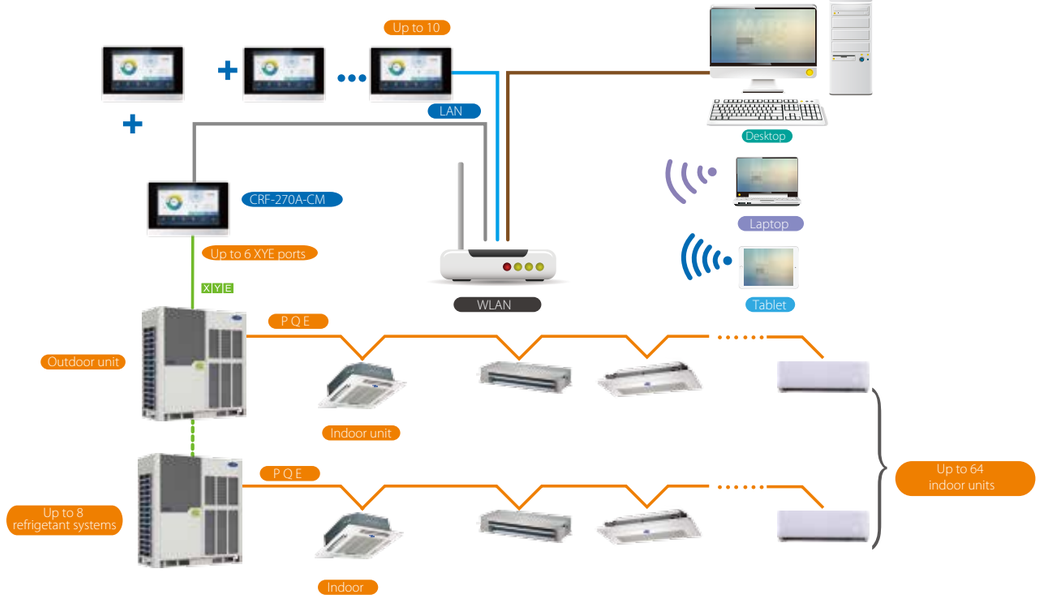
Network Flexibility



LAN access



Remote VPN access



CRF-270A-CM

BMS Gateway

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

BACnet® Gateway

NW-BAC-CM

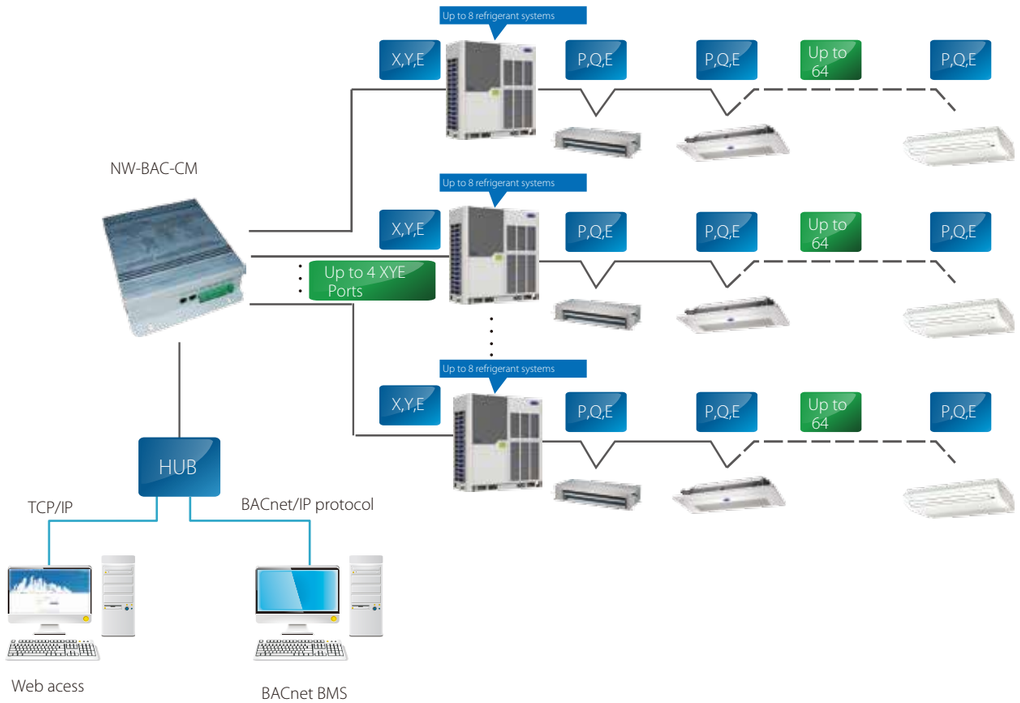
4GNS-BAC-CM

Full Integration

The NW-BAC-CM Gateway allows Carrier VRF systems to be monitored and controlled alongside other building management technology that use the BACnet protocol such as access control, fire detection and lighting systems.

Network Flexibility

The gateway can be connected to master outdoor units' XYE ports directly.



Features

Model		NW-BAC-CM / 4GNS-BAC-CM
Max. number of indoor units		256
Max. number of outdoor units		128
Max. number of refrigerant systems		32
Control	On / Off	●
	Mode selection	●
	Temperature setting	●
	Fan speed	●
	Energy management	●
Indoor unit monitoring	Room temperature display	●
	Error status	●
	Error alarms	●
Outdoor unit monitoring	Operating mode	●
	Outdoor ambient temperature	●
	Fan speed	●
	Compressor operating frequency	●
	Discharge temperature	●
	System pressure	●
	Error status	●
	Error alarms	●
LAN access		●
BTL certification		●
Compatibility	Siemens	APOGEE
	Trane	TRACER
	Honeywell	ALERTON
	Schneider	Andover Continuum
	Johnson Controls	METASYS
Dimensions (HxWxD)(mm)		319x251x61
Power supply		1 phase, 100-240V, 50/60Hz

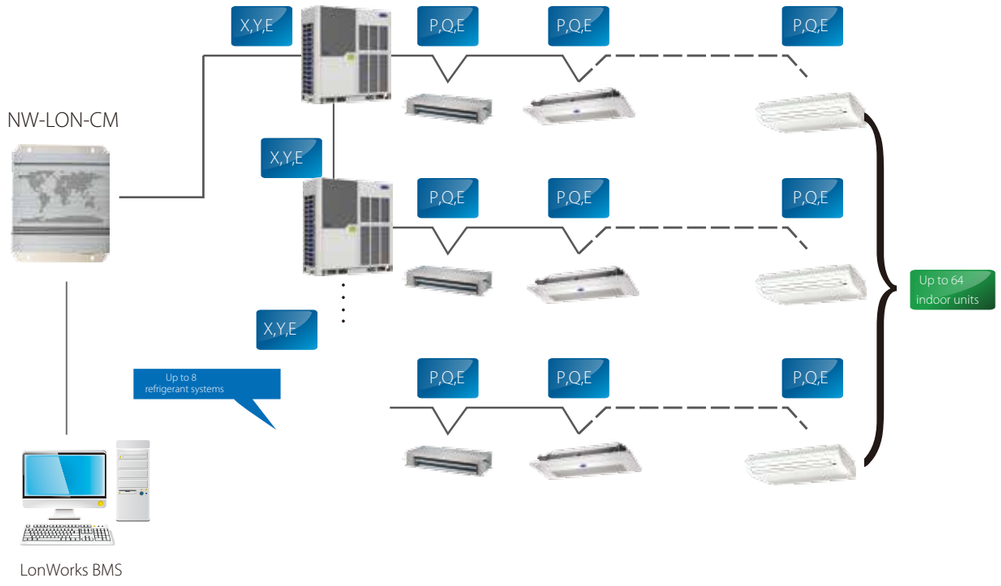
NW-LON-CM

LonWorks® Gateway

Full Integration

The NW-LON-CM Gateway allows Carrier VRF systems to be monitored and controlled alongside other building management technology on the LonWorks platform such as security, fire safety and lighting systems.

Network Flexibility



Features

Model		NW-LON-CM
Max. number of indoor units		64
Max. number of outdoor units		32
Max. number of refrigerant systems		8
Control	Mode selection	●
	Temperature setting	●
	Fan speed	●
	Group shut down	●
	On / Off	●
Indoor unit monitoring	Operating mode	●
	Set temperature	●
	Fan speed	●
	Online status	●
	Operating status	●
	Room temperature	●
	Error status	●
Outdoor unit monitoring	Error status	●
Dimensions (HxWxD)(mm)		319x251x61
Power supply		1 phase, 100-240V, 50/60Hz

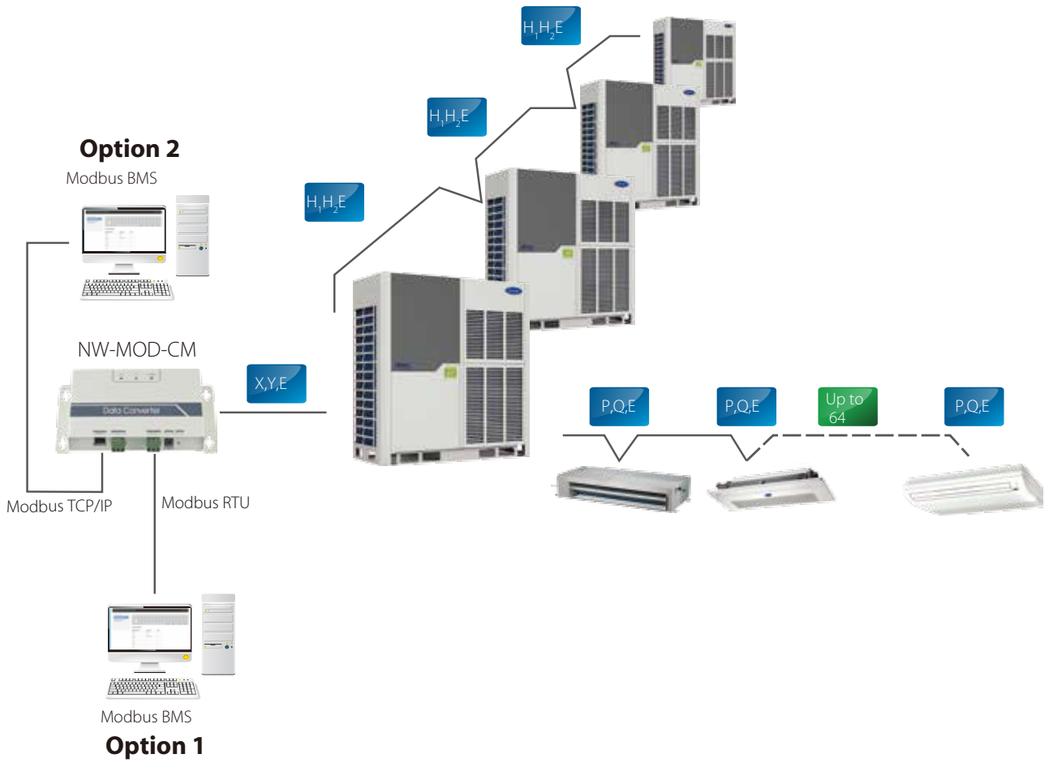
NW-MOD-CM

Modbus® Gateway

Full Integration

The NW-MOD-CM Gateway enables seamless connection of Carrier VRF systems with building management systems built on the Modbus communication protocol.

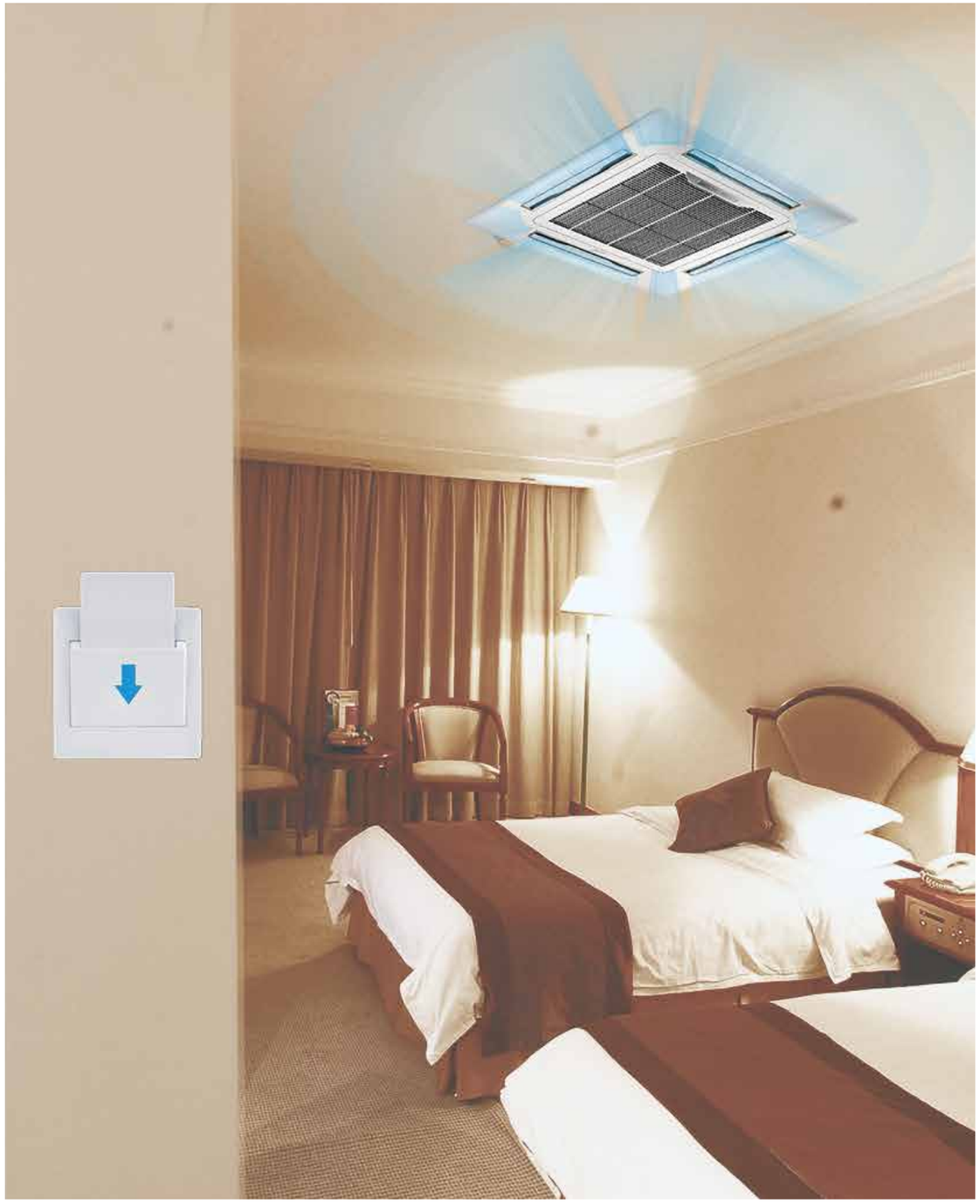
Network Flexibility



Features

Model		NW-MOD-CM
Max. number of indoor units		64
Max. number of outdoor units		4
Max. number of refrigerant systems		1
Control	On / Off	●
	Mode selection	●
	Temperature setting	●
	Fan speed	●
	Group on/off	●
Indoor unit monitoring	Online status	●
	Room temperature	●
	Error status	●
	Operating mode	●
Outdoor unit monitoring	Operating mode	●
	Lock status	●
	Fan speed	●
	Set temperature	●
	Outdoor ambient temperature	●
	Error status	●
LAN access		●
Dimensions (HxWxD)(mm)		319x251x61
Power supply		1 phase, 100-240V, 50/60Hz

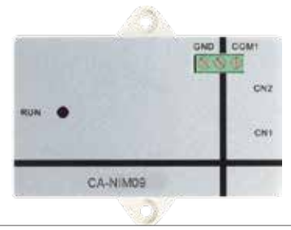
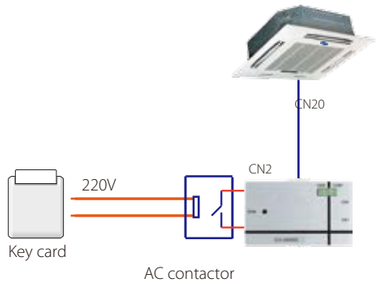
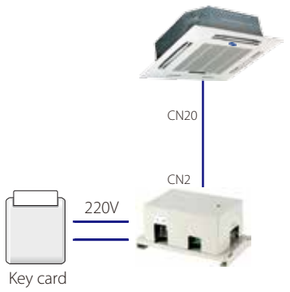
Hotel Key Card Interface Modules



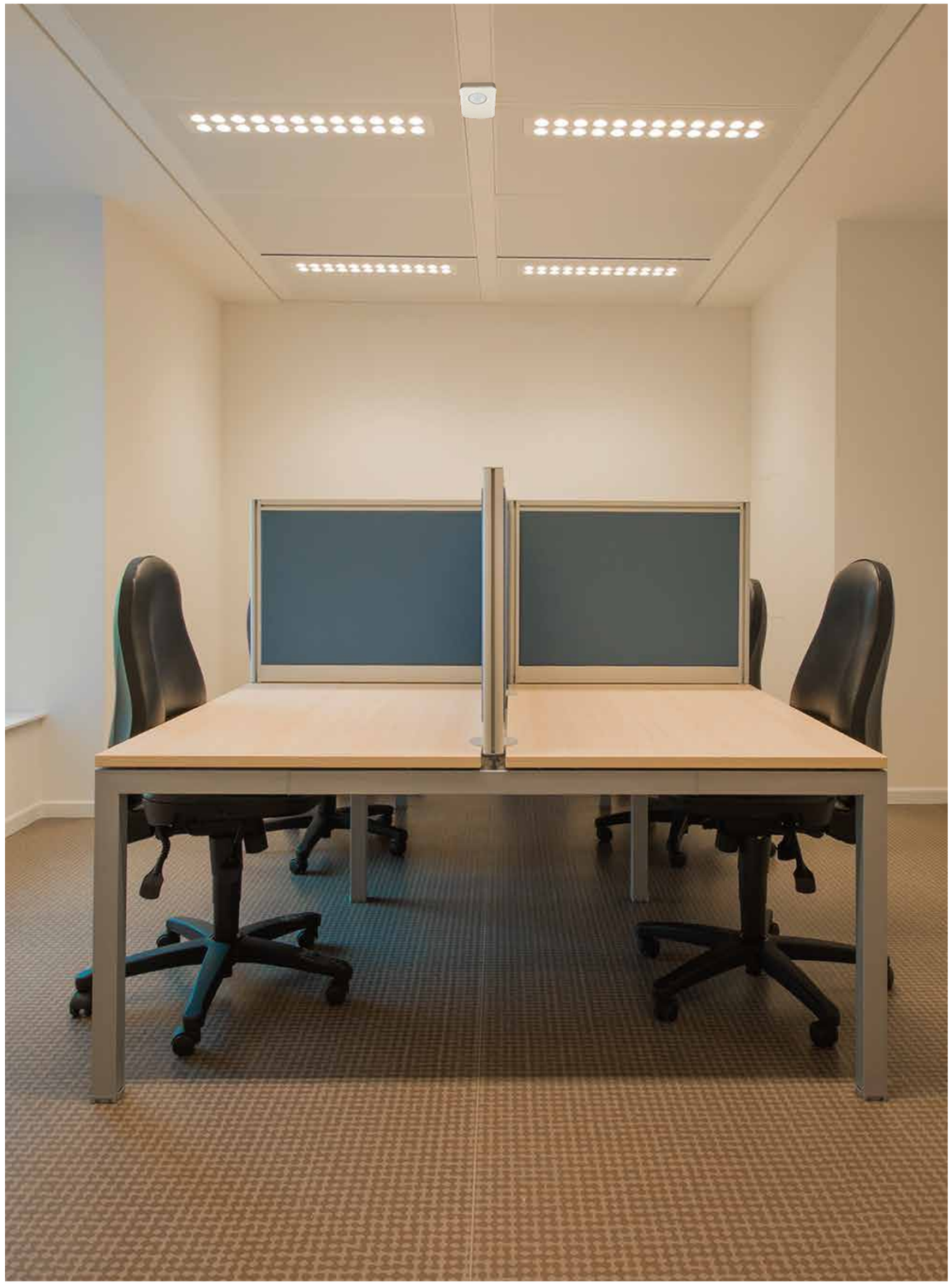
Full Integration

The Hotel Key Card Interface Modules enable power supply to indoor units to be integrated with hotel key card power supply management systems, which are designed to save energy by only running appliances whilst guests are present in their room.

Features

Model	CA-NIM05/E	CA-NIM05B/E
Appearance		
Network flexibility		
Auto restart	●	●
Compatiblity	Remote and wired controller	Remote and wired controller
Dimensions (HxWxD) (mm)	15.5x86x72.8	87x150x70
Power supply	5V DC (Supplied by indoor unit)	1 phase, 100-240V, 50/60Hz

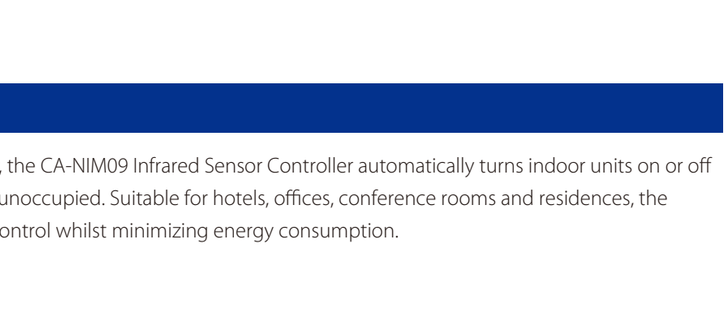
Infrared Sensor Controller



Full Integration

Using infrared sensors to detect movement, the CA-NIM09 Infrared Sensor Controller automatically turns indoor units on or off upon sensing that the room is occupied or unoccupied. Suitable for hotels, offices, conference rooms and residences, the Infrared Sensor Controller ensures climate control whilst minimizing energy consumption.

Features

Model	CA-NIM09
Appearance	 
Network flexibility	
Dimensions (HxWxD)(mm)	Sensor 46x30x25.6, Control box 86x72.8x15.5
Power supply	5V DC (Supplied by indoor unit)

Diagnosis Software

Monitor and Diagnose

Carrier's VRF Diagnosis Software tool is used to monitor VRF systems and diagnose system errors.
System settings and operating parameters can be accessed easily and data logs can be reviewed for fault prevention purposes.

Features

Model		VRF-DIAG-B
Max. number of indoor units		64
Max. number of outdoor units		4
Max. number of refrigerant systems		1
Control	Mode selection	●
	Temperature setting	●
	Fan speed	●
Outdoor unit monitoring	Operating mode	●
	Capacity	●
	Compressor operating frequency	●
	Operating current	●
	Error status	●
	Temperatures	T3,T4,Tp (See note 1)
	Valve statuses	SV2, SV4, SV5, SV6, ST1 (See note 2)
	EXV position	●
Indoor unit monitoring	Operating mode	●
	Capacity	●
	Fan speed	●
	Address	●
	Temperatures	T1, T2, T2B, TS (See note 3)
	EXV position	●
Error codes		●
Toubleshooting		●
Data logs		●
Diagrams		System schematic, refregetrant flow diagram, parameter chart
Languges supported		English

Notes:
1. Heat exchanger temperature, outdoor ambient temperature, discharge temperature.
2. Discharge temperature control valve, oil return valve, defrosting valve, EXV bypass valve, four-way valve.
3. Indoor ambient temperature, indoor heat exchanger mid-point temperature, indoor heat exchanger outlet temperature, set temperature.

Expert Diagnosis

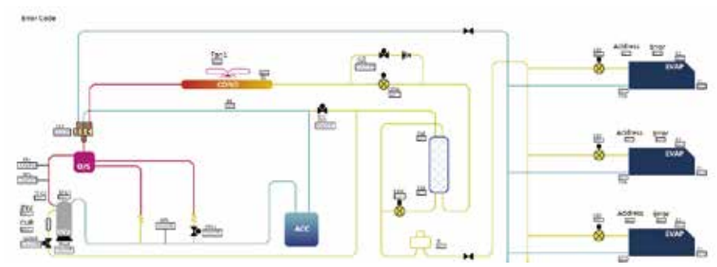
Carrier ' s VRF Diagnosis Software is specially designed to allow after-sales engineers, to understand the operating status of the system at a glance.

Use-friendly Interface

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

Diagrams

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

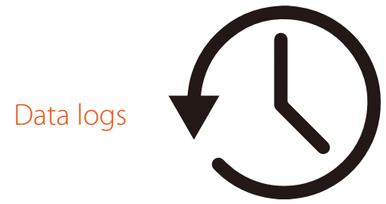


Parameter Querying

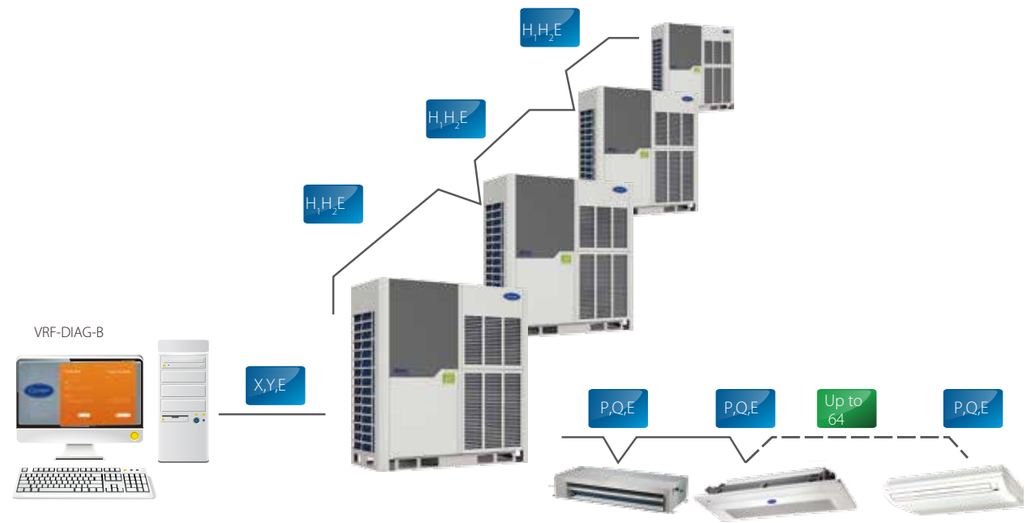
Access all the system parameters easily.

Data Logs

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



Wiring Schematic



VRF AHU Control Box

High Efficiency

AHU kit facilitates raising the EER/COP of the complete AHU system.

Wide Capacity Range

Four kits can be used in parallel, giving an overall capacity range of 3.2HP to 80HP.

AHUKZ-01B

3.2-6HP

AHUKZ-02B

8-12HP

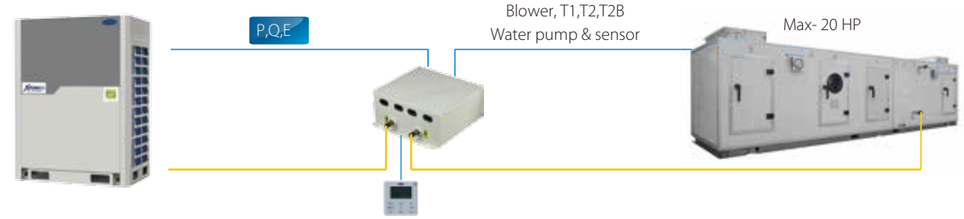
AHUKZ-03B

14-20HP

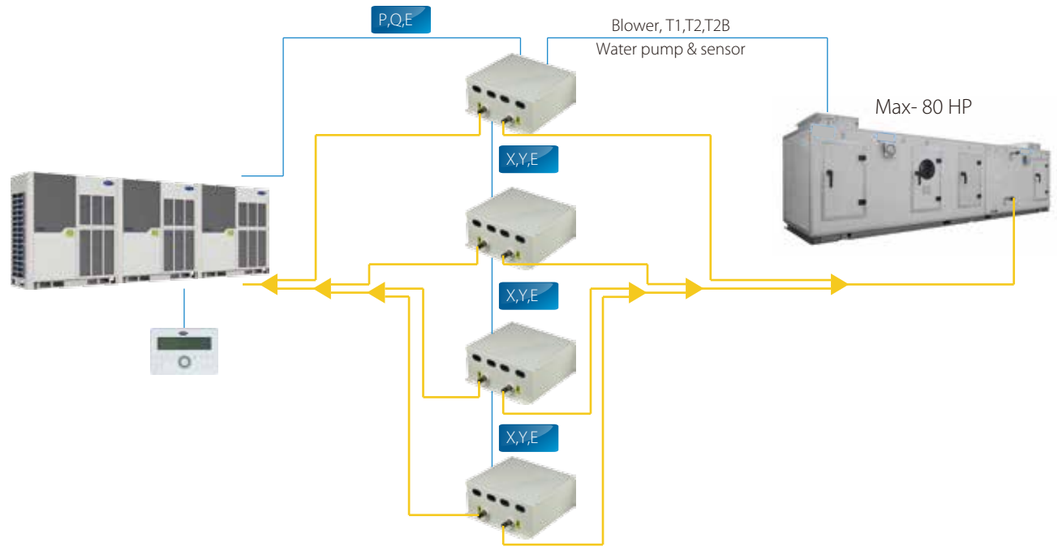
Compatible with All VRF Systems

AHU kits are compatible with all Carrier VRF outdoor units and can be used together with all types of Carrier VRF indoor units.

Single AHU Control Box Connection



Multi AHU Control Boxes Connection



Specifications

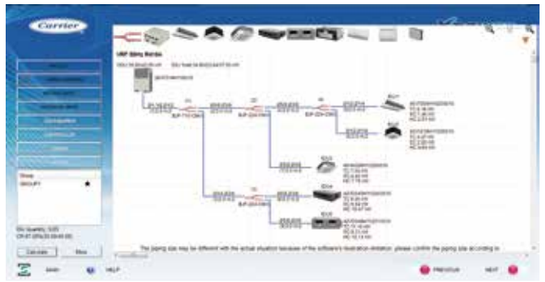
Model		AHUKZ-01B	AHUKZ-02B	AHUKZ-03B
Capacity	HP	3.2-6	8-12	14-20
Power supply		1 phase, 208-230V, 60Hz		
Refrigerant			R410A	
Pipe connections (inlet and outlet)	mm	Φ8	Φ12.7	Φ15.9
Net dimensions (W×H×D)	mm	350×150×375		
Packed dimensions (W×H×D)	mm	420×240×490		
Net weight	kg	8.4	8.7	8.9
Gross weight	kg	11.4	11.7	11.9
Operating modes		Cooling, heating and fan only		
Standard controller		Wired controller		
Optional controller		Wireless remote controller; SIEMENS controller		

Selection Software

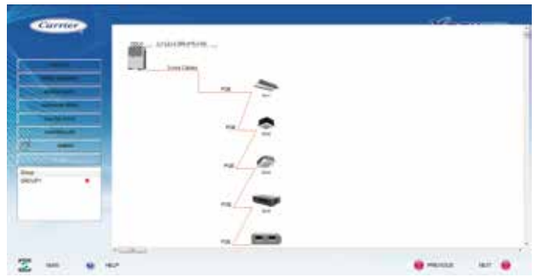
High Efficiency

Carrier's advanced design automation tool can be used by designers, consultants and distributors to greatly reduce the time and effort that must be devoted to the selection process. The software provides quick and convenient selectable options for users, supports multiple languages, and greatly improves the selection process.

The Selection Software provides distributors' sales team with a comprehensive selection of system design reports and calculations. Load calculations may be on either an initial estimate basis or detailed room-by-room basis. Based on the indoor units, outdoor units and controllers selected, the software produces detailed system layout diagrams and piping requirement calculations.



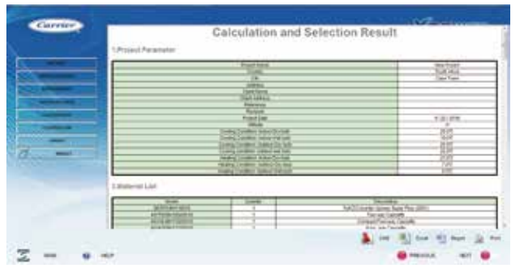
Piping diagram



Wiring diagram

Selection Software

Controller selection



Report

Compatible Table Of Control System

Outdoor Unit Series	Indoor Unit Series	1st Generation (Remote/Wired Controllers & KNX Gateway1)	1st Generation Centralized Controllers	1st generation BMS	2nd Generation (Remote/Wired Controllers & KNX Gateway1)	2nd Generation Centralized Controllers	2nd Generation BMS	Data Converter	Network Control System	Diagnosis Software	Accessories
Super X/ Super Xi	1st DC/AC	WR-12-CM WR-29B-CM WR-90D-CM WL-12-CM WL-14-CM WR-120B-CM WR-120C-CM	CRF-10-CM CRF-30-CM WCRF-10-CM (Connect with indoor unit)	/	/	CRF-180A-CM CRF-270A-CM	NW-BAC-CM NW-MOD-CM NW-LON-CM	CIF-15A-CM	CRF-270A-CM + 4GNS-20-IF or 4GNS-20-CM + 4GNS-20-IF	VRF-DIAG-B	CA-NIM05/E CA-NIM05B/E CA-NIM09
Super X/ Super Xi	2nd DC	/	/	/	WL-12D-CM WL-12B-CM WR-86K-CM WR-86KD-CM WR-120G-CM	CRF-180A-CM CRF-270A-CM	NW-BAC-CM NW-MOD-CM NW-LON-CM	CIF-15A-CM	CRF-270A-CM + 4GNS-20-IF or 4GNS-20-CM + 4GNS-20-IF	VRF-DIAG-B	CA-NIM05/E CA-NIM05B/E CA-NIM09
Non Super X/ Super Xi	1st DC/AC	WR-12-CM WR-29B-CM WR-90D-CM WL-12-CM WL-14-CM WR-120B-CM WR-120C-CM	CRF-10-CM CRF-30-CM WCRF-10-CM CRC-10-CM	NW-BCN-CM CRF-18-CM NW-LNWD-CM NW-KNX-CM	/	/	/	CIF-15A-CM	M-interface + IMM	VRF-DIAG-B	CA-NIM05/E CA-NIM05B/E CA-NIM09
Non Super X/ Super Xi	2nd DC	/	CRF-10-CM CRF-30-CM WCRF-10-CM CRC-10-CM	NW-BCN-CM CRF-18-CM NW-LNWD-CM	WL-12D-CM WL-12B-CM WR-86K-CM WR-86KD-CM WR-120G-CM	CRF-180A-CM CRF-270A-CM	/	CIF-15A-CM	M-interface + IMM	VRF-DIAG-B	CA-NIM05/E CA-NIM05B/E CA-NIM09

Heat Recovery Ventilator

Fan Motor Options

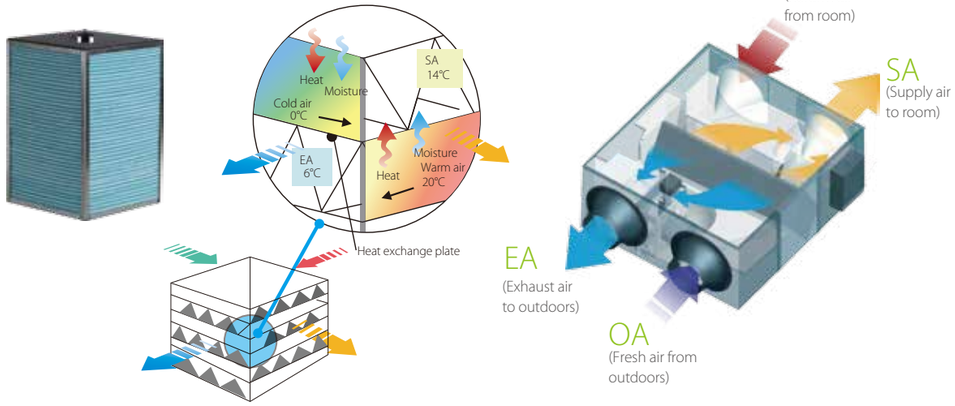
AC and DC fan versions available.

Enhanced Efficiency

The Carrier heat recovery ventilator (HRV) can greatly reduce energy losses and room temperature fluctuations caused by the ventilation process. The Carrier 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%.

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

HRV-1500
HRV-2000

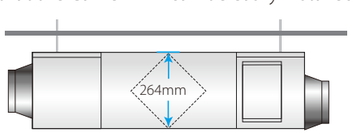


Low Noise

Soundproofing is used to guarantee quiet operation.

Flexibility

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



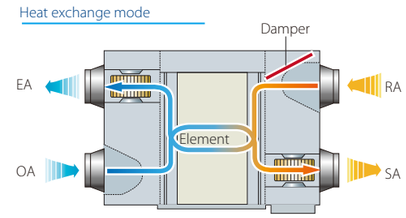
Multiple Modes

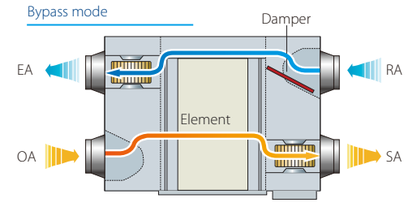
Heat exchange mode
The flows of incoming and outgoing air pass close to each other, allowing heat transfer between the two channels. During summer, incoming air is cooled by the indoor air being exhausted and in winter, incoming air is warmed.

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.

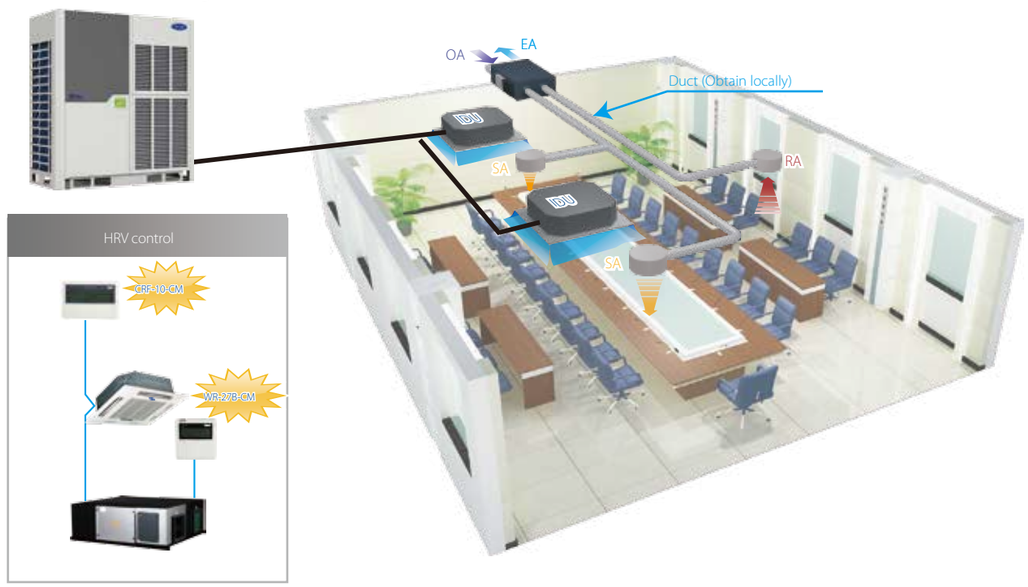




Auto mode
The controller chooses heat exchange mode or bypass mode according to the temperature difference between outdoors and indoors. Both fans are set to run at low speed.

Flexible Control

HRV can be controlled together with other indoor units.



Specifications

AC Series

Model		HRV-200	HRV-300	HRV-400	HRV-500
Power supply	V/Ph/Hz	220-240/1/50		220-240/1/50 & 220/1/60	
Cooling temp. exchange efficiency (H/M/L)	%	55/55/60	55/55/60	55/55/60	55/55/60
Cooling enthalpy exchange efficiency (H/M/L)	%	50/50/55	50/50/55	50/50/55	50/50/55
Heating temp. exchange efficiency (H/M/L)	%	60/60/65	60/60/65	60/60/65	65/65/70
Heating enthalpy exchange efficiency (H/M/L)	%	55/55/60	55/55/60	60/60/65	60/60/65
Sound pressure level in heat exchange mode (H/M/L)	dB(A)	27/26/20	30/29/23	32/31/25	35/34/28
Sound pressure level in bypass mode (H/M/L)	dB(A)	28/27/22	31/30/25	33/32/27	36/35/30
Airflow rate (H/M/L)	m^3/h	200/200/150	300/300/225	400/400/300	500/500/375
External static pressure (H/M/L)	Pa	75/58/35	75/60/40	80/65/43	80/68/45
Motor type		AC			
Duct diameter	mm	Φ144	Φ144	Φ144	Φ194
Net dimensions (WxDxH)	mm	866×655×264	944×722×270	944×927×270	1038×1026×270
Packed dimensions (WxDxH)	mm	960×770×445	1020×810×452	1020×1020×452	1120×1120×452
Net weight	kg	23	26	31	41
Gross weight	kg	40	44	52	64
Operating temperature range	°C	-7 to 43 DB, RH 80% or lower			

Model		HRV-800	HRV-1000	HRV-1500	HRV-2000
Power supply	V/Ph/Hz	220-240/1/50 & 220/1/60		380-415/3/50 & 220/3/60	
Cooling temp. exchange efficiency (H/M/L)	%	55/55/60	55/55/60	55	55
Cooling enthalpy exchange efficiency (H/M/L)	%	50/50/55	50/50/55	50	50
Heating temp. exchange efficiency (H/M/L)	%	65/65/70	65/65/70	65	65
Heating enthalpy exchange efficiency (H/M/L)	%	60/60/65	60/60/65	60	60
Sound pressure level in heat exchange mode (H/M/L)	dB(A)	39/38/32	40/39/33	51	53
Sound pressure level in bypass mode (H/M/L)	dB(A)	40/39/34	41/40/35	52	54
Airflow rate (H/M/L)	m^3/h	800/800/600	1000/1000/750	1500	2000
External static pressure (H/M/L)	Pa	100/82/54	100/85/58	160	170
Motor type		AC			
Duct dimensions	mm	Φ242	Φ242	346×326	346×326
Net dimensions (WxDxH)	mm	1286×1006×388	1286×1256×388	1600×1270×540	1650×1470×540
Packed dimensions (WxDxH)	mm	1380×1100×573	1400×1370×573	1710×1410×720	1760×1610×720
Net weight	kg	62	79	163	182
Gross weight	kg	88	110	224	247
Operating temperature range	°C	-7 to 43 DB, RH 80% or lower			

Note:
1. Models HRV-200 to HRV-1000 each have have 3 airflow settings; the airflow rates of the HRV-1500 and HRV-2000 are not adjustable.
2. Sound level is measured 1.4m below the center of the unit in an semi-anechoic chamber.
3. Efficiency is measured under the following conditions:
   Cooling: exhaust air temp 27°C DB, 19.5°C WB; fresh air temp. 35°C DB, 28°C WB.
   Heating: exhaust air temp 21°C DB, 13°C WB; fresh air temp. 5°C DB, 2°C WB.

Specifications

DC Series

Model		HRV-D200(A)	HRV-D300(A)	HRV-D400(A)	HRV-D500(A)
Power supply	V/Ph/Hz	220-240/1/50(60)			
Cooling temp. exchange efficiency	%	76.1	74.8	76.2	76.1
Cooling enthalpy exchange efficiency	%	77.3	76.1	78.7	78.2
Heating temp. exchange efficiency	%	76.1	74.8	76.2	76.1
Heating enthalpy exchange efficiency	%	82.6	79.8	83.6	80.4
Sound pressure level	dB(A)	27	30	32	35
Airflow rate	m^3/h	200	300	400	500
External static pressure	Pa	75	75	80	80
Motor type		DC			
Duct diameter	mm	Φ144	Φ144	Φ144	Φ194
Net dimensions (WxDxH)	mm	852×665×264	928×734×270	928×940×270	1020×1036×270
Packed dimensions (WxDxH)	mm	910×710×430	980×774×435	1010×1010×440	1120×1120×452
Net weight	kg	25	27	32	35
Gross weight	kg	37	40	46	51
Operating temperature range	°C	-7 to 43 DB, RH 80% or lower			

Model		HRV-D800(A)	HRV-D1000(A)	HRV-D1500(A)	HRV-D2000(A)
Power supply	V/Ph/Hz	220-240/1/50(60)		220V/1/50（60）	
Cooling temp. exchange efficiency	%	76.9	75.8	77.8	77.2
Cooling enthalpy exchange efficiency	%	78.1	76.9	79.2	78.7
Heating temp. exchange efficiency	%	76.9	75.8	77.8	77.2
Heating enthalpy exchange efficiency	%	80.1	78.6	80.5	80.3
Sound pressure level	dB(A)	39	40	51	53
Airflow rate	m^3/h	800	1000	1500	2000
External static pressure	Pa	100	100	160	170
Motor type		DC			
Duct dimensions	mm	Φ242	Φ242	346×326	346×326
Net dimensions (WxDxH)	mm	1276×1020×388	1276×1269×388	1600×1270×540	1650×1470×540
Packed dimensions (WxDxH)	mm	1355×1045×560	1400×1370×573	1710×1410×720	1760×1610×720
Net weight	kg	58	69	151	165
Gross weight	kg	77	90	184	198
Operating temperature range	°C	-7 to 43 DB, RH 80% or lower			

Note:
1. All models each have have 3 airflow setting.
2. Sound level is measured 1.4m below the center of the unit in an semi-anechoic chamber.
3. Efficiency is measured under the following conditions:
   Cooling: exhaust air temp 27°C DB, 19.5°C WB; fresh air temp. 35°C DB, 28°C WB.
   Heating: exhaust air temp 21°C DB, 13°C WB; fresh air temp. 5°C DB, 2°C WB.

Air handler

Optional wireless remote controller

WL-14-CM

WL-12-CM

Optional wired controller

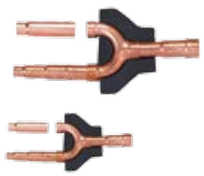
WR-29B-CM

WR-90D-CM

Model			40VM018H115003010	40VM024H115003010	40VM030H115003010	40VM036H115003010	40VM048H115003010	40VM054H115003010
Power supply		V- Ph-Hz	1 phase, 208-230V,60Hz					
Cooling	Capacity	kW	5.3	7.1	9	10.5	14	16
		kBtu/h	18	24	30	36	48	54
	Input	W	220	290	390	350	590	700
Heating	Capacity	kW	8	9	10	12.5	16	17
		kBtu/h	21	27	34	40	54	60
	Input	W	220	290	390	350	590	700
Indoor air flow (H/M/L)		m^3/h	1100/930/780	1360/1240/1020	1700/1480/1275	2040/1785/1530	2700/2300/1900	3000/2600/2100
		CFM	650 / 550 / 460	800 / 730 / 600	1000 / 870 / 750	1200 / 1050 / 900	1600 / 1360 / 1120	1800 / 1530 / 1260
Indoor noise level (H/M/L)		dB(A)	48 / 45 / 43	49 / 47 / 43	52 / 49 / 47	53 / 50 / 47	57 / 54 / 52	58 / 57 / 55
Indoor unit	Dimension (W×H×D)	mm	500×1180×550	500×1180×550	500×1180×550	560×1385×610	560×1385×610	560×1385×610
	Packing (W×H×D)	mm	567×1274×644	567×1274×644	567×1274×644	627×1479×704	627×1479×704	627×1479×704
	Net/Gross weight	kg	55.7/66.6	55.7/66.6	55.7/66.6	73.8/86	73.8/86	73.8/86
Refrigerant piping	Liquid / Gas	mm	Φ9.53/ Φ15.9	Φ9.53/ Φ15.9	Φ9.53/ Φ15.9	Φ9.53/ Φ15.9	Φ9.53/ Φ15.9	Φ9.53/ Φ15.9
Drainage water pipe diameter			OD Φ19.05					

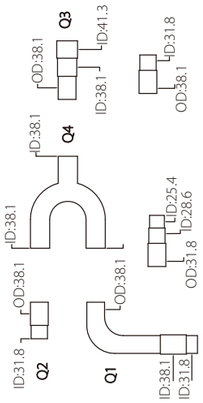
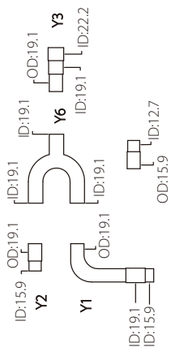
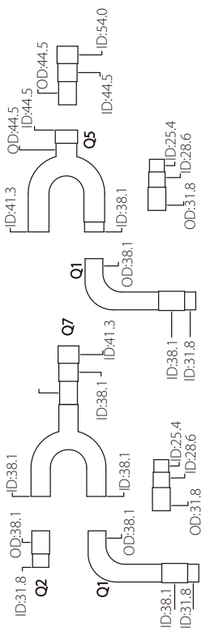
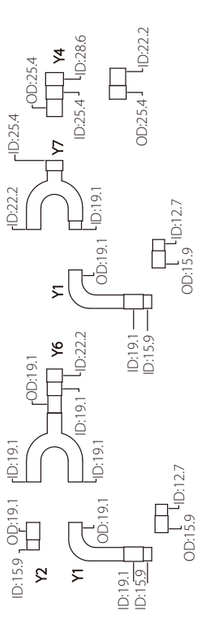
Notes:
1. Indoor temperature 27°C DB, 19°C WB; outdoor temperature 35°C DB; equivalent refrigerant piping length 7.5m with zero level difference.
2. Indoor temperature 20°C DB; outdoor temperature 7°C DB, 6°C WB; equivalent refrigerant piping length 7.5m with zero level difference.
3. Each model's 7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

Branch Joints

Type	Appearance	Model	Packed Dimensions mm	Gross Weight kg	Note
Branch joints for outdoor units		BJC-02E-CM(i)	255×150×185	2.0	Connecting two outdoor units
		BJC-03E-CM(i)	345×160×285	4.3	Connecting three outdoor units
Branch joints for indoor units		BJF-224-CM(i)	290×105×100	0.4	/
		BJF-330-CM(i)	290×105×100	0.6	/
		BJF-710-CM(i)	310×130×125	0.9	/
		BJF-1344-CM(i)	350×180×170	1.5	/
		BJF-E1344-CM(i)	365×195×215	1.9	/
		BJF-E1500-CM(i)	390×230×255	3.1	/
		BJF-E2690-CM(i)	390×230×255	3.4	/

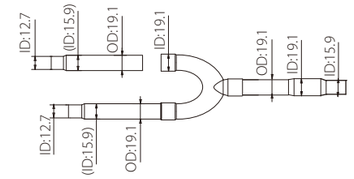
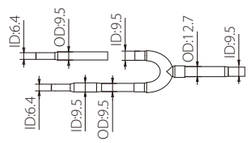
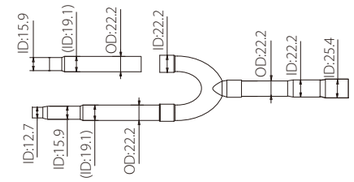
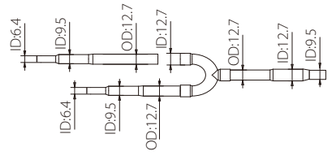
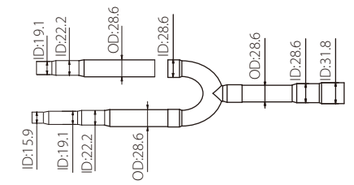
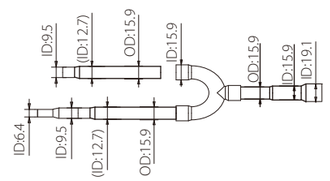
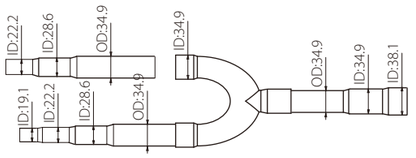
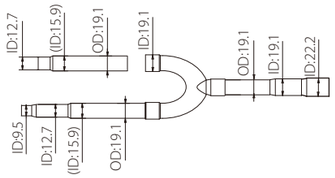
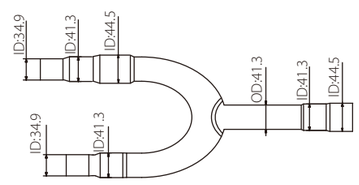
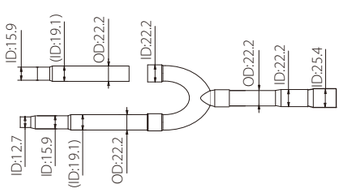
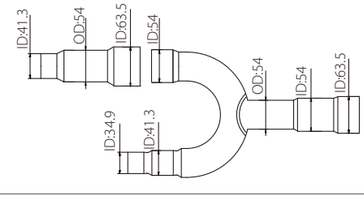
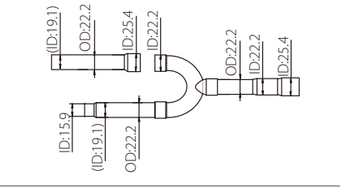
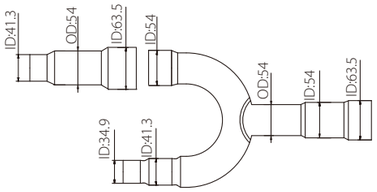
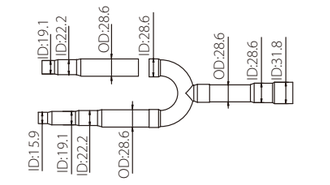
Dimensions

Outdoor Branch Joints

Model	Gas side joints	Liquid side joints
BJC-02E-CM(i)		
BJC-03E-CM(i)		

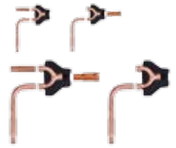
Dimensions

Indoor Branch Joints

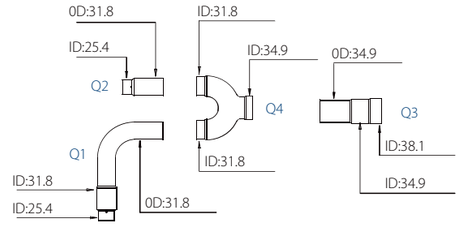
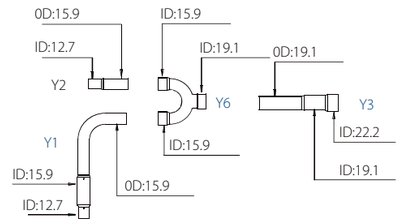
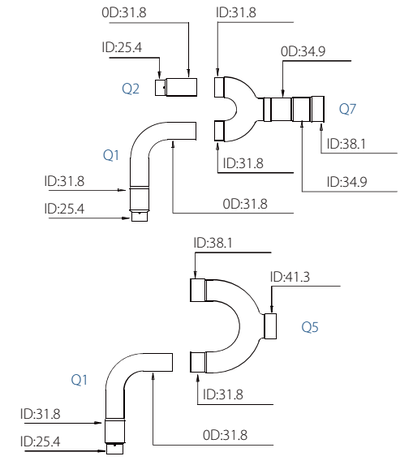
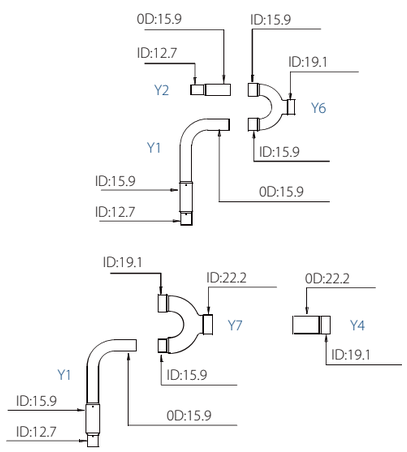
Model	Gas side joints	Liquid side joints
BJF-224-CM(i)		
BJF-330-CM(i)		
BJF-710-CM(i)		
BJF-1344-CM(i)		
BJF-E1344-CM(i)		
BJF-E1500-CM(i)		
BJF-E2690-CM(i)		

Branch Pipe

Branch joints of two-pipe refrigerant system

Model	Appearance	Model name	Packing Size (mm)	Gross Weight (kg)	Description
Branch joint for R410A outdoor unit		BJC-02-CM(i)	255×150×185	1.5	For two outdoor units connection
		BJC-03-CM(i)	345×160×285	3.4	For three outdoor units connection
		BJC-04-CM(i)	475×165×300	4.8	For four outdoor units connection

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

Model	Gas side joints	Liquid side joints
BJC-02-CM(i)		
BJC-03-CM(i)		
BJC-04-CM(i)