

VRF Systems



Split series air conditioners	Multi split series air conditioners	Fan coil units	Commercial series air conditioners	VRF systems

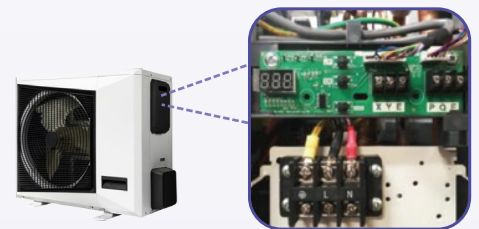
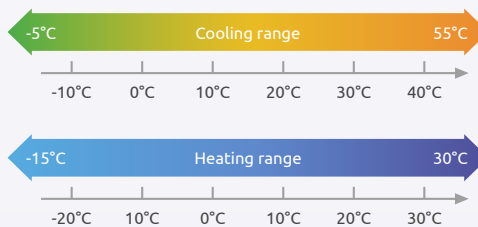
VRF systems are larger and more powerful version of the multi split system, so they are suitable for cooling large areas of premises: shopping centers, hotels, commercial and administrative buildings, restaurants and other buildings with a large number of rooms.

Up to 63 units of internal blocks can be connected to one external unit, which can be controlled according to their requirements - each block can be controlled without changing the working mode of other blocks.

Discover Refra VRF systems!

Mini VRF non modular units

8 / 10 / 12.5 / 14 / 16kW
Smaller size, higher efficiency



Compact appearance

- The center of gravity has been reduced
- The vibration level is smaller
- It is suitable to be installed on terrace due to its compact appearance



Wide Outdoor Operation Range

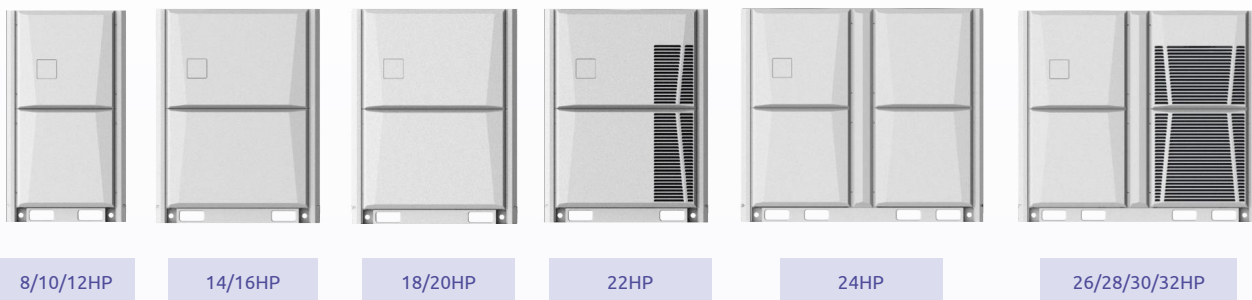
- Due to global warming, cooling ambient temperature is designed up to 55°C.
- Heating ambient temperature is down to -15°C. In cold weather, CHV Mini VRF has capability to heat the room continuously.



Easy Maintenance Window

LED display on the PCB: this is available to show operation status and error codes of the system.

► 13 Basic Modules



Modules can be freely combined to become larger unit.
Recommended maximum capacity of single system is 256kW (96HP).

Maximum capacity of single system can be up to 342kW (128HP).



► Indoor units

	One-way Cassette	Two-way Cassette	4-way cassette	Round-flow cassette	Wall-mounted	Floor Ceiling	Short ducted	Medium ESP ducted	High ESP ducted	Fresh air processor
Cap. (kW)										
2.2	✓		✓		✓		✓			
2.8	✓		✓		✓		✓			
3.6	✓		✓		✓		✓			
4.5	✓	✓	✓		✓	✓	✓			
5.6	✓	✓		✓	✓	✓	✓			
7.1	✓	✓		✓	✓	✓	✓	✓	✓	
8.0		✓		✓	✓	✓		✓	✓	
9.0				✓		✓		✓	✓	
10.0				✓				✓	✓	
11.2				✓		✓				
12.0								✓	✓	
12.5				✓						
14.0				✓		✓				✓
15.0								✓	✓	
16.0				✓		✓				
20.0									✓	
22.4										✓
25.0									✓	
28.0									✓	✓
45.0									✓	✓
56.0									✓	✓

RCOF mini VRF technical data

Model name			RCOFM080AR1	RCOFM100AR1	RCOFM125AR1	RCOFM140AR1	RCOFM160AR1		
Power supply			220~240V/1N/50Hz	220~240V/1N/50Hz	220~240V/1N/50Hz	220~240V/1N/50Hz	220~240V/1N/50Hz		
Performance data									
Cooling	Capacity (T1/T3)	HP	3	3,6	4,5	5	5,7		
		kW	8	10	12,5	14	16		
		Btu/h	27300	34100	42600	47800	54600		
	Power input (T1/T3)	kW	2,60	3,00	3,20	3,75	4,75		
	Rated current(T1/T3)	A	11,8	13,6	14,5	17,0	21,8		
Heating	Capacity	W/W	3,08	3,33	3,74	3,55	3,5		
		kW	9	11	14	16	17		
	Btu/h	30700	37500	47800	54600	58000			
	Power input	kW	2,65	3,1	3,52	4	4,4		
	Rated current	A	12	14	16,1	18,2	20		
COP	W/W	3,39	3,55	3,83	3,72	3,61			
Max. input consumption			kW	3,96	4,4	7,48	7,48	7,48	
Max. current			A	18	20	34	34	34	
Capacity adjustment range				50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	
Compressor data									
DC Inverter compressor	Quantity		1	1	1	1	1		
	Type		Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor		
	frequency range	Hz	10~120	10~120	10~120	10~120	10~120		
	Crankcase heater	W	25	35	35	35	35		
Compressor oil			Original oil volume	ml	400	670	1100	1100	1100
Fan data									
Fan motor	Type		DC	DC	DC	DC	DC		
	Quantity		1	1	1	1	1		
	Insulation class		B	B	E	E	E		
	Protection class		IPX4	IPX4	IP44	IP44	IP44		
	Power output	W	75	90	180	180	180		
	Type		Axial	Axial	Axial	Axial	Axial		
	Drive		Direct-driven	Direct-driven	Direct-driven	Direct-driven	Direct-driven		
	Fan Quantity		1	1	1	1	1		
	Air flow	m ³ /h	3300	4000	8000	8000	8000		
Physical data									
	Tube diameter	mm	Ø7	Ø9.52	Ø7	Ø7	Ø7		
	Number of rows		3	2	2	3	3		
	Coil length x height x width	mm	784×630×40.11	1003×750×43.3	1145×798×38.8	1145×798×58.2	1145×798×58.2		
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a		
	Volume	kg	2	2,6	3	3,8	3,8		
	Throttle type		EXV	EXV	EXV	EXV	EXV		
Dimension (W*H*D)	Net	mm	935×702×383	1032×810×445	1100×870×528	1100×870×528	1100×870×528		
	Packing	mm	975×770×420	1075×875×495	1140×965×540	1140×965×540	1140×965×540		
Weight	Net	kg	47	60	85	90	90		
	Gross	kg	50	65	95	100	100		
Outdoor sound level			dB(A)	≤54	≤56	≤56	≤57	≤57	
Maximum operating pressure			MPa	4,5	4,5	4,5	4,5	4,5	
Piping & wiring data									
Pipe size	Liquid pipe	mm	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52		
	Gas pipe	mm	Ø15.88	Ø15.88	Ø15.88	Ø15.88	Ø15.88		
Max. pipe length	Total pipe length	m	100	100	100	100	100		
	From OU to farthest IU	m	70	70	70	70	70		
	From 1st indoor distributor to farthest IU	m	20	20	20	20	20		
Max. vertical length	Between OU & IU(OU above IU)	m	30	30	30	30	30		
	Between OU & IU(OU below IU)	m	20	20	20	20	20		
	Between IUs	m	8	8	8	8	8		
Connection wire	Power wire size	mm ²	3×4.0	3×4.0	3×6.0	3×6.0	3×6.0		
	Signal wire type		3-core shielded cable	3-core shielded cable	3-core shielded cable	3-core shielded cable	3-core shielded cable		
	Signal wire size	mm ²	1,0	1,0	1,0	1,0	1,0		
Operation temperature range									
Cooling	Outdoor side	°C	-5~55	-5~55	-5~55	-5~55	-5~55		
	Indoor side	°C	16~32	16~32	16~32	16~32	16~32		
Heating	Outdoor side	°C	-15~30	-15~30	-15~30	-15~30	-15~30		
	Indoor side	°C	16~32	16~32	16~32	16~32	16~32		

Notes:

- Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C
- The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB
- The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB
- Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
- The above data may be changed without notice for future improvement on quality and performance.

Model name			RCOF125FR1	RCOF160FR1	RCOF180FR1	RCOF200FR1	RCOF224FR1	RCOF260FR1	RCOF275FR1	RCOF330FR1
Power supply			380~415V/ 3N/50Hz	380~415V/ 3N/50Hz	380~415V/ 3N/50Hz	380~415V/ 3N/50Hz	380~415V/ 3N/50Hz	380~415V/ 3N/50Hz	380~415V/ 3N/50Hz	380~415V/ 3N/50Hz
Cooling	Capacity	HP	4,5	5,7	6,5	7	8	9	10	12
		kW	12,5	16	18	20	22,4	26	28	33,5
		Btu/h	42000	54000	61000	68200	76400	88700	95500	114300
	Power input	kW	3,38	4,53	5,18	5,92	6,75	7,54	8,31	9,46
	EER	W/W	3,70	3,53	3,47	3,38	3,32	3,45	3,37	3,54
Heating	Capacity	kW	14	18	20	22	24	28,5	31,5	37,5
		Btu/h	47000	61000	68000	75000	81800	97200	107500	128000
	Power input	kW	3,26	4,61	5,02	5,35	5,62	6,77	8,18	8,99
	COP	W/W	4,29	3,91	3,98	4,11	4,27	4,21	3,85	4,17
Max. input consumption		kW	6,3	6,8	7	9,8	10,6	11,5	13	13,8
Max. current		A	6	7,6	12,5	15,8	17	19	22,5	24
Capacity adjustment range			50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%
Compressor data										
DC Inverter compressor	Quantity		1	1	1	1	1	1	1	1
	Type		Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor	Twin-rotary Compressor
	frequency range	Hz	15~120	10~120	10~120	10~120	10~120	10~120	10~120	10~120
	Crankcase heater	W	35	35	35	35	35	35	35	35
Compressor oil	Original oil volume	ml	850 per compressor	1100 per compressor	1400 per compressor	2300 per compressor	2300 per compressor	2300 per compressor	2300 per compressor	2300 per compressor
Fan data										
Fan motor	Type		DC	DC	DC	DC	DC	DC	DC	DC
	Quantity		2	2	2	2	2	2	2	2
	Insulation class		E	E	E	B	B	E	E	E
	Power output	W	100*2	100*2	100*2	100*2	100*2	180*2	180*2	180*2
	Type		Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial
	Drive		Direct-driven	Direct-driven	Direct-driven	Direct-driven	Direct-driven	Direct-driven	Direct-driven	Direct-driven
	Fan Quantity		2	2	2	2	2	2	2	2
Air flow	m ³ /h	8000	8000	8000	8000	8000	8000	9000	9000	
Physical data										
Refrigerant	Tube diameter	mm	Ø7.94	Ø9.52	Ø7	Ø7	Ø7	Ø7	Ø7	Ø7
	Type		R410a	R410a	R410a	R410a	R410a	R410a	R410a	R410a
	Volume	kg	3,45	3,8	4,2	5,3	5,3	6,1	8	8
	Throttle type		EXV	EXV	EXV	EXV	EXV	EXV	EXV	EXV
Dimension (W*H*D)	Net	mm	975×1335×400	975×1335×400	975×1335×400	1015×1430×450	1015×1430×450	1120×1549×528	1120×1549×528	1120×1549×528
	Packing	mm	1010×1445×415	1010×1445×415	1010×1445×415	1095×1545×485	1095×1545×485	1278×1703×560	1278×1703×560	1278×1703×560
Weight	Net	kg	86,6	90,1	94,7	112,7	112,7	142	154	154
	Gross	kg	96,4	100	104,4	126,8	126,8	162	174	174
Outdoor sound level		dB(A)	56	58	58	58	58	60	60	60
Maximum operating pressure		MPa	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5
Piping & wiring data										
Pipe size	Liquid pipe	mm	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø12.7	Ø12.7
	Gas pipe	mm	Ø15.88	Ø15.88	Ø19.05	Ø19.05	Ø19.05	Ø22.2	Ø22.2	Ø22.2
Max. pipe length	Total pipe length	m	120	120	120	120	120	120	120	120
	From OU to farthest IU	m	70	70	70	70	70	70	70	70
	From 1st indoor distributor to farthest IU	m	20	20	20	20	20	20	20	20
Max. vertical length	Between OU & IU(OU above IU)	m	30	30	30	30	30	30	30	30
	Between OU & IU(OU below IU)	m	20	20	20	20	20	20	20	20
	Between IUs	m	8	8	8	8	8	8	8	8
Connection wire	Power wire size	mm ²	5×2.5	5×2.5	5×6.0	5×6.0	5×6.0	5×6.0	5×6.0	5×6.0
	Signal wire type		3-core shielded cable	3-core shielded cable	3-core shielded cable	3-core shielded cable	3-core shielded cable	3-core shielded cable	3-core shielded cable	3-core shielded cable
	Signal wire size	mm ²	1	1	1	1	1	1	1	1
Operation temperature range										
Cooling	Outdoor side	°C	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55
	Indoor side	°C	16~32	16~32	16~32	16~32	16~32	16~32	16~32	16~32
Heating	Outdoor side	°C	-20~30	-20~30	-20~30	-20~30	-20~30	-20~30	-20~30	-20~30
	Indoor side	°C	16~32	16~32	16~32	16~32	16~32	16~32	16~32	16~32

- Notes:**
- Cooling operating temperature range is from -5°C to 55°C (It can be customized down to -10°C). Heating operation temperature range is from -20°C to 30°C.
 - The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB.
 - The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F) DB.
 - Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 - The above data may be changed without notice for future improvement on quality and performance.

RCOFS series modular outdoor units

MODEL NAME		RCOFS252FR1	RCOFS280FR1	RCOFS335FR1	RCOFS400FR1	RCOFS450FR1	RCOFS500FR1	RCOFS560FR1	RCOFS615FR1	
POWER SUPPLY		380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz	380~415V-3N-50Hz	
Performance Data										
Cooling	Capacity	HP	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP
		kW	25.2	28.0	33.5	40.0	45.0	50.0	56.0	61.5
		Btu/h	86000	95500	114000	136500	153500	170600	191000	209800
		RT	7.2	8.0	9.5	11.4	12.8	14.2	16.0	17.5
	Rated current	A	9.04	11.30	14.51	18.10	21.60	23.29	26.10	29.06
	Power input	kW	5.31	6.22	8.35	9.76	11.63	12.22	14.66	16.62
	EER	W/W	4.75	4.50	4.01	4.10	3.87	4.09	3.82	3.70
Heating	Capacity	kW	27.4	31.5	37.5	45.0	50.0	56.0	63.0	69
		Btu/h	93500	107500	128000	153500	170600	191000	214900	235400
		RT	7.8	9.0	10.7	12.8	14.2	16.0	18.0	19.7
	Rated current	A	8.93	11.25	14.34	18.00	20.25	22.61	25.70	28.4
	Power input	kW	4.98	5.86	7.35	9.34	10.87	11.89	14.16	16.80
	COP	W/W	5.50	5.38	5.10	4.82	4.60	4.71	4.45	4.11
	Max.input consumption	kW	13.4	14.3	14.8	18.3	18.8	22.0	24.4	25.0
Max.current	A	23.13	24.70	25.50	30.89	31.70	37.40	41.10	42.10	
Capacity adjustment range		50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	50%~130%	
Compressor Data										
Compressor	Quantity		1	1	1	1	1	1	1	1
	Type		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Physical Data										
Refrigerant	Type		R410a	R410a	R410a	R410a	R410a	R410a	R410a	R410a
	Volume	kg	9	9	11	14	14	15	16	16
	Throttle type		EXV	EXV	EXV	EXV	EXV	EXV	EXV	EXV
Dimension (W×H×D)	Net	mm	990×1740×840	990×1740×840	990×1740×840	1340×1740×840	1340×1740×840	1340×1740×840	1340×1740×840	1340×1740×840
	packing	mm	1060×1900×910	1060×1900×910	1060×1900×910	1410×1900×910	1410×1900×910	1410×1900×910	1410×1900×910	1410×1900×910
Weight	Net	kg	228	228	230	275	275	285	290	297
	Gross	kg	240	240	242	293	293	303	308	315
Outdoor sound level	dB(A)		58	58	60	60	61	62	63	63
Max.operating range	MPa		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Piping Data										
Pipe Size	Liquid pipe	mm	Ø12.7	Ø12.7	Ø12.7	Ø15.88	Ø15.88	Ø15.88	Ø15.88	Ø15.88
	Gas pipe	mm	Ø25.4	Ø25.4	Ø25.4	Ø31.8	Ø31.8	Ø31.8	Ø31.8	Ø31.8
Max.pipe length	Total pipe length	m	1000	1000	1000	1000	1000	1000	1000	1000
	ODU to farthest IDU (Actual length)	m	190	190	190	190	190	190	190	190
	ODU to farthest IDU (Equivalent length)	m	220	220	220	220	220	220	220	220
	1st IDU distributor to farthest IDU	m	40/90	40/90	40/90	40/90	40/90	40/90	40/90	40/90
Max. vertical length	Between ODU&IDU (ODU above IDU)	m	90	90	90	90	90	90	90	90
	Between ODU&IDU (ODU below IDU)	m	110	110	110	110	110	110	110	110
	Between IDUs	m	30	30	30	30	30	30	30	30
	Between ODUs)	m	0	0	0	0	0	0	0	0
Operation temperature range										
Cooling	Outdoor side	°C	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55	-5~55
	Indoor side	°C	16~32	16~32	16~32	16~32	16~32	16~32	16~32	16~32
Heating	Outdoor side	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
	Indoor side	°C	16~32	16~32	16~32	16~32	16~32	16~32	16~32	16~32

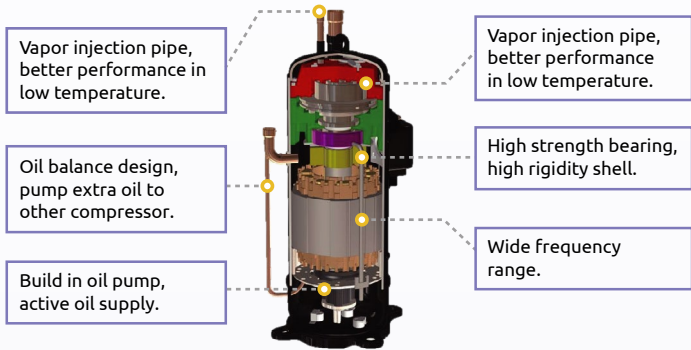
Notes:

- Cooling operating temperature range is from -5°C to 55°C (It can be customized down to -10°C). Heating operation temperature range is from -30°C to 30°C.
- The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB.
- The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F) DB.
- Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
- The above data may be changed without notice for future improvement on quality and performance.

Features for Users

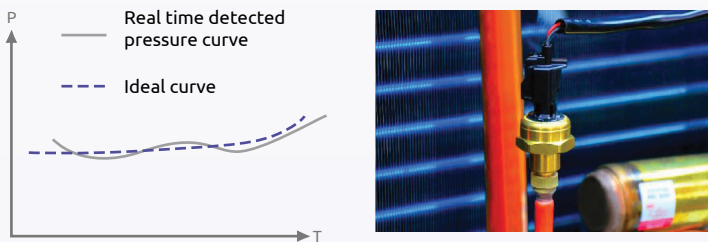
DC Inverter EVI Compressor

Small suction refrigerant superheat, refrigerant volume efficiency is high large refrigerant discharge buffer volume, low vibration and noise.



DC Motor Stepless Control

High precision pressure control. By adopting high precision pressure sensor, fan motor speed and can be stepless regulated to fit system's load requirement.



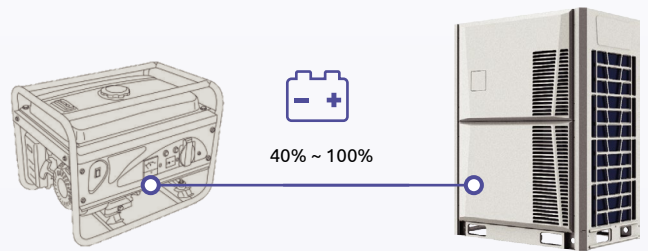
High Efficiency DC Brushless Motor

- High efficiency DC fan motor is from well-known brand.
- Low noise and high efficiency because of high-density wire winding engineering.
- Brushless with built-in sensor.



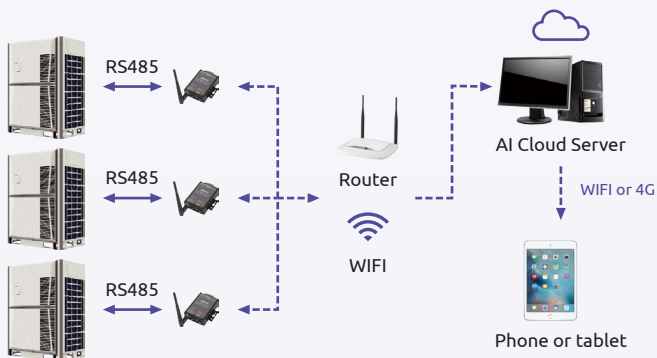
Power Saving Mode

In the case of power shortage, RCOFS can run power saving mode to ease generator's pressure.



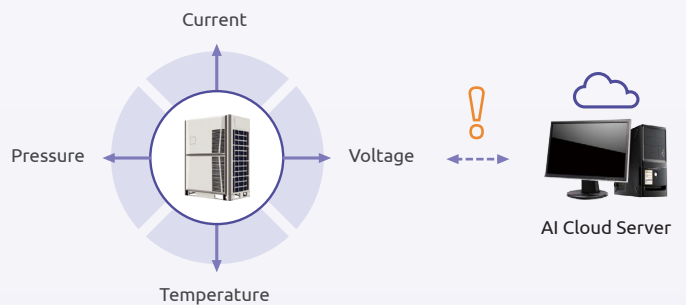
Long Distance Remote Control

Long distance remote control by phone or tablet.



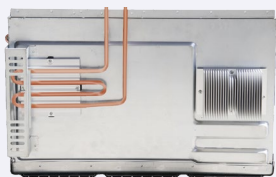
Malfunction Forecasting

- Thanks to the cloud server, malfunction can be forecasted when system running parameter is abnormal.
- Technician can be sent to site to check then system before the it stops.



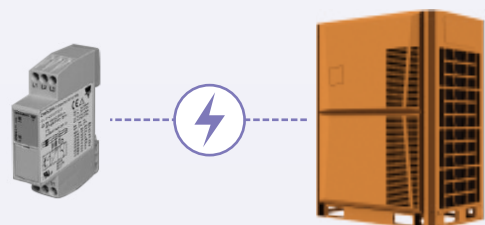
Refrigerant Cooling Design

We use refrigerant to cool down inverter modular board, to keep it in a safe condition even when outdoor temperature is up to 55°C.



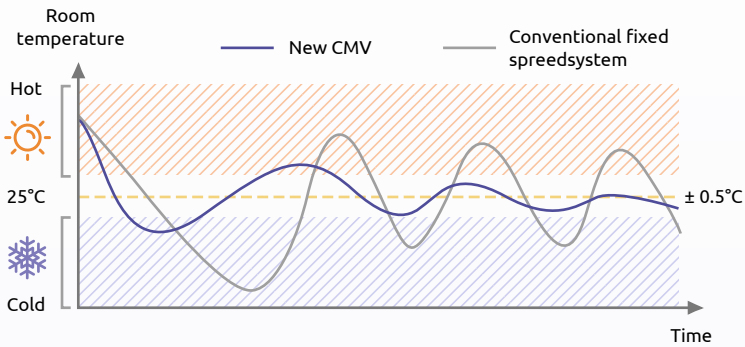
3-phase Power Protector

- Wide operation voltage range: 295V ~ 456V.
- Protect the outdoor unit from instable voltage.
- High quality and reliable protector.



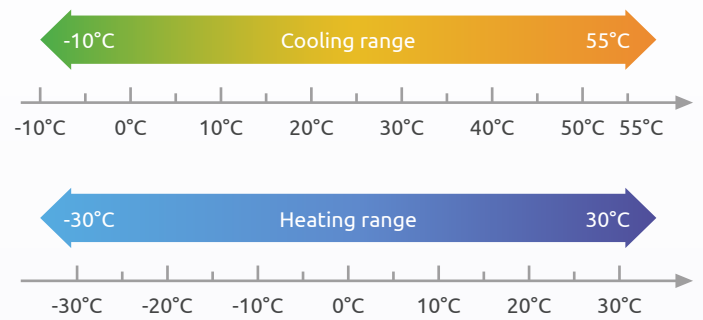
Outstanding Comfort Ability

- Precisely room temperature control by adopting large pulse EXV. Indoor temperature fluctuation can be maintain within 0.5°C, offers outstanding comfort ability.
- Fast heating, can maximum heating capacity output in 60s.



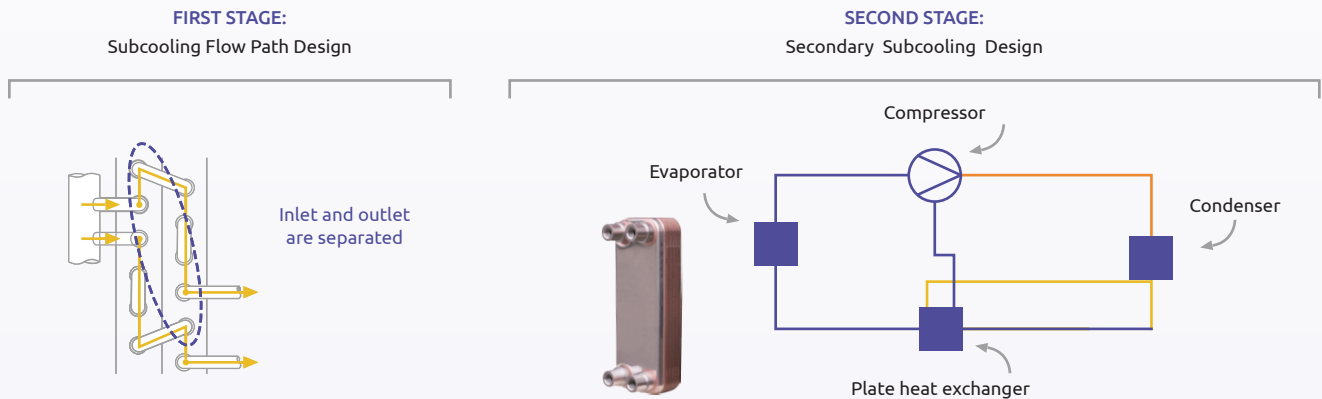
Wide Outdoor Operation Range

- Due to EVI technology, RCOFS's heating performance increased by 35% compare to conventional VRF system.
- Due to EVI technology, RCOFS still has 85% of rated capacity even in -15°C.

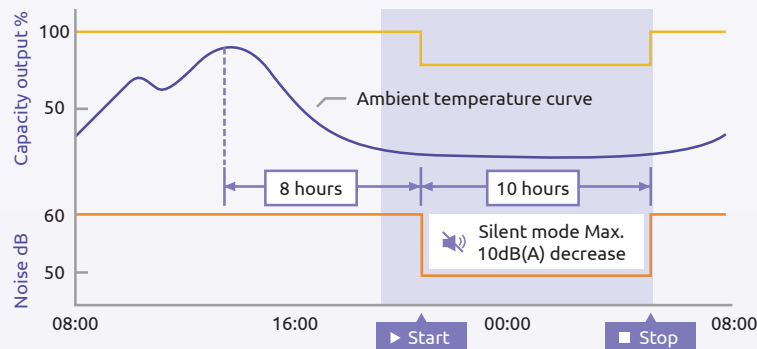


Two-Stage Subcooling

Based on subcooling flow path design, RCOFS is building in subcooling design structure, max subcooling temperature is up to 30°C.



Night Time Noise Control



All Outdoor Units Cycle Operation

- In one combination system, any outdoor unit can run as master unit.
- Balance the lifespan among outdoor units in one system.

Time	Start order
X	A → B → C
X+1	B → C → A
X+2	C → A → B



Backup Function

Module back up function

When some modules are failure, the others can keep running by simply settings.



Compressor back up function

When one compressor is failure, the other one can keep running by simply settings.



Fan motor back up function

When one fan motor is failure, the other one can keep running by simply settings.



Features for Installers

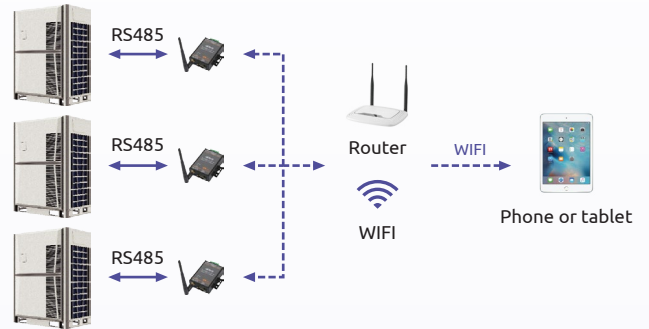
More Indoor Units

Max. 100 Indoor units can be connect in ONE system.



On Site Diagnosis

Technician can do the commissioning & diagnosis by phone or tablet on site.



Wired Controller

- Bidirectional communication
- Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design
- Timer function
- Electrical standard dimensions

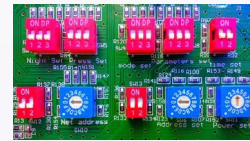


Mode Restriction

- 6 mode restriction:

First start indoor units priority mode	Cooling only mode	Cooling priority mode
VIP unit priority or majority priority mode	Heating only mode	Heating priority mode

- Mode restriction function can be selected on the outdoor PCB.



Service Window On Front Cover

Thanks to the service window, checking outdoor unit's status and setting is now easy, no need to remove the front cover.



Oil Control Technology

Core oil control technology makes system safety & reliable.

Separation efficiency 92%



Oil level control

Oil even pipe



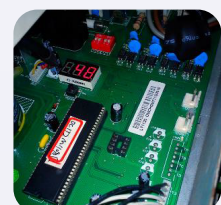
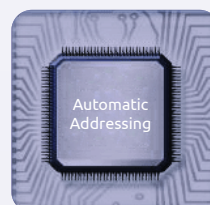
Oil separator

Intelligent oil return program



Automatic Addressing

- 2 addressing methods:
- Automatically addressing: system will distribute address to indoor unit automatically
- Manually setting by wireless remote controller
- Addressing method can be selected easily by adjusting the switch on outdoor PCB.



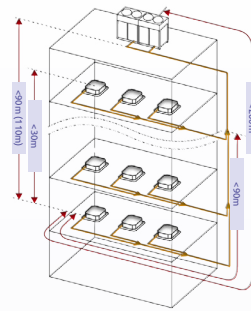
▶ Wired Controller

User can check the error code and inquiry unit status very easy, safe and convenient.

- Easy
- Convenient
- Safe



▶ Long Pipe & Height Difference



- The total pipe length: 1000 m
- The longest pipe length: 200 /240m
- Height difference: Outdoor unit above <90m;
- Outdoor unit below <110m
- Height difference between indoor units: 30m
- Length from first indoor distributor to last indoor unit: 90 m
- Communication wire length can be up to 1000m.

Controllers & Software

▶ Wireless Remote Controllers

- Indoor unit address inquiry
- Indoor unit address setting
- Temperature setting
- Operation mode setting
- Fan speed setting
- Timer function



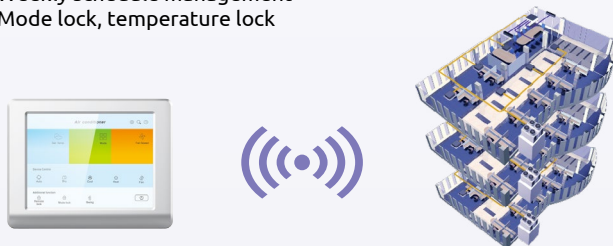
▶ Wired Controllers

- Bidirectional communication
- Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design
- Timer function
- Electrical standard dimensions



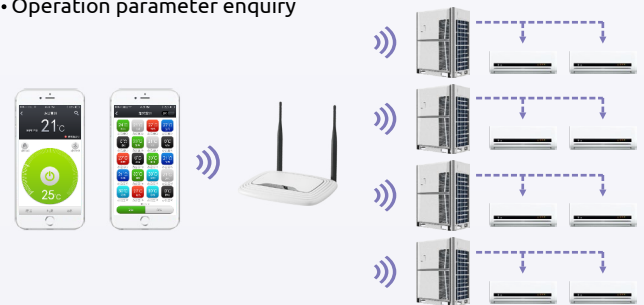
▶ Touch Screen Centralized Controller

- Wireless WIFI connection
- Touch screen, easy to use
- Can control single unit or groups
- Can be used with internet
- Weekly schedule management
- Mode lock, temperature lock



▶ Centralized Control App

- Available on iOS and Android
- Single unit controller or group control
- Weekly schedule management
- Operation parameter enquiry



▶ Touch Screen Wired Controllers

- Curved screen design
- Compact design
- Easy to operate with sensible screen
- New 3 cores communication cable
- Weekly timer function
- Control AC by your phone



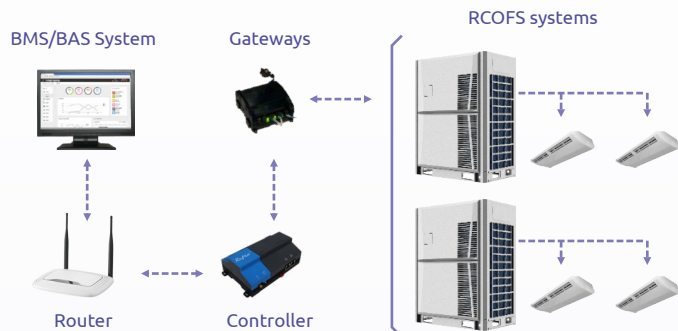
▶ Simplify Centralized Controller

- Easy to install. Controller connects to outdoor units only.
- 1 Controller can control max. 100 indoor units.
- Operation mode restriction
- Error or protection code display
- Can control single unit or all units together



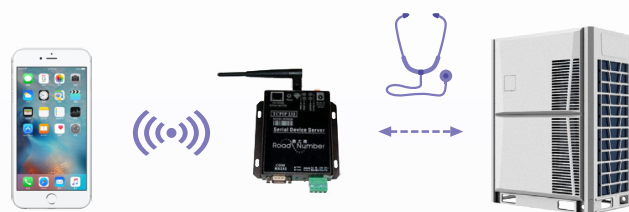
Centralized Control System

- Centralized control
- Electricity charge management
- Operation data record
- Schedule management



Doctor Kit Pro

- Fast to install, easy to use
- All indoor / outdoor units data can be enquired
- Indoor unit can be long distance remote controlled and diagnosed



Indoor Units

Four-way Cassette

COMPACT TYPE

- Capacity: 2.2 kW to 4.5 kW
- Panel size: 650*650mm
- Build in water pump
- EXV inside



Specifications

Model	RCKF022CAR1		RCKF028CAR1		RCKF036CAR1		RCKF045CAR1	
Power supply	220-240V/1N/50Hz		220-240V/1N/50Hz		220-240V/1N/50Hz		220-240V/1N/50Hz	
Capacity	Cooling	kW	2,2	2,8	3,6	4,5		
	Heating	kW	2,5	3,2	4	5		
Power Input		kW	0,015	0,015	0,023	0,023		
Fan motor	Model		DR-310-35Q-8-1	DR-310-35Q-8-1	DR-310-35Q-8-1	DR-310-35Q-8-1		
	Type		DC	DC	DC	DC		
	Capacitor	μF	/	/	/	/		
	Speed (Hi/Med/Low)	r/min	570/440/350	570/440/350	640/530/440	640/530/440		
Indoor coil	Number of rows		2	2	2	2		
	Fin type		Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum		
	Fin spacing	mm	1,4	1,4	1,4	1,4		
	Tube pitch(a)x row pitch(b)	mm	21x13.37	21x13.37	21x13.37	21x13.37		
	Tube type		Inner grooved	Inner grooved	Inner grooved	Inner grooved		
	Number of circuit		4	4	4	4		
	Tube diameter	mm	Φ7	Φ7	Φ7	Φ7		
Air flow		m ³ /h	440/327/246	440/327/246	530/432/327	530/432/327		
Sound pressure level		dB(A)	21~32	21~32	26~36	26~36		
Body	Dimension (W×H×D)	mm	653×267×585	653×267×585	653×267×585	653×267×585		
	Packing (W×H×D)	mm	745×375×675	745×375×675	745×375×675	745×375×675		
	Net/Gross weight	kg	17.5/23	17.5/23	17.5/23	17.5/23		
Panel	Dimension (W×H×D)	mm	650×30×650	650×30×650	650×30×650	650×30×650		
	Packing (W×H×D)	mm	750×95×750	750×95×750	750×95×750	750×95×750		
	Net/Gross weight	kg	2.7/4.0	2.7/4.0	2.7/4.0	2.7/4.0		
Refrigerant type			R410A	R410A	R410A	R410A		
Throttle type			EXV	EXV	EXV	EXV		
Design pressure		MPa	4,5	4,5	4,5	4,5		
Liquid pipe / Gas pipe		mm	Φ6.35/Φ9.53	Φ6.35/Φ9.53	Φ6.35/Φ12.7	Φ6.35/Φ12.7		
Connecting wire	Power wire	mm ²	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)		
	Signal wire	mm ²	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield		
Drainage water pipe (outer diameter)		mm	DN25	DN25	DN25	DN25		
Controller	Standard		Remote controller	Remote controller	Remote controller	Remote controller		
	Optional		Wired controller	Wired controller	Wired controller	Wired controller		
Operation temp		°C	16~32	16~32	16~32	16~32		

STANDARD TYPE

- Capacity: 5.6 kW to 16 kW
- Panel size: 950*950mm
- Built in water pump
- EXV inside



Specifications

Model			RCKRF056BAR1	RCKRF071BAR1	RCKRF080BAR1	RCKRF090BAR1	RCKRF100BAR1	
Power supply			220-240V/1PH/50Hz		220-240V/1PH/50Hz		220-240V/1PH/50Hz	
Capacity	Cooling	kW	5.6	7.1	8	9	10	
	Heating	kW	6.3	8	8.8	10	11	
Power Input		kW	0.014-0.023	0.018-0.063	0.018-0.063	0.026-0.066	0.026-0.066	
Fan motor	Model		DR-310-60Q-8-1	DR-310-60Q-8-1	DR-310-60Q-8-1	DR-310-100Q-8	DR-310-100Q-8	
	Type		DC	DC	DC	DC	DC	
	Brand		Refra	Refra	Refra	Refra	Refra	
	Speed (Hi/Med/Low)	r/min	380/430/480	440/600/680	440/600/680	420/520/600	420/520/600	
Indoor coil	Number of rows		2	2	2	2	2	
	Fin type		Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	
	Tube diameter and type	mm	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube	
Air flow (High speed)		m³/h	710/810/910	825/1140/1310	825/1140/1310	1000/1200/1500	1000/1200/1500	
Sound pressure level		dB(A)	31-38	34-39	34-39	37~41	35-41	
Body	Dimension (W×H×D)	mm	833×232×900	833×232×900	833×232×900	833×286×900	833×286×900	
	Packing (W×H×D)	mm	920×265×985	920×265×985	920×265×985	920×310×985	920×310×985	
	Net/Gross weight	kg	22/28	22/28	22/28	27/33.5	27/33.5	
Panel	Dimension (W×H×D)	mm	950×50×950	950×50×950	950×50×950	950×50×950	950×50×950	
	Packing (W×H×D)	mm	1030×105×1030	1030×105×1030	1030×105×1030	1030×105×1030	1030×105×1030	
	Net/Gross weight	kg	5.4/8	5.4/8	5.4/8	5.4/8	5.4/8	
Refrigerant type			R410A	R410A	R410A	R410A	R410A	
Throttle type			Electrical expansion valve	Electrical expansion valve	Electrical expansion valve	Electrical expansion valve	Electrical expansion valve	
Design pressure		MPa	4.5	4.5	4.5	4.5	4.5	
Liquid pipe / Gas pipe		mm	Ø6.35/ Ø12.7	Ø9.52/ Ø15.88	Ø9.52/ Ø15.88	Ø9.52/ Ø15.88	Ø9.52/ Ø15.88	
Connecting wire	Power wire	mm²	2.5*2+2.5(L≤20m)	2.5*2+2.5(L≤20m)	2.5*2+2.5(L≤20m)	2.5*2+2.5(L≤20m)	2.5*2+2.5(L≤20m)	
	Signal wire	mm²	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25	Ø25	Ø25	
Controller	Standard		Remote controller	Remote controller	Remote controller	Remote controller	Remote controller	
	Optional		Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	
Operation temp		°C	16~32	16~32	16~32	16~32	16~32	

Model			RCKRF112BAR1	RCKRF125BAR1	RCKRF140BAR1	RCKRF160BAR1
Power supply			220-240V/1PH/50Hz		220-240V/1PH/50Hz	
Capacity	Cooling	kW	11.2	12.5	14	16
	Heating	kW	12.5	14	15	17
Power Input		kW	0.026-0.066	0.04-0.1	0.04-0.1	0.04-0.1
Fan motor	Model		DR-310-100Q-8	DR-310-100Q-8	DR-310-100Q-8	DR-310-100Q-8
	Type		DC	DC	DC	DC
	Brand		Refra	Refra	Refra	Refra
	Speed (Hi/Med/Low)	r/min	420/520/600	480/580/680	480/580/680	480/580/680
Indoor coil	Number of rows		2	2	2	2
	Fin type		Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum
	Tube diameter and type	mm	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube
Air flow (High speed)		m³/h	1000/1200/1500	1200/1400/1700	1200/1400/1700	1200/1400/1700
Sound pressure level		dB(A)	35-41	40-47	40-47	40-47
Body	Dimension (W×H×D)	mm	833×286×900	833×286×900	833×286×900	833×286×900
	Packing (W×H×D)	mm	920×310×985	920×310×985	920×310×985	920×310×985
	Net/Gross weight	kg	27/33.5	27/33.5	27/33.5	27/33.5
Panel	Dimension (W×H×D)	mm	950×50×950	950×50×950	950×50×950	950×50×950
	Packing (W×H×D)	mm	1030×105×1030	1030×105×1030	1030×105×1030	1030×105×1030
	Net/Gross weight	kg	5.4/8	5.4/8	5.4/8	5.4/8
Refrigerant type			R410A	R410A	R410A	R410A
Throttle type			Electrical expansion valve	Electrical expansion valve	Electrical expansion valve	Electrical expansion valve
Design pressure		MPa	4.5	4.5	4.5	4.5
Liquid pipe / Gas pipe		mm	Ø9.52/ Ø15.88	Ø9.52/ Ø15.88	Ø9.52/ Ø15.88	Ø9.52/ Ø15.88
Connecting wire	Power wire	mm²	2.5*2+2.5(L≤20m)	2.5*2+2.5(L≤20m)	2.5*2+2.5(L≤20m)	2.5*2+2.5(L≤20m)
	Signal wire	mm²	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25	Ø25
Controller	Standard		Remote controller	Remote controller	Remote controller	Remote controller
	Optional		Wired controller	Wired controller	Wired controller	Wired controller
Operation temp		°C	16~32	16~32	16~32	16~32

Wall-mounted

- Capacity: 2.2 kW to 7.1 kW
- Built-in EXV
- Compact size and low noise
- DC fan motor for standard



Specifications

Model			RCSF022DAR1	RCSF028DAR1	RCSF036DAR1	RCSF045DAR1	RCSF056DAR1	RCSF070DAR1	RCSF080DAR1
Power supply			220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1	8
	Heating	kW	2.5	3.2	4.0	5.0	6.3	8	8.8
Power Input		kW	0.015	0.015	0.020	0.02	0.03	0.05	0.06
Fan motor	Model		DR-310-25G-8	DR-310-25G-8	DR-310-50G-8	DR-310-50G-8	DR-310-50G-8	DR-310-50G-8-1	DR-310-50G-8-1
	Type		DC	DC	DC	DC	DC	DC	DC
	Brand		Lvzhi	Lvzhi	Lvzhi	Lvzhi	Lvzhi	Lvzhi	Lvzhi
	Capacitor	μF	-	-	-	-	-	-	-
	Speed (Hi/Med/Low)	r/min	950/850/800	950/850/800	900/800/750	900/800/750	1100/950/850	1200/1050/900	1250/1100/950
Indoor coil	Number of rows		2	2	2	2	2	2	2
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and type	mm	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube
Air flow (Hi/Med/Low)		m ³ /h	410/350/330	410/350/330	640/540/520	640/540/520	800/690/600	990/850/700	1050/890/760
Sound power level		dB(A)	24~33	24~33	27~36	29~38	32~42	35~43	35~46
Body	Dimension (W×H×D)	mm	782×277×215	782×277×215	948×314×243	948×314×243	948×314×243	1050×314×246	1050×314×246
	Packing (W×H×D)	mm	870×365×280	870×365×280	1045×400×330	1045×400×330	1045×400×330	1150×400×330	1150×400×330
	Net/Gross weight	kg	8.5/10	8.5/10	13/15	13/15	13/15	14.5/17	14.5/17
Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A	R410A
Throttle type			EXV	EXV	EXV	EXV	EXV	EXV	EXV
Design pressure		MPa	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Liquid pipe / Gas pipe		mm	Ø6.35/ Ø9.53	Ø6.35/ Ø9.53	Ø6.35/ Ø12.7	Ø6.35/ Ø12.7	Ø6.35/ Ø12.7	Ø9.52/ Ø15.9	Ø9.52/ Ø15.9
Connecting wire	Power wire	mm ²	1.5*2+2.5	1.5*2+2.5	1.5*2+2.5	1.5*2+2.5	1.5*2+2.5	1.5*2+2.5	1.5*2+2.5
	Signal wire	mm ²	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2
Drainage water pipe (Outer diameter)		mm	Ø20	Ø20	Ø20	Ø20	Ø20	Ø20	Ø20
Controller	Standard		Remote controller	Remote controller	Remote controller	Remote controller	Remote controller	Remote controller	Remote controller
	Optional		Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	Wired controller
Operation temperature		°C	16~32	16~32	16~32	16~32	16~32	16~32	16~32

Floor Ceiling

- Capacity: 4.5kW to 16.0kW
- Flexible installation: vertical or horizontal installed
- Built-in with EXV
- Water pump box is optional
- DC motor is optional



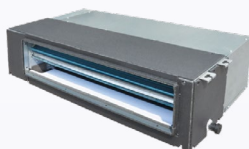
Specifications

Model			RCCF045AR1	RCCF056AR1	RCCF071AR1	RCCF080AR1
Power supply			220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz
Capacity	Cooling	kW	4.5	5.6	7.1	8
	Heating	kW	5.0	6.3	8.0	8.8
Power Input		kW	0.04	0.04	0.065	0.065
Fan motor	Model		DR-310-120LD-8	DR-310-120LD-8	DR-310-120LD-8	DR-310-120LD-8
	Type		DC	DC	DC	DC
	Brand		Panasonic	Panasonic	Panasonic	Panasonic
	Speed (Hi/Med/Low)	r/min	800/650/520	800/650/520	980/880/780	980v/880/780
Indoor coil	Number of rows		2	2	2	2
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and type	mm	Ø9.53, Innergroove tube	Ø9.52, Innergroove tube	Ø9.52, Innergroove tube	Ø9.53, Innergroove tube
Air flow (High speed)		m ³ /h	950	950	1300	1300
Sound power level		dB(A)	37~46	37~46	39~48	39~48
Body	Dimension (W×H×D)	mm	1245×680×240	1245×680×240	1245×680×240	1245×680×240
	Packing (W×H×D)	mm	1325×770×330	1325×770×330	1325×770×330	1325×770×330
	Net/Gross weight	kg	36/42	36/42	36/42	36/42
Refrigerant type			R410A	R410A	R410A	R410A
Throttle type			EXV	EXV	EXV	EXV
Design pressure		MPa	4.5	4.5	4.5	4.5
Liquid pipe / Gas pipe		mm	Ø6.35/ Ø12.7	Ø6.35/ Ø12.7	Ø9.53/ Ø15.88	Ø9.53/ Ø15.88
Connecting wire	Power wire	mm ²	2.5*3	2.5*3	2.5*3	2.5*3
	Signal wire	mm ²	0.75*2	0.75*2	0.75*2	0.75*2
Drainage water pipe (Outer diameter)		mm	Ø20	Ø20	Ø25	Ø25
Controller	Standard		Remote controller	Remote controller	Remote controller	Remote controller
	Optional		Wired controller	Wired controller	Wired controller	Wired controller
Operation temp		°C	16~32	16~32	16~32	16~32

Model			RCCF090AR1	RCCF112AR1	RCCF140AR1	RCCF160AR1
Power supply			220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz
Capacity	Cooling	kW	9	11.2	14	16
	Heating	kW	10.0	12.5	15	17
Power Input		kW	0.135	0.15	0.15	0.15
Fan motor	Model		DR-310-120LD-8	2*DR-310-75LD-8	2*DR-310-75LD-8	2*DR-310-75LD-8
	Type		DC	DC	DC	DC
	Brand		Panasonic	Panasonic	Panasonic	Panasonic
	Speed (Hi/Med/Low)	r/min	1300/1200/1100	1300/1150/1000	1300/1150/1000	1300/1150/1000
Indoor coil	Number of rows		2	2	2	2
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and type	mm	Ø9.53, Innergroove tube	Ø9.53, Innergroove tube	Ø9.53, Innergroove tube	Ø9.53, Innergroove tube
Air flow (High speed)		m³/h	1500	2300	2300	2300
Sound power level		dB(A)	44~50	45~52	45~52	45~52
Body	Dimension (W×H×D)	mm	1245×680×240	1670×680×240	1670×680×240	1670×680×240
	Packing (W×H×D)	mm	1325×770×330	1750×770×330	1750×770×330	1750×770×330
	Net/Gross weight	kg	38/44	51/58	51/58	51/58
Refrigerant type			R410A	R410A	R410A	R410A
Throttle type			EXV	EXV	EXV	EXV
Design pressure		MPa	4.5	4.5	4.5	4.5
Liquid pipe / Gas pipe		mm	Ø9.53/ Ø15.88	Ø9.53/ Ø15.88	Ø9.53/ Ø15.9	Ø9.53/ Ø15.9
Connecting wire	Power wire	mm²	2.5*3	2.5*3	2.5*3	2.5*3
	Signal wire	mm²	0.75*2	0.75*2	0.75*2	0.75*2
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25	Ø25
Controller	Standard		Remote controller	Remote controller	Remote controller	Remote controller
	Optional		Wired controller	Wired controller	Wired controller	Wired controller
Operation temp		°C	16~32	16~32	16~32	16~32

Short concealed ducted

- Capacity: 2.2 kW to 7.1 kW
- External static pressure: 30Pa
- Build-in with EXV
- Low noise and light weight
- Short body, 700mm width for 2.2KW to 4.5KW unit
- Build in water pump is optional
- DC motor is optional
- Filter is optional

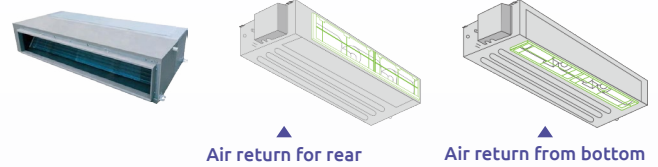


Specifications

Model			RCDLFD022AR1	RCDLFD028AR1	RCDLFD036AR1	RCDLFD045AR1	RCDLFD056AR1	RCDLFD071AR1
Power supply			220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating	kW	2.5	3.2	4.0	5.0	6.3	8.0
Power Input		kW	0.02	0.02	0.03	0.035	0.045	0.055
Fan motor	Model		DR-310-27F-8	DR-310-27F-8	DR-310-27F-8	DR-310-27F-8	DR-310-55F-8	DR-310-68F-8
	Type		DC	DC	DC	DC	DC	DC
	Brand		Panasonic	Panasonic	Panasonic	Panasonic	Panasonic	Panasonic
	Speed (Hi/Med/Low)	r/min	1130/980/920	1130/980/920	1330/1090/1000	1360/1220/1200	1330/1130/1070	1360/1200/1150
ESP		Pa	30	30	30	30	30	30
Indoor coil	Number of rows		2	2	2	2	2	2
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and type	mm	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube	Ø7, Innergroove tube
Air flow (High speed)		m³/h	450	450	500	620	800	1000
Sound power level		dB(A)	24~29	24~29	25~32	32~37	28~38	30~39
Body	Dimension (W×H×D)	mm	814×210×467	814×210×467	814×210×467	814×210×467	1010×210×467	1214×210×467
	Packing (W×H×D)	mm	910×240×510	910×240×510	910×240×510	910×240×510	1110×240×510	1310×240×510
	Net/Gross weight	kg	16/19	16/19	16.5/19	16.5/19	20/23	25/28
Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A
Throttle type			EXV	EXV	EXV	EXV	EXV	EXV
Design pressure		MPa	4.5	4.5	4.5	4.5	4.5	4.5
Liquid pipe / Gas pipe		mm	Ø6.35/ Ø9.53	Ø6.35/ Ø9.53	Ø6.35/ Ø12.7	Ø6.35/ Ø12.7	Ø6.35/ Ø12.7	Ø9.53/ Ø15.9
Connecting wire	Power wire	mm²	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)
	Signal wire	mm²	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25	Ø25	Ø25	Ø25
Controller	Standard		Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	Wired controller
	Optional		Remote controller	Remote controller	Remote controller	Remote controller	Remote controller	Remote controller
Operation temp		°C	16~32	16~32	16~32	16~32	16~32	16~32

Medium ESP ducted

- Capacity: 7 kW to 15 kW
- External static pressure: 70Pa
- Built-in with EXV
- Flexible installation, many options
- Air return method can be sitechanged
- Filter is standard
- Build in water pump is optional
- DC motor is optional



Air return for rear

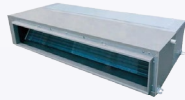
Air return from bottom

Specifications

Model			RCDMF071AR1	RCDMF080AR1	RCDMF090AR1	RCDMF100AR1	RCDMF120AR1	RCDMF150AR1
Power supply			220-240V/1PH/50Hz		220-240V/1PH/50Hz		220-240V/1PH/50Hz	
Capacity	Cooling	kW	7.1	8	9	10	12	15
	Heating	kW	8	9	10	11	13	17
Power Input		kW	0.11	0.11	0.2	0.340	0.2	0.2
Fan motor	Model		DR-310-90F-8	DR-310-90F-8	DR-310-75F-8 DR-310-150F-8	DR-310-75F-8 DR-310-150F-8	DR-310-75F-8 DR-310-150F-8	DR-310-75F-8 DR-310-150F-8
	Type		DC	DC	DC	DC	DC	DC
	Brand		Panasonic	Panasonic	Panasonic	Panasonic	Panasonic	Panasonic
	Speed (Hi/Med/Low)	r/min	1200/1050/950	1200/1050/950	1300/1150/970 1300/1150/970	1300/1150/970 1300/1150/970	1300/1150/970 1300/1150/970	1300/1150/970 1300/1150/970
	ESP	Pa	70	70	70	70	70	70
Indoor coil	Number of rows		3	3	3	3	3	3
	Fin type		Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum
Tube diameter and type		mm	Ø7.94,Innergroove Tube	Ø7.94,Innergroove Tube	Ø7.94,Innergroove Tube	Ø7.94,Innergroove Tube	Ø7.94,Innergroove Tube	Ø7.94,Innergroove Tube
Air flow (High speed)		m ³ /h	1220	1220	2000	2000	2000	2000
Sound power level		dB(A)	36~41	36~41	40~44	40~44	40~44	40~44
Body	Dimension (W×H×D)	mm	1209×260×680	1209×260×680	1445×260×680	1445×260×680	1445×260×680	1445×260×680
	Packing (W×H×D)	mm	1255×325×720	1255×325×720	1490×325×720	1490×325×720	1490×325×720	1490×325×720
	Net/Gross weight	kg	31/36	31/36	43/48	43/48	43/48	43/48
Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A
Throttle type			EXV	EXV	EXV	EXV	EXV	EXV
Design pressure		MPa	4.5	4.5	4.5	4.5	4.5	4.5
Liquid pipe / Gas pipe		mm	Ø9.53/Ø15.9	Ø9.53/Ø15.9	Ø9.53/Ø15.9	Ø9.53/Ø15.9	Ø9.53/Ø15.9	Ø9.53/Ø15.9
Connecting wire	Power wire	mm ²	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)
	Signal wire	mm ²	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25	Ø25	Ø25	Ø25
Controller	Standard		Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	Wired controller
	Optional		Remote controller	Remote controller	Remote controller	Remote controller	Remote controller	Remote controller
Operation temp		°C	16~32	16~32	16~32	16~32	16~32	16~32

High ESP ducted

- Capacity: 7.1 kW to 56 kW
- External static pressure: 150 / 200 Pa
- Built-in with EXV
- Suitable for long distance air supply
- Water pump box is optional



7.1kW / 8.0kW / 9.0kW



10.0kW / 12.0kW / 15.0kW



20kW / 25kW / 28kW / 45kW / 56kW

Specifications

Model			RCDHF071AR1	RCDHF080AR1	RCDHF090AR1	RCDHF100AR1
Power supply			220-240V/1PH/50Hz		220-240V/1PH/50Hz	
Capacity	Cooling	kW	7.1	8	9	10
	Heating	kW	7.8	8.8	10.0	11.0
Power Input		kW	0.340	0.340	0.340	0.450
Fan motor	Model		YDK110-75F-4P3H105L-2 YSK120-150F-4P3H105-2	YDK110-75F-4P3H105L-2 YSK120-150F-4P3H105-2	YDK110-75F-4P3H105L-2 YSK120-150F-4P3H105-2	YSK139-300F-4P3H95
	Type		AC	AC	AC	AC
	Brand		Kangbao	Kangbao	Kangbao	Kangbao
	Capacitor	µF	4+6	4+6	4+6	15
	Speed (Hi/Med/Low)	r/min	1420/1370/1330 1400/1320/1280	1420/1370/1330 1400/1320/1280	1420/1370/1330 1400/1320/1280	1050/830/720
ESP	Pa	150	150	150	150	
Indoor coil	Number of rows		3	3	3	3
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
Tube diameter and type		mm	Ø7.94,Innergroove tube	Ø7.94,Innergroove tube	Ø7.94,Innergroove tube	Ø7.94,Innergroove tube
Air flow (High speed)		m ³ /h	1500	1500	1500	2300
Sound power level		dB(A)	40~42	40~42	44~52	44~52
Body	Dimension (W×H×D)	mm	1445×260×680	1445×260×680	1445×260×680	1190×370×620
	Packing (W×H×D)	mm	1480×320×720	1480×320×720	1480×320×720	1480×320×720
	Net/Gross weight	kg	46/50	46/50	46/50	47/51
Refrigerant type			R410A	R410A	R410A	R410A
Throttle type			EXV	EXV	EXV	EXV
Design pressure		MPa	3.8	3.8	3.8	3.8
Liquid pipe / Gas pipe		mm	Ø9.53/Ø15.9	Ø9.53/Ø15.9	Ø9.53/Ø15.9	Ø9.53/Ø15.9
Connecting wire	Power wire	mm ²	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)
	Signal wire	mm ²	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25	Ø25
Controller	Standard		Wired controller	Wired controller	Wired controller	Wired controller
	Optional		Remote controller	Remote controller	Remote controller	Remote controller
Operation temp		°C	16~32	16~32	16~32	16~32

Model			RCDHF120AR1	RCDHF150AR1	RCDHF200AR1	RCDHF250AR1
Power supply			220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz
Capacity	Cooling	kW	12	15	20	25
	Heating	kW	13.0	17.0	22.0	27.5
Power Input		kW	0.45	0.45	1.200	1.200
Fan motor	Model		YSK139-300F-4P3H95	YSK139-300F-4P3H95	YDK-300F-4P3 *2	YDK-300F-4P3 *2
	Type		AC	AC	AC	AC
	Brand		Kangbao	Kangbao	Yongan	Yongan
	Capacitor	μF	15	15	15+15	15+15
	Speed (Hi/Med/Low)	r/min	1050/830/720	1050/830/720	1050/920/820	1050/920/820
	ESP	Pa	150	150	150	150
Indoor coil	Number of rows		3	3	4	4
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and type	mm	Ø7.94,Innergroove tube	Ø7.94,Innergroove tube	Ø9.52,Innergroove tube	Ø9.52,Innergroove tube
Air flow (High speed)		m³/h	2300	2300	4000	4200
Sound power level		dB(A)	44~52	44~52	45~53	45~54
Body	Dimension (W×H×D)	mm	1190×370×620	1190×370×620	1465×448×811	1465×448×811
	Packing (W×H×D)	mm	1480×320×720	1480×320×720	1510×490×870	1510×490×870
	Net/Gross weight	kg	47/51	47/51	102/106	102/106
Refrigerant type			R410A	R410A	R410A	R410A
Throttle type			EXV	EXV	EXV	EXV
Design pressure		MPa	3.8	3.8	3.8	3.8
Liquid pipe / Gas pipe		mm	Ø9.53/Ø15.9	Ø9.53/Ø15.9	Ø22/Ø12.7	Ø22/Ø12.7
Connecting wire	Power wire	mm²	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+4(L≤20m)	2.5*2+4(L≤20m)
	Signal wire	mm²	0.75*2 shield	0.75*2 shield	0.75*2 shield	0.75*2 shield
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø30	Ø30
Controller	Standard		Wired controller	Wired controller	Wired controller	Wired controller
	Optional		Remote controller	Remote controller	Remote controller	Remote controller
Operation temp		°C	16~32	16~32	16~32	16~32

Model			RCDHF280AR1	RCDHF450AR1	RCDHF560AR1
Power supply			220-240V/1PH/50Hz	380-415V/3N/50Hz	380-415V/3N/50Hz
Capacity	Cooling	kW	28	45	56
	Heating	kW	30.8	50	63
Power Input		kW	1.200	1.6	2,45
Fan motor	Model		YDK-300F-4P3 *2	YX3-100L1-4-B3	YX3-100L1-4
	Type		AC	AC	AC
	Brand		Yongan	Wannan	Wannan
	Capacitor	μF	15+15	/	/
	Speed (Hi/Med/Low)	r/min	1050/920/820	1440	1440
	ESP	Pa	150	200Pa	200Pa
Indoor coil	Number of rows		4	3	3
	Fin type		Hydrophilic aluminum	Hydrophilic aluminum	Hydrophilic aluminum
	Tube diameter and type	mm	Ø9.52,Innergroove tube	Ø7.94,Innergroove tube	Ø7.94,Innergroove tube
Air flow (High speed)		m³/h	4400	6000	8000
Sound power level		dB(A)	45~55	60	64
Body	Dimension (W×H×D)	mm	1465×448×811	2165×676×916	2165×676×916
	Packing (W×H×D)	mm	1510×490×870	2267×1050×840	2267×1050×840
	Net/Gross weight	kg	102/106	222/260	222/260
Refrigerant type			R410A	R410A	R410A
Throttle type			EXV	EXV	EXV
Design pressure		MPa	3.8	4,5	4,5
Liquid pipe / Gas pipe		mm	Ø22/Ø12.7	Ø15.9/Ø28.6	Ø15.9/Ø28.6
Connecting wire	Power wire	mm²	2.5*2+4(L≤20m) 4*2+4(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20m<L≤50m)
	Signal wire	mm²	0.75*2 shield	0.75*2 shield	0.75*2 shield
Drainage water pipe (Outer diameter)		mm	Ø30	Ø32	Ø32
Controller	Standard		Wired controller	Wired controller	Wired controller
	Optional		Remote controller	Remote controller	Remote controller
Operation temp		°C	16~32	16~32	16~32

AHU connection kit

- Refra AHU connection kit is an interface to allow 3rd party manufacturer's AHU connecting to Refra VRF outdoor units.
- 4 basic modules: 5HP/10HP/20HP/30HP
- Can be combined into bigger capacity.
- 0-10V Function.
- Remote ON/OFF function.
- Remote mode (cooling/heating) setting function



One-way Cassette

- Capacity: 2.2kW to 7.1kW
- Single direction air flow
- Built-in drain pump
- Slim body 235mm
- Fresh air supply



Specifications

Model			RCZF022AR1	RCZF028AR1	RCZF036AR1	RCZF045AR1	RCZF056AR1	RCZF071AR1
Power supply			220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz	220-240V/1N/50Hz
Capacity	Cooling	kW	2,2	2,8	3,6	4,5	5,6	7,1
	Heating	kW	2,5	3,2	4	5	6,3	8
Power input		kW	0,04	0,04	0,04	0,05	0,07	0,09
Fan motor	Model		YSK-10-4A	YSK-10-4A	YSK-10-4A	YSK-12-4	YSK-15-4	YSK-30-4
	Type		AC	AC	AC	AC	AC	AC
	Brand		Refra	Refra	Refra	Refra	Refra	Refra
	Capacitor	µF	1,6	1,6	1,6	2	1,6	3
	Speed	r/min	730	730	730	760	750	990
Indoor coil	Number of rows		3	3	3	3	3	3
	Fin type		Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum
Tube diameter and type		mm	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube
Air flow		m ³ /h	520	520	520	610	750	950
Sound pressure level		dB(A)	32~36	32~36	32~36	36~41	35~41	38~45
Body	Dimension (W×H×D)	mm	994×250×532	994×250×532	994×250×532	994×290×532	1304×290×572	1304×290×572
	Packing (W×H×D)	mm	1160×275×655	1160×275×655	1160×275×655	1160×315×655	1470×305×690	1470×305×690
	Net/Gross weight	kg	24/30	24/30	24/30	26/32	34/39	34/39
Panel	Dimension (W×H×D)	mm	1070×50×520	1070×50×520	1070×50×520	1070×50×520	1380×50×560	1380×50×560
	Packing (W×H×D)	mm	1090×65×540	1090×65×540	1090×65×540	1090×65×540	1390×70×560	1390×70×560
	Net/Gross weight	kg	3.6/5	3.6/5	3.6/5	3.6/5	3.6/5	3.6/5
Refrigerant type			R410A	R410A	R410A	R410A	R410A	R410A
Throttle type			Electrical expansion valve	Electrical expansion valve	Electrical expansion valve	Electrical expansion valve	Electrical expansion valve	Electrical expansion valve
Design pressure		MPa	4,5	4,5	4,5	4,5	4,5	4,5
Liquid pipe / Gas pipe		mm	Ø6.35/ Ø9.53	Ø6.35/ Ø9.53	Ø6.35/ Ø9.53	Ø9.53/ Ø12.7	Ø9.53/ Ø12.7	Ø9.53/ Ø15.88
Connecting wire	Power wire	mm ²	2.5*2+2.5(L≤20m) 4*2+2.5(20<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20<L≤50m)	2.5*2+2.5(L≤20m) 4*2+2.5(20<L≤50m)
	Signal wire	mm ²	0,75	0,75	0,75	0,75	0,75	0,75
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25	Ø25	Ø25	Ø25
Controller	Standard		Remote controller	Remote controller	Remote controller	Remote controller	Remote controller	Remote controller
	Optional		Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	Wired controller
Operation temp		°C	16~32	16~32	16~32	16~32	16~32	16~32

Two-way Cassette

- Capacity: 4.5kW to 8.0kW
- Two direction air flow
- Built-in drain pump
- Super high air flow



Specifications

Model			RCXF045AR1	RCXF056AR1	RCXF071AR1	RCXF080AR1
Power supply			220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz	220-240V/1PH/50Hz
Capacity	Cooling	kW	4,5	5,6	7,1	8
	Heating	kW	5	6,3	8	9
Power input		kW	0,07	0,07	0,07	0,1
Fan motor	Model		YSK-25-4	YSK-25-4	YSK-30-4	YSK-30-4
	Type		AC	AC	AC	AC
	Brand		Refra	Refra	Refra	Refra
	Capacitor	µF	1,8	1,8	3	3
	Speed	r/min	895	895	990	990
Indoor coil	Number of rows		2	2	2	2
	Fin type		Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum	Hydrophilic Aluminum
Tube diameter and type		mm	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube	Ø7,Innergroove Tube
Air flow		m ³ /h	800	800	1120	1120
Sound pressure level		dB(A)	36~42	36~42	40~46	40~46
Body	Dimension (W×H×D)	mm	1068×310×517	1068×310×517	1308×310×517	1308×310×517
	Packing (W×H×D)	mm	1215×365×630	1215×365×630	1455×365×630	1455×365×630
	Net/Gross weight	kg	33/39.5	33/39.5	40/47	40/47
Panel	Dimension (W×H×D)	mm	1205×50×630	1205×50×630	1445×50×630	1445×50×630
	Packing (W×H×D)	mm	1235×70×655	1235×70×655	1475×70×655	1475×70×655
	Net/Gross weight	kg	6.5/8.5	6.5/8.5	7.5/10	7.5/10
Refrigerant type			R410A	R410A	R410A	R410A
Throttle type			Electrical expansion valve	Electrical expansion valve	Electrical expansion valve	Electrical expansion valve
Design pressure		MPa	4,5	4,5	4,5	4,5
Liquid pipe / Gas pipe		mm	Ø6.35/ Ø12.70	Ø6.35/ Ø12.70	Ø9.52/ Ø15.88	Ø9.52/ Ø15.88
Connecting wire	Power wire	mm ²	2×2.5+2.5mm2 (below 20m) 2×4.0+2.5mm2 (below 50m)	2×2.5+0.25mm2 (below 20m) 2×4.0+2.5mm2 (below 50m)	2×2.5+0.25mm2 (below 20m) 2×4.0+2.5mm2 (below 50m)	2×2.5+0.25mm2 (below 20m) 2×4.0+2.5mm2 (below 50m)
	Signal wire	mm ²	0,75	0,75	0,75	0,75
Drainage water pipe (Outer diameter)		mm	Ø25	Ø25	Ø25	Ø25
Controller	Standard		Remote controller	Remote controller	Remote controller	Remote controller
	Optional		Wired controller	Wired controller	Wired controller	Wired controller
Operation temp		°C	16~32	16~32	16~32	16~32