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IMVF-II

CIAC

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Carrier Enterprise

IMVF-II-SL-202202

IMVF-II Inverter Multi Variable Flow

Intelligent Flexibility

CONTENTS

50/60Hz R410a

PRODUCT LINE-UP

(Condensing units)

Series	HP / Ph/V/Hz	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
IMVF Heat Pump	3/208-230/60																						

Series	HP / Ph/V/Hz	3	5	7	8	10	12																
IMVF Mini	1/208-230/60																						

Series	HP / Ph/V/Hz	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72
IMVF-II	3/208-230/60																																	

Series	HP / Ph/V/Hz	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
IMVF W	3/208-230/60																					

PRODUCT LINE-UP

Series		kW / KBTU/h	1.5 / 5.1	2.2 / 7	2.8 / 9	3.6 / 12	4.5 / 16	5.6 / 18	7.1 / 24	8 / 28	9 / 30	11.2 / 38	14 / 48	16 / 54.6	22.6 / 72	28 / 96
4-way cassette compact		CK43BV***-CYJ1H			●	●	●									
4-way cassette		CK43CV***-4YJ1H						●	●	●	●	●	●			
Round-way cassette		CK43BV***-6YJ1H		●	●	●	●	●	●		●	●	●	●		
2-way cassette		CK43BV***-2YJ1H		●	●	●	●	●								
1-way cassette		CK43BV***-1YJ1H	●	●	●	●										
Ceiling / Floor		CF43CV***-MYJ1H			●	●	●	●	●	●	●	●	●			
Slim duct(0/30Pa)		CC43BV***LLYJ1H		●	●	●	●	●	●							
Medium ESP duct(50/100pa)		CC43CV***MHYJ1H CC43DV***MHYJ1H						●	●	●	●	●	●			
Medium ESP duct(50/96Pa)		CC43CV***MHYJ1H									●	●	●			
High ESP duct(100/196Pa)		CC43CV***HHYJ1H						●	●	●	●	●	●		●	●
Console		CJ43CV***-MYJ1H		●	●	●		● (5.0)								
Hi wall		CH43CV***-DYJ1H CH43DV***-DYJ1H		●	●	●	●	●	●							
ERV (Energy Reclaim Ventalation)		150m³/h 800m³/h 260m³/h 1000m³/h														
AHU connection kit		28kW														
		56kW														

IMVF
Inverter Multi Variable Flow

Heat Pump

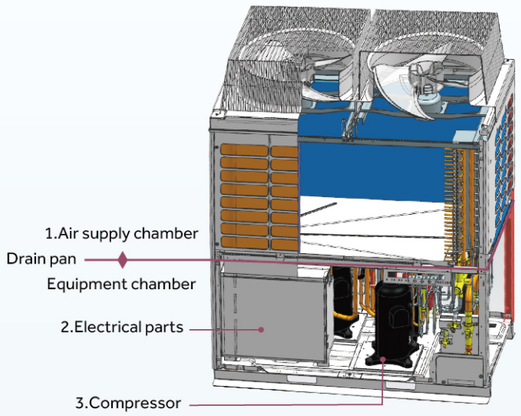
IMVF

Air Supply Chamber and Equipment Chamber Separation Design

1. Prevent electrical parts and the main functional components by the rain Erosion, prolong the service life of components;

2. Compressor running noise was closed in the equipment room, reduce the running noise about 3 dB(A);

3. Air supply chamber complete isolation: During commissioning and maintenance, the units can be used normally.



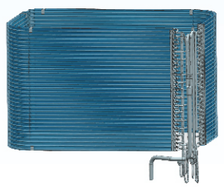
Special Heat Exchanger Design

4 way air return heat exchanger design

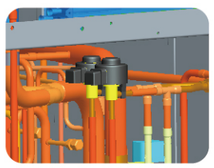
Reduce the heat exchanger height (650mm), and the upper and lower wind speed uniform and high efficiency.

Two stages heat exchanger design

Two stages heat exchanger can separate control and adjust heat exchanger size, effectively cope with small load operation, to ensure the reliable operation range.



The two stage heat exchanger are respectively controlled by a electronic expansion valve control, which can adjust the condenser volume.



Special Heat Exchanger Design

■ Aviation noise reduction patent fan design

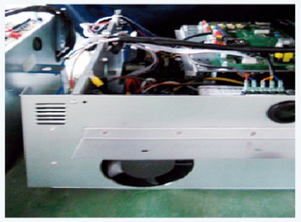
•Streamline vortex fan, sharp fan blade edge, and a certain degree of curvature, reduce the vibration, and pressure loss.

■ DC fan motor

•DC inverter technology •High efficiency •Low noise

Electric Control Box Heat Dissipation Design

Streamline vortex fan forced heat dissipation fan inside the electric control box, to ensure the stable internal temperature and stable system operationn, sharp fan blade edge, and a certain degree of curvature, reduce the vibration, and pressure loss.

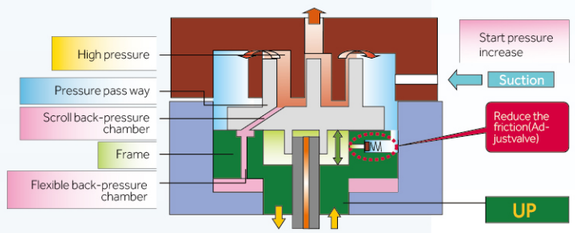


ENERGY EFFICIENT

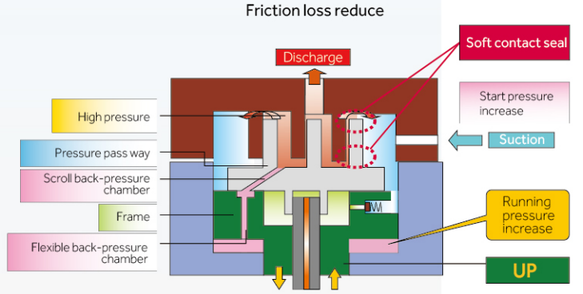
High Efficiency DC Inverter Scroll Compressor

•DC inverter scroll compressor imported from mitsubishi electric.

•Equipped with a "Frame Compliance Mechanism" that allows movement in the axial direction of the frame supporting the cradle scroll. This greatly reduces both leakage and friction loss, ensuring very high efficiency throughout the whole speed range.



Friction loss reduce

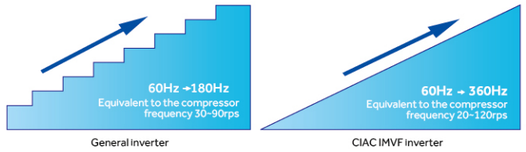


Leakage loss reduce

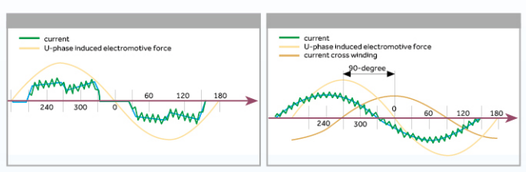
ENERGY EFFICIENT

Stepless DC Inverter Control Technology

High precision control, variable frequency drive from 0 to 360Hz.



180° vector DC inverter drive technology: Sine wave current drive, efficiency improve 17% comparing to conventional rectangle wave.

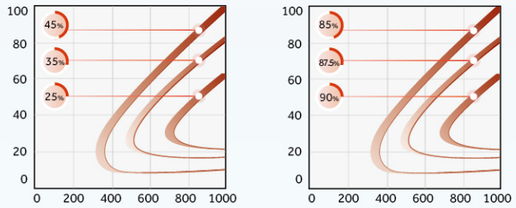


Energy Management Technology

There is energy saving dip switch (SW8-3) in the indoor unit which can be lock the temperature at 26°C in summer and 20°C in winter, to avoid the energy waste and realize the centralized management.
The temperature lock function also can be realized through the new wired controller YR-E16.

64 Stage Speed Adjustment DC Fan Motor

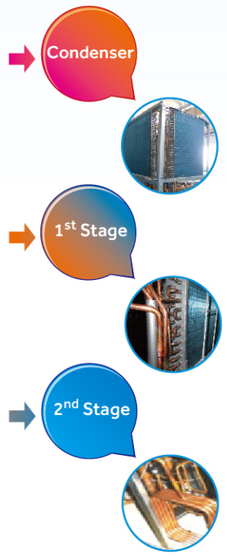
Efficiency increase 45% comparing with AC motor and power input largely decrease.
64 stage speed adjustment plus DC inverter drive, stabilizing compressor discharge pressure and suction pressure to ensure high system reliability.



AC motor efficiency DC motor efficiency

Two Stage Deep Sub Cooling Technology

1st stage sub cooling added a sub cooling coil to condenser.
2nd stage sub cooling added a stand alone sub cooler.
After further cooling, sub-cooling degree can be up to 30°C, with the heat exchanging capacity per unit mass of xrefrigerant improved by 46% and flow resistance reduced by 55%, and running efficiency improved by 9%.



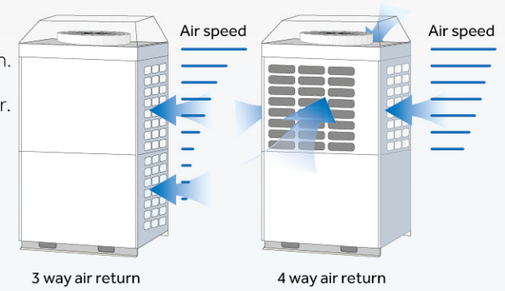
High Efficiency Heat Exchanging Technology

Outdoor high efficiency four way air return heat exchanger design.

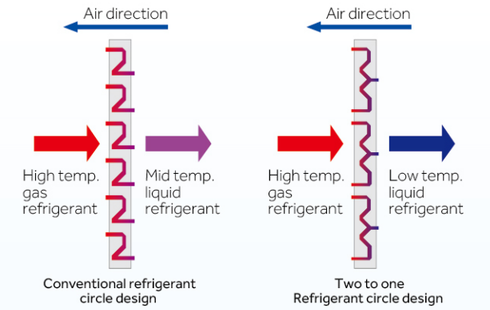
The compressor and condenser are placed in separated chamber.

High efficiency heat exchanger design.

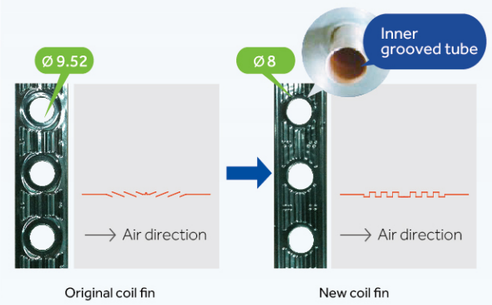
Efficient ø8 inner grooved tube and 0.11 hydrophilic aluminum coil fin, corrosion and oxidation resistance treatment.



Two to one refrigerant circle design



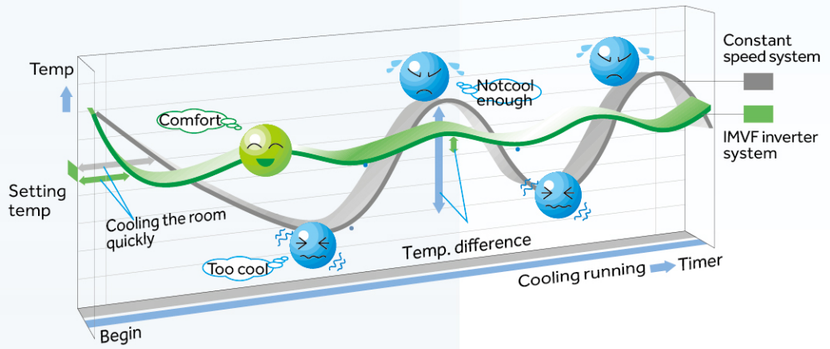
Coil fin and tube



COMFORT

Precise Control

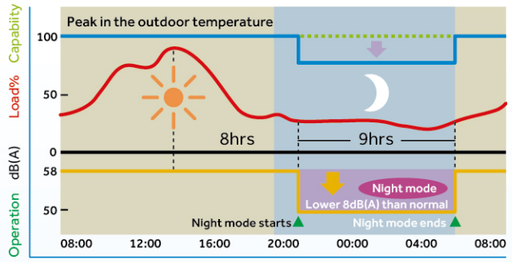
Adopt the inverter control, the temperature could be control precisely within the range of ±0.5°C.

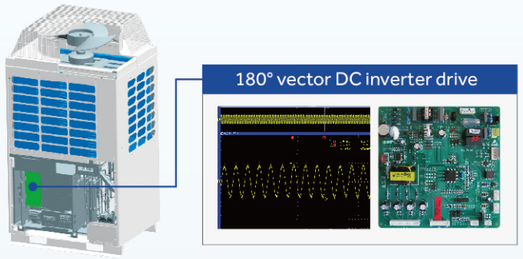


COMFORT

Low Noise and Night Silent Running

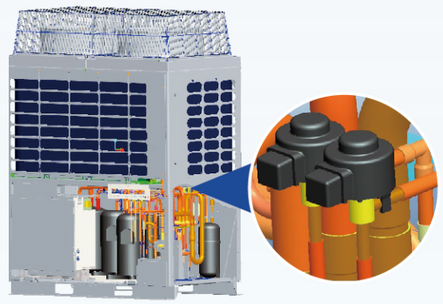
Machinery chamber is separated from air supply chamber; Built-in high efficient muffler in the machinery chamber greatly reduce the compressor noise.
The night silent running function can be set on the outdoor PCB. The noise can be reduced by 8 dB(A) at most.





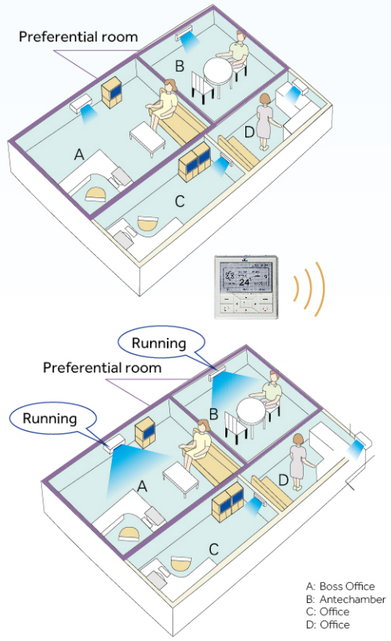
Double EEV Control

Make sure the refrigerant flow equally, to provide more comfort temperature.



Priority Setting

With the human design, you can set different preferential steps of some indoor units according to the room functions, so that it will ensure that the most important room gains high priority.



CONVENIENT INSTALLATION

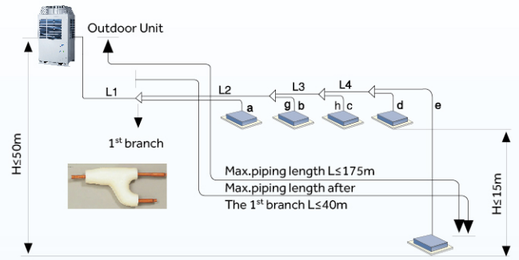
Long Pipe Length, High Height Drop

Total 300m refrigerant piping length.

Max.175m refrigerant piping length.

Max.50m height drop between indoor and outdoor units.

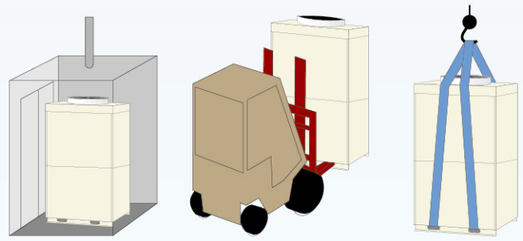
Max.15m height drop between indoor units.



Easy Transportation

Outdoor footprint only occupy 0.74m²(8/10HP) and 1.04m² (12/14/16HP) .

Can lift with elevators and save lots of transport cost and time.

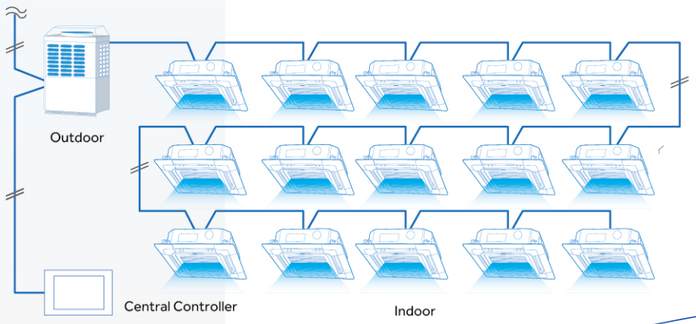


Outdoor High External Static Pressure

Up to 50Pa and can be installed at different floors .

Connection Wire

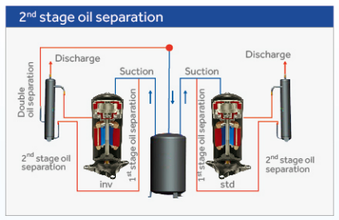
Two core nonpolar communication line way, no joint wrong hidden trouble.
Centralized controller bus and indoor/outdoor bus shareable, wiring and access is very simple Indoor address automatically set.



HIGH RELIABILITY

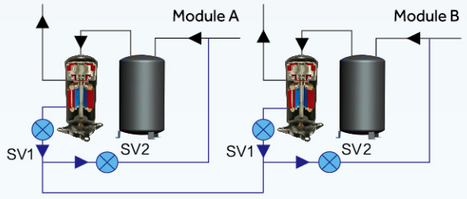
The First 2-stages Oil Separation and Cross Oil Return Technology in The Industry

1st stage oil separation: built-in oil separating unit, greatly reduced the oil from the compressor discharge.
2nd stage oil separation: external oil separator to separate the small amount oil from discharge.



High Pressure Difference Oil Equalization

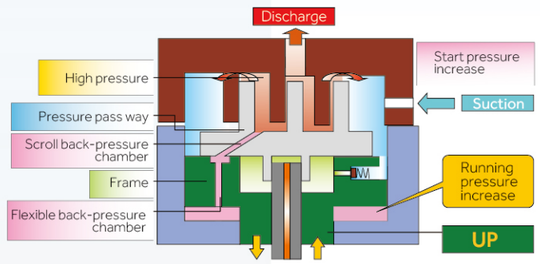
Using the pressure difference between suction and discharge, to realize fast oil balance between module.



Flow	a ► b		b ► a	
ON	SV1a	SV2b	SV1b	SV2a
OFF	SV1b	SV2a	SV1a	SV2b

Compressor Anti-liquid Shock Technology

Compressor adopt flexible frame mechanism, when any liquid enter into compressor, cradle scroll detaching fixed scroll, discharging liquid refrigerant out of scroll set, to avoid scroll damage.



Duty Cycle Operation to Extend the System Lifetime (Combination Model)

The outdoor units priority operating changes every 24 hours.Outdoor units start in turn and operation time can be balanced.Inverter compressor lifetime can be extend maximum 3 times.

First unit priority

Second unit priority

Third unit priority

Cycle unit priority

Backup Operation

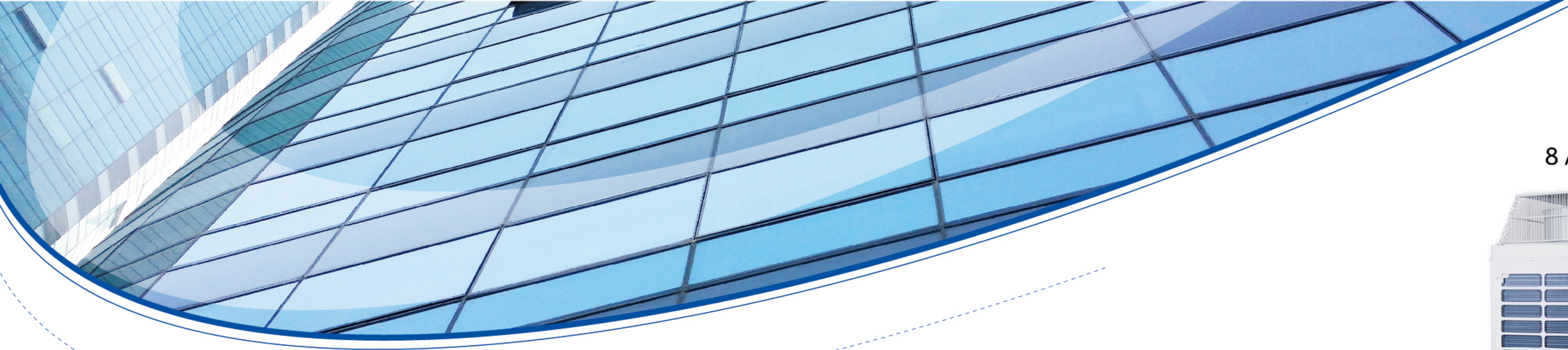
If one outdoor unit get into malfunction, the other units continue to operate without affecting the whole system.

12HP-16HP

If one on/off compressor fault

18HP-48HP

If one outdoor fault in cooling mode



IMVF Heat Pump

460V/3Ph/60Hz

8 /10 HP

12/14/16 HP

DC motor | High performance compressor | 180° sine wave DC inverter | Super quiet | Quiet operation | 3 minutes protection | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin

Basic model units: 8 HP, 10 HP, 12 HP, 14 HP, 16 HP

Free combination up to 48 HP

Model			CA43BV224-V6J1H	CA43BV280-V6J1H	CA43BV335-V6J1H	CA43BV400-V6J1H	CA43BV450-V6J1H	CA43BV504-V6J1H	CA43BV560-V6J1H	CA43BV615-V6J1H	CA43BV680-V6J1H
Combination model			/	/	/	/	/	CA43BV224-V6J1H	CA43BV280-V6J1H	CA43BV280-V6J1H	CA43BV280-V6J1H
			/	/	/	/	/	CA43BV280-V6J1H	CA43BV280-V6J1H	CA43BV335-V6J1H	CA43BV400-V6J1H
			/	/	/	/	/	/	/	/	/
Capacity	Capacity range	HP	8	10	12	14	16	18	20	22	24
	Cooling	kW	22.4	31.5	33.5	40	45	56.5	56.0	61.5	68.0
	Heating	kW	25	3/460/60	37.5	45	50	3/460/60	63.0	69.0	76.5
Electrical parameters	Power supply	Ph/V/Hz	3/460/60	7.36	3/460/60	3/460/60	3/460/60	12.63	3/460/60	3/460/60	3/460/60
	Cooling Rated power input	kW	5.27	15.00	10.00	11.40	13.40	28.00	14.72	17.36	18.76
	Cooling Max power input	kW	13.00	9.72	17.00	19.00	20.50	16.69	30.00	32.00	34.00
	Cooling Rated current	A	6.96	19.82	13.21	15.06	17.70	37.00	19.45	22.94	24.79
	Cooling Max current	A	17.18	7.97	22.46	25.10	27.08	13.86	39.64	42.28	44.92
	Heating Rated power input	kW	5.89	12.40	10.00	11.60	13.50	22.67	15.94	17.97	19.57
	Heating Max power input	kW	10.27	10.53	15.10	17.10	18.30	18.31	24.80	27.50	29.50
	Heating Rated current	A	7.78	16.38	13.21	15.33	17.84	29.95	21.06	23.74	25.86
	Heating Max current	A	13.57	3.80	19.95	22.59	24.18	3.99	32.77	36.33	38.98
	EER		4.25	3.95	3.35	3.51	3.36	4.08	3.80	3.54	3.62
	COP		4.24	11000	3.75	3.88	3.70	22000	3.95	3.84	3.91
Performance	Air flow (H)	m³/h	11000	57	14100	14100	14100	60	22000	25100	25100
	Sound pressure level (H)	dB(A)	57	73	60	60	60	77	60	61	61
	Sound power level (H)	dB(A)	73		76	76	76		77	78	78
Installation	External dimensions (W/D/H)	mm	990/750/1808	990/750/1808	1390/750/1808	1390/750/1808	1390/750/1808	(990*1808*750)*2	(990/750/1808)*2	990/750/1808 +1390/750/1808	990/750/1808 +1390/750/1808
	Shipping dimensions (W/D/H)	mm	1090/860/1990	1090/860/1990	1490/860/1990	1490/860/1990	1490/860/1990	(1090*1990*860)*2	(1090/860/1990)*2	1090/860/1990 +1490/860/1990	1090/860/1990 +1490/860/1990
	Net/Shipping weight	kg	240/255	240/255	368/386	368/386	368/386	240/255+240/255	(240/255)*2	240/255+368/386	240/255+368/386
	Compressor type		DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL
	Compressor brand		MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
	Compressor quantity		1 INV	1 INV	1 INV +1 FIX	1 INV +1 FIX	1 INV +1 FIX	1 INV+1 INV	1 INV*2	1 INV +(1 INV +1 FIX)	1 INV +(1 INV +1 FIX)
	Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Refrigerant charge	kg	10	10	10	10	10	20	20	20	20
	Refrigerant liquid pipe	mm	9.52	9.52	12.7	12.7	12.7	15.88	15.88	15.88	15.88
	Refrigerant gas pipe	mm	22.22	22.22	25.4	25.4	28.58	28.58	28.58	28.58	28.58
	Oil equalization pipe	mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
	Total pipe lenth	m	300	300	300	300	300	300	300	300	300
	Max.pipe length(Equivalent/Actual)	m	175/150	175/150	175/150	175/150	175/150	175/150	175/150	175/150	175/150
	Max drop between I.U.&O.U	m	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40
	External static pressure	Pa	50	50	50	50	50	50	50	50	50
Connection ratio	Connectable indoor unit ratio	%	50~130	50~130	50~130	50~130	50~130	50~130	50~130	50~130	50~130
	Maximum number of indoor units		13	16	19	23	26	26	26	26	26
Working temp.	Cooling	°C	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43
	Heating	°C	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21

Model			CA43BV730-V6J1H	CA43BV800-V6J1H	CA43BV850-V6J1H	CA43BV900-V6J1H	CA43BV960-V6J1H	CA43BV1010-V6J1H	CA43BV1080-V6J1H	CA43BV1130-V6J1H	CA43BV1180-V6J1H	CA43BV1235-V6J1H	CA43BV1300-V6J1H	CA43BV1350-V6J1H
Combination model			CA43BV280-V6J1H	CA43BV400-V6J1H	CA43BV400-V6J1H	CA43BV450-V6J1H	CA43BV280-V6J1H	CA43BV280-V6J1H	CA43BV280-V6J1H	CA43BV280-V6J1H	CA43BV280-V6J1H	CA43BV335-V6J1H	CA43BV400-V6J1H	CA43BV450-V6J1H
			CA43BV450-V6J1H	CA43BV400-V6J1H	CA43BV450-V6J1H	CA43BV450-V6J1H	CA43BV280-V6J1H	CA43BV280-V6J1H	CA43BV400-V6J1H	CA43BV400-V6J1H	CA43BV450-V6J1H	CA43BV450-V6J1H	CA43BV450-V6J1H	CA43BV450-V6J1H
			/	/	/	/	CA43BV400-V6J1H	CA43BV450-V6J1H	CA43BV400-V6J1H	CA43BV450-V6J1H	CA43BV450-V6J1H	CA43BV450-V6J1H	CA43BV450-V6J1H	CA43BV450-V6J1H
Capacity	Capacity range	HP	26	28	30	32	34	36	38	40	42	44	46	48
	Cooling	kW	73.0	80.0	85	90	96	101	108.0	113	118.0	123.5	145.0	135.0
	Heating	kW	81.5	90.0	95	100	108	113	121.5	127	131.5	137.5	3/460/60	150.0
Electrical parameters	Power supply	Ph/V/Hz	3/460/60	3/460/60	3/460/60	3/460/60	3/460/60	3/460/60	3/460/60	3/460/60	3/460/60	3/460/60	38.20	3/460/60
	Cooling Rated power input	kW	20.76	22.80	24.80	26.80	26.12	28.12	30.16	32.16	34.16	36.80	60.00	40.20
	Cooling Max power input	kW	35.50	38.00	39.50	41.00	49.00	50.50	53.00	54.50	56.00	58.00	50.47	61.50
	Cooling Rated current	A	27.43	30.12	32.77	35.41	34.51	37.15	39.85	42.49	45.13	48.62	79.26	53.11
	Cooling Max current	A	46.90	50.20	52.18	54.16	64.74	66.72	70.02	72.00	73.98	76.62	38.60	81.24
	Heating Rated power input	kW	21.47	23.20	25.10	27.00	27.54	29.44	31.17	33.07	34.97	37.00	53.70	40.50
	Heating Max power input	kW	30.70	34.20	35.40	36.60	41.90	43.10	46.60	47.80	49.00	51.70	51.00	54.90
	Heating Rated current	A	28.37	30.65	33.16	35.67	36.39	38.90	41.18	43.69	46.20	48.88	70.95	53.51
	Heating Max current	A	40.56	45.19	46.77	48.36	55.36	56.94	61.57	63.15	64.74	68.31	3.40	72.53
	EER		3.52	3.51	3.43	3.36	3.68	3.59	3.58	3.51	3.45	3.36	3.76	3.36
	COP		3.80	3.88	3.78	3.70	3.92	3.84	3.90	3.83	3.76	3.72	42300	3.70
Performance	Air flow (H)	m³/h	25100	28200.0	28200	28200	36100	36100	39200.0	39200	39200	42300	64	42300
	Sound pressure level (H)	dB(A)	61	62	62	62	63	63	63	63	63	64	82	64
	Sound power level (H)	dB(A)	78	79	79	79	81	81	81	81	81	82		82
Installation	External dimensions (W/D/H)	mm	990/750/1808 +1390/750/1808	1390/750/1808 +1390/750/1808	1390/750/1808 +1390/750/1808	(1390/750/1808)*2	990/750/1808*2 +1390/750/1808	(990/750/1808)*2 +(1390/750/1808)	(990/750/1808) +(1390/750/1808) +(1390/750/1808)	(990/750/1808) +(1390/750/1808) +(1390/750/1808)	(990/750/1808) +(1390/750/1808)*2	(1390/750/1808) +(1390/750/1808)*2	(1390/750/1808) +(1390/750/1808)*2	(1390/750/1808)*3
	Shipping dimensions (W/D/H)	mm	1090/860/1990 +1490/860/1990	1490/860/1990 +1490/860/1990	1490/860/1990 +1490/860/1990	(1490/860/1990)*2	1090/860/1990*2 +1490/860/1990	(1090/860/1990)*2 +(1490/860/1990)	(1090/860/1990) +(1490/860/1990) +(1490/860/1990)	(1090/860/1990) +(1490/860/1990) +(1490/860/1990)	(1090/860/1990) +(1490/860/1990)*2	(1490/860/1990) +(1490/860/1990)*2	(1490/860/1990) +(1490/860/1990)*2	(1490/860/1990)*3
	Net/Shipping weight	kg	240/255+368/386	368/386+368/386	368/386+368/386	(368/386)*2	240/255*2+368/386	240/255*2+368/386	240/255+368/386+368/386	240/255+368/386+368/386	240/255+368/386*2	368/386+368/386*2	368/386+368/386*2	(368/386)*3
	Compressor type		DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL
	Compressor brand		MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
	Compressor quantity		1 INV +(1 INV +1 FIX)	(1 INV +1 FIX) +(1 INV +1 FIX)	(1 INV +1 FIX) +(1 INV +1 FIX)	(1 INV +1 FIX)*2	1 INV*2 +(1 INV +1 FIX)	1 INV*2 +(1 INV +1 FIX)	1 INV +(1 INV +1 FIX) +(1 INV +1 FIX)	1 INV +(1 INV +1 FIX) +(1 INV +1 FIX)	1 INV +(1 INV +1 FIX)*2	(1 INV +1 FIX) +(1 INV +1 FIX)*2	(1 INV +1 FIX) +(1 INV +1 FIX)*2	(1 INV +1 FIX)*3
	Refrigerant type		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Refrigerant charge	kg	20	20	20	20	30	30	30	30	30	30	30	30
	Refrigerant liquid pipe	mm	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05
	Refrigerant gas pipe	mm	31.8	31.8	31.8	31.8	31.8	38.1	38.1	38.1	38.1	38.1	38.1	38.1
	Oil equalization pipe	mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
	Total pipe lenth	m	300	300	300	300	300	300	300	300	300	300	300	300
	Max.pipe length(Equivalent/Actual)	m	175/150	175/150	175/150	175/150	175/150	175/150	175/150	175/150	175/150	175/150	175/150	175/150
	Max drop between I.U.&O.U	m	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40
	External static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50	50
Connection ratio	Connectable indoor unit ratio	%	50~130	50~130	50~130	50~130	50~130	50~130	50~130	50~130%	50~130	50~130	50~130	50~130
	Maximum number of indoor units		26	26	26	26	26	26	26	26	26	26	26	26
Working temp.	Cooling	°C	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43	-5~43
	Heating	°C	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21	-15~21

* Max. drop between I.U & O.U.: 50/40 Meters (outdoor unit is higher/lower than indoor units).
* All the specifications are tested under nominal condition(In cooling, Indoor temp is 27°C DB/19°C WB; Outdoor temp 35°C DB/24°C WB; In heating, Indoor temp is 20°C DB, Outdoor temp is 7°C DB/6°C WB).

IMVF
Inverter Multi Variable Flow

Mini

IMVF Mini (Side Discharge)
3/5/7 HP

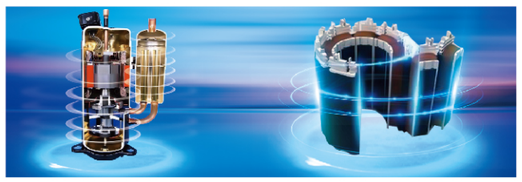
FEATURES&BENEFITS

New update

•We upgraded the whole series and launched new capacity of 3, 5 and 7 HP modules. The overall rounded corner design refreshes you visually;
•The stop-valve of new module is build-in, Easier installation;
•Equipped with super large diameter 550mm fan, in sawtooth shape type design, heat transfer of units more powerful;
•The heat transfer area of the condensed is increased by 15%, and the heat transfer effect is increased by 10% (5/7HP): The original heat exchanger was 1197*970mm. The current heat exchanger area is 1302*1005mm;
•Standard self-cleaning technology, in addition to the new module upgrade 56°C high temperature cleaning technology;The heat exchanger of IDU can realize high temperature of 56°, effectively remove mold, and make the air supply more healthy.

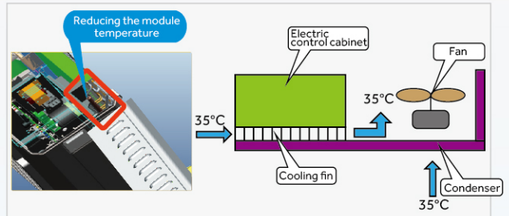
Full DC inverter twin rotary compressor

Compressor 15~140 RPM wide operating range, can effective against low load output. The compressor adopts keel motor technology, the energy efficiency is increased by 10%.



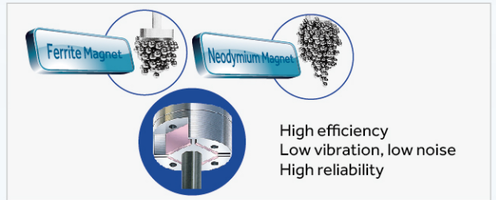
Air inlet grill design on right side panel

The unit adopts louver at right side panel for better heat dissipation to guarantee high frequency operation at high temperature. The air inlet grill design, reduces the module temperature and avoids air dust into air conditioner.



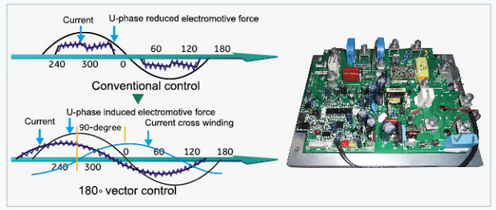
DC inverter technology

DC fan motor speed can be adjusted from 0~960r/min, it can improve the unit efficiency, at the same time, the unit can realize low ambient cooling operation.



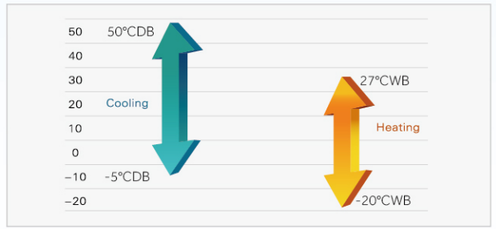
180° vector control technology

Haier using power resistance to detect the rotor position of compressor, results in the consistency of the compressor working current and current sine waves, improve power efficiency about 17%.



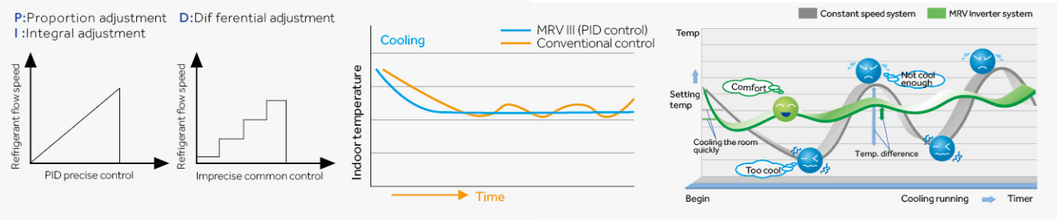
Operation range

Relying on the compressor upgraded by MRV SI and optimized pipeline upgrade, the operating temperature range of the new model is expanded, including -5°C~50°C for cooling and -20°C~27°C for heating.



Precise control

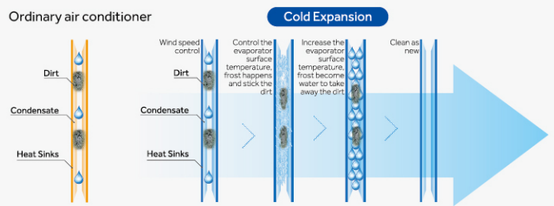
PID control adjusts the output of compressor and the open degree of EEV, balances the indoor refrigerant flow, realizes the linear output, creates a comfortable environment. The temperature could be controlled precisely.

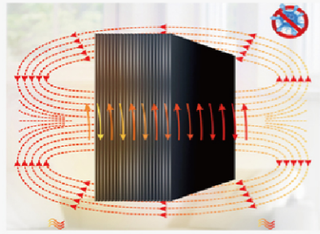


FEATURES & BENEFITS

Self-cleaning technology

•Cooling expansion technology—— Easily remove dirt from heat exchanger
•Condensate water technology ——Increase condensate water by 30%
•Sapphire coating ——The hydrophilic ability is increased by 50%, and the flow speed is increased by 20%
•Antibacterial technology——Silver ion antibacterial coating, effectively prevent the growth of bacteria
•56°C high temperature technology——The temperature of IDU heat exchanger is improved by using the condensing heat of high pressure refrigerant. The temperature is up to 56°C, effectively prevent mold breeding. (5/7HP)

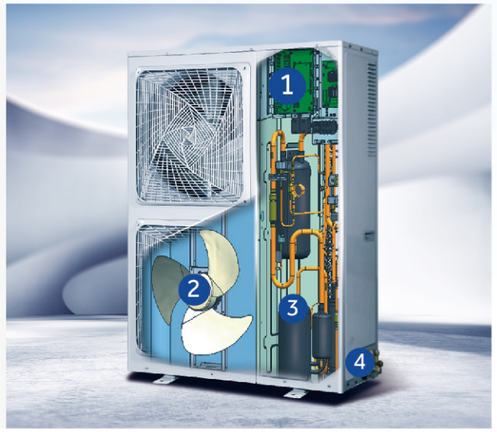




Side discharge MRV SI outdoor units

Dual Frequency 50/60Hz / DC Inverter TWIN Rotary Compressor / BLDC Fan (BrushLess DC motor)

1. Control the compressor running frequency by temp. Sensor, more precise and prompt than conventional control system.
1. Protections: Pressure, temp, compressor, fan motor, refrigerant, oil quantity etc. Realize perfect performance.
1. Malfunction self-diagnose.
2. DC fan motor (AU48/60).
3. DC inverter compressor, high efficiency.
4. Single set valve, easy to installation and save installation time.



IMVF Mini

- CM43CV080-HYJ1H
- CM43CV140-HYJ1H
- CM43CV180-HYJ1H

3 HP

5 /7 HP


DC motor


High performance compressor

180° sine wave DC inverter


Super quiet


Quiet operation

3 minutes protection

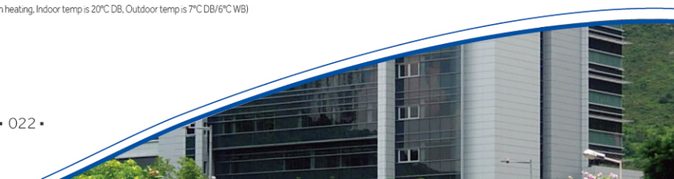
Lowambient cooling (-5°C)

Lowambient heating (-15°C)

Blue fin

Model			CM43CV080-HYJ1H	CM43CV140-HYJ1H	CM43CV180-HYJ1H
Capacity	Capacity range	HP	3	5	7
	Cooling	kBtu/h	27.3	51.2	61.4
		kW	8	14	18
	Heating	kBtu/h	32.4	58	68.2
		kW	9.5	16	20
Electrical parameters	Power supply	PhV/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
	Power input (Cooling)	kW	2.2	3.7	4.75
	Power input (Heating)	kW	2.2	3.73	4.56
	EER/COP		3.64/4.32	3.78/4.29	3.79/4.39
Performance	Air flow (H)	m³/h	4500	7200	7200
	Sound pressure level (H)	dB(A)	50	52	54
	Sound power level (H)	dB(A)	61	63	65
Installation	External dimensions(W/D/H)	mm	920×372×760	950×370×1350	950×370×1350
	Shipping dimensions(W/D/H)	mm	1036×478×820	1023/483/1492	1023/483/1492
	Net/Shipping weight	kg	61/67	108/123	108/123
	Compressor type		Rotary	Rotary	Rotary
	Compressor brand		MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
	Compressor quantity		1	1	1
	Refrigerant type		R410A	R410A	R410A
	Refrigerant charge	kg	2.1	4	4
	Refrigerant liquid pipe	mm	9.52	9.52	9.52
	Refrigerant gas pipe	mm	15.88	19.05	19.05
	Total pipe lenth	m	120	150	150
	Max. pipe length(Equivalent/Actual)	m	70	70	70
	Max drop between I.U.&O.U	m	30/20	30/20	30/20
Connection ratio	Connectable indoor unit ratio	%	10	10	10
	Maximum number of indoor units		50~130%	50~130%	50~130%
Working temp.	Cooling	°C	4	8	9
	Heating	°C	-5~50	-5~50	-5~50
			-20~27	-20~27	-20~27

* All the specifications are tested under nominal condition(In cooling, Indoor temp is 27°C DB/19°C WB; Outdoor temp 35°C DB/24°C WB; In heating, Indoor temp is 20°C DB, Outdoor temp is 7°C DB/6°C WB)



IMVF-II
Inverter Multi Variable Flow

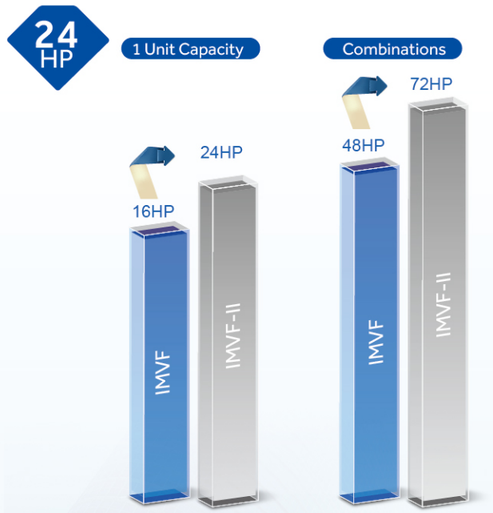
Heat Pump

IMVF-II Heat Pump

FEATURES&BENEFITS

IMVF milestones & IMVF-II line up

Largest capacity single module



Single module line-up

Capacity
8,10,12,14,16HP

Capacity
18,20,22,24HP

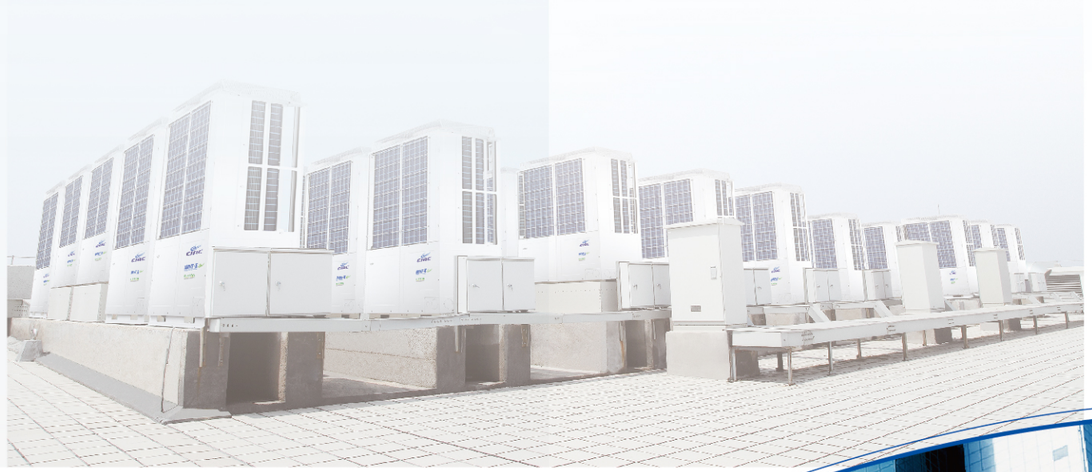
IMVF milestones & IMVF-II line up

Combination line-up

8~72HP

- Max 3 modules combination 72HP, every 2HP one model.
- Footprint of 72HP only 2.92m², 50% size reduced

8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72
•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

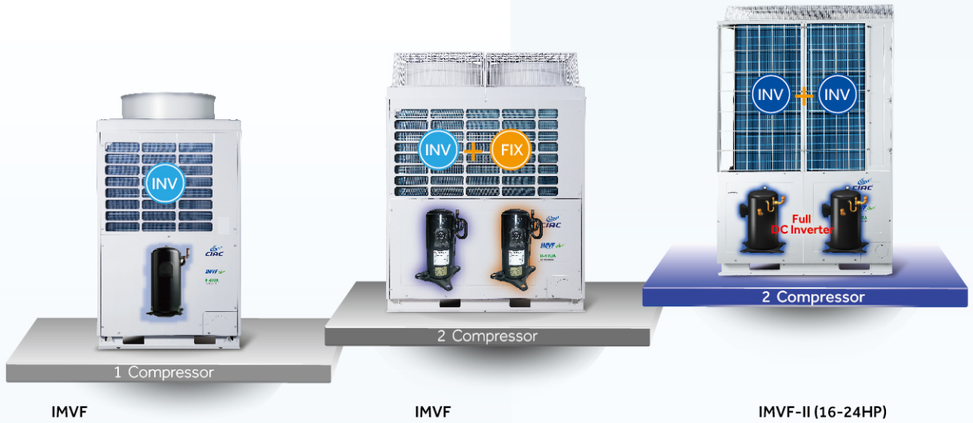


FEATURES&BENEFITS

Full DC Inverter High Efficiency

1. Full DC Inverter technology
2. Key parts to support full DC inverter technology
3. High efficiency

Full DC inverter technology

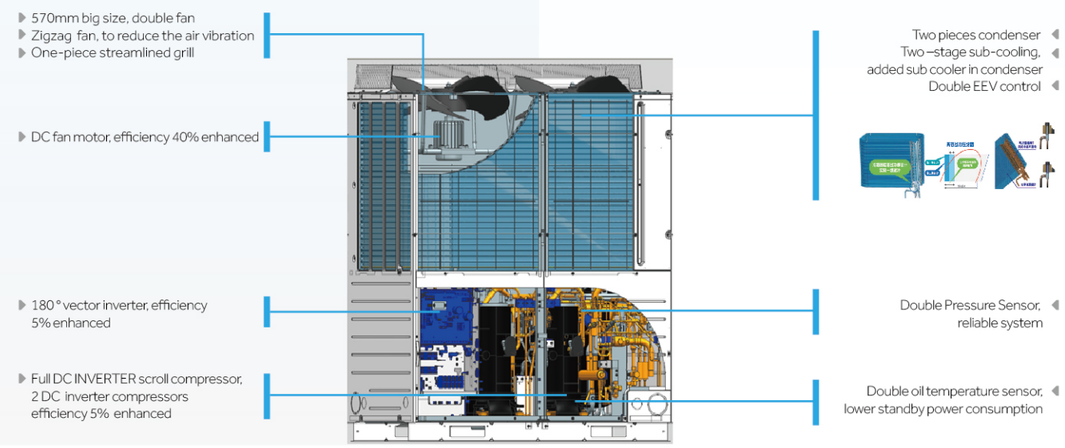


IMVF
- One Compressor
- DC INVERTER x 1

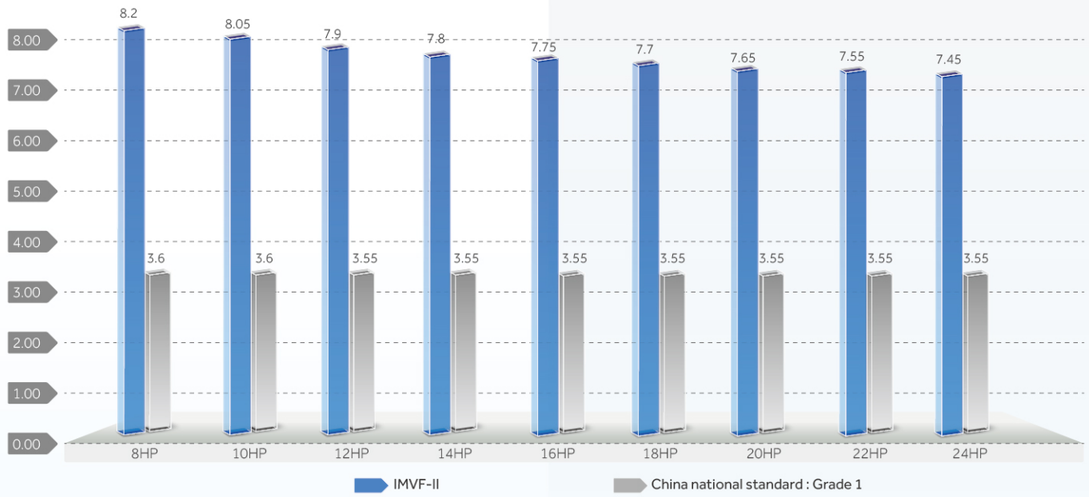
IMVF
- Two Compressor
- One DC INVERTER compressor + One Fixed Speed comp ressor

IMVF-II (16-24HP)
- Two Compressor
- Full DC Inverter x 2

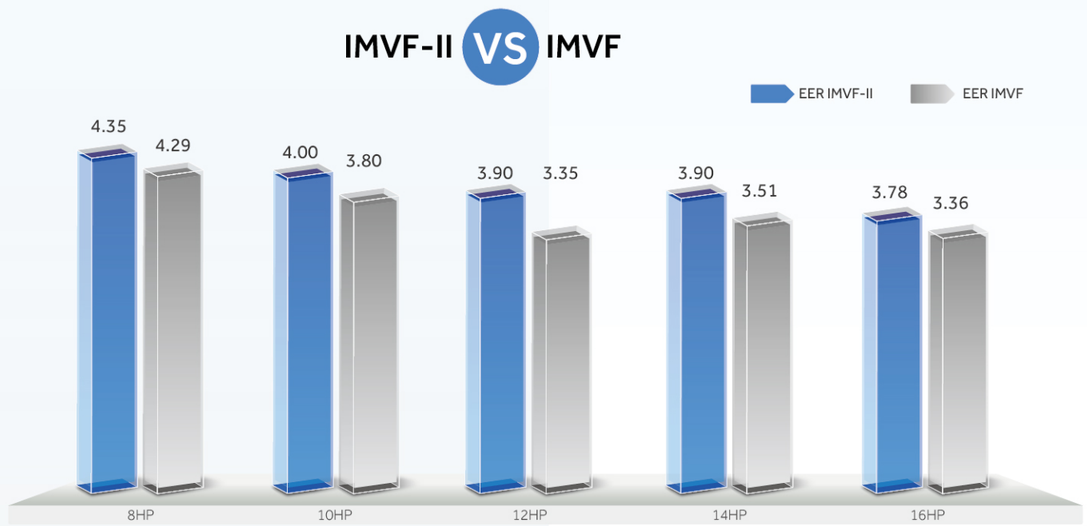
Full new outlook, full DC inverter technology key parts



IPLV(c) up to 8.2, average IPLV(c) up to 7.7, low running cost



Higher energy efficiency than IMVF

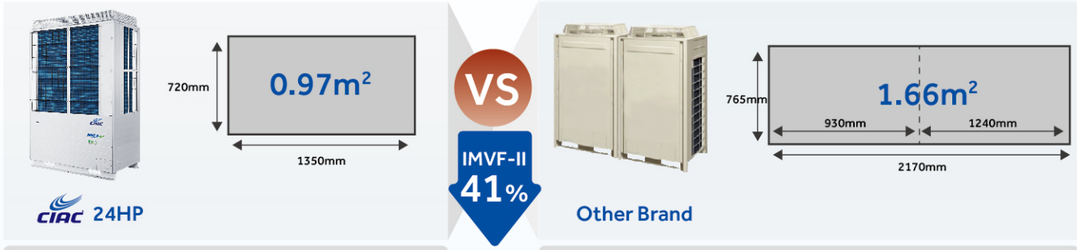


FEATURES&BENEFITS

Easy Installation

1. Largest capacity single module, smallest footprint
2. Long pipe length, high height drop
3. High outdoor ESP

Largest capacity single module in the industry: 24HP ,
Smallest footprint in the industry : 0.97m2



All the outdoor with same bottom size

Footprint 41% reduced. Smallest in the industry

Footprint of 72HP only 2.92m², 30% size reduced

82Pa ESP, Long air duct connecting available

Up to 82 Pa outdoor ESP

Longer air duct connecting available

Long pipe length, high height drop

Max. total pipe length **1000m**

Max. Single pipe length **165m** (equivalent pipe **190m**)

Max.Height drop between ID and OD **Max.110m/90m**[*1] Standard 50m/40m

Max height drop between ID **Max 30m**[*2] (Standard 18m)

*1 *2 Need contact your local distributor/dealer for individual design.

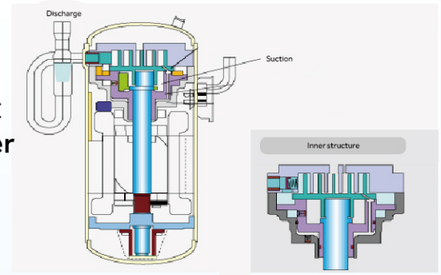
FEATURES&BENEFITS

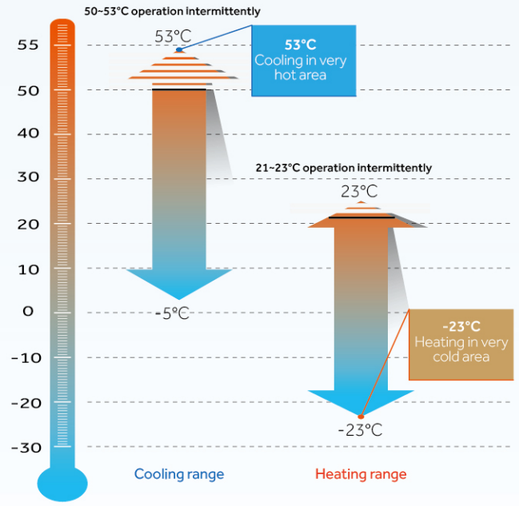
Comfort

1. Wide operation range
2. Low noise, night silent running
3. Optimal temperature control

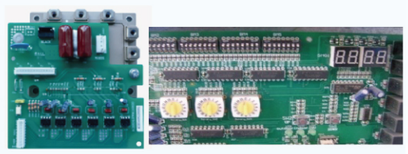
Wide operation range, -23°C heating, 53°C cooling

Full DC Inverter Comp.



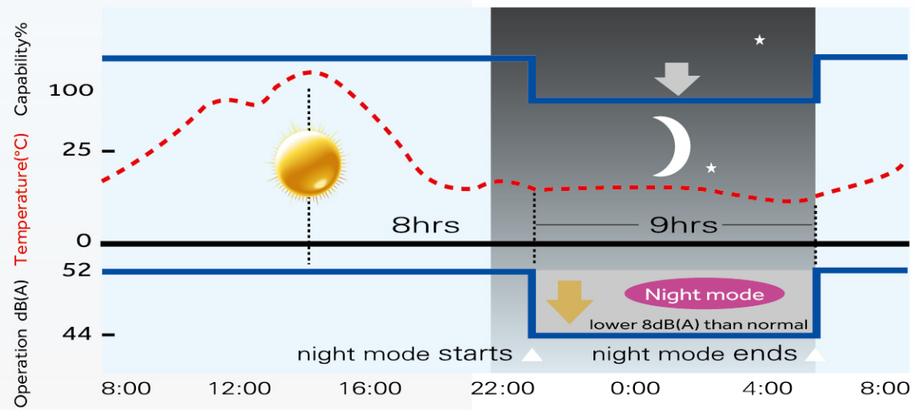


Precise control Tech.



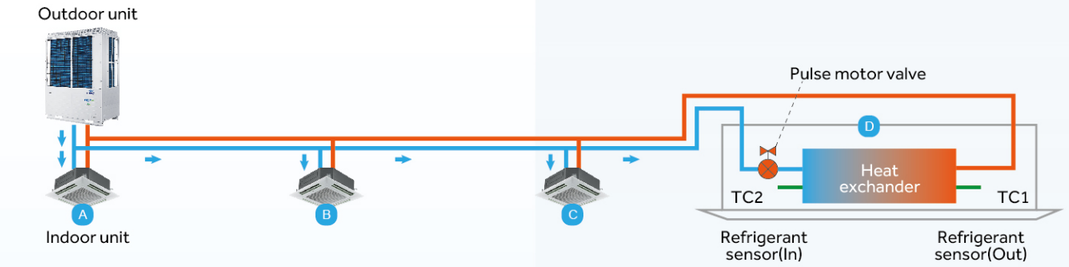
Low noise and night silent running

- 8dB/A noise will be reduced if night silent mode starts.



Optimal Temperature Control

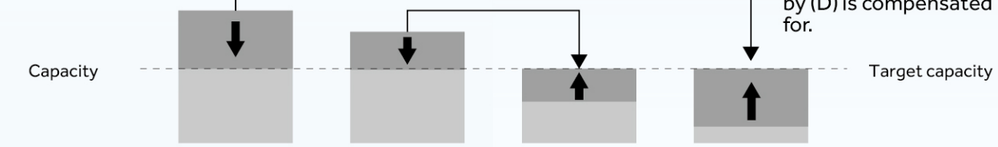
- When a multiple number of indoor units are connected, an insufficient or excess amount of refrigerant may be supplied to indoor units depending on the difference in length of the piping connection from outdoor units
- Optimal refrigerant control uses the indoor coil temperature to detect the air conditioning status of each indoor unit and control the capacity(refrigerant amounts) very precisely



The surplus represented by (A) is diminished.

The surplus represented by (B) is diminished and the deficiency represented by (C) is compensated for.

The surplus represented by (A) is diminished and the deficiency represented by (D) is compensated for.



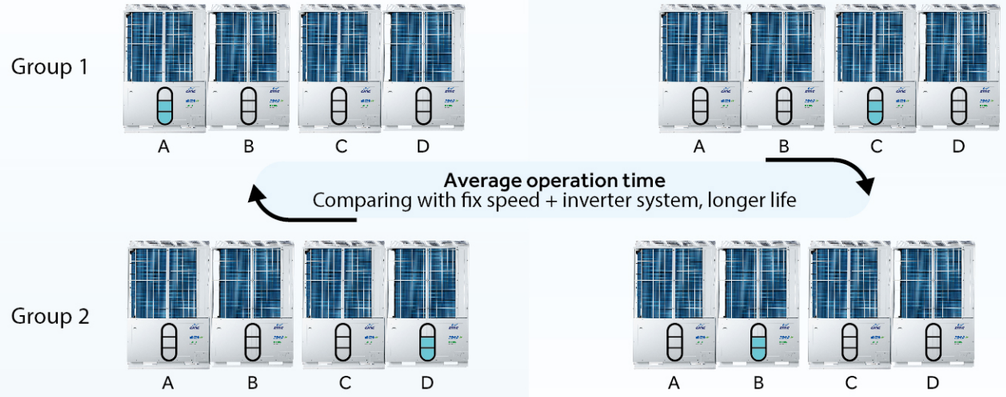
FEATURES&BENEFITS

High Reliability

1. Recycling operation
2. 2 stage oil return
3. Oil temperature sensor
4. Double Pressure sensor
5. Thunder Protection

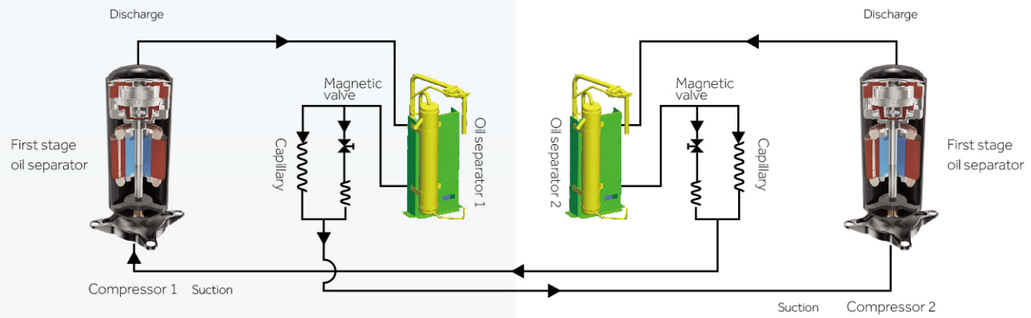
Recycling operation

Recycling operation, longer life of compressor



Oil Return

If the compressor operate at low frequency,oil return is only through the capillary. If the compressor operate at high frequency,oil return is through the capillary and magnetic valve.



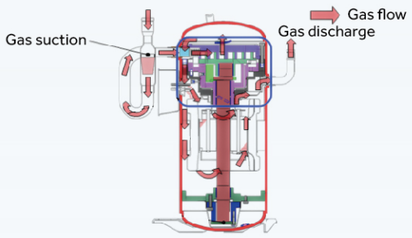
Compressor double protection

Base on the basic gas discharge sensor, IMVF-II add the oil temperature sensor at the bottom of compressor.

With the oil temperature sensor

- Control the on/off of heater of compressor, preventing from the liquid shock of compressor
- Judge if the liquid refrigerant enter into the compressor
- Compressor oil sub heating protection.

- High pressure sensor for every compressor so for the module with 2 compressors ,there are 2 high pressure sensors and 1 low pressure sensors, total 3 sensors



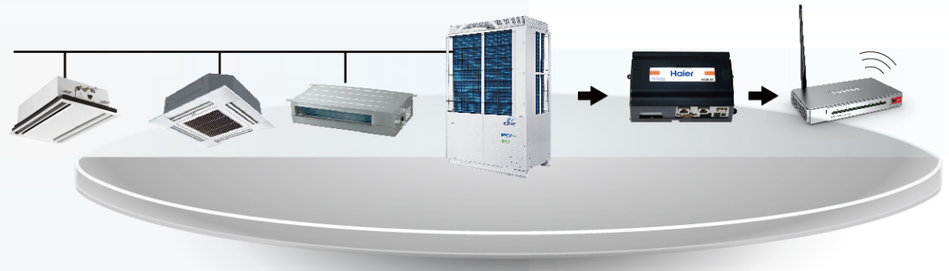
Thunder protection

There are electricity discharge wire in the terminal block, to lead the abnormal voltage into the earth, then to prevent the thunder affect.

Cloud Service Platform

1 Cloud Service

Cloud Service



- 7*24 on-line service
- Intelligent service： failure remind, maintenance mind information
- Energy saving： real-time data saving, provide energy saving solution according to data analysis
- Under development

IMVF-II

220V/3Ph/50-60Hz

DC motor

High performance compressor

180° sine wave DC inverter

Super quiet

Quiet operation

3 minutes protection

Blue fin

8/10/12/14HP

16/18/20/22/24HP

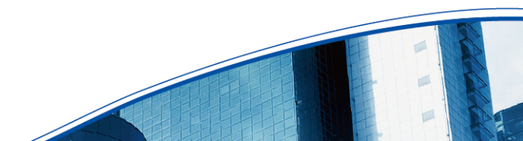
- Single Module: 8/10/12/14HP,16/18/20/22/24HP
- Combination Module: 22-72HP, 2-3 modules
- Full DC INVERTER technology
- Max.1000m total pipe length, Max.110m height drop
- Compatible with all the IMVF indoor units.

Model				CA43CV224-V5J1H	CA43CV280-V5J1H	CA43CV335-V5J1H	CA43CV400-V5J1H	CA43CV450-V5J1H	CA43CV500-V5J1H	CA43CV560-V5J1H	CA43CV615-V5J1H	CA43CV680-V5J1H	CA43CV730-V5J1H	CA43CV800-V5J1H	CA43CV850-V5J1H	CA43CV900-V5J1H	CA43CV960-V5J1H
Combination model				/	/	/	/	/	/	/	/	/	CA43CV335-V5J1H	CA43CV335-V5J1H	CA43CV400-V5J1H	CA43CV400-V5J1H	CA43CV400-V5J1H
				/	/	/	/	/	/	/	/	/	CA43CV400-V5J1H	CA43CV450-V5J1H	CA43CV450-V5J1H	CA43CV500-V5J1H	CA43CV560-V5J1H
				/	/	/	/	/	/	/	/	/	/	/	/	/	/
Capacity	Capacity range		HP	8	10	12	14	16	18	20	22	24	12+14	12+16	14+16	14+18	14+20
	Cooling		kW	25.20	28.00	33.50	40.00	45.00	50.40	56.00	61.50	68.00	73.50	78.50	85.00	90.40	96.00
	Heating		kW	27.30	31.50	37.50	45.00	50.00	56.50	63.00	69.00	73.00	82.50	87.50	95.00	101.50	108.00
Electrical parameters	Power supply		Ph/V/Hz	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60
	Cooling	Rated power input	kW	5.31	6.09	7.61	9.20	10.84	12.60	14.36	17.57	19.71	16.81	18.45	20.04	21.80	23.56
		Max power input	kW	12.64	13.99	16.28	23.18	23.18	23.90	28.36	27.42	32.93	39.46	39.46	46.36	47.08	51.54
		Rated current	A	16.07	18.44	23.06	27.85	32.84	38.16	43.49	53.02	59.47	50.91	55.90	60.69	66.01	71.34
		Max current	A	36.99	40.16	40.81	56.54	57.03	65.53	69.56	73.72	87.62	97.35	97.84	113.57	122.07	126.10
	Heating	Rated power input	kW	5.25	6.36	7.98	9.78	11.11	13.14	15.18	16.18	18.13	17.76	19.09	20.89	22.92	24.96
		Max power input	kW	9.48	12.60	15.31	17.87	17.77	20.94	22.23	23.43	27.17	33.18	33.08	35.64	38.81	40.10
		Rated current	A	15.90	19.27	24.17	29.63	33.65	39.80	45.98	48.83	54.71	53.80	57.82	63.28	69.43	75.61
		Max current	A	27.05	36.49	38.44	50.22	50.68	61.06	61.93	68.30	79.09	88.66	89.12	100.90	111.28	112.15
	EER			4.75	4.60	4.40	4.35	4.15	4.00	3.90	3.50	3.45	4.37	4.25	4.24	4.15	4.07
	COP			5.20	4.95	4.70	4.60	4.50	4.30	4.15	3.80	3.75	4.65	4.58	4.55	4.43	4.33
Performance	Air flow (H)		m^3/h	C: 15000/H: 13200	C: 15000/H: 13200	C: 15000/H: 13200	C: 15600/H: 14400	C: 15600/H: 14400	C: 16200/H: 15000	C: 16200/H: 15000	C: 16200/H: 15000	C: 16200/H: 15000	C: 30600/H: 27600	C: 30600/H: 27600	C: 31200/H: 28800	C: 31800/H: 29400	C: 31800/H: 29400
	Sound pressure level (H)		dB(A)	57.00	57.00	59.00	61.00	61.00	62.00	62.00	62	63	63.50	63.50	64.00	64.50	64.50
	Sound power level (H)		dB(A)	73.00	73.00	75.21	77.21	77.21	78.64	78.64	79	80	81.14	81.14	81.64	82.14	82.14
Installation	External dimensions (W/D/H)		mm	1350×720×1690	1350×720×1690	1350×720×1690	1350×720×1690	1350×720×1690	1350×720×2048	1350×720×2048	1350×720×2048	1350×720×2048	1350×720×1690 +1350×720×1690	1350×720×1690 +1350×720×1690	1350×720×1690 +1350×720×1690	1350×720×1690 +1350×720×2048	1350×720×1690 +1350×720×2048
	Shipping dimensions (W/D/H)		mm	1450×826×1885	1450×826×1885	1450×826×1885	1450×826×1885	1450×826×1885	1450×826×2225	1450×826×2225	1450×826×2225	1450×826×2225	1450×826×1885 +1450×826×1885	1450×826×1885 +1450×826×1885	1450×826×1885 +1450×826×1885	1450×826×1885 +1450×826×2225	1450×826×1885 +1450×826×2225
	Net/Shipping weight		kg	276/301	276/301	276/301	321/346	321/346	335/360	335/360	359/384	359/384	276/301+321/346	276/301+321/346	(321/346)*2	321/346+335/360	321/346+335/360
	Compressor type			DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL
	Compressor brand			MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
	Compressor quantity			1	1	1	2	2	2	2	2	2	3	3	4	4	4
	Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Refrigerant charge		kg	9.70	9.70	9.70	10.00	10.00	10.00	10.00	10.00	10.00	19.70	19.70	20.00	20.00	20.00
	Refrigerant liquid pipe		mm	9.52	9.52	12.70	12.70	12.70	15.88	15.88	15.88	15.88	19.05	19.05	19.05	19.05	19.05
	Refrigerant gas pipe		mm	19.05	22.22	25.40	25.40	28.58	28.58	28.58	28.58	28.58	31.80	31.80	31.80	31.80	31.80
	Oil equalization pipe		mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
	Max.total pipe length		m	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00
	Max. pipe length (Equivalent/Actual)		m	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165
	Max drop between I.U.&O.U (O.U down/up) *1		m	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110
	Standard drop between I.U. &O.U (O.U up/down) *2		m	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40
	Max drop between I.U *3		m	30	30	30	30	30	30	30	30	30	30	30	30	30	30
	Standard drop between I.U *4		m	18	18	18	18	18	18	18	18	18	18	18	18	18	18
	External static pressure		Pa	82	82	82	82	82	82	82	82	82	82	82	82	82	82
Connection ratio	Connectable indoor unit ratio		%	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130
	Maximum number of indoor units			14	16	20	24	27	30	33	36	40	43	46	50	53	57
Working temp.	Cooling		℃	(-5℃-50℃)									(-5℃-50℃)				
	Heating		℃	(-23℃-21℃)									(-23℃-21℃)				

Max drop between I.U.&O.U *1 If the height difference between the outdoor and the indoor units is from 50 to 110m, you MUST contact your local distributor/dealer for individual design and production.
Standard drop between I.U.&O.U *2 Standard design and production in the factory.
Max drop between I.U. *3 If the height difference between the indoor units is from 18 to 30m, you MUST contact your local distributor/dealer for individual design and production.

Standard drop between I.U. *4 Standard design and production in the factory.

* All the specifications are tested under nominal condition(in cooling T1, indoor temp. is 27℃ DB/19℃ WB;Outdoor temp 35℃ DB/24WB;in cooling T3, indoor temp. is 27℃ DB/19℃ WB;Outdoor temp 46℃ DB/24WB;in heating, indoor temp.is 20℃ DB,in heating, outdoor temp.is 7℃ DB/6℃ WB)



IMVF-II

220V/3Ph/50-60Hz

72HP

DC motor

High performance compressor

180° sine wave DC inverter

Super quiet

Quiet operation

3 minutes protection

Blue fin

- Single Module: 8/10/12/14HP,16/18/20/22/24HP
- Combination Module: 22-72HP, 2-3 modules
- Full DC INVERTER technology
- Max.1000m total pipe length, Max.110m height drop
- Compatible with all the IMVF indoor units.

Model				CA43CV1010-V5J1H	CA43CV1080-V5J1H	CA43CV1130-V5J1H	CA43CV1180-V5J1H	CA43CV1240-V5J1H	CA43CV1300-V5J1H	CA43CV1360-V5J1H	CA43CV1400-V5J1H	CA43CV1460-V5J1H	CA43CV1520-V5J1H	CA43CV1575-V5J1H
Combination model				CA43CV450-V5J1H	CA43CV500-V5J1H	CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV615-V5J1H	CA43CV680-V5J1H	CA43CV450-V5J1H	CA43CV450-V5J1H	CA43CV450-V5J1H	CA43CV500-V5J1H
				CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV615-V5J1H	CA43CV680-V5J1H	CA43CV680-V5J1H	CA43CV680-V5J1H	CA43CV450-V5J1H	CA43CV450-V5J1H	CA43CV500-V5J1H	CA43CV500-V5J1H
				/	/	/	/	/	/	/	CA43CV500-V5J1H	CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV560-V5J1H
Capacity	Capacity range		HP	16+20	18+20	20+20	20+22	20+24	22+24	24+24	16+16+18	16+16+20	16+18+20	18+18+20
	Cooling		kW	101.00	106.40	112.00	117.50	124.00	129.50	136.00	140.40	146.00	151.40	156.80
	Heating		kW	113.00	119.50	126.00	132.00	136.00	142.00	146.00	156.50	163.00	169.50	176.00
Electrical parameters	Power supply		Ph/V/Hz	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60
	Cooling	Rated power input	kW	25.20	26.96	28.72	31.93	34.07	37.28	39.42	34.28	36.04	37.80	39.56
		Max power input	kW	51.54	52.26	56.72	55.78	61.29	60.35	65.85	70.26	74.72	75.44	76.16
		Rated current	A	76.33	81.65	86.98	96.51	102.96	112.49	118.94	103.84	109.17	114.49	119.81
		Max current	A	126.59	135.09	139.12	143.28	157.18	161.34	175.24	179.59	183.62	192.12	200.62
	Heating	Rated power input	kW	26.29	28.32	30.36	31.36	33.31	34.32	36.27	35.36	37.40	39.43	41.46
		Max power input	kW	40.00	43.17	44.46	45.66	49.40	50.60	54.34	56.48	57.77	60.94	64.11
		Rated current	A	79.63	85.78	91.96	94.81	100.69	103.54	109.42	107.10	113.28	119.43	125.58
		Max current	A	112.61	122.99	123.86	130.23	141.02	147.39	158.18	162.42	163.29	173.67	184.05
	EER			4.01	3.95	3.90	3.68	3.64	3.47	3.45	4.10	4.05	4.01	3.96
	COP			4.30	4.22	4.15	4.21	4.08	4.14	4.03	4.43	4.36	4.30	4.25
Performance	Air flow (H)		m³/h	C: 31800/H: 29400	C: 32400/H: 30000	C: 32400/H: 30000	C: 32400/H: 30000	C: 32400/H: 30000	C: 32400/H: 30000	C: 32400/H: 30000	C: 47400/H: 43800	C: 47400/H: 43800	C: 48000/H: 44400	C: 48600/H: 45000
	Sound pressure level (H)		dB(A)	64.50	65.00	65.00	65.00	66.00	66.00	66.00	66.50	66.50	66.50	67.00
	Sound power level (H)		dB(A)	82.14	82.64	82.64	82.00	83.00	83.00	83.00	84.68	84.68	84.68	85.18
Installation	External dimensions (W/D/H)		mm	1350×720×1690 +1350×720×2048	1350×720×2048 +1350×720×2048	(1350×720×2048)*2	1350×720×2048 +1350×720×2048	1350×720×2048 +1350×720×2048	1350×720×2048 +1350×720×2048	1350×720×2048)*2	(1350×720×1690)*2 +1350×720×2048	(1350×720×1690)*2 +1350×720×2048	1350×720×1690 +1350×720×2048 +1350×720×2048	1350×720×2048 +(1350×720×2048)*2
	Shipping dimensions (W/D/H)		mm	1450×826×1885 +1450×826×2225	1450×826×2225 +1450×826×2225	(1450×826×2225)*2	1450×826×2225 +1450×826×2225	1450×826×2225 +1450×826×2225	1450×826×2225 +1450×826×2225	(1450×826×2225)*2	(1450×826×1885)*2 +1450×826×2225	(1450×826×1885)*2 +1450×826×2225	1450×826×1885 +1450×826×2225 +1450×826×2225	1450×826×2225 +(1450×826×2225)*2
	Net/Shipping weight		kg	321/346+335/360	(335/360)*2	(335/360)*2	335/360+359/384	335/360+359/384	(359/384)*2	(359/384)*2	(321/346)*2+335/360	(321/346)*2+335/360	321/346+(335/360)*2	(335/360)*3
	Compressor type			DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL
	Compressor brand			MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
	Compressor quantity			4	4	4	4	4	4	4	6	6	6	6
	Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Refrigerant charge		kg	20.00	20.00	20.00	20.00	20.00	20.00	20.00	30.00	30.00	30.00	30.00
	Refrigerant liquid pipe		mm	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05	19.05
	Refrigerant gas pipe		mm	38.10	38.10	38.10	38.10	38.10	38.10	38.10	38.10	38.10	38.10	41.30
	Oil equalization pipe		mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
	Max.total pipe length		m	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00
	Max. pipe length (Equivalent/Actual)		m	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165	190/165
	Max drop between I.U.&O.U (O.U down/up) *1		m	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110	90 / 110
	Standard drop between I.U. &O.U (O.U up/down) *2		m	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40 30	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40	50 / 40
	Max drop between I.U *3		m	30	30	30	30	18	30	30	30	30	30	30
	Standard drop between I.U *4		m	18	18	18	18	82	18	18	18	18	18	18
	External static pressure		Pa	82	82	82	82	50-130	82	82	82	82	82	82
Connection ratio	Connectable indoor unit ratio		%	50-130	50-130	50-130	50-130	64	50-130	50-130	50-130	50-130	50-130	50-130
	Maximum number of indoor units			60	64	64	64		64	64	64	64	64	64
Working temp.	Cooling		℃	(-5℃-50℃)							(-5℃-50℃)			
	Heating		℃	(-23℃-21℃)							(-23℃-21℃)			

Max drop between I.U.&O.U *1 If the height difference between the outdoor and the indoor units is from 50 to 110m, you MUST contact your local distributor/dealer for individual design and production.
Standard drop between I.U.&O.U *2 Standard design and production in the factory.
Max drop between I.U. *3 If the height difference between the indoor units is from 18 to 30m, you MUST contact your local distributor/dealer for individual design and production.

Standard drop between I.U. *4 Standard design and production in the factory.

* All the specifications are tested under nominal condition(in cooling T1, indoor temp. is 27℃ DB/19℃ WB;Outdoor temp 35℃ DB/24WB;in cooling T3, indoor temp. is 27℃ DB/19℃ WB;Outdoor temp 46℃ DB/24WB;in heating, indoor temp.is 20℃ DB,in heating, outdoor temp.is 7℃ DB/6℃WB)

IMVF-II

220V/3Ph/50-60Hz

DC motor

High performance compressor

180° sine wave DC inverter

Super quiet

Quiet operation

3 minutes protection

Blue fin

72HP

- Single Module: 8/10/12/14HP,16/18/20/22/24HP
- Combination Module: 22-72HP, 2-3 modules
- Full DC INVERTER technology
- Max.1000m total pipe length, Max.110m height drop
- Compatible with all the IMVF indoor units.

Model				CA43CV1640-V5J1H	CA43CV1690-V5J1H	CA43CV1740-V5J1H		CA43CV1800-V5J1H	CA43CV1855-V5J1H	CA43CV1920-V5J1H	CA43CV1975-V5J1H	CA43CV2040-V5J1H
Combination model				CA43CV500-V5J1H	CA43CV560-V5J1H	CA43CV560-V5J1H		CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV615-V5J1H	CA43CV680-V5J1H
				CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV560-V5J1H		CA43CV560-V5J1H	CA43CV615-V5J1H	CA43CV680-V5J1H	CA43CV680-V5J1H	CA43CV680-V5J1H
				CA43CV560-V5J1H	CA43CV560-V5J1H	CA43CV615-V5J1H		CA43CV680-V5J1H	CA43CV680-V5J1H	CA43CV680-V5J1H	CA43CV680-V5J1H	CA43CV680-V5J1H
Capacity	Capacity range		HP	18+20+20	20+20+20	20+20+22		20+20+24	20+22+24	20+24+24	22+24+24	24+24+24
	Cooling		kW	162.40	168.00	173.50		180.00	185.50	192.00	197.50	204.00
	Heating		kW	182.50	189.00	195.00		199.00	205.00	209.00	215.00	219.00
Electrical parameters	Power supply		Ph/V/Hz	3/208-230V/60	3/208-230V/60	3/208-230V/60		3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60	3/208-230V/60
	Cooling	Rated power input	kW	41.32	43.08	46.29		48.43	51.64	53.78	56.99	59.13
		Max power input	kW	80.62	85.08	84.14		89.65	88.71	94.21	93.28	98.78
		Rated current	A	125.14	130.47	140.00		146.45	155.98	162.43	171.95	178.41
		Max current	A	204.65	208.68	212.84		226.74	230.90	244.80	248.96	262.85
	Heating	Rated power input	kW	43.50	45.54	46.54		48.49	49.50	51.45	52.45	54.40
		Max power input	kW	65.40	66.69	67.89		71.63	72.83	76.57	77.77	81.51
		Rated current	A	131.76	137.94	140.79		146.67	149.52	155.40	158.25	164.13
		Max current	A	184.92	185.79	192.16		202.95	209.32	220.11	226.48	237.27
	EER			3.93	3.90	3.75		3.72	3.59	3.57	3.47	3.45
	COP			4.20	4.15	4.19		4.10	4.14	4.06	4.10	4.03
Performance	Air flow (H)		m³/h	C：48600/H：45000	C：48600/H：45000	C: 48600/H: 45000		C: 48600/H: 45000	C: 48600/H: 45000	C: 48600/H: 45000	C: 48600/H: 45000	C: 48600/H: 45000
	Sound pressure level (H)		dB(A)	67.00	67.00	67.00		67.00	67.00	67.00	67.00	68.00
	Sound power level (H)		dB(A)	85.18	85.18	84.00		84.00	84.00	84.00	84.00	85.00
Installation	External dimensions (W/D/H)		mm	1350×720×2048 +(1350×720×2048)*2	(1350×720×2048)*3	(1350×720×2048)*2+1350×720×2048		(1350×720×2048)*2+1350×720×2048	1350×720×2048 +1350×720×2048 +1350×720×2048	(1350×720×2048)*2+1350×720×2048	(1350×720×2048)*2+1350×720×2048	(1350×720×2048)*3
	Shipping dimensions (W/D/H)		mm	1450×826×2225 +(1450×826×2225)*2	(1450×826×2225)*3	(1450×826×2225)*2+1450×826×2225		(1450×826×2225)*2+1450×826×2225	1450×826×2225 +1450×826×2225 +1450×826×2225	(1450×826×2225)*2+1450×826×2225	(1450×826×2225)*2+1450×826×2225	(1450×826×2225)*3
	Net/Shipping weight		kg	(335/360)*3	(335/360)*3	(335/360)*2+359/384		(335/360)*2+359/384	335/360+(359/384)*2	335/360+(359/384)*2	(359/384)*3	(359/384)*3
	Compressor type			DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL		DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL
	Compressor brand			MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC		MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC	MITSUBISHI ELECTRIC
	Compressor quantity			6	6	6		6	6	6	6	6
	Refrigerant type			R410A	R410A	R410A		R410A	R410A	R410A	R410A	R410A
	Refrigerant charge		kg	30.00	30.00	30.00		30.00	30.00	30.00	30.00	30.00
	Refrigerant liquid pipe		mm	19.05	19.05	19.05		19.05	19.05	19.05	19.05	19.05
	Refrigerant gas pipe		mm	41.30	41.30	41.3		41.3	41.3	41.3	41.3	41.3
	Oil equalization pipe		mm	9.52	9.52	9.52		9.52	9.52	9.52	9.52	9.52
	Max.total pipe length		m	1000.00	1000.00	1000.00		1000.00	1000.00	1000.00	1000.00	1000.00
	Max. pipe length (Equivalent/Actual)		m	190/165	190/165	190/165		190/165	190/165	190/165	190/165	190/165
	Max drop between I.U.&O.U (O.U down/up) *1		m	90 / 110	90 / 110	90 / 110		90 / 110	90 / 110	90 / 110	90 / 110	90 / 110
	Standard drop between I.U. &O.U (O.U up/down) *2		m	50 / 40	50 / 40	50 / 40		50 / 40	50 / 40	50 / 40	50 / 40	50 / 40
	Max drop between I.U *3		m	30	30	30		30	30	30	30	30
	Standard drop between I.U *4		m	18	18	18		18	18	18	18	18
	External static pressure		Pa	82	82	82		82	82	82	82	82
Connection ratio	Connectable indoor unit ratio		%	50-130	50-130	50-130		50-130	50-130	50-130	50-130	50-130
	Maximum number of indoor units			64	64	64		64	64	64	64	64
Working temp.	Cooling		℃	(-5℃-50℃)						(-5℃-50℃)		
	Heating		℃	(-23℃-21℃)						(-23℃-21℃)		

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IMVF
Inverter Multi Variable Flow

Water Cooled VRF (IMVF W)

FEATURES&BENEFITS

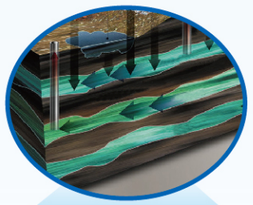
Outdoor Structure (8/10/12hp Side Discharge)

More Bigger Outdoor Capacity, More Flexible Application

River water

Lake water

Sea water



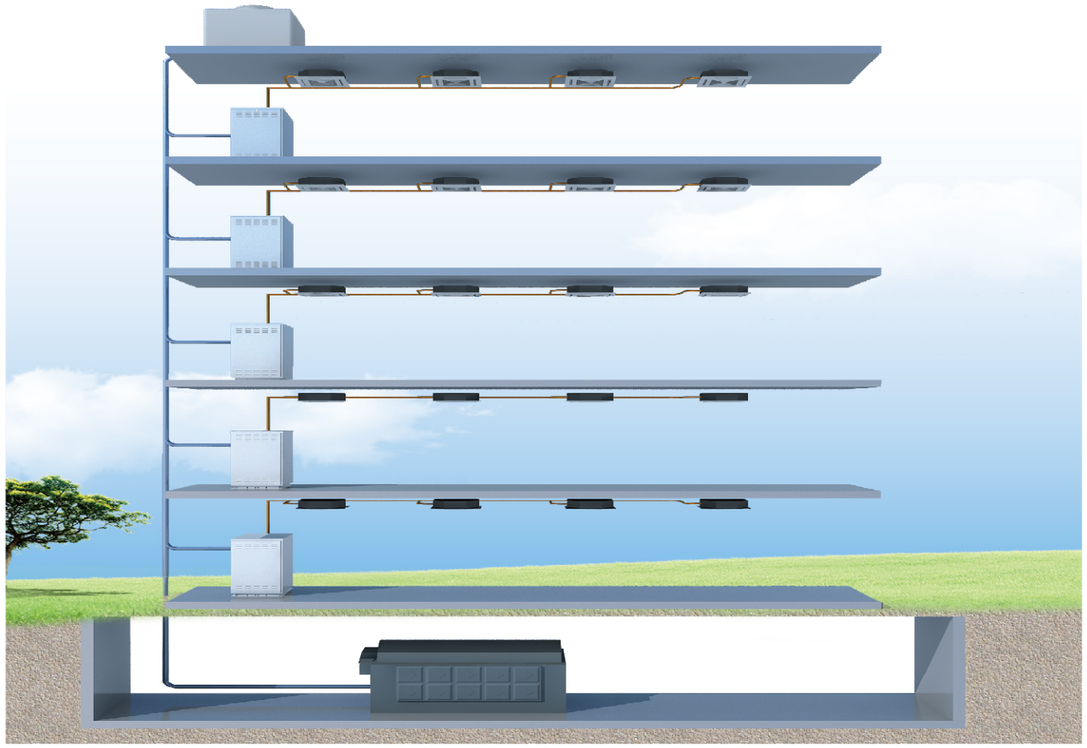
Ground water

Soil

Solar energy

Waste water

Industry waste heat



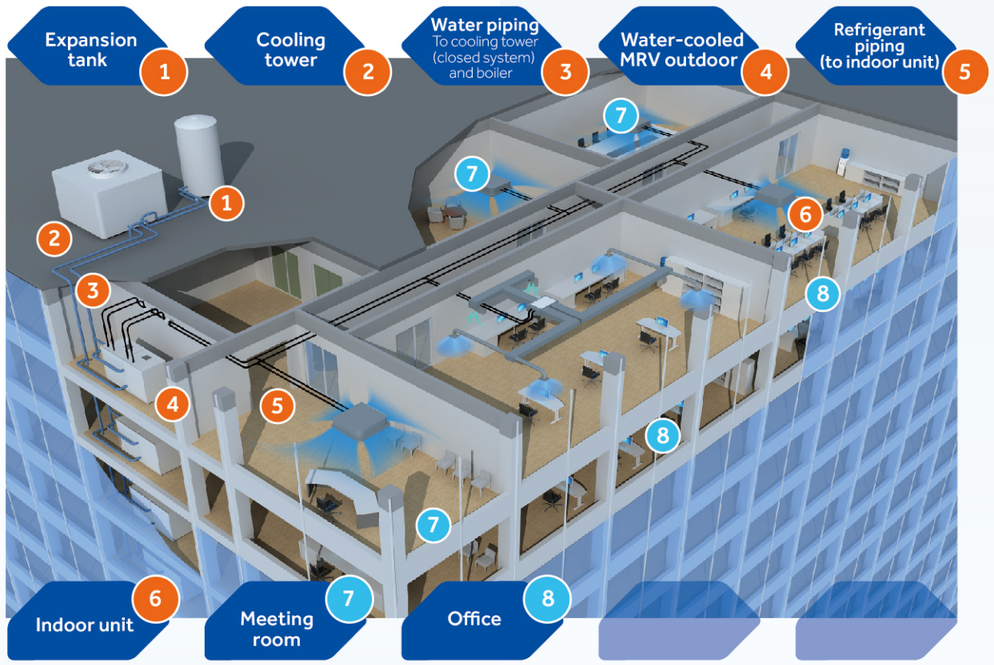
What is IMVF W Series

•IMVF W series system is a VRF air conditioning system that adopts water as a cooling or heating source

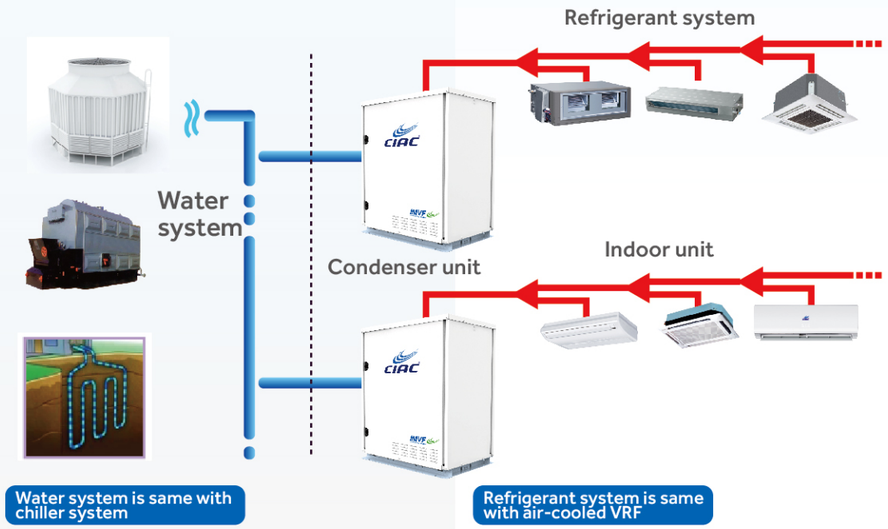
•IMVF W series can combine water system and refrigerant system together

FEATURES&BENEFITS

System Introduction

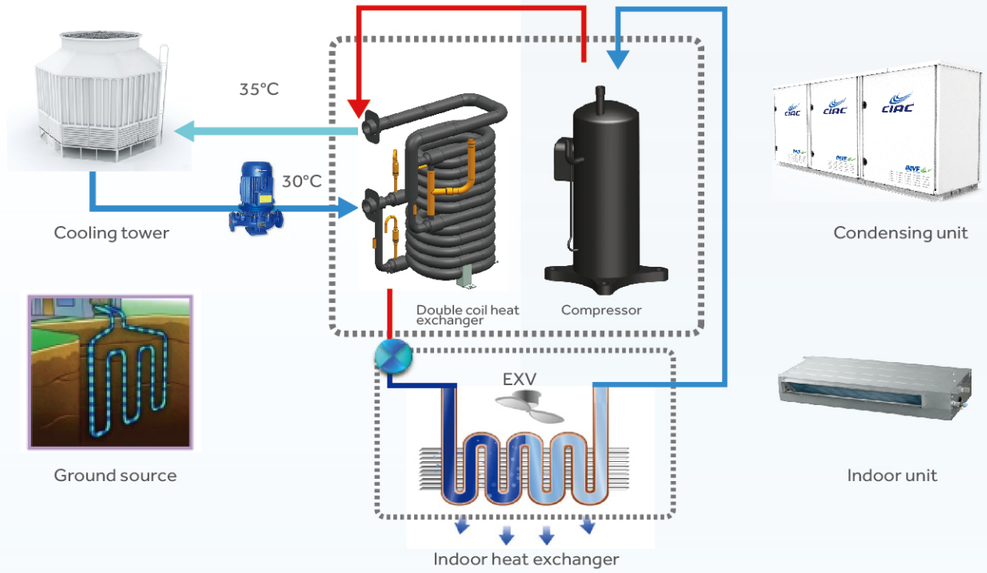


Working Principle

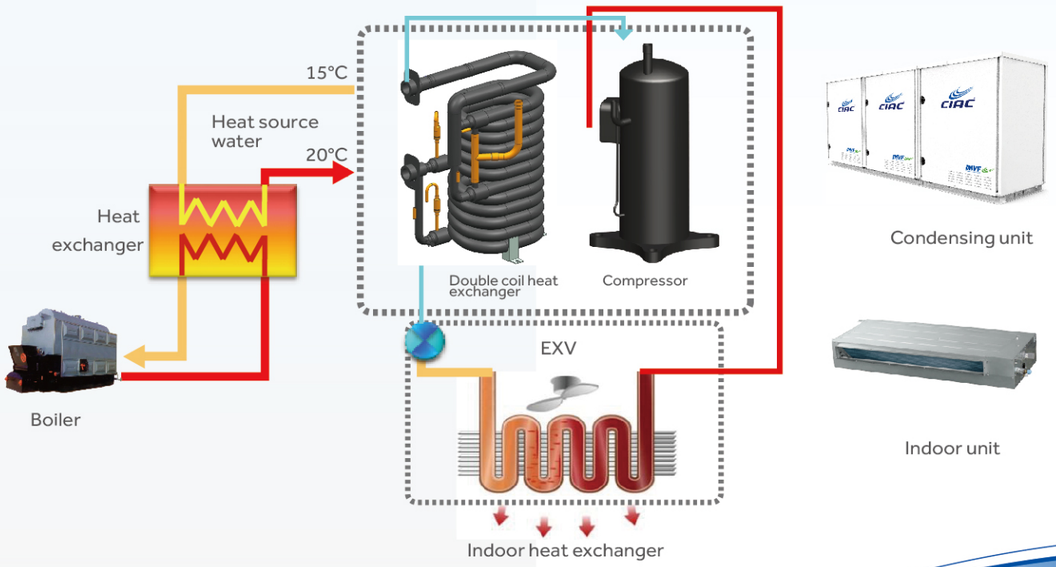


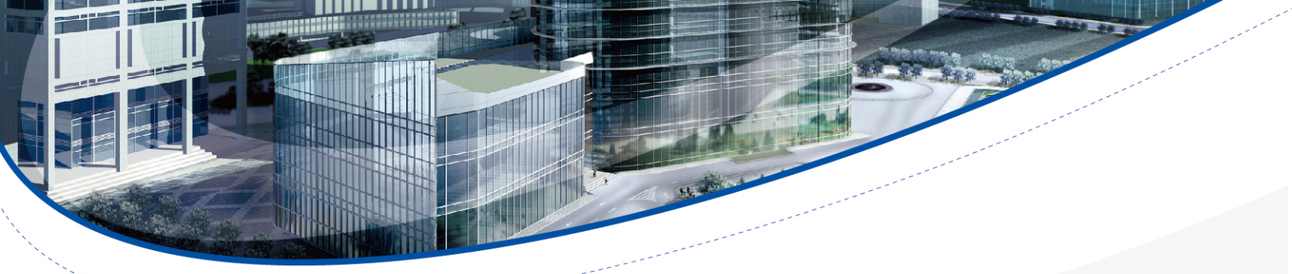
Working Principle

Working principle in cooling mode



Working principle in heating mode

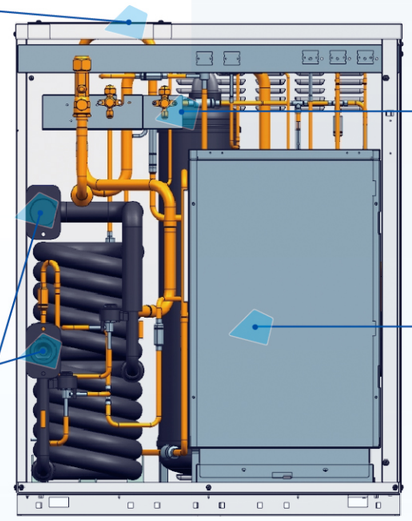




FEATURES&BENEFITS

Outdoor Structure

Core Technologies and Parts (Front Side)



Refrigerant pipe

Refrigerant pipe to connect the indoor units

Gas-liquid separator

Reduce the heat exchanger height(650mm), and the upper and lower wind speed uniform and high efficiency

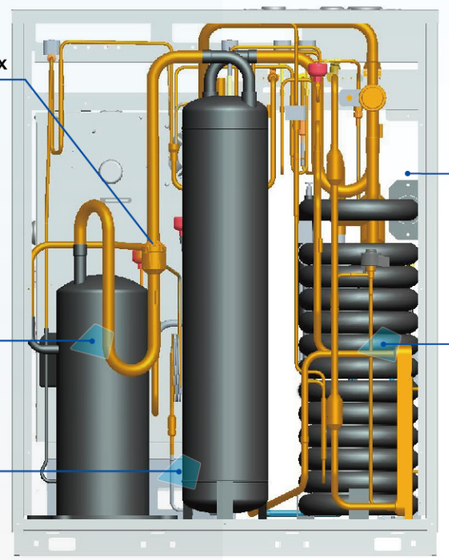
Compact electrical control box

Compact electric control box, which can rote up and down, easy for compressor service

Water outlet and inlet

Water outlet and inlet pipe to connect the double coil heat exchanger

Core Technologies and Parts(Back Side)



Compact electrical control box

Compact electric control box, which can rote up and down, easy for compressor service

Water switch

DC inverter scroll compressor

DC inverter scroll compressor, more higher energy efficiency

Double coil heat exchanger

•Double coil heat exchanger, more uniform Heat transfer effect

•More higher double coil, saving more space, more compact design

Oil separator

IMVF W Application Typical high-rise buildings

3 Types Typical High-rise Buildings

•Compact inner structure and core parts

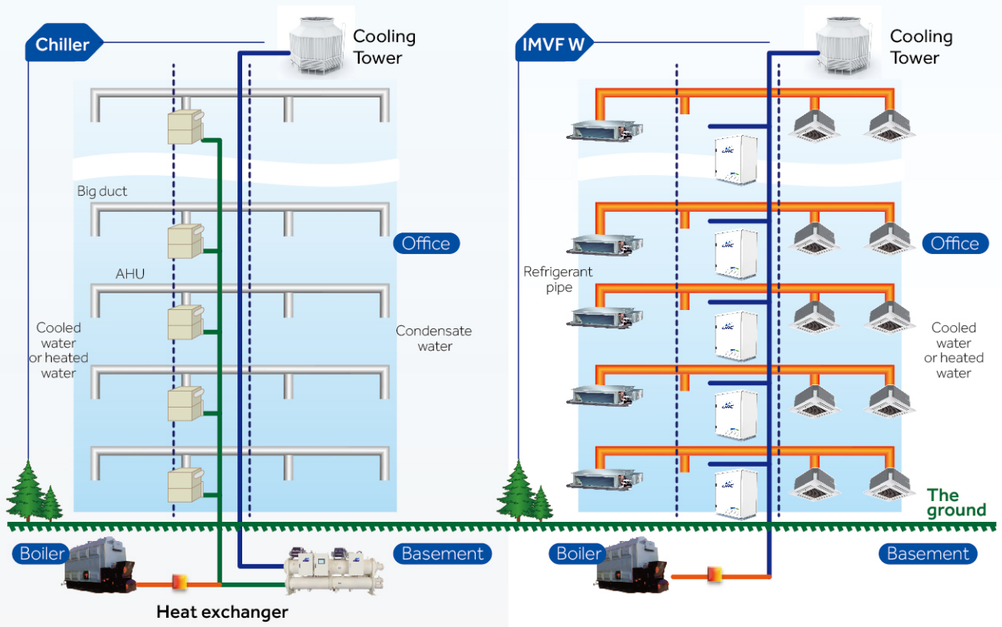
High rise building without podium

High rise building with podium

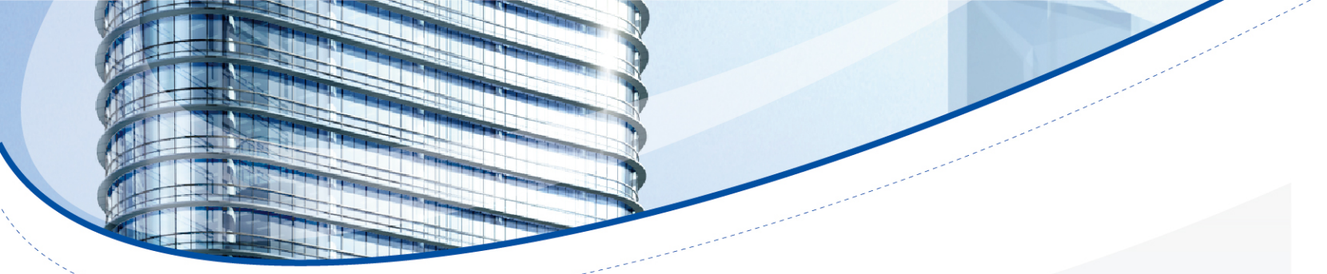
Single layer with a large area

Type 1 High-rise Building

•Conventional chiller system, and new water-cooled IMVF solution



Heat exchanger

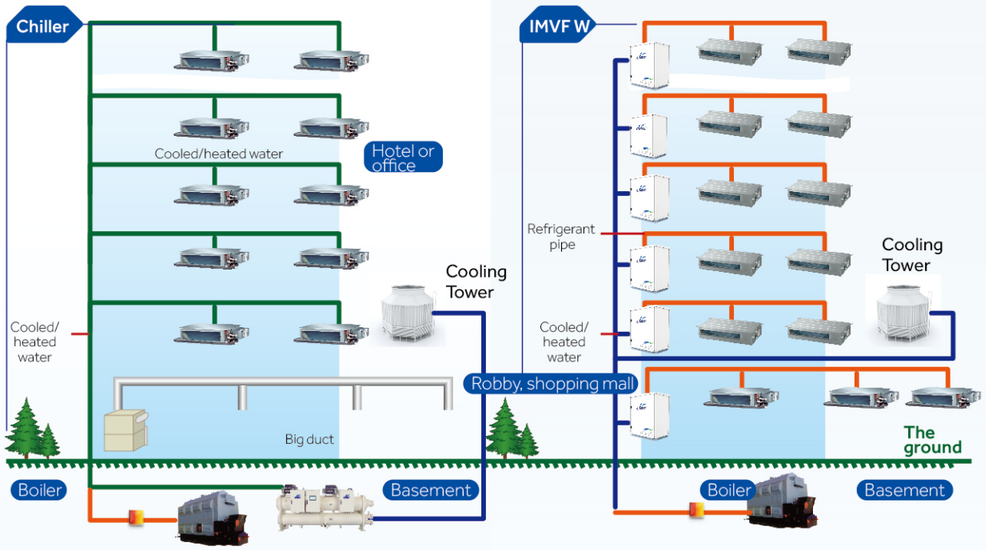


FEATURES&BENEFITS

IMVF W Application

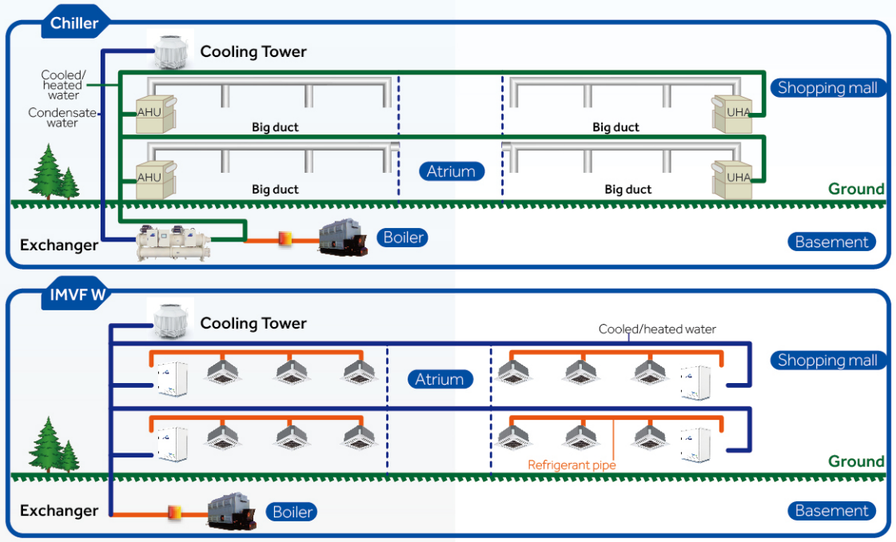
Type 2 High-rise Building

•Conventional chiller system, and water-cooled IMVF solution



Type 3 High-rise Building

•Conventional chiller system, and water-cooled IMVF solution



IMVF W Application

Buildings That Suitable

•New construction or retrofit building: MRV W provides an energy efficient solution anywhere that could use a water-cooled chiller or replacing water source heat pump design by enabling them to afford the water-cooled chiller benefits. It is especially true for high-rise buildings such as condos, offices, medical centers, schools

•High-rise building that didn't design with VRF system

•Glass curtain wall or special design building

•No enough space to put the outdoor unit even accept the VRF system

•Building which required to renewable energy sources

Benefit

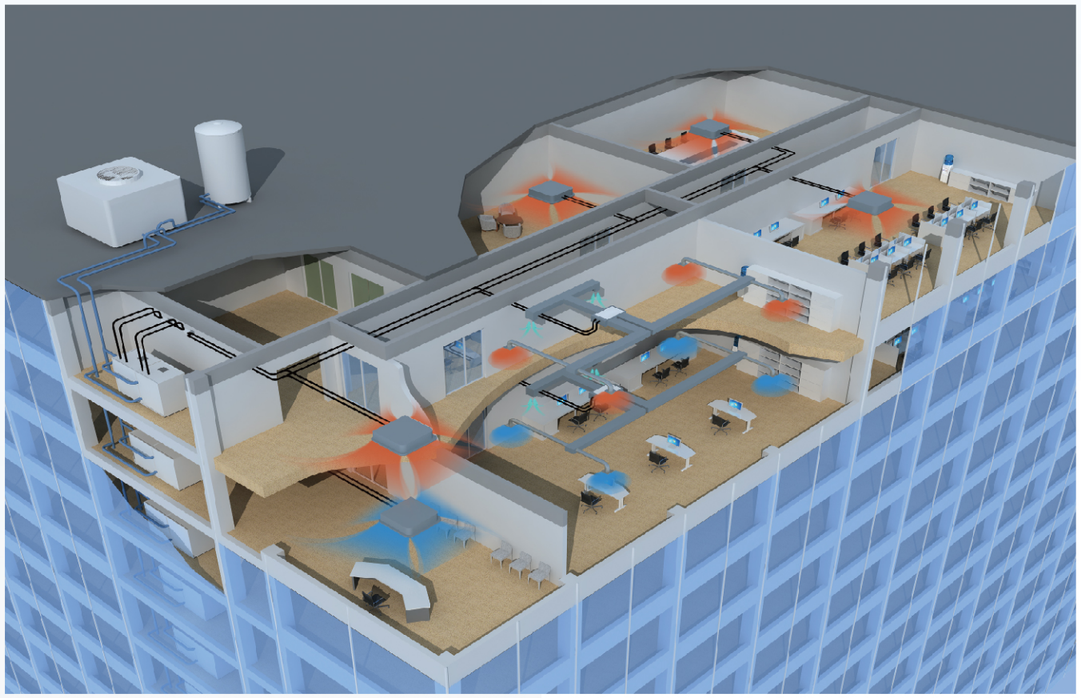
•Lower initial cost for the developer and builder

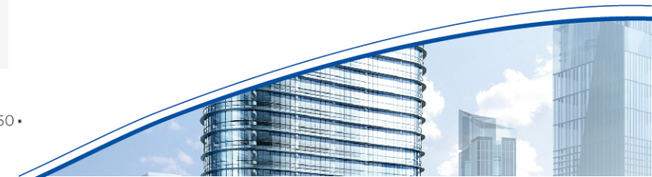
•Client or developer can add air conditioning to match load requirement

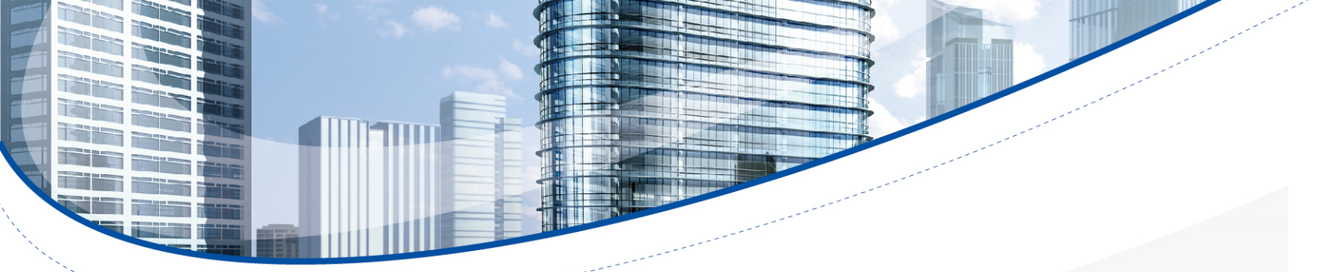
•No rebalancing of water systems if commissioning valves are installed on each floor

•Connect to the full suite of MRV control solution A/C management system

•Separate control to every indoor unit







FEATURES&BENEFITS

Overview

1 Energy Efficiency

2 Comfort

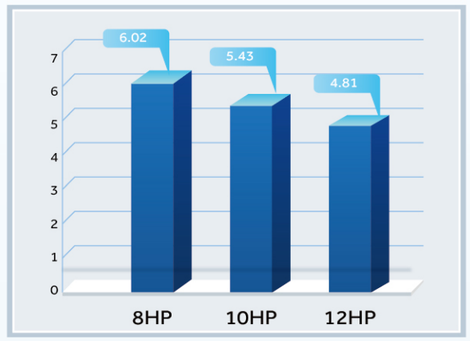
3 High Reliability

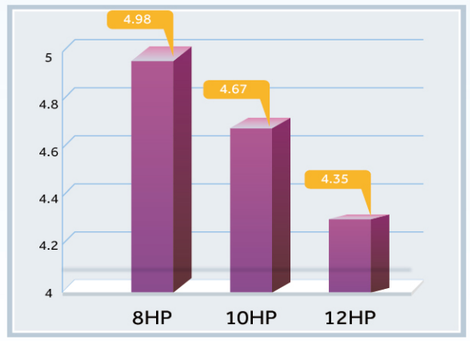
4 High Convenience

Energy saving

•COP can be up to 6.02, much more higher energy level than air system

•EER can be up to 4.98, more higher energy level than air system





Energy Saving

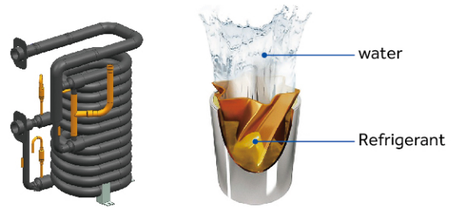
High efficiency dc inverter compressor

•High efficiency DC inverter compressor from mitsubishi electric

Energy Saving

High efficiency double coil heat exchanger

•Double coil heat-exchanger, more uniform heat transfer effect

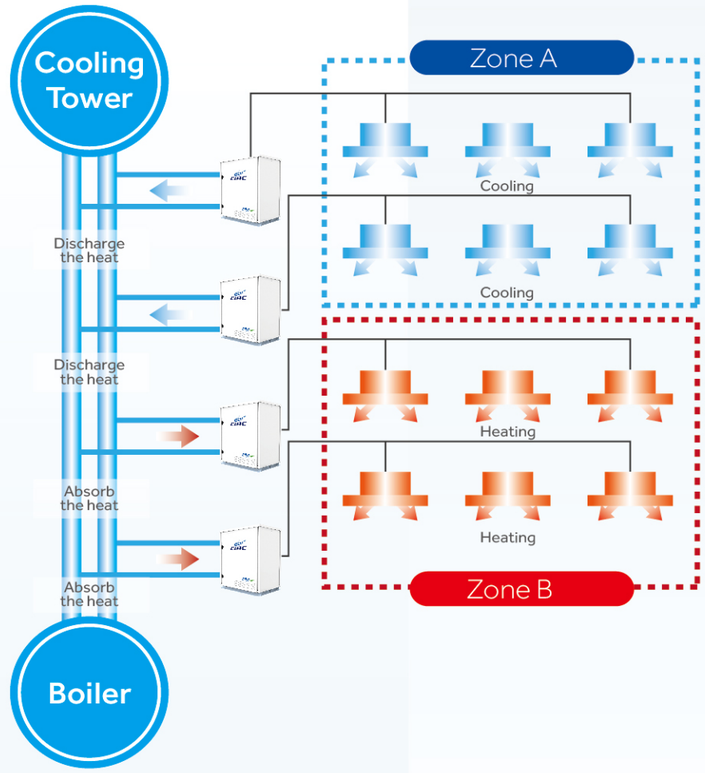


Energy Saving

Heat recovery between different refrigerant system

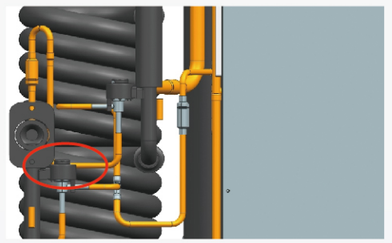
•Heat recovery is achieved within the water loop between different refrigerant system, more higher total COP

•Cooling and heating at the same time in different refrigerant system



Double EEV Control

•The double EEV control the 2 stages heat exchanger separately, which can adjust the condenser volume



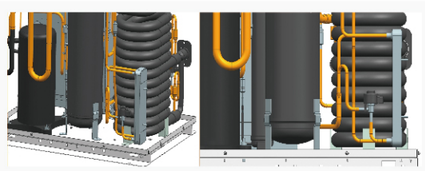
Two Stage Deep Sub Cooling Technology

•1st stage sub cooling added a sub cooling coil to condenser

•2nd stage sub cooling added a stand alone sub cooler

•After further cooling, sub-cooling degree can be up to 30°C,

with the heat exchanging capacity per unit mass of refrigerant improved by 46% and flow resistance reduced by 55%, and running efficiency improved by 9%

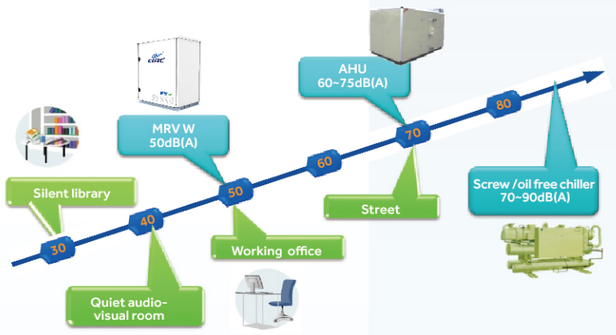


FEATURES&BENEFITS

Comfortable Environment

Low Noise Level

•Comparing with air system, without fan in the outdoor and with full insulation design, the noise level can be reduced to only 50dB(A), much lower than the air system and conventional chiller



No Influence From Ambient Temperature

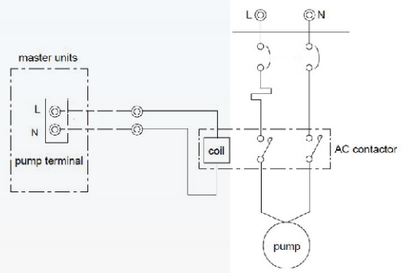
•Thanks to the stable water source, the capacity and efficiency will not reduce with extreme ambient conditions compare with air-cooled system

•Especially in heating mode, water cooling means no defrost operation is required, the resultant rapid start up time assures quick and comfortable heating, even in cold environment

High Reliability

Water Pump Controlled Together with the Outdoor

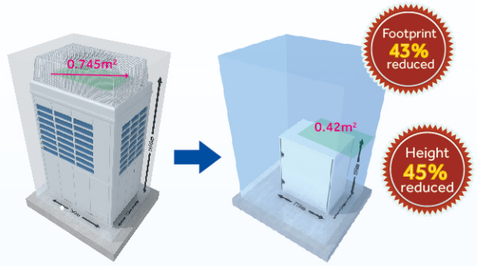
•The reserved water pump linkage control, realize the pump linkage control, reduce the energy consumption and eliminate hidden dangers



High Convenience (Use/installation/service)

Compact and Lightweight Design

•The industry's most compact and lightweight design, installed in the narrow space.
Comparing with the conventional top discharge air-cooled system, height 45% reduced, footprint 43% reduced



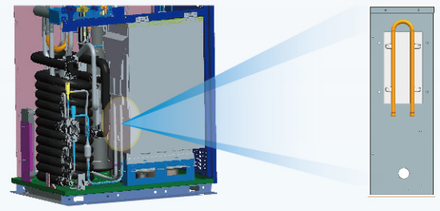
Stacked Installation

•The condensers are smaller and can be staked, reducing the installation space and increasing the customers usable square footage

High Reliability

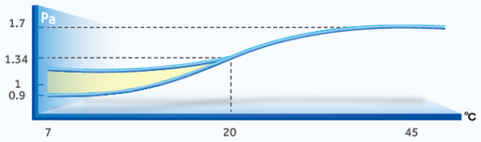
Chilled Electric Control Module

•Using refrigerant to reduce the module temperature, to realize stable module temperature, more reliable operation
•Canceling heat dissipation fan of the module, reduce the power consumption and noise level

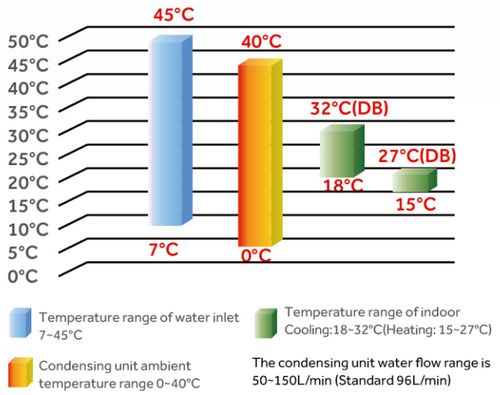


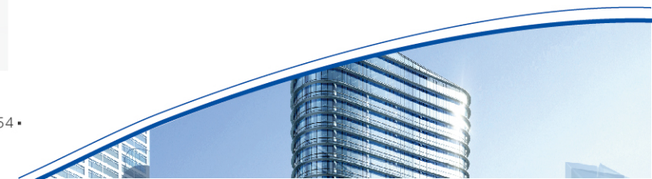
Stable Pressure Setting

•Stable pressure setting design, to make the high pressure keep above the required pressure, ensure the compressor reliability and stable capacity output



Wide Operation Range



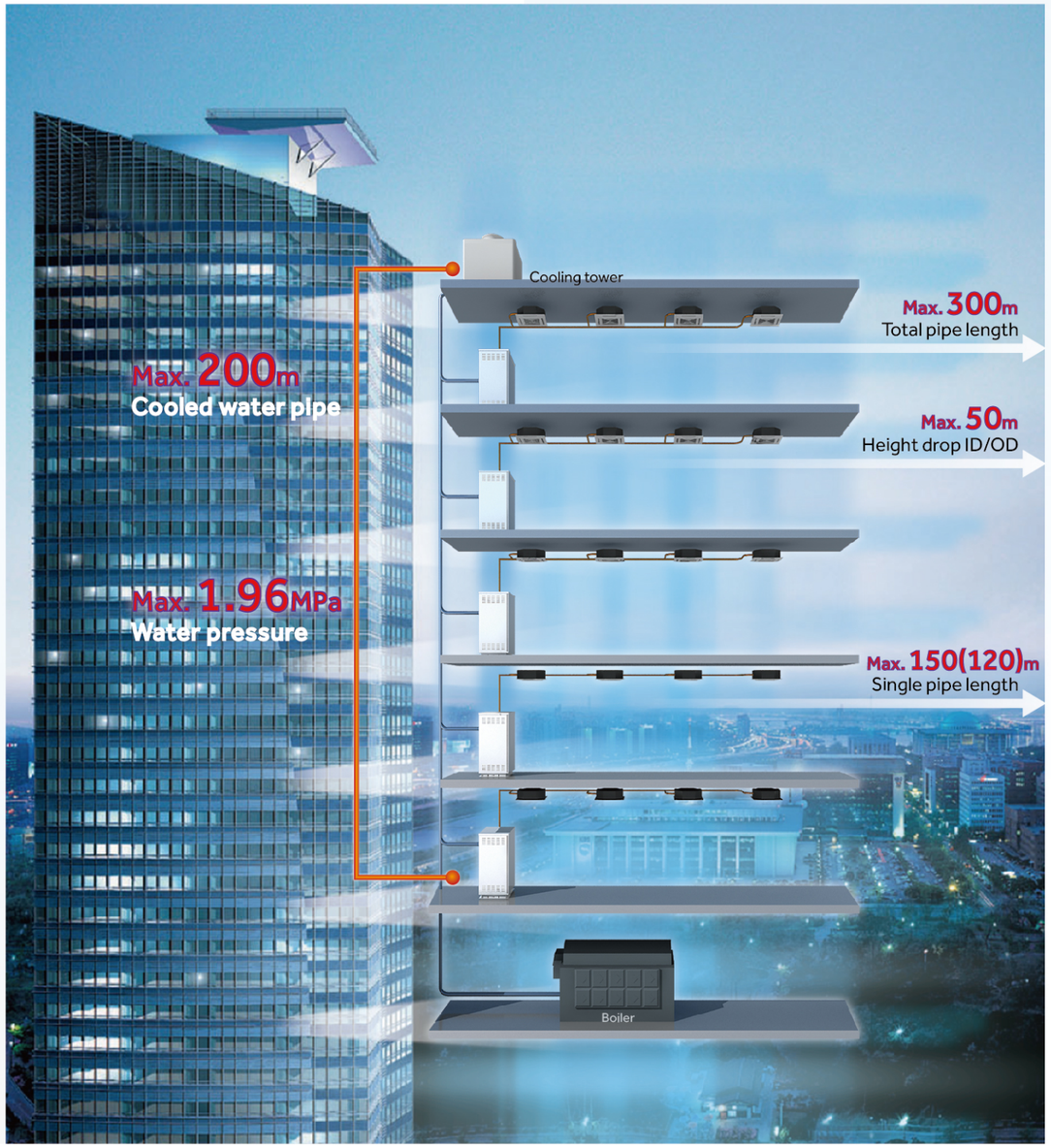


FEATURES&BENEFITS

Energy Efficiency

Long Pipe Length and High Height Drop

The condensers are smaller and can be staked, reducing the installation space and increasing the customers usable square footage

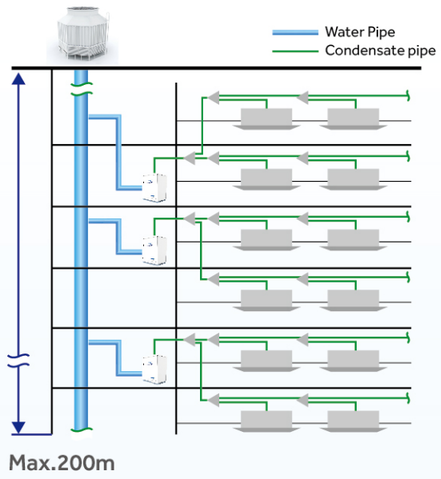


Energy Efficiency

Flexible Water Pipe Design

•Max water pressure can be up to 1.96MPa

•Condensate pipe length can be up to 200m



Energy Efficiency

Flexible Installation Location


Outside


Machine room


Balcony


Corridor


Equipment room


Storage

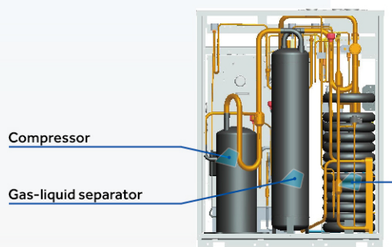
High Convenience (Use/installation/service)

Various Mode and Priority Selection

•The condensers are smaller and can be staked, reducing the installation space and increasing the customers usable square footage

Easy Maintenance

Compact outdoor structure design



IMVF Water Cooled Module

208-230V/3Ph/60Hz

8/10/12HP

DC motor · High performance compressor · 180° sine wave DC inverter · Super quiet · Quiet operation · 3 minutes protection · Lowambient cooling (-5°C) · Lowambient heating (-15°C) · Blue fin

Model				CA43BV224-E5J1W	CA43BV280-E5J1W	CA43BV335-E5J1W	CA43BV448-E5J1W	CA43BV504-E5J1W	CA43BV560-E5J1W	CA43BV615-E5J1W	CA43BV670-E5J1W	CA43BV728-E5J1W	CA43BV784-E5J1W	CA43BV840-E5J1W	CA43BV895-E5J1W	CA43BV950-E5J1W	CA43BV1005-E5J1W
Combination model				/	/	/	CA43BV224-5J1W	CA43BV224-5J1W	CA43BV280-5J1W	CA43BV280-5J1W	CA43BV335-5J1W	CA43BV224-5J1W	CA43BV224-5J1W	CA43BV280-5J1W	CA43BV280-5J1W	CA43BV280-5J1W	CA43BV280-5J1W
				/	/	/	CA43BV224-5J1W	CA43BV280-5J1W	CA43BV280-5J1W	CA43BV335-5J1W	CA43BV335-5J1W	CA43BV224-5J1W	CA43BV280-5J1W	CA43BV280-5J1W	CA43BV280-5J1W	CA43BV335-5J1W	CA43BV335-5J1W
				/	/	/	/	/	/	/	/	CA43BV280-5J1W	CA43BV280-5J1W	CA43BV280-5J1W	CA43BV335-5J1W	CA43BV335-5J1W	CA43BV335-5J1W
Capacity	Capacity range		HP	8	10	12	16	18	20	22	24	26	28	30	32	34	36
	Cooling capacity		kW	22.4	28	33.5	44.8	50.4	56	61.5	67.0	72.8	78.4	84.0	89.5	95.0	100.5
	Heating capacity		kW	25	31.5	37.5	50.0	56.5	63	69.0	75.0	81.5	88.0	94.5	100.5	106.5	112.5
Electrical parameters	Power supply		Ph/V/Hz	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60	3/208-230/60
	Cooling	Rated power input	kW	4.50	6.00	7.70	9.00	10.50	12.00	13.70	15.40	15.00	16.50	18.00	19.70	21.40	23.10
		Max. power input	kW	13.00	15.00	17.00	26.00	28.00	30.00	32.00	34.00	41.00	43.00	45.00	47.00	49.00	51.00
		Rated current	A	12.43	16.58	21.27	24.86	29.01	33.15	37.85	42.54	41.44	45.58	49.73	54.42	59.12	63.81
		Max.current	A	35.91	41.44	46.96	71.83	77.35	82.88	88.40	93.93	113.26	118.79	124.31	129.84	135.36	140.89
	Heating	Rated power input	kW	4.15	5.80	7.80	8.30	9.95	11.60	13.60	15.60	14.10	15.75	17.40	19.40	21.40	23.40
		Max. power input	kW	13.00	15.00	17.00	26.00	28.00	30.00	32.00	34.00	41.00	43.00	45.00	47.00	49.00	51.00
		Rated current	A	11.46	16.02	21.55	22.93	27.49	32.05	37.57	43.10	38.95	43.51	48.07	53.59	59.12	64.64
		Max.current	A	35.91	41.44	46.96	71.83	77.35	82.88	88.40	93.93	113.26	118.79	124.31	129.84	135.36	140.89
	EER/COP			4.98/6.02	4.67/5.43	4.35/4.81	4.98/6.02	4.8/5.68	4.67/5.43	4.49/5.07	4.35/4.81	4.85/5.78	4.75/5.59	4.67/5.43	4.54/5.18	4.44/4.98	4.35/4.81
Performance	Water flow (H)		m^3/h	4.8	6	7.2	9.6	10.8	12	13.2	14.4	15.6	16.8	18.0	19.2	20.4	21.6
	Sound pressure level (H)		dB(A)	50	51	53	53	54	54	55	56	55	55	56	57	57	58
	Sound power level (H)		dB(A)	61	62	64	64	65	65	66	67	66	66	67	68	68	69
Installation	External dimensions(W/D/H)		mm	775/545/995	775/545/995	775/545/995	(775/545/995)*2	(775/545/995)*2	(775/545/995)*2	(775/545/995)*2	(775/545/995)*2	(775/545/995)*3	(775/545/995)*3	(775/545/995)*3	(775/545/995)*3	(775/545/995)*3	(775/545/995)*3
	Shipping dimensions(W/D/H)		mm	875/655/1182	875/655/1182	875/655/1182	(875/655/1182)*2	(875/655/1182)*2	(875/655/1182)*2	(875/655/1182)*2	(875/655/1182)*2	(875/655/1182)*3	(875/655/1182)*3	(875/655/1182)*3	(875/655/1182)*3	(875/655/1182)*3	(875/655/1182)*3
	Net/Shipping weight		kg	172/183	172/183	172/183	344/366	344/366	344/366	344/366	344/366	516/549	516/549	516/549	516/549	516/549	516/549
	Compressor type			DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL	DC INV. SCROLL
	Compressor quantity			1 INV	1 INV	1 INV	2 INV	2 INV	2 INV	2 INV	2 INV	3 INV	3 INV	3 INV	3 INV	3 INV	3 INV
	Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Refrigerant charge		kg	2	2	2	4	4	4	4	4	6	6	6	6	6	6
	Refrigerant liquid pipe		mm	9.52	9.52	12.7	12.7	15.9	15.9	15.9	15.9	19.1	19.1	19.1	19.1	19.1	19.1
	Refrigerant gas pipe		mm	19.05	22.2	25.4	28.6	28.6	28.6	28.6	28.6	31.8	31.8	31.8	31.8	31.8	38.1
	Oil equalization pipe		mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52	9.52
	Total pipe length		m	300	300	300	300	300	300	300	300	300	300	300	300	300	300
	Max. pipe length(Equivalent/Actual)		m	150/120	150/120	150/120	150/120	150/120	150/120	150/120	150/120	150/120	150/120	150/120	150/120	150/120	150/120
	Max drop between I.U.&O.U		m	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40	50/40
Heat Exchanger	Type			Double coil	Double coil	Double coil	Double coil	Double coil	Double coil	Double coil	Double coil	Double coil	Double coil	Double coil	Double coil	Double coil	Double coil
	Material			Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel	Copper&Steel
Water side	Inlet water connection pipe		mm	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32
	Outlet water connection pipe		mm	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32	DN32
	pressure drop(inlet and outlet)		Kpa	35	50	70	35+35	35+50	50+50	50+70	70+70	35+35+50	35+50+50	50+50+50	50+50+70	50+70+70	70+70+70
	Connection type			inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved	inner grooved
	Max. system water pressure		Mpa	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
	Inlet water temperature range (Cooling & Heating)		°C	7-45	7-45	7-45	7-45	7-45	7-45	7-45	7-45	7-45	7-45	7-45	7-45	7-45	7-45
Connection ratio	Connectable indoor unit ratio		%	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130	50-130
	Maximum number of indoor units		unt	13	16	19	23	29	33	36	39	43	46	50	53	56	59

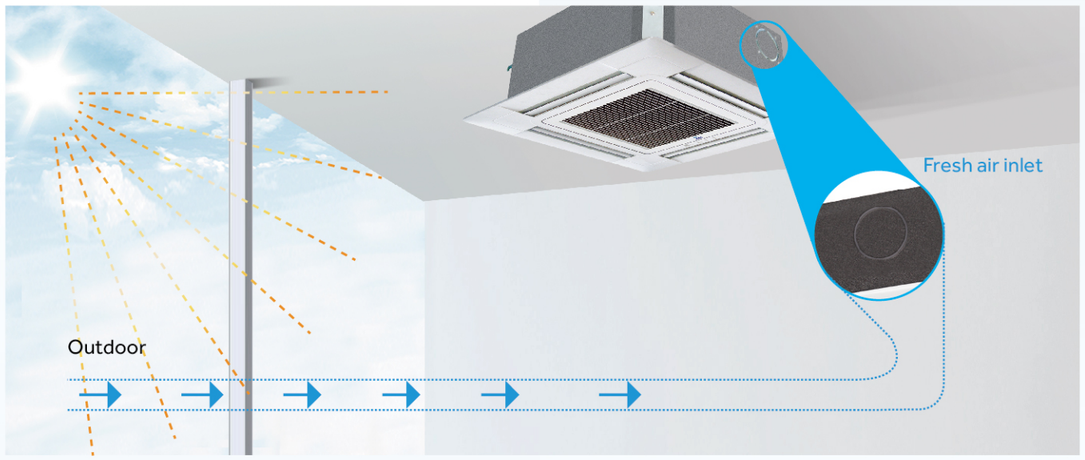
* 1 outdoor above 50m,outdoor below 40m.
* All the specifications are tested under nominal condition(In cooling, Indoor temp is 27°C DB/19°C WB; Outdoor temp 35°C DB/24°C WB; In heating, Indoor temp is 20°C DB, Outdoor temp is 7°C DB/6°C WB).
* The specification may change according to the further product developement.

IMVF
Inverter Multi Variable Flow

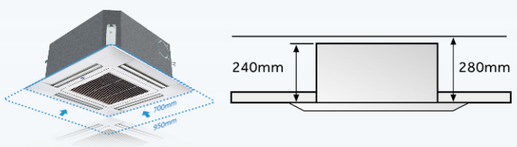
Indoor Units

4-way cassette compact

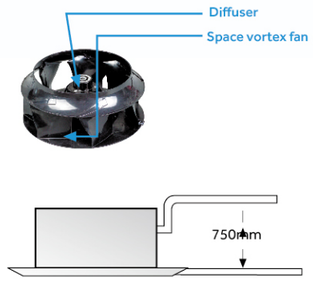
•Fresh Air Inlet Except For 5.6/7.1/8. 0 kW



•Compact Design, Only 240mm Height, (For 5.6/7.1/8.0kW)
700 X 700mm Panel (For 2.8/3.6/4.5kW)

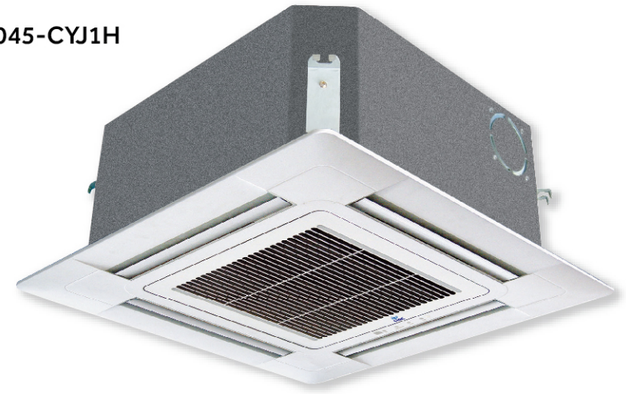


•Quiet Operation, Diffuser and Space Vortex Fan Design, More Lower Noise



•Built in High Head Drain Pump

CK43BV028-CYJ1H **CK43BV045-CYJ1H**
CK43BV036-CYJ1H

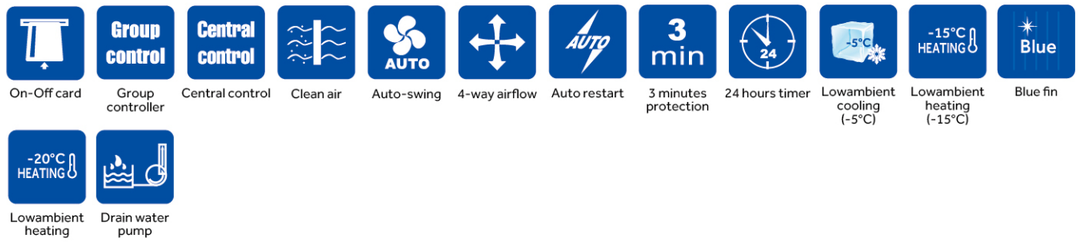



YR-E17A(S)


YR-E16B(O)


YR-HRS01(O)

STANDARD FUNCTION



Model/Indoor unit			CK43BV028-CYJ1H	CK43BV036-CYJ1H	CK43BV045-CYJ1H
Capacity	Cooling	kBtu/h	9.5	12.3	15.3
		kW	2.8	3.6	4.5
	Heating	Btu/h	10.9	13.6	17.1
		kW	3.2	4	5
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/220-230/50/60
Performance	Air flow (H)	m^3/h	700	700	700
	Sound pressure level(H/M/L)	dB(A)	32/30/29	32/30/29	33/30/29
	Sound power level(H/M/L)	dB(A)	46/44/43	46/44/43	47/44/43
Installation	External dimensions(W/D/H)	mm	570/570/260	570/570/260	570/570/260
	Shipping dimensions(W/D/H)	mm	718/680/380	718/680/380	718/680/380
	Net/Shipping weight	kg	17/21	19/23	19/23
	Refrigerant liquid pipe	mm	6.35	6.35	6.35
	Refrigerant gas pipe	mm	9.52	12.7	12.7
Panel	Model name		PB-700IB	PB-700IB	PB-700IB
	External dimensions(W/D/H)	mm	700/700/60	700/700/60	700/700/60
	Shipping dimensions(W/D/H)	mm	740/740/115	740/740/115	740/740/115
	Net/Shipping weight	kg	2.8/4.5	2.8/4.5	2.8/4.5
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
		/	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

- CK43CV056-4YJ1H
- CK43CV071-4YJ1H
- CK43CV080-4YJ1H

YR-E17A(S)

YR-E16B(O)

YR-HRS01(O)

STANDARD FUNCTION

On-Off card | Group controller | Central control | Clean air | Auto-swing | 4-way airflow | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin | Lowambient heating | Drain water pump

Model/Indoor unit			CK43CV056-4YJ1H	CK43CV071-4YJ1H	CK43CV080-4YJ1H
Capacity	Cooling	kBtu/h	19.1	24.2	27.3
		kW	5.6	7.1	8
	Heating	Btu/h	21.5	27.3	30.7
		kW	6.3	8	9
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m³/h	1000/810/620	1380/1190/1000	1380/1190/1000
	Sound pressure level(H/M/L)	dB(A)	33/30/29	35/34/31	37/35/31
	Sound power level(H/M/L)	dB(A)	47/44/43	49/48/45	51/49/45
Installation	External dimensions(W/D/H)	mm	840/840/180	840/840/204	840/840/204
	Shipping dimensions(W/D/H)	mm	983/983/268	983/983/290	983/983/290
	Net/Shipping weight	kg	25/28	25/28	25/28
	Refrigerant liquid pipe	mm	6.35	9.52	9.52
	Refrigerant gas pipe	mm	12.7	15.88	15.88
Panel	Model name		PB-950JB	PB-950JB	PB-950JB
	External dimensions(W/D/H)	mm	950/950/60	950/950/60	950/950/60
	Shipping dimensions(W/D/H)	mm	992/992/115	992/992/115	992/992/115
	Net/Shipping weight	kg	6/7.5	6/7.5	6/7.5
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
		/	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

4-way cassette

- CK43CV090-4YJ1H
- CK43CV112-4YJ1H
- CK43CV140-4YJ1H

YR-E17A(S)

YR-E16B(O)

YR-HRS01(O)

STANDARD FUNCTION

On-Off card | Group controller | Central control | Clean air | Auto-swing | 4-way airflow | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin | Lowambient heating | Drain water pump

Model/Indoor unit			CK43CV090-4YJ1H	CK43CV112-4YJ1H	CK43CV140-4YJ1H
Capacity	Cooling	kBtu/h	30.7	38.2	47.8
		kW	9	11.2	14
	Heating	Btu/h	34.1	42.7	54.6
		kW	10	12.5	16
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m³/h	2050/1860/1670	2050/1860/1670	2100/1910/1720
	Sound pressure level(H/M/L)	dB(A)	37/35/31	37/35/31	44/40/36
	Sound power level(H/M/L)	dB(A)	51/49/45	51/49/45	58/54/50
Installation	External dimensions(W/D/H)	mm	840/840/246	840/840/246	840/840/288
	Shipping dimensions(W/D/H)	mm	983/983/331	983/983/331	983/983/373
	Net/Shipping weight	kg	25/28	25/28	25/28
	Refrigerant liquid pipe	mm	9.52	9.52	9.52
	Refrigerant gas pipe	mm	15.88	15.88	15.88
Panel	Model name		PB-950JB	PB-950JB	PB-950JB
	External dimensions(W/D/H)	mm	950/950/60	950/950/60	950/950/60
	Shipping dimensions(W/D/H)	mm	992/992/115	992/992/115	992/992/115
	Net/Shipping weight	kg	6/7.5	6/7.5	6/7.5
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
		/	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

Round-way Cassette

- CK43BV022-6YJ1H
- CK43BV028-6YJ1H
- CK43BV036-6YJ1H
- CK43BV045-6YJ1H
- CK43BV056-6YJ1H

YR-E17A(S)

YR-E16B(O)

YR-HRS01(O)

- CK43BV071-6YJ1H
- CK43BV090-6YJ1H
- CK43BV112-6YJ1H
- CK43BV126-6YJ1H
- CK43BV140-6YJ1H

YR-E17A(S)

YR-E16B(O)

YR-HRS01(O)

•Unique round-way air outlet, no blind spot
•Innovative 4 independent air flow control
•6 adjustable louver positions, 1296 air flow combinations

Model/indoor unit			CK43BV022-6YJ1H	CK43BV028-6YJ1H	CK43BV036-6YJ1H	CK43BV045-6YJ1H	CK43BV056-6YJ1H
Capacity	Cooling	kBtu/h	7.5	9.5	12.3	15.3	19.1
		kW	2.2	2.8	3.6	4.5	5.6
	Heating	kBtu/h	8.5	10.9	13.6	17.1	21.5
		kW	2.5	3.2	4	5	6.3
Electrical parameters	Power supply	V-Ph-Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H/M/L)	m³/h	1000/810/620	1000/810/620	1000/810/620	1000/810/620	1000/810/620
	Sound pressure level (H/M/L)	dB(A)	30/27/25	30/27/25	30/27/25	32/29/27	33/30/29
Installation	Dimension (W/H/D)	mm	840/840/183	840/840/183	840/840/183	840/840/183	840/840/183
	Packing (W/H/D)	mm	983/983/268	983/983/268	983/983/268	983/983/268	983/983/268
	Net weight	kg	25	25	25	25	25
	Gross weight	kg	28	28	28	28	28
	Refrigerant Liquid pipe	mm	6.35	6.35	6.35	6.35	6.35
	Refrigerant Gas pipe	mm	9.52	9.52	12.7	12.7	12.7
Panel	Model name		PB-950KB	PB-950KB	PB-950KB	PB-950KB	PB-950KB
	External Dimension(W/D/H)	mm	950/950/50	950/950/50	950/950/50	950/950/50	950/950/50
	Shipping Dimension(W/D/H)	mm	1013/1025/123	1013/1025/123	1013/1025/123	1013/1025/123	1013/1025/123
	Net weight	kg	6.5	6.5	6.5	6.5	6.5
	Gross weight	kg	9	9	9	9	9
Controller	Wired (O-Optional/S-Standard)		YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
			YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
	Infrared(O-Optional/S-Standard)		YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

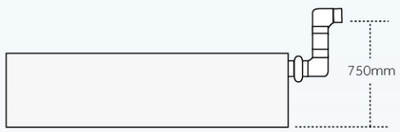
•Unique round-way air outlet, no blind spot
•Innovative 4 independent air flow control
•6 adjustable louver positions, 1296 air flow combinations

Model/indoor unit			CK43BV071-6YJ1H	CK43BV090-6YJ1H	CK43BV112-6YJ1H	CK43BV126-6YJ1H	CK43BV140-6YJ1H
Capacity	Cooling	kBtu/h	24.2	30.7	38.2	47.7	54.6
		kW	7.1	9	11.2	14	16
	Heating	kBtu/h	27.3	34.1	42.6	54.6	61.2
		kW	8	10	12.5	16	18
Electrical parameters	Power supply	V-Ph-Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H/M/L)	m³/h	1380/1190/1000	2050/1860/1670	2050/1860/1670	2100/1910/1720	2100/1910/1720
	Sound pressure level (H/M/L)	dB(A)	35/34/31	37/35/31	37/35/31	44/40/36	44/40/36
Installation	Dimension (W/H/D)	mm	840/840/204	840/840/246	840/840/246	840/840/288	840/840/288
	Packing (W/H/D)	mm	983/983/290	983/983/331	983/983/331	983/983/373	983/983/373
	Net weight	kg	27	31	31	33	33
	Gross weight	kg	30	36	36	38	38
	Refrigerant Liquid pipe	mm	9.52	9.52	9.52	9.52	9.52
	Refrigerant Gas pipe	mm	15.88	15.88	15.88	15.88	15.88
Panel	Model name		PB-950KB	PB-950KB	PB-950KB	PB-950KB	PB-950KB
	External Dimension(W/D/H)	mm	950/950/50	950/950/50	950/950/50	950/950/50	950/950/50
	Shipping Dimension(W/D/H)	mm	1013/1025/123	1013/1025/123	1013/1025/123	1013/1025/123	1013/1025/123
	Net weight	kg	6.5	6.5	6.5	6.5	6.5
	Gross weight	kg	9	9	9	9	9
Controller	Wired (O-Optional/S-Standard)		YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
			YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
	Infrared(O-Optional/S-Standard)		YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

2-way cassette

•Compact Design: Only 220mm Height

•Built in High Head Drain Pump



•Ceiling Antifouling Design Unique Antifouling Design

•Two Way Air Flow

•Quiet Operation

•5 Models Ranging From 2.2kW to 5.6kW

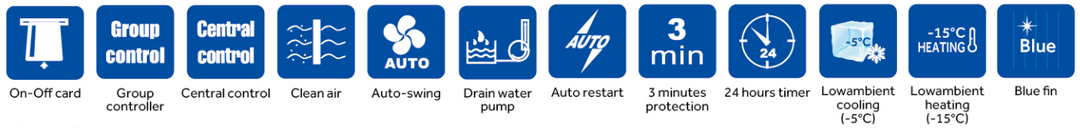
CK43BV022-2YJ1H CK43BV036-2YJ1H CK43BV056-2YJ1H
CK43BV028-2YJ1H CK43BV045-2YJ1H

YR-E17A(S)

YR-E16B(O)

YR-HRS01(O)

STANDARD FUNCTION



On-Off card | Group controller | Central control | Clean air | Auto-swing | Drain water pump | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin

Lowambient heating

Model/Indoor unit			CK43BV022-2YJ1H	CK43BV028-2YJ1H	CK43BV036-2YJ1H	CK43BV045-2YJ1H	CK43BV056-2YJ1H
Capacity	Cooling	kBtu/h	7.5	9.6	12.3	15.4	19.1
		kW	2.2	2.8	3.6	4.5	5.6
	Heating	Btu/h	8.5	10.9	13.7	17.1	21.5
		kW	2.5	3.2	4	5	6.3
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m^3/h	840	840	840	840	840
	Sound pressure level(H/M/L)	dB(A)	42/37/33	42/37/33	42/37/33	44/39/34	44/39/34
	Sound power level(H/M/L)	dB(A)	55/50/46	55/50/46	55/50/46	57/52/47	57/52/47
Installation	External dimensions(W/D/H)	mm	817/620/220	817/620/220	817/620/220	817/620/220	817/620/220
	Shipping dimensions(W/D/H)	mm	1022/682/274	1022/682/274	1022/682/274	1022/682/247	1022/682/274
	Net/Shipping weight	kg	21/23	21/23	21/23	21/23	21/23
	Refrigerant liquid pipe	mm	6.35	6.35	6.35	6.35	6.35
	Refrigerant gas pipe	mm	9.52	9.52	12.7	12.7	12.7
Panel	Model name		P2B-1055IB	P2B-1055IB	P2B-1055IB	P2B-1055IB	P2B-1055IB
	External dimensions(W/D/H)	mm	1055/680/68	1055/680/68	1055/680/68	1055/680/68	1055/680/68
	Shipping dimensions(W/D/H)	mm	1097/707/136	1097/707/136	1097/707/136	1097/707/136	1097/707/136
	Net/Shipping weight	kg	7/8	7/8	7/8	7/8	7/8
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
		/	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

1-way cassette

•Ultra Thin Design 185mm

•Ultra low sound level 29 dB(A)

•Built-in high head drain pump

•4 Models Ranging From 1.5kW to 3.6kW

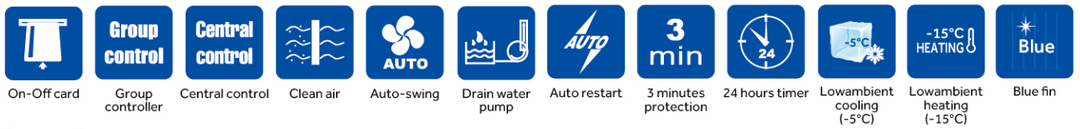
CK43BV016-1YJ1H CK43BV022-1YJ1H
CK43BV028-1YJ1H CK43BV036-1YJ1H

YR-E17A(S)

YR-E16B(O)

YR-HRS01(O)

STANDARD FUNCTION



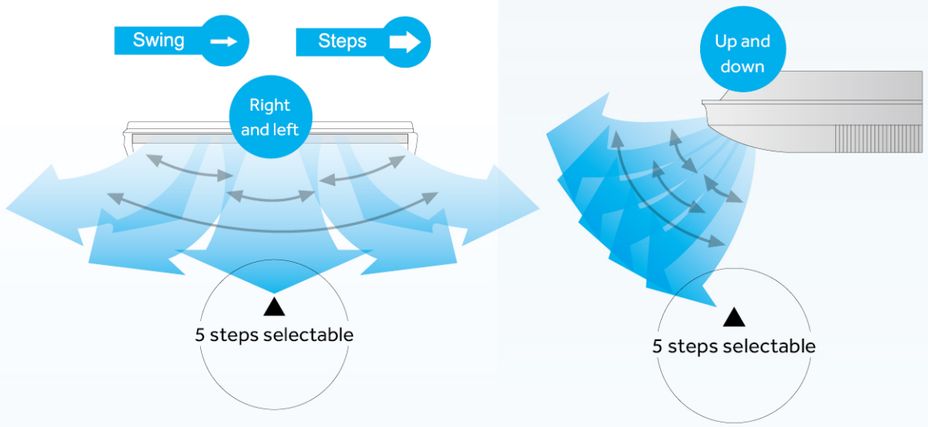
On-Off card | Group controller | Central control | Clean air | Auto-swing | Drain water pump | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin

Lowambient heating

Model/Indoor unit			CK43BV016-1YJ1H	CK43BV022-1YJ1H	CK43BV028-1YJ1H	CK43BV036-1YJ1H
Capacity	Cooling	kBtu/h	5.1	7.5	9.6	12.3
		kW	1.5	2.2	2.8	3.6
	Heating	kBtu/h	5.8	8.5	10.9	13.6
		kW	1.7	2.5	3.2	4
Electrical Parameters	Power supply	Ph/V/Hz	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60
Performance	Air flow (H)	m^3/h	280/300/330	340/370/400	410/440470	480/510/540
	Sound pressure level(H/M/L)	dB(A)	36/30/23	37/30/24	37/31/24	38/32/25
	Sound power level(H/M/L)	dB(A)	54/48/41	55/48/42	55/49/42	56/50/43
Installation	External dimensions(W/D/H)	mm	875/505/185	875/505/185	875/505/185	875/505/185
	Net/Shipping weight	kg	23/27	23/27	23/27	23/27
	Refrigerant liquid pipe	mm	6.35	6.35	6.35	6.35
	Refrigerant gas pipe	mm	9.52	9.52	9.52	12.7
Panel	External dimensions(W/D/H)	mm	1050/550/125	1050/550/125	1050/550/125	1050/550/125
	Net/Shipping weight	kg	4/6	4/6	4/6	4/6
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16(O)
		/	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

Ceiling / Floor

- **Wide Range Angle Air Flow**



- **Compact Design, Ultra Thin Unit Body 199mm (Less than 24k BTU model)**
- **Quiet Operation**
- **Active Carbon and ESF Filter Optional**
- **9 Models Ranging From 2.8kW to 14kW**

CF43CV028-MYJ1H CF43CV036-MYJ1H CF43CV045-MYJ1H
CF43CV056-MYJ1H CF43CV071-MYJ1H


YR-E17A(S)


HW-BA116ABK(O)


YR-E16B(O)


YR-HRS01(O)

STANDARD FUNCTION

On-Off card | Group controller | Central control | Clean air | Auto-swing | Left&Right airflow | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin

Lowambient heating

Model/Indoor unit			CF43CV028-MYJ1H	CF43CV036-MYJ1H	CF43CV045-MYJ1H	CF43CV056-MYJ1H	CF43CV071-MYJ1H
Capacity	Cooling	kBtu/h	9.5	12.3	15.4	19.1	24.2
		kW	2.8	3.6	4.5	5.6	7.1
	Heating	Btu/h	10.9	13.6	17.1	21.5	27.3
		kW	3.2	4.0	5	6.3	8
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m³/h	820/750/690	820/750/690	950/820/690	950/820/690	1420/1270/1240
	Sound pressure level(H/M/L)	dB(A)	38/36/34	38/36/34	42/38/35	42/38/35	46/44/41
	Sound power level(H/M/L)	dB(A)	52/50/47	52/50/47	55/51/48	55/51/48	60/58/54
Installation	External dimensions(W/D/H)	mm	1000/230/680	1000/230/680	1000/230/680	1000/230/680	1325/230/680
	Shipping dimensions(W/D/H)	mm	1100/305/779	1100/305/779	1100/305/779	1100/305/779	1425/305/779
	Net/Shipping weight	kg	27.9/33.6	27.9/33.6	27.9/33.6	27.9/33.6	35.8/42.1
	Refrigerant liquid pipe	mm	6.35	6.35	6.35	6.35	9.52
	Refrigerant gas pipe	mm	9.52	12.7	12.7	12.7	15.88
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B	YR-E16B	YR-E16B	YR-E16B	YR-E16B
		/	HW-BA116ABK	HW-BA116ABK	HW-BA116ABK	HW-BA116ABK	HW-BA116ABK
		/	YR-E17A	YR-E17A	YR-E17A	YR-E17A	YR-E17A
	Infrared(O-Optional/S-Standard)	/	YR-HRS01	YR-HRS01	YR-HRS01	YR-HRS01	YR-HRS01

Ceiling / Floor

- CF43CV080-MYJ1H
- CF43CV090-MYJ1H

YR-E17A(S)

HW-BA116ABK(O)

YR-E16B(O)

YR-HRS01(O)

STANDARD FUNCTION

Model/Indoor unit			CF43CV080-MYJ1H	CF43CV090-MYJ1H
Capacity	Cooling	kBtu/h	27.3	30.7
		kW	8	9
	Heating	Btu/h	30.7	34.1
		kW	9	10
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m³/h	1570/1420/1240	1570/1420/1240
	Sound pressure level(H/M/L)	dB(A)	47/44/41	47/44/41
	Sound power level(H/M/L)	dB(A)	61/58/54	61/58/55
Installation	External dimensions(W/D/H)	mm	1325/230/680	1325/230/680
	Shipping dimensions(W/D/H)	mm	1425/305/779	1425/305/779
	Net/Shipping weight	kg	35.8/42.1	35.8/42.1
	Refrigerant liquid pipe	mm	9.52	9.52
	Refrigerant gas pipe	mm	15.88	15.88
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B	YR-E16B
		/	HW-BA116ABK	HW-BA116ABK
		/	YR-E17A	YR-E17A
	Infrared(O-Optional/S-Standard)		YR-HRS01	YR-HRS01

- CF43CV112-MYJ1H
- CF43CV140-MYJ1H

YR-E17A(S)

HW-BA116ABK(O)

YR-E16B(O)

YR-HRS01(O)

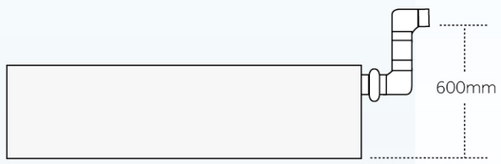
STANDARD FUNCTION

Model/Indoor unit			CF43CV112-MYJ1H	CF43CV140-MYJ1H
Capacity	Cooling	kBtu/h	38.2	48.0
		kW	11.2	14.0
	Heating	Btu/h	42.6	55.0
		kW	12.5	16.0
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m³/h	2110/1990/1750	2110/1990/1750
	Sound pressure leve(H/M/L)	dB(A)	50/46/43	50/46/43
	Sound power level(H/M/L)	dB(A)	63/60/57	63/60/57
Installation	External dimensions(W/D/H)	mm	1650/230/680	1650/230/680
	Shipping dimensions(W/D/H)	mm	1750/305/779	1750/305/779
	Net/Shipping weight	kg	43.5/50.5	43.5/50.5
	Refrigerant liquid pipe	mm	9.52	9.52
	Refrigerant gas pipe	mm	15.88	15.88
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B	YR-E16B
		/	HW-BA116ABK	HW-BA116ABK
		/	YR-E17A	YR-E17A
	Infrared(O-Optional/S-Standard)		YR-HRS01	YR-HRS01

Slim duct(0/30Pa)

- 185mm Height Ultra Thin Design and 420mm Depth

- Built in Drain Pump



- Ultra Low Noise: Realize 21 dB(A) Operation Noise
- Rear Air Return
- Static Pressure 0/30Pa
- 6 Models Ranging From 2.2kW to 7.1kW

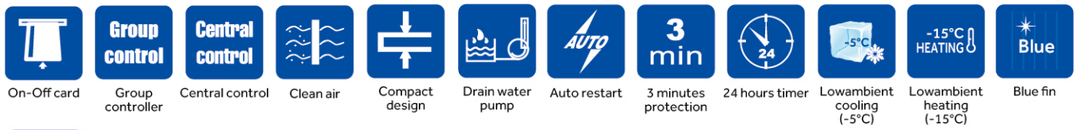
CC43BV022LLYJ1H **CC43BV036LLYJ1H**
CC43BV028LLYJ1H **CC43BV045LLYJ1H**


YR-E17A(S)


YR-E16B(O)


YR-HRS01(O)

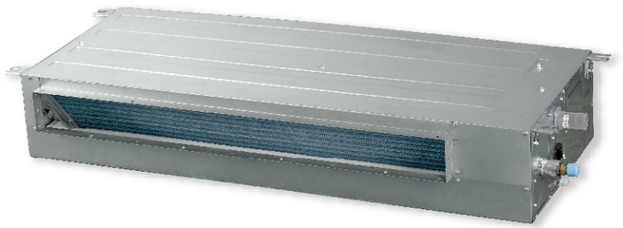
STANDARD FUNCTION



Model/Indoor unit			CC43BV022LLYJ1H	CC43BV028LLYJ1H	CC43BV036LLYJ1H	CC43BV045LLYJ1H
Capacity	Cooling	kBtu/h	7.5	9.5	12.3	15.3
		kW	2.2	2.8	3.6	4.5
	Heating	Btu/h	8.5	10.9	13.6	17.1
		kW	2.5	3.2	4	5
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m^3/h	480	480	550	600
	Sound pressure level(H/M/L)	dB(A)	27/24/21	27/24/21	30/28/25	33/30/27
	Sound power level(H/M/L)	dB(A)	41/38/35	41/38/35	44/42/39	47/44/41
Installation	External dimensions(W/D/H)	mm	850/420/185	850/420/185	850/420/185	850/420/185
	Shipping dimensions(W/D/H)	mm	1045/540/270	1045/540/270	1045/540/270	1045/540/270
	Net/Shipping weight	kg	16.5/21.5	16.5/21.5	17.5/22.5	18.5/23.5
	Refrigerant liquid pipe	mm	6.35	6.35	6.35	6.35
	Refrigerant gas pipe	mm	9.52	9.52	12.7	12.7
	Static pressure	Pa	0/30	0/30	0/30	0/30
Drain pump	S-standard		S	S	S	S
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
		/	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

Slim duct(0/30Pa)

CC43BV056LLYJ1H



YR-E17A(S)

YR-E16B(O)

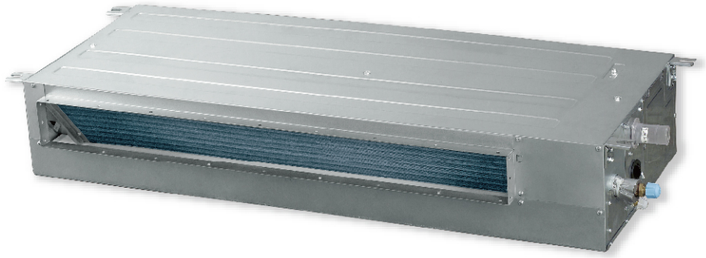
YR-HRS01(O)

STANDARD FUNCTION

On-Off card | Group controller | Central control | Clean air | Compact design | Drain water pump | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin | Lowambient heating

Model/Indoor unit			CC43BV056LLYJ1H
Capacity	Cooling	kBtu/h	19.1
		kW	5.6
	Heating	Btu/h	21.5
		kW	6.3
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60
Performance	Air flow (H)	m³/h	800
	Sound pressure level(H/M/L)	dB(A)	33/30/28
	Sound power level(H/M/L)	dB(A)	47/44/42
Installation	External dimensions(W/D/H)	mm	1170/420/185
	Shipping dimensions(W/D/H)	mm	1365/540/270
	Net/Shipping weight	kg	22.2/28.2
	Refrigerant liquid pipe	mm	6.35
	Refrigerant gas pipe	mm	12.7
	Static Pressure	Pa	0/30
Drain Pump	S-standard		S
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B(O)
		/	YR-E17A(S)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)

CC43BV071LLYJ1H



YR-E17A(S)

YR-E16B(O)

YR-HRS01(O)

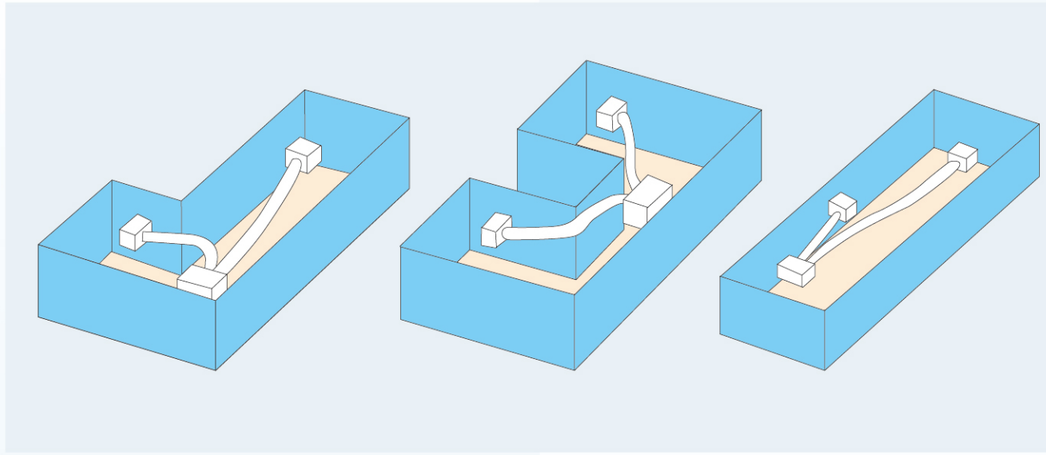
STANDARD FUNCTION

On-Off card | Group controller | Central control | Clean air | Compact design | Drain water pump | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin | Lowambient heating

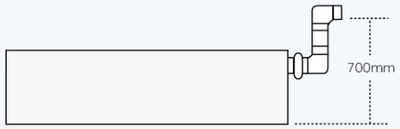
Model/Indoor unit			CC43BV071LLYJ1H
Capacity	Cooling	kBtu/h	24.2
		kW	7.1
	Heating	Btu/h	27.3
		kW	8
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60
Performance	Air flow (H)	m³/h	930
	Sound pressure level(H/M/L)	dB(A)	36/33/31
	Sound power level(H/M/L)	dB(A)	50/47/44
Installation	External dimensions(W/D/H)	mm	1170/420/185
	Shipping dimensions(W/D/H)	mm	1365/540/270
	Net/Shipping weight	kg	24/30
	Refrigerant liquid pipe	mm	9.52
	Refrigerant gas pipe	mm	15.88
	Static Pressure	Pa	0/30
Drain Pump	S-standard		S
Controller	Wired (O-Optional/S-Standard)	/	YR-E16B(O)
		/	YR-E17A(S)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)

Medium ESP duct(50/100Pa)

- **Flexible Duct Connection**



- **Built in Drain Pump**



- **Static Pressure 50/100Pa**

- **6 Models Ranging From 5.6kW to 14kW**

CC43CV056MHYJ1H **CC43CV071MHYJ1H** **CC43DV112MHYJ1H**
CC43CV080MHYJ1H **CC43DV090MHYJ1H** **CC43DV140MHYJ1H**

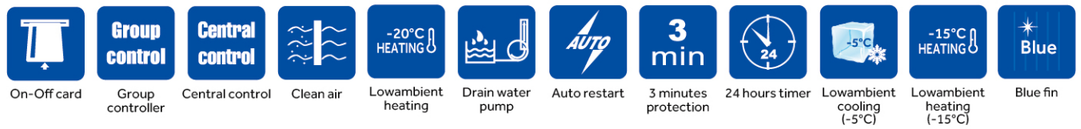

YR-E17A(S)


HW-BA116ABK(O)


YR-E16B(O)


YR-HRS01(O)

STANDARD FUNCTION

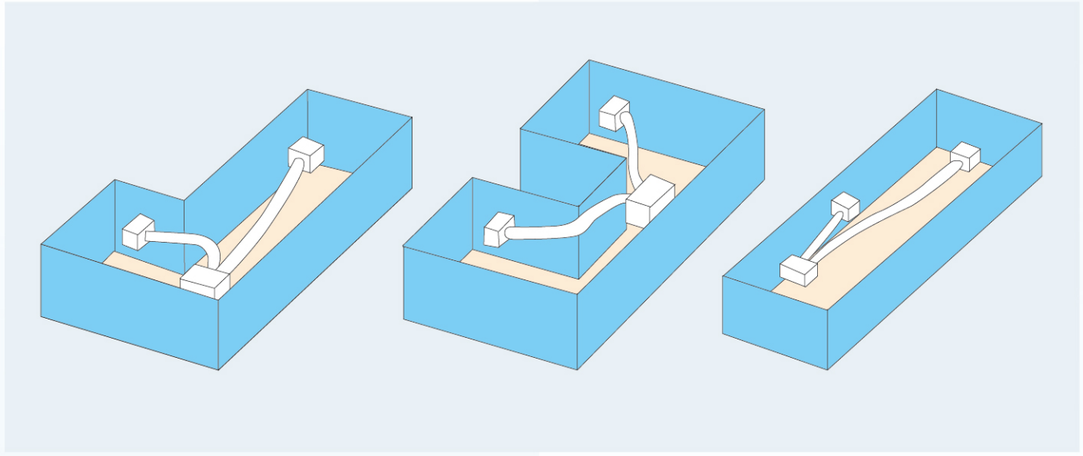


On-Off card | Group controller | Central control | Clean air | Lowambient heating | Drain water pump | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C) | Blue fin

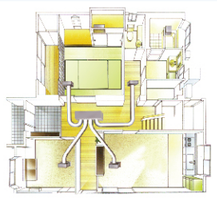
Model/Indoor unit			CC43CV056MHYJ1H	CC43CV071MHYJ1H	CC43CV080MHYJ1H	CC43DV090MHYJ1H	CC43DV112MHYJ1H	CC43DV140MHYJ1H
Capacity	Cooling	kBtu/h	19.1	24.2	27.3	30.7	38.2	47.8
		kW	5.6	7.1	8	9	11.2	14
	Heating	Btu/h	21.5	27.3	30.7	34.1	44.4	55.6
		kW	6.3	8	9	10	13	16.3
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/220-230/50/60	1/220-230/50/60	1/220-230/50/60
Performance	Air flow (H)	m³/h	980/840/760	1174/1080/960	1174/1080/960	1500/1180/930	1700/1300/900	2000/1700/1250
	Sound pressure level(H/M/L)	dB(A)	36/34/32	40/37/34	42/38/34	42/38/34	42/39/35	43/40/35
	Sound power level(H/M/L)	dB(A)	40/38/36	44/41/38	46/42/38	46/42/38	46/43/39	47/44/39
Installation	External dimensions(W/D/H)	mm	1100/700/248	1100/700/248	1100/700/248	1100/700/248	1500/700/248	1500/700/248
	Shipping dimensions(W/D/H)	mm	1332/835/280	1332/835/280	1332/835/280	1332/835/280	1698/857/305	1698/857/305
	Net/Shipping weight	kg	36.8/43.4	37/43.6	37/43.6	39.4/45.4	48.3/56.5	51.3/59.5
	Refrigerant liquid pipe	mm	6.35	9.52	9.52	9.52	9.52	9.52
	Refrigerant gas pipe	mm	12.7	15.88	15.88	15.88	15.88	15.88
	Static Pressure(Standard/Max.)	Pa	50/100	50/100	50/100	50/100	50/100	50/100
Drain Pump	O-optional,S-standard,W-without		S	S	S	S	S	S
Controller	Wired (O-Optional/S-Standard)	/	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
		/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
		/	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)
	Infrared(O-Optional/S-Standard)		YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

Medium ESP duct(50/96Pa)

- **Flexible Duct Connection**



- **Optional External Drain Pump**
- **Flexible Duct Connection**



- **Static Pressure 50/96Pa**

CC43CV090MHYJ1H **CC43CV112MHYJ1H**
CC43CV140MHYJ1H

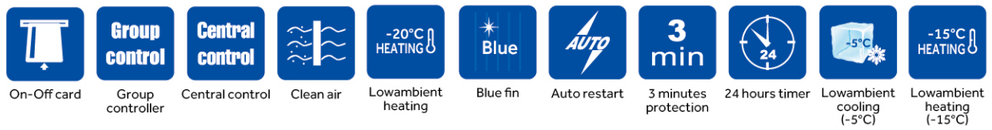

YR-E17A(S)


HW-BA116ABK(O)


YR-E16B(O)


YR-HRS01(O)

STANDARD FUNCTION

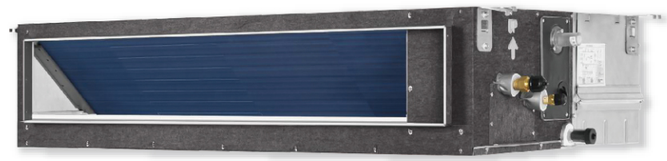


On-Off card | Group controller | Central control | Clean air | Lowambient heating | Blue fin | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C)

Model/Indoor unit			CC43CV090MHYJ1H	CC43CV112MHYJ1H	CC43CV140MHYJ1H
Capacity	Cooling	kBtu/h	30	38	48
		kW	9	11.2	14
	Heating	Btu/h	34	43	55
		kW	10	12.5	16
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m³/h	1500/1400/1200	1500/1400/1200	1500/1400/1200
	Sound pressure level(H/M/L)	dB(A)	49/47/43	49/47/43	49/47/43
	Sound power level(H/M/L)	dB(A)	62/60/56	62/60/56	62/60/56
Installation	External dimensions(W/D/H)	mm	1100/700/248	1100/700/248	1100/700/248
	Shipping dimensions(W/D/H)	mm	1332/835/280	1332/835/280	1332/835/280
	Net/Shipping weight	kg	45/51	45/51	45/51
	Refrigerant liquid pipe	mm	9.52	9.52	9.52
	Refrigerant gas pipe	mm	15.88	15.88	15.88
	Static Pressure(Standard/Max.)	Pa	50/96	50/96	50/96
Controller	Wired (O-Optional/S-Standard)		YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
		/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
		/	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

High ESP duct(20/200Pa)

CC43CV056HHYJ1H CC43CV071HHYJ1H CC43CV080HHYJ1H
CC43CV090HHYJ1H CC43CV112HHYJ1H CC43CV140HHYJ1H




YR-E17A(S)

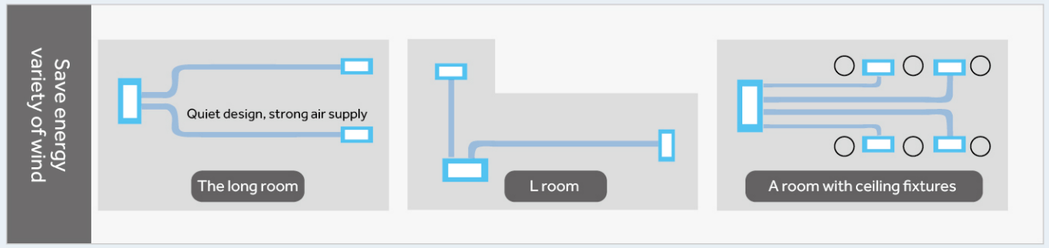

HW-BA116ABK(O)


YR-E16B(O)


YR-HRS01(O)

•High static pressure design, more room to share

The external static pressure can achieve 250Pa, and the air duct can be freely selected. Do an air conditioning, multi-room sharing.

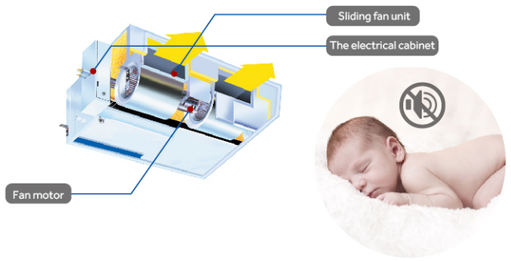


•Silence design

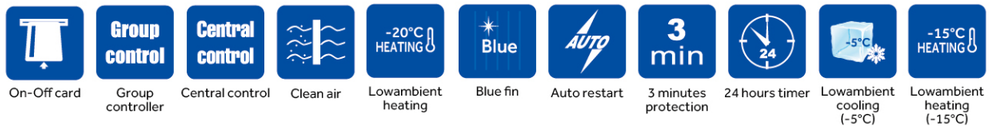
•Adopt international new sound insulation noise reduction materials, pressure off mute wind wheel.

•Prevents indoor pollution and provides maximum wind speed, ensuring air circulation throughout the room.

•5 speed adjustable wind speed to meet different needs.



STANDARD FUNCTION

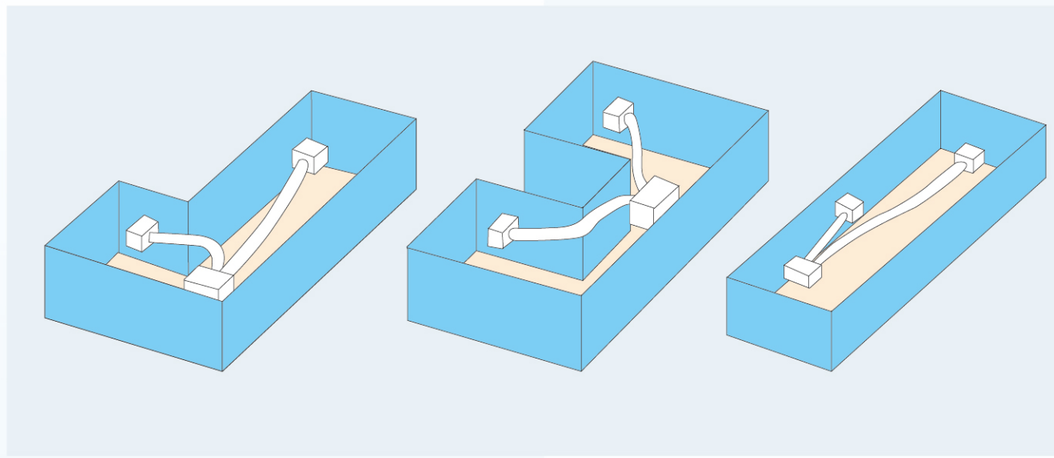


On-Off card | Group controller | Central control | Clean air | Lowambient heating | Blue fin | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C)

Model/Indoor unit			CC43CV056HHYJ1H	CC43CV071HHYJ1H	CC43CV080HHYJ1H	CC43CV090HHYJ1H	CC43CV112HHYJ1H	CC43CV140HHYJ1H
Capacity	Model capacity	HP	2.0	2.5	3.0	3.2	4.0	5.0
	Cooling	kBtu/h	19.1	24.2	27.3	30.7	38.2	47.8
		kW	5.6	7.1	8	9	11.2	14
	Heating	kBtu/h	21.5	27.3	30.7	34.1	44.4	55.6
		kW	6.3	8	9	10	13	16.3
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Dimensions (W/D/H)	Net Product	mm	1100/700/248	1100/700/248	1100/700/248	1100/700/248	1500/700/248	1500/700/248
	Shipping Product	mm	1332/835/280	1332/835/280	1332/835/280	1332/835/280	1698/857/305	1698/857/305
Weight	Product Net/Shipping	kg	36.8/43.4	36.8/43.4	36.8/43.4	39.4/45.4	48.3/56.5	51.3/59.5
Fan	Static Pressure(Standard/Max)	Pa	20/200	20/200	20/200	20/180	20/180	20/180
	Air flow (H/M/L)	m^3/h	915/765/640	1275/1050/875	1275/1050/875	1450/1200/1000	2000/1700/1400	2150/1750/1400
Sound level	Sound pressure level(H/M/L)	dB(A)	33/31/29	34/31/29	35/33/30	36/33/30	38/35/32	40/36/32
	Sound power level(H/M/L)	dB(A)	45/43/41	46/43/41	47/45/42	48/45/42	50/47/44	52/48/44
Piping	Refrigerant liquid pipe	mm	6.35	9.52	9.52	9.52	9.52	9.52
	Refrigerant gas pipe	mm	12.7	15.88	15.88	15.88	15.88	15.88
Drain Pump	O-optional,S-standard,N-not	/	S	S	S	S	S	S
Controller	Wired (O-Optional/S-Standard)	/	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)	YR-E17A(S)
		/	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)	YR-E16B(O)
		/	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)	HW-BA116ABK(O)
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)

High ESP duct(100/300Pa)

•**Flexible Duct Connection**



•**Variable Static Pressure 100/300Pa Setting**

CC43CV224HHYJ1H CC43CV280HHYJ1H

YR-E17A(S)

HW-BA116ABK(O)

YR-E16B(O)

YR-HRS01(O)

STANDARD FUNCTION

On-Off card | Group controller | Central control | Clean air | Lowambient heating | Blue fin | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating (-15°C)

Model/Indoor unit			CC43CV224HHYJ1H	CC43CV280HHYJ1H
Capacity	Cooling	kBtu/h	77.1	95.5
		kW	22.6	28
	Heating	Btu/h	86.0	107.5
		kW	25.2	31.5
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m³/h	4000/3500/3000	4500/4000/3600
	Sound pressure level(H/M/L)	dB(A)	49/46/43	51/49/47
	Sound power level(H/M/L)	dB(A)	63/60/57	65/63/61
Installation	External dimensions(W/D/H)	mm	1512/856/502	1512/856/502
	Shipping dimensions(W/D/H)	mm	1558/896/612	1558/896/612
	Net/Shipping weight	kg	102/116	102/116
	Refrigerant liquid pipe	mm	12.7	12.7
	Refrigerant gas pipe	mm	22.22	22.22
	Static Pressure(Standard/Max.)	Pa	100/300	100/300
Controller	Wired (O-Optional/S-Standard)		YR-E16A(O)	YR-E16A(O)
		/	YR-E16B(O)	YR-E16B(O)
		/	HW-BA116ABK(O)	HW-BA116ABK(O)
	Infrared(O-Optional/S-Standard)	/	YR-E17A(S)	YR-E17A(S)

Console

CJ43CV022-MYJ1H CJ43CV028-MYJ1H
CJ43CV036-MYJ1H CJ43CV050-MYJ1H

YR-HRS01(S)

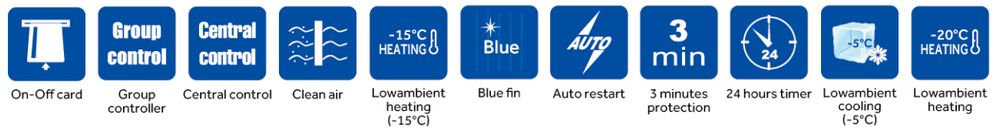
•Air Discharge Through Top ang Bottom

•Compact Design & Small Space Occupation

•Quiet Operation

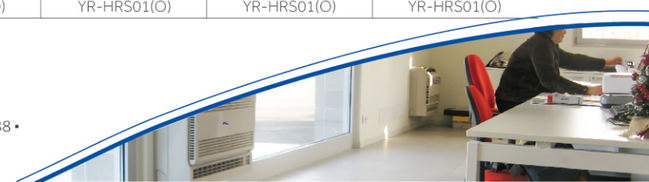
•4 Models Ranging From 2.2kW to 5.0kW

STANDARD FUNCTION



On-Off card | Group controller | Central control | Clean air | Lowambient heating (-15°C) | Blue fin | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating

Model/Indoor unit			CJ43CV022-MYJ1H	CJ43CV028-MYJ1H	CJ43CV036-MYJ1H	CJ43CV050-MYJ1H
Capacity	Cooling	kBtu/h	7.5	9.5	12.3	17
		kW	2.2	2.8	3.6	5
	Heating	kBtu/h	8.5	10.9	13.6	18.5
		kW	2.6	3.2	4	5.5
Power supply	Power supply	Ph-V-Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Indoor air flow (H/M/L)	Indoor air flow (H/M/L)	m^3/h	540/460/390/310/270	540/460/390/310/270	580/500/420/350/270	620/540/460/390/270
	Sound pressure level (H/M/L)	dB(A)	45/42/39/35/32	45/42/39/35/32	47/44/41/38/34	48/45/42/39/35
	Sound power level (H/M/L)	dB(A)	58/55/52/48/45	58/55/52/48/45	60/57/54/51/47	61/58/55/52/48
Dimension (W*H*D)	Dimension (W*H*D)	mm	700/210/600	700/210/600	700/210/600	700/210/600
	Packing (W*H*D)	mm	783/303/695	783/303/695	783/303/695	783/303/695
	Net weight	kg	15.2	15.2	15.2	15.2
	Gross weight	kg	18.7	18.7	18.7	18.7
	Liquid pipe	mm	6.35	6.35	6.35	6.35
	Gas pipe	mm	12.7	12.7	12.7	12.7
Controller	Wired (O-Optional/S-Standard)	/	/	/	/	/
	Infrared(O-Optional/S-Standard)	/	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)	YR-HRS01(O)



Hi wall

CH43DV022-DYJ1H CH43DV028-DYJ1H CH43DV036-DYJ1H CH43CV045-DYJ1H
CH43CV056-DYJ1H CH43CV071-DYJ1H CH43CV090-DYJ1H


YR-E17A(S)


HW-BA116ABK(O)


YR-E16B(O)


YR-HRS01(O)

- Stylish Design & LED Display

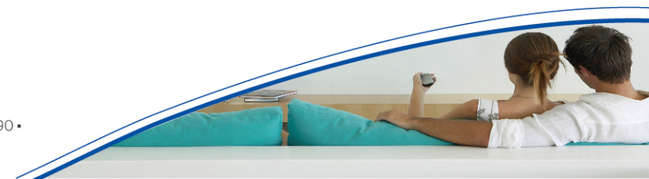
- Built in EEV, Easy to Installation

- Negative Ion, Vitamin C, and ESF Filter Optional
- 6 Models Ranging From 2.2kW to 7.1kW

STANDARD FUNCTION

On-Off card | Auto-swing | Central control | Clean air | Lowambient heating (-15°C) | Blue fin | Auto restart | 3 minutes protection | 24 hours timer | Lowambient cooling (-5°C) | Lowambient heating

Model/Indoor unit			CH43DV022-DYJ1H	CH43DV028-DYJ1H	CH43DV036-DYJ1H	CH43CV045-DYJ1H	CH43CV056-DYJ1H	CH43CV071-DYJ1H	CH43CV090-DYJ1H
Capacity	Cooling	kBtu/h	7.5	9.5	12.3	15.3	19.1	24.2	30.7
		kW	2.2	2.8	3.6	4.5	5.6	7.1	9
	Heating	Btu/h	8.5	10.9	13.6	17.1	21.5	27.3	34.1
		kW	2.5	3.2	4	5	6.3	8	10
Electrical Parameters	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
Performance	Air flow (H)	m³/h	550/480/420	600/530/470	630/560/500	800/720/650	920/800/720	1010/920/800	1600/1500/1400
	Sound pressure level(H/M/L)	dB(A)	35/31/29	36/31/29	37/33/29	39/36/34	40/39/35	44/40/36	49/44/41
	Sound power level(H/M/L)	dB(A)	50/47/42	52/48/44	54/51/50	56/53/51	57/54/52	58/56/54	61/58/54
Installation	External dimensions(W/D/H)	mm	855/208/280	855/208/280	855/208/280	1115/243/336	1115/243/336	1115/243/336	1316/270/365
	Shipping dimensions(W/D/H)	mm	954/279/355	954/279/355	954/279/355	1206/342/418	1206/342/418	1206/342/418	1403/384/463
	Net/Shipping weight	kg	9.9/12	9.9/12	9.9/12	15.8/18.9	15.8/18.9	15.8/18.9	21.8/26.3
	Refrigerant liquid pipe	mm	6.35	6.35	6.35	6.35	6.35	9.52	9.52
	Refrigerant gas pipe	mm	9.52	9.52	12.7	12.7	12.7	15.88	15.88
Controller	Wired	/	YR-E16B	YR-E16B	YR-E16B	YR-E16B	YR-E16B	YR-E16B	YR-E16B
	(O-Optional/S-Standard)	/	HW-BA116ABK	HW-BA116ABK	HW-BA116ABK	HW-BA116ABK	HW-BA116ABK	HW-BA116ABK	HW-BA116ABK
		/	YR-E17A	YR-E17A	YR-E17A	YR-E17A	YR-E17A	YR-E17A	YR-E17A
	Infrared (Standard)	/	YR-HRS01	YR-HRS01	YR-HRS01	YR-HRS01	YR-HRS01	YR-HRS01	YR-HRS01



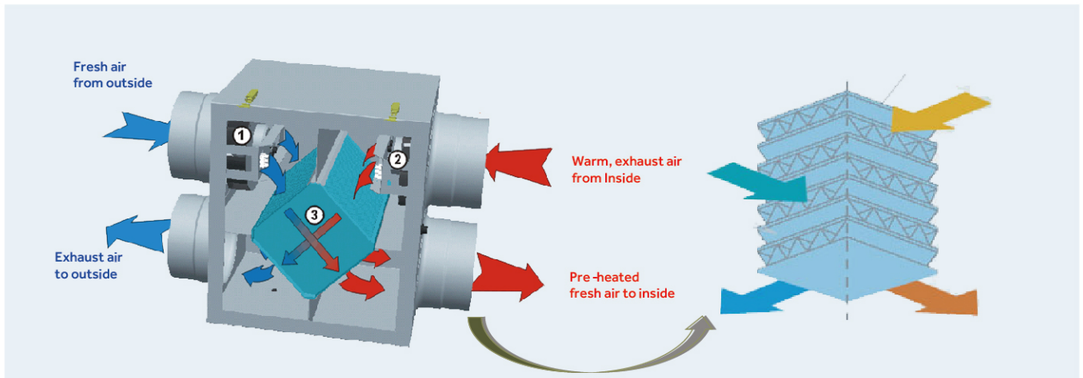
ERV

Energy Reclaim Ventilation

CE43CV015-HYJ1H CE43CV026-HYJ1H
CE43CV080-HYJ1H CE43CV100-HYJ1H

W9301

- **Be Controlled with Other Indoor Units Together**



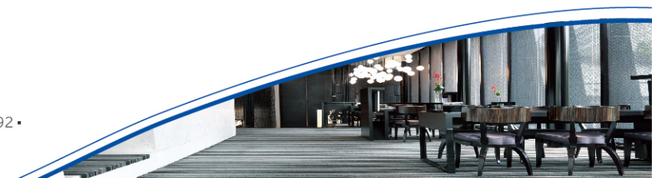
- **Efficient Heat Recovery Air Processing**
- **Heat Recovery Media Element**
- **4 Models Ranging From 150m³/h to 1000m³/h**

STANDARD FUNCTION

Clean air | O₂-refresh | Central control | Auto restart | 3 minutes protection | 24 hours timer

Model/Indoor unit			CE43CV015-HYJ1H	CE43CV026-HYJ1H	CE43CV080-HYJ1H	CE43CV100-HYJ1H
Electrical	Power supply	Ph/V/Hz	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60	1/208-230/50/60
	Rated power input	W	135	165	360	420
	Rated current	A	0.65	0.79	1.72	2.01
Performance	Air flow (H/M/L)	m³/h	150/110/70	250/200/160	800/680/600	1000/810/730
	Sound pressure level (H/M/L)	dB(A)	38/35/30	40/38/35	48/46/43	50/48/45
	Sound power level(H/M/L)	dB(A)	48/45/40	50/48/45	58/58/53	60/58/55
Installation	External dimensions(W/D/H)	mm	750/530/240	750/530/270	1200/940/324	1250/935/350
	Shipping dimensions(W/D/H)	mm	955/575/305	955/575/335	1405/985/389	1455/980/415
	Aire inlet / outlet hole	mm	110	150	200	200
	Net weight/Shipping weight	kg	26/28	30/32	55/59	56/60
	Static Pressure	Pa	80	80	100	100
Controller	Wired (Standard)	/	W9301	W9301	W9301	W9301

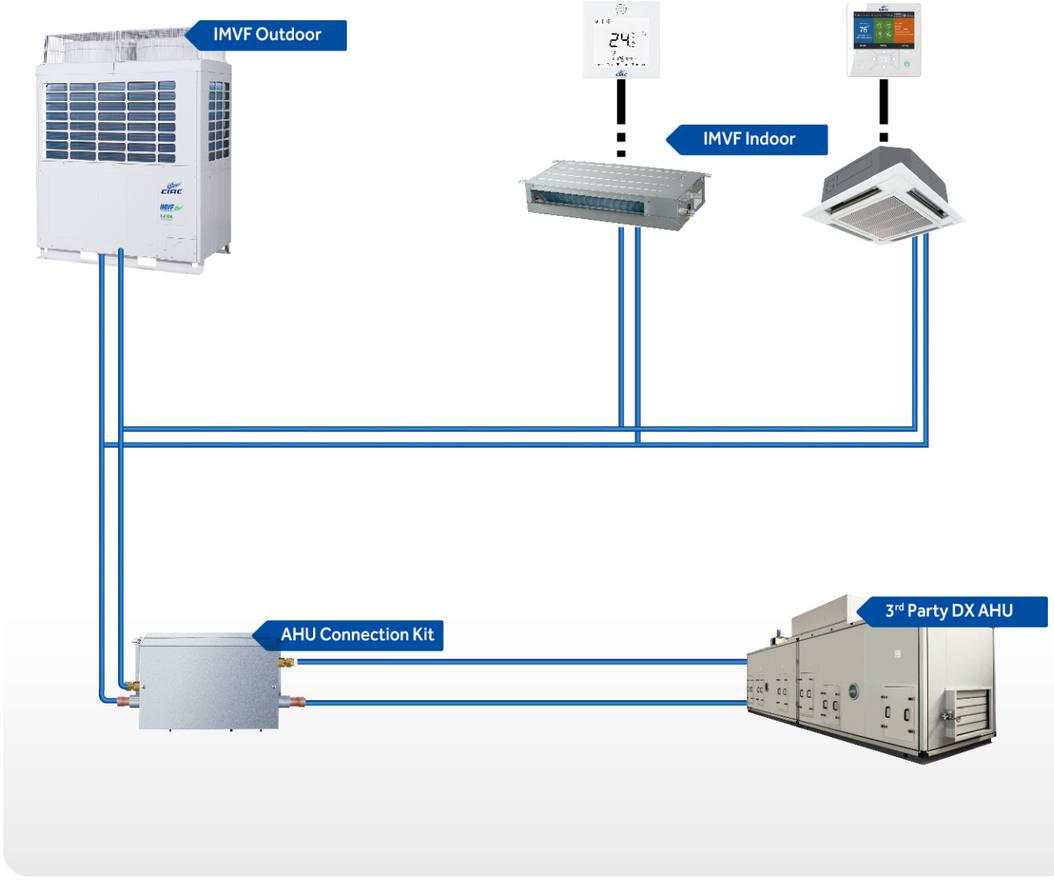
Remark: H/M/L is corresponding to 9/6/3 on controller



AHU Connection Kit

System Introduction

CIAC offers a range of connection kit to connect IMVF outdoor units to third party DX air handling units.



System Application

•Provide a solution for big space to cool down the supply fresh air with IMVF outdoor units to match the air handling units. Intergraded the advantages of IMVF and AHU units
•Meet the requirement of law in EU, that for every working place it have to supply at minimum 25 m3/h fresh air.so it means that every office, every shop and mostly every commercial building MUST have this solution.

High rise building without podium

High rise building with podium

Single layer with a large area

System Line Up

IMVF Outdoor

Valve Box

AH1-280B

5HP(14KW) <Connected AHU capa. ≤10HP(28KW)

AH1-560B

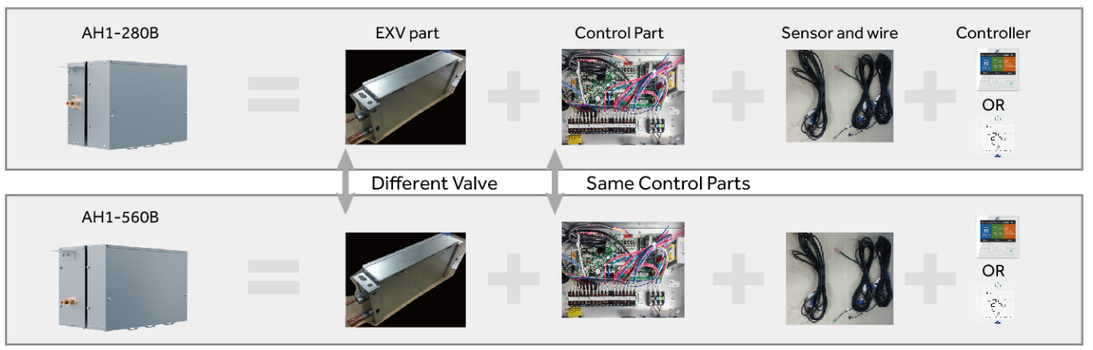
10HP <Connected AHU capa. ≤20HP(56kw)

AHU & IMVF indoor

AHU need purchase in Market

AHU Kit Configuration

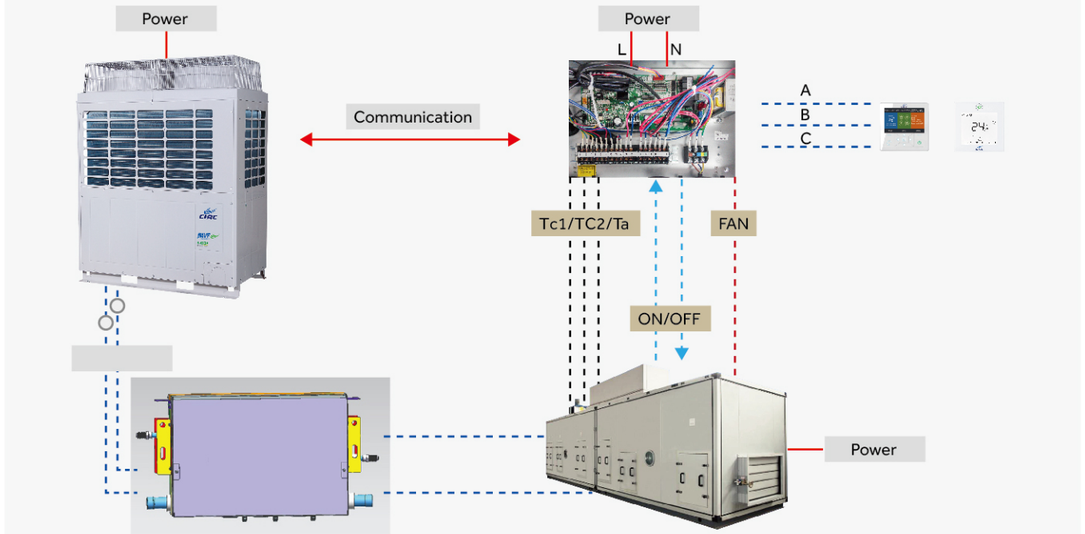
CIAC AHU Connection Kit consists the following 4 parts.



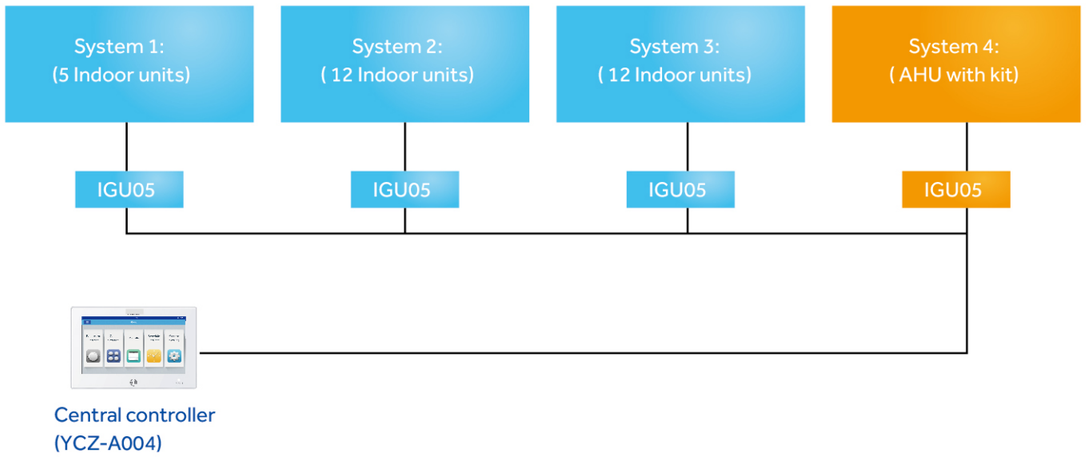
•EXV part, Control part, Sensor and wire are all integrated in one box.
•Controller need to be purchased separately.

AHU Connection Kit Control

System Control



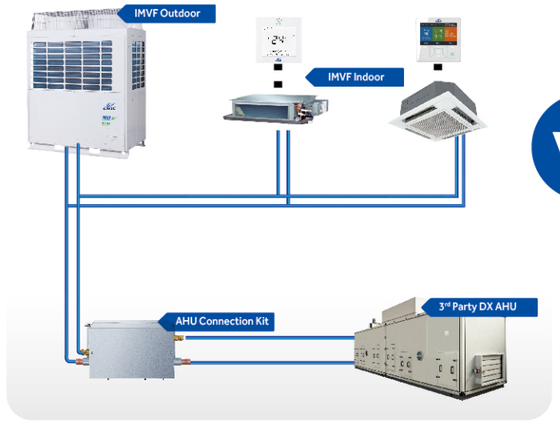
Central Control: AHU control is same as IMVF, models indoor unit control.



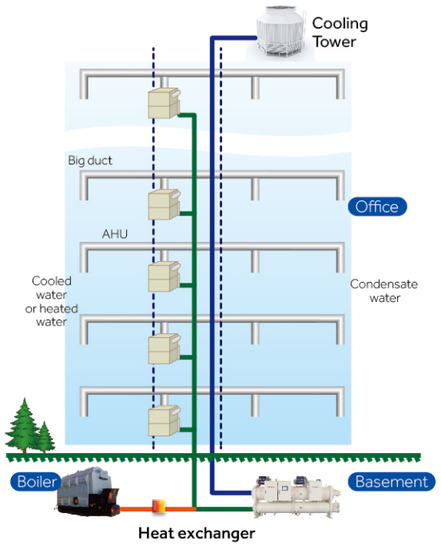
Central controller
(YCZ-A004)

Easy Installation

•Adopting the IMVF outdoor ,not the traditional chiller outdoor system, is easy to design and install since no additional water system such as boilers , gas connections, cooling tower etc. are required. This also reduces the total system cost.
•AHU can provide enough cooled fresh air to big space other than ERV and fresh air indoor units.
•All the control system for IMVF outdoor is available:
-Wired control -Central control -Network control -BMS control



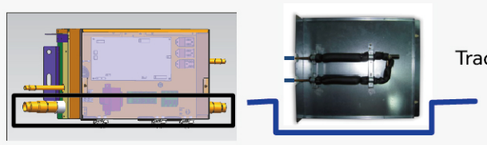
VS



EXV part and Control part integration, easy for translation and installation. Gas pipe is integrated into the valve box.

Gas pipe no need the bend and welding, easy installation.

CIAC

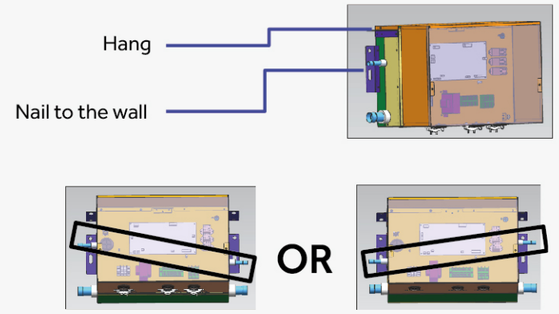


Traditional

Optional installation location

EEV box inlet and outlet pipe can be left or right.

Installation can choose lifting or nailed to the wall.



Advantages

Broad capacity	Connected AHU capacity from 5HP to 20HP.
High Compatible	1.Same PCB board with IMVF indoor, easy operation and service. 2.Same wired controller can be used with IMVF indoor unit such as YR-E14, YR-E16 and YR-E17.
Reliable EEV	 

Specification

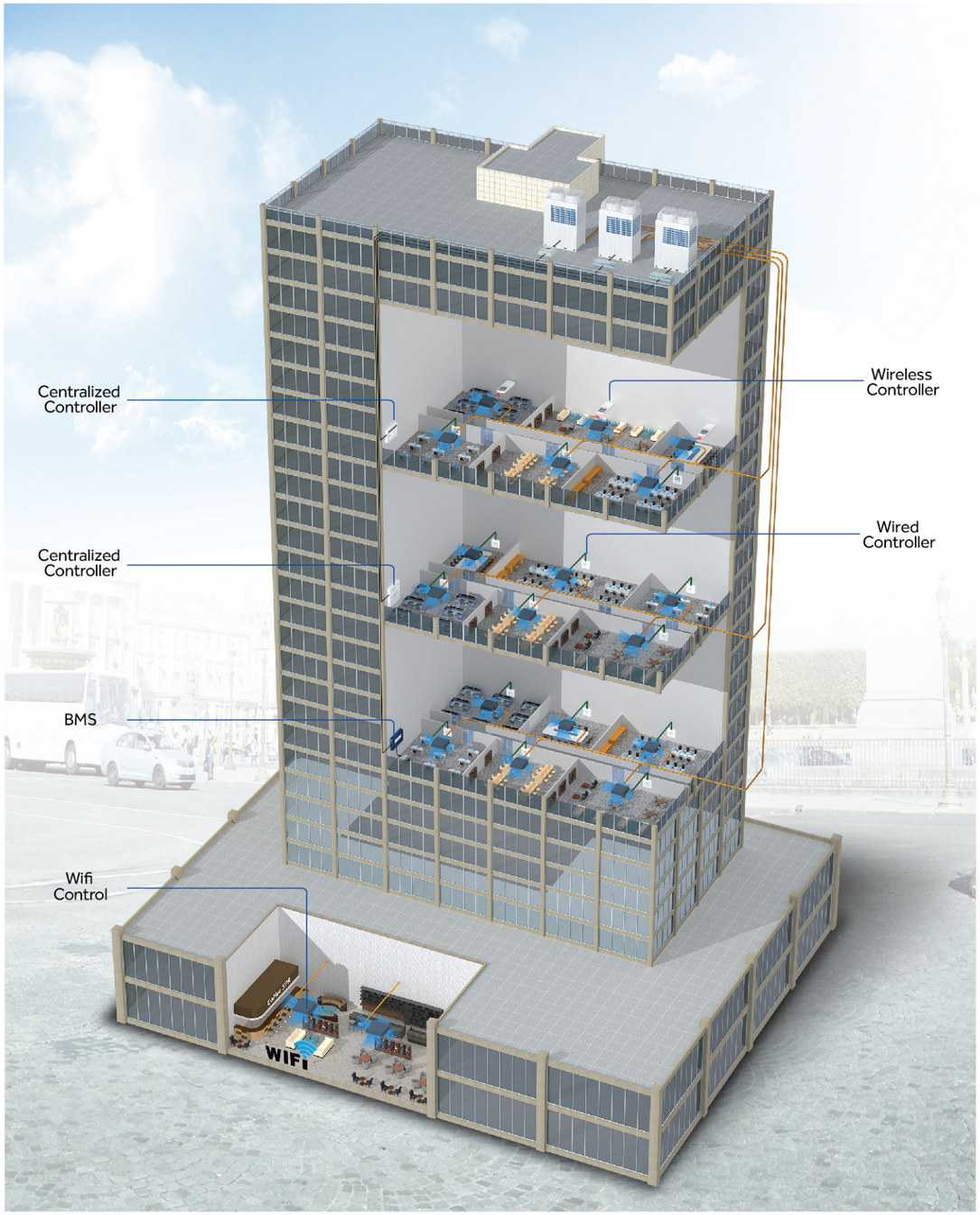
 

Model	AH1-280B	AH1-560B
Connected	14<X≤28KW	28＜X≤56KW
AHU capacity	(5-10HP)	(10-20HP)
Power Supply (Ph/V/Hz)	1/220~240/50/60	1/220~240/50/60
Dimension (W/D/H) (mm)	420/260/165	420/260/215
Shipping dimensions (mm)	520/340/225	520/340/275
Material	Galvanized steel	Galvanized steel
Color	Grey	Grey
Weight (KG)	5.5	6.5
Shipping Weight (KG)	8.5	10
Liquid pipe (mm)	9.52 (Main) / 6.35	12.7 (Main) / 15.88
Pipe connection method	Flare connection and welding	Flare connection and welding
AHU Kit-3rd party AHU Max Single pipe length (m)	5	5
AHU Kit-3rd party AHU Max Single pipe length (m)	5	5

IMVF
Inverter Multi Variable Flow

Control Systems

Control System Structure



User Friendly Management Control Solution

Integrated Management

Convenient and efficient, CIAC controllers realize the co-management of IMVF in one system, providing you more combination choices for better managing large or middle-sized buildings.

Building Management

The excellent building management system provides a professional and reliable service for a better management of your air conditioning units.

Intelligent Management

"CIAC Smart AC" provides an intelligent and personalized experience for your smart life.

Applications

CIAC control products are designed to provide you a perfect solution for the small, medium or large commercial projects.

Individual Controller

The individual control system has a variety of wired and wireless controllers which enable you an easy and intelligent control of your air conditioners. You can choose the one which best suits for your air conditioning management.

YR-HRS01

- On/Off, Operation Mode, Fan speed, Temperature setting, Swing
- Turbo and quiet
- Individual louver control for Round Flow 4- way cassette and mini 4-way cassette
- Self-Clean
- Timer
- Health function
- Backlight

YR-HQS01

- On/Off, Operation Mode, Fan speed, Temperature setting, Swing
- Turbo and Quiet
- Individual louver control for Round Flow 4- way cassette and mini 4-way cassette
- Clock & Timer
- Health function
- Self-Clean
- Backlight
- Convenient to operate most functions through one button

HW-BA116ABK

- Alternating current
- Basic fucntion: on/off, mode, fan speed, temperature
- Individual & group control (max.16 indoor units)
- Simple and smart design, 86*86*14.80mm
- Could receive wireless controller signal

YR-E17A

- On/Off, Mode, Fan speed, Temperature setting, Swing
- Individual & Group control (Max.16 indoor units)
- Simple and Smart design, 86*86*13.05mm
- Touch button with back light
- Timer/ Clock
- Individual flap control for round way cassette and compact cassette
- Built-in infrared signal receiver for duct units
- Self-cleaning function
- Built-in humidity sensor and humidity display

YR-E16B

- Colorful screen
- On/off, mode, fan speed, temperature setting, swing
- Individual & group control (max 16 indoor units)
- Fahrenheit/ celsius selectable; sensitivity ±0.5°c (±1°F)
- Weekly timer
- Individual louver control for MINI 4-way cassette and Round Flow 4-way cassette
- Static pressure setting

RE-02

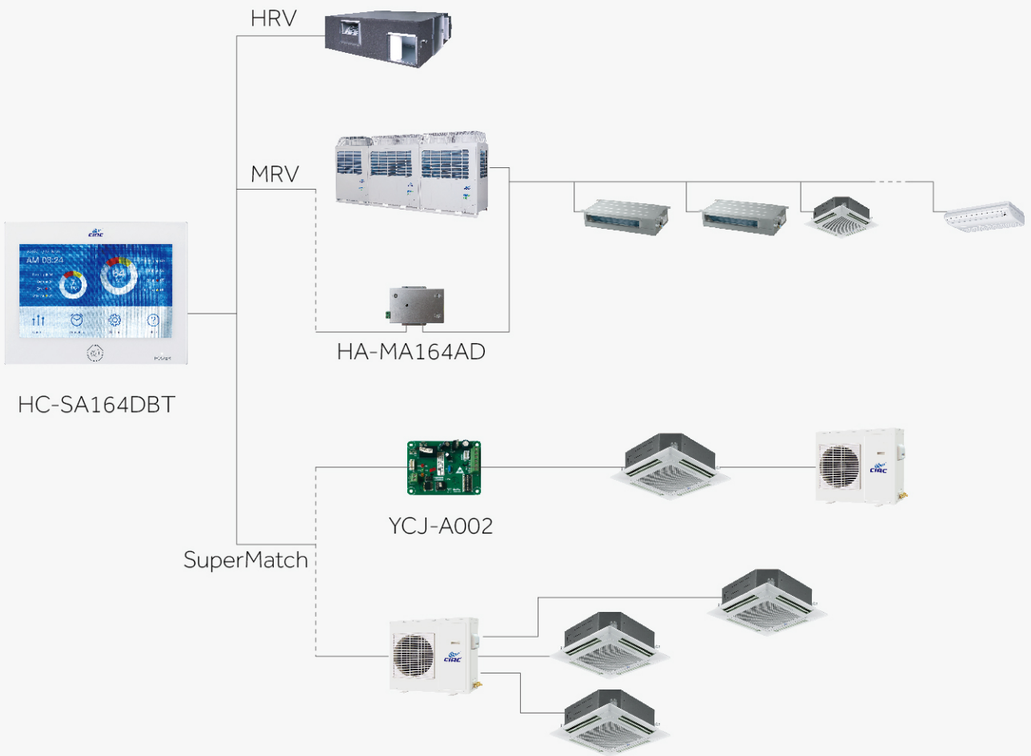
- Infrared signal receiver
- Realize the remote control of duct type indoor unit
- Model selection depens on the duct indoor unit

Central Controller

HC-SA164DBT

- Individual control, central control (max. 64 indoor units)
- 5-inch TFT LCD touch screen with back light
- Weekly timer
- Indoor units' information editable
- Historical error
- MRV 5 system and upgraded MRV SII(8/10/12HP) outdoor units can connect directly
- Other MRV system requires HA-MA164AD

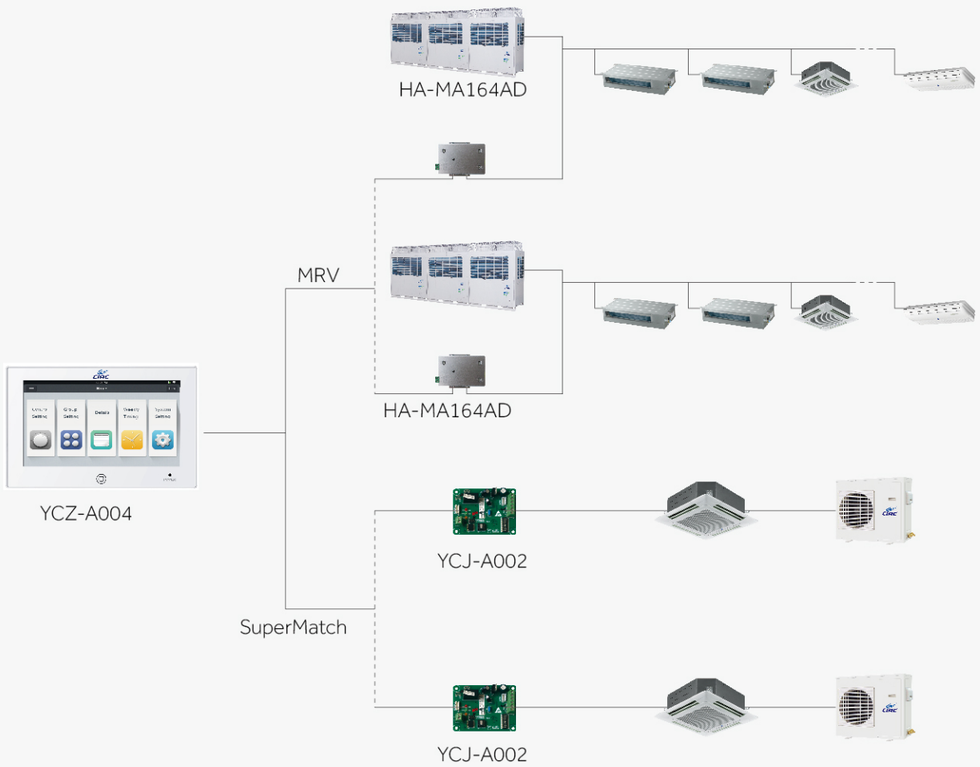
HC-SA164DBT System



YCZ-A004

- Individual control, group control & central control (Max. 256 indoor units)
- 7-inch TFT LCD touch screen with back light
- Weekly timer
- Indoor units' information editable
- Error display
- Other MRV system requires HA-MA164AD

YCZ-A004 System



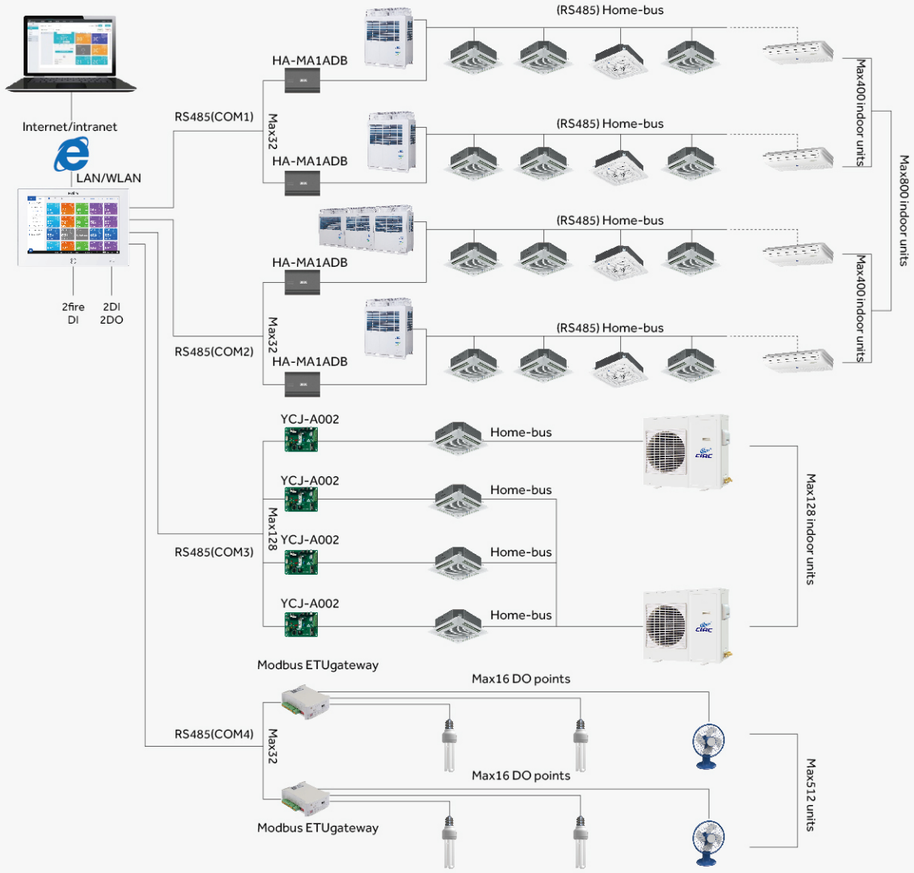
BMS Solution

The building management modules could perfectly integrate air conditioners into the building management system, providing an excellent solution for large commercial areas.

HC-LA1CDBT

- 12.5-inch TFT LCD touch screen
- Max. 800 MRV indoor units and Max. 128 LCAC IDUs connectable for one controller totally 928 IDUS connectable
- Floor plan layout view
- Web Access and Email Alarm
- Weekly Schedule and Special day setting
- Integrate 3rd party devices like fire alarm, lighting with Haier indoor units
- All MRV system requires the new gateway HA-MA1ADB(one system requires one gateway)
- LCAC products requires PCB adapter YCJ-A002(One IDU requires one YCJ-A002)
- Total electricity consumption display
- Data curve
- Electricity consumption distribution for Tenant billing
- Multi Language

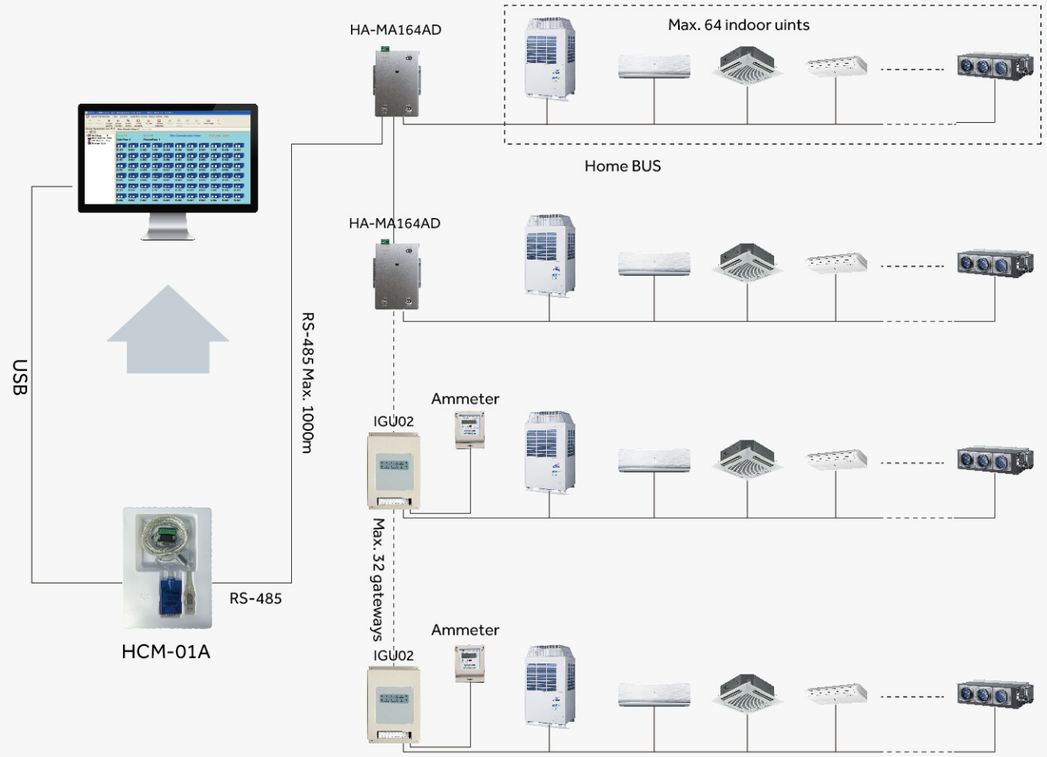
HC-LA1CDBT System



HCM-01A

- Local control version; convert USB to RS-485
- Max. 400 indoor units can be controlled
- Modbus rtu interface
- Brand new interface design
- Win 7 32bits/64bits, Win 8 Pro, Win 10 Pro
- Max.32 systems connectable
- MRV 5system and upgraded MRV SII(8/10/12HP) outdoor units can directly connect with HCM-01A
- Other MRV system outdoor units require HA-MA164AD
- Electricity charge report (must use IGU02)

HCM-01A System

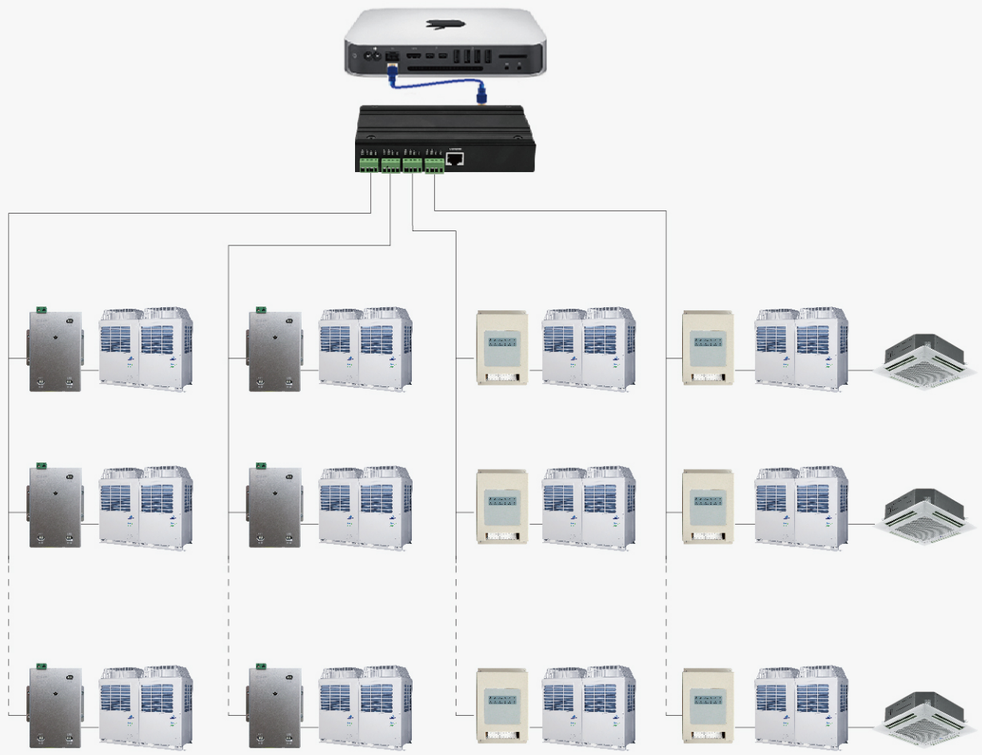


*Each outdoor system requires one HA-MA164AD; For power consumption function, users should connect IGU02 and Ammeter.

HCM-03A

- Remote monitoring version; third party interface: BACnet ip/ Modbus ip
- Max. 1500 indoor units can be controlled
- Max. 4 groups. each group can connect 20 systems
- MRV 5 system and upgraded MRV SII(8/10/12HP) outdoor units can directly connect with HCM-03A
- Other MRV system outdoor units require HA-MA164AD
- Operation status setting & monitoring.
- Schedule setting
- Multi user management with different authorized levels
- Operation and error history log
- Electricity charge report (must use IGU02)

HCM-03A System



BMS interface

The adapters offer you an easy and convenient way to integrate air conditioners into various building management system; perfect for large commercial projects.

HA-MA164AD

- Protocol adapter, convert homebus to RS-485
- Gateway: modbus rtu
- Max. 64 indoor units can be connected with one HA-MA164AD
- MRV 5system and upgraded MRV SII(8/10/12HP) outdoor units can directly connect with central controller HC-SA164AD and YCZ-A004 or BMS monitor: HCM-01A and HCM-03A
- Other MRV system outdoor units require HA-MA164AD

HA-MA1ADB

- Interface: Modbus
- Match with 12.5-inch webserver central controller HC-LA1CDBT
- Max. 128 indoor units connectable
- Digital tube display Indoor quantity, gateway address, time and date
- Electricity data collection, calculation, distribution and storage

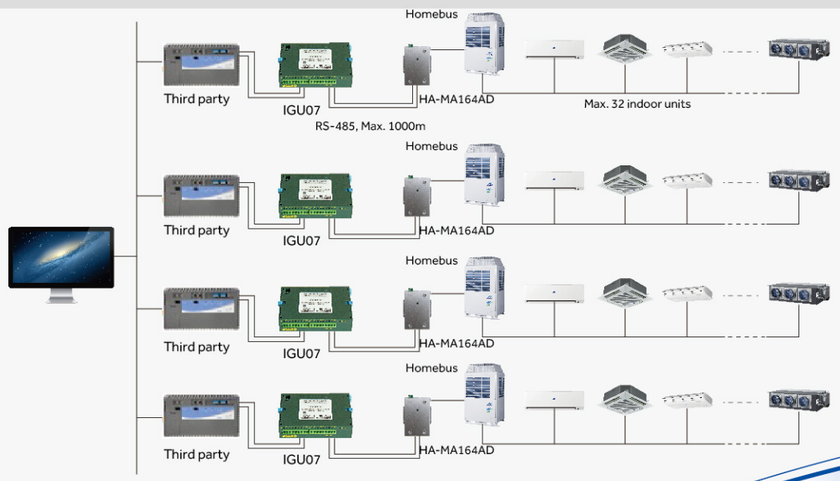
IGU02

- Protocol adapter, convert homebus to modbus
- Electricity data collection, calculation, allocation and storage
- Match with BMS (HCM-01A,03A,05,05A). each system requires one IGU02
- Max.40 indoor units can be connected with one IGU02

IGU07

- Protocol adapter, convert modbus rtu to lonworks
- Each system requires one IGU07+ HA-MA164AD
- Max. 32 indoor units can be connected in one system
- External 24V DC power supply is needed

LonWorks System



HCM-04

•BACnet gateway, convert modbus rtu to BACnet ip
•Max.128 indoor units/ 4 systems can be controlled. Max. 32 indoor units for one system
•MRV 5 and upgraded MRV SI I (8/10/12HP) can connect directly with HCM-04.
•Other MRV systems require IGU02 or HA-MA164AD
•BTL certificate

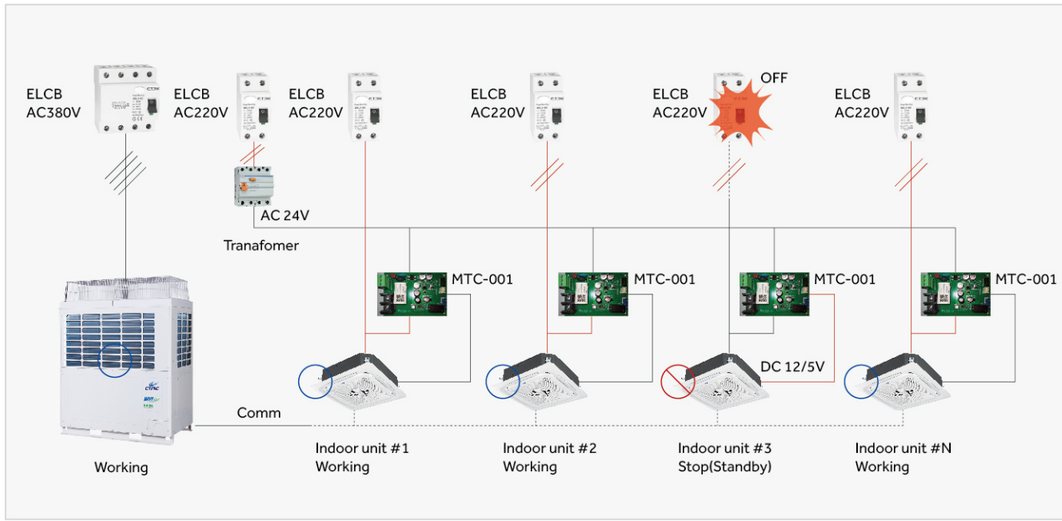
HA-AC-KNX-8 / HA-AC-KNX-16 / HA-AC-KNX-64

•KNX gateway
•Convert modbus to KNX
•Max. 8/ 16/ 64 indoor units can be connected in one system
•MRV 5 and upgraded MRV SI I (8/10/12HP) can connect directly
•Other MRV systems require HA-MA164AD
*For the KNX gateway purchase, please contact the KNX manufacture Intesis directly

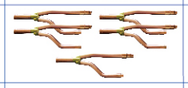
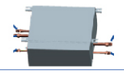
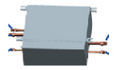
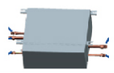
MULTI TENANT SOLUTION

MTC-001

Application Scenario:
•a. The multi tenant site using separate circuit breaker for each indoor unit
•b. The hotel room using key-tag system which cuts off the power of indoor unit directly
•When it is detected that any connected indoor unit is forcibly cut off, the MTC-001 provides DC power to the indoor PCB to ensure that the indoor unit maintains standby mode: the EEV is turned off and the control signal is blocked to prevent the system from alarming
•Note: If there is power or communication failure in the indoor computer board, MTC-001 cannot be prevented and detected



ACCESSORIES

Name	Design	Model	Functions	For what units
Gather pipe		HZG-20A	Refrigerant gathering	2 IMVF outdoor units
Gather pipe		HZG-30A	Refrigerant gathering	3 IMVF outdoor units
Gather pipe		HZG-R20A	Refrigerant gathering for IMVF Heat Recovery	2 outdoor units
Gather pipe		HZG-R30A	Refrigerant gathering for IMVF Heat Recovery	3 outdoor units
Manifold pipe		FQG-B335A	Refrigerant distribution for heat pump MRV	Total indoor units capacity less than 33,500W
Manifold pipe		FQG-B506A	Refrigerant distribution for heat pump MRV	Total indoor units capacity less than 50,600W, but equal or bigger than 33,500W
Manifold pipe		FQG-B730A	Refrigerant distribution for heat pump MRV	Total indoor units capacity less than 73,000W, but equal or bigger than 50,600W
Manifold pipe		FQG-B1350A	Refrigerant distribution for heat pump MRV	Total indoor units capacity bigger than 73,000W
Manifold pipe		FQG-RB335A	Refrigerant distribution for IMVF Heat Recovery	Total indoor units capacity less than 33,500W
Manifold pipe		FQG-RB506A	Refrigerant distribution for IMVF Heat Recovery	Total indoor units capacity less than 50,600W, but equal or bigger than 33,500W
Manifold pipe		FQG-RB730A	Refrigerant distribution for IMVF Heat Recovery	Total indoor units capacity less than 73,000W, but equal or bigger than 50,600W
Manifold pipe		FQG-RB1350A	Refrigerant distribution for IMVF Heat Recovery	Total indoor units capacity less than 135,000W, but equal or bigger than 73,000W
VP box		VP1-112A	Vavle box	IMVF Heat Recovery
VP box		VP1-180A	Vavle box	IMVF Heat Recovery
VP box		VP1-280A	Vavle box	IMVF Heat Recovery
VP box		VP4-450A	Vavle box	IMVF Heat Recovery

CONTROL SYSTEM

Control System		Model	Design	Functions
Individual Controller	Wireless Controller	YR-HRS01		•On/Off, Mode, Fan speed, Temperature setting, Swing. •Individual control •Five grades of fan speed: •Individual blade control for Smart Power Cassette •Clock & Timer •Follow/Evade function
		YR-HQS01		•On/Off, Operation Mode, Fan speed, Temperature setting, Swing •Turbo and quiet •Individual louver control for Round Flow 4- way cassette and mini 4-way cassette •Self-Clean •Timer •Health function •Backlight
	Wired Controller	HW-BA116ABK		•Alternating current •Basic fucntion: On/Off, Mode, Fan speed, Temperature •Individual & Group control (Max 16 indoor units) •Simple and Smart design, 86*86*13.05mm
		YR-E17A		•On/Off, Mode, Fan speed, Temperature setting, Swing •Individual & Group control (Max.16 indoor units) •Simple and Smart design, 86*86*13.05mm •Touch button with back light •Timer/ Clock •Individual flap control for round way cassette and compact cassette •Built-in infrared signal receiver for duct units •Self-cleaning function •Built-in humidity sensor and humidity display
		YR-E16B		•Colorful screen •On/off, mode, fan speed, temperature setting, swing •Individual & group control (max 16 indoor units) •Fahrenheit/ celsius selectable; sensitivity ±0.5°c (±1°F) •Weekly timer •Individual louver control for MINI 4-way cassette and Round Flow 4-way cassette •Static pressure setting
		RE-02		•Infrared signal receiver •Realize the remote control of duct type indoor unit •Model selection depens on the duct indoor unit
	Centralized Controller	HC-SA164DBT		•Individual control, central control (max. 64 indoor units) •5-inch TFT LCD touch screen with back light •Weekly timer •Indoor units' information editable •Historical error •MRV 5 system and upgraded MRV SII(8/10/12HP) outdoor units can connect directly •Other MRV system requires HA-MA164AD
		YCZ-A004		•Individual control, Group control & Central control (Max 256 indoor units) •7-inch TFT LCD touch screen with back light •Weekly timer •Indoor units' information edit •Historical data backup * Must be used in combination with an HA-MA for eachMRV system. (Max. 32 sets)
		HC-LA1CDBT		•12.5-inch TFT LCD touch screen •Max. 800 MRV indoor units and Max. 128 LCAC IDUs connectable for one controller totally 928 IDUS connectable •Floor plan layout view •Web Access and Email Alarm •Weekly Schedule and Special day setting •Integrate 3rd party devices like fire alarm, lighting with Haier indoor units •All MRV system requires the new gateway HA-MA1ADB(one system requires one gateway) •LCAC products requires PCB adapter YCJ-A002(One IDU requires one YCJ-A002) •Total electricity consumption display •Data curve •Electricity consumption distribution for Tenant billing •Multi Language

CONTROL SYSTEM

Control System	Model	Design	Functions
BMS (Building Mannagement System)	HCM-01A		•Local control version; convert USB to RS-485 •Max. 400 indoor units can be controlled •Modbus rtu interface •Brand new interface design •Win 7 32bits/64bits, Win 8 Pro, Win 10 Pro •Max.32 systems connectable •MRV 5system and upgraded MRV SII(8/10/12HP) outdoor units can directly connect with HCM-01A •Other MRV system outdoor units require HA-MA164AD •Electricity charge report (must use IGU02)
	HCM-01A		•Remote monitoring version; third party interface: BACnet ip/ Modbus ip •Max. 1500 indoor units can be controlled •Max. 4 groups. each group can connect 20 systems •MRV 5 system and upgraded MRV SII(8/10/12HP) outdoor units can directly connect with HCM-03A •Other MRV system outdoor units require HA-MA164AD •Operation status setting & monitoring. •Schedule setting •Multi user management with different authorized levels •Operation and error history log •Electricity charge report (must use IGU02)
BMS Interface	HA-MA164AD		•Protocol adapter, convert homebus to RS-485 •Gateway: modbus rtu •Max. 64 indoor units can be connected with one HA-MA164AD •MRV 5system and upgraded MRV SII(8/10/12HP) outdoor units can directly connect with central controller HC-SA164AD and YCZ-A004 or BMS monitor: HCM-01A and HCM-03A •Other MRV system outdoor units require HA-MA164AD
	HA-MA1ADB		•Interface: Modbus •Match with 12.5-inch webserver central controller HC-LA1CDBT •Max. 128 indoor units connectable •Digital tube display Indoor quantity, gateway address, time and date •Electricity data collection, calculation, distribution and storage
	IGU02		•Protocol adapter, convert homebus to modbus •Electricity data collection, calculation, allocation and storage •Match with BMS (HCM-01A,03A,05,05A). each system requires one IGU02 •Max.40 indoor units can be connected with one IGU02
	IGU07		•Protocol adapter, convert modbus rtu to lonworks •Each system requires one IGU07+ HA-MA164AD •Max. 32 indoor units can be connected in one system •External 24V DC power supply is needed
	HCM-04		•BACnet gateway, convert modbus rtu to BACnet ip •Max.128 indoor units/ 4 systems can be controlled. Max. 32 indoor units for one system •MRV 5 and upgraded MRV SI I (8/10/12HP) can connect directly with HCM-04. •Other MRV systems require IGU02 or HA-MA164AD •BTL certificate
	HA-AC-KNX-8 HA-AC-KNX-16 HA-AC-KNX-64		•KNX gateway •Convert modbus to KNX •Max. 8/ 16/ 64 indoor units can be connected in one system •MRV 5 and upgraded MRV SI I (8/10/12HP) can connect directly •Other MRV systems require HA-MA164AD *For the KNX gateway purchase, please contact the KNX manufacture Intesis directly
Multi Tenant Solution	MTC-001		Application Scenario: •a. The multi tenant site using separate circuit breaker for each indoor unit •b. The hotel room using key-tag system which cuts off the power of indoor unit directly •When it is detected that any connected indoor unit is forcibly cut off, the MTC-001 provides DC power to the indoor PCB to ensure that the indoor unit maintains standby mode: the EEV is turned off and the control signal is blocked to prevent the system from alarming •Note: If there is power or communication failure in the indoor computer board, MTC-001 cannot be prevented and detected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