Technical Manual

Mini ARV

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Part 1 General Information

HAVC system has advantages such as intelligent and energy-saving operation, convenient design & installation, flexible &diversified placement, small occupation space in building, convenient usage, low operation cost, free of A/C room, non-water system and simple maintenance, which is popularized rapidly with the economic development in recent years. It is not only extensively applied in household, villa, small office, restaurant, beauty saloon, but also gradually applied in office building, complex building and large entertainment place where conventional HAVC system dominates. The unit uses R410A environment-friendly refrigerant, which is more efficient, more energy-saving, more environment-friendly and enjoys more and more promising market prospect.

1 ARV Characteristics

Comfortable User Experience

◇Excellent Energy-saving Effect

The new technology improve EER and COP of the system in a while, especially partially overloaded. The Integrated Part Load Value (IPLV) of the system reaches top level in the industry, the while series of products passed National first class energy-saving authentication. Take 10HP Modular Multi Outdoor Unit as example, the IPLV can be as high as 4.35.

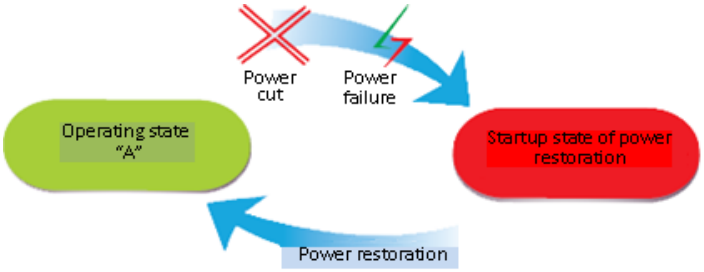
◇Environment-friendly Technology

① R410A environment-friendly refrigerant is used;

② It meets requirements of Euro RoHs, largely inhibiting the usage amount of hazardous substances.

◇Auto Restart Function

In some specific cases such as unattended A/C room, if unit encounters power failure during operation, regardless of the lasting time of power failure, once power is restored, the unit requires no manual restart and can automatically operate according to the mode set before power failure



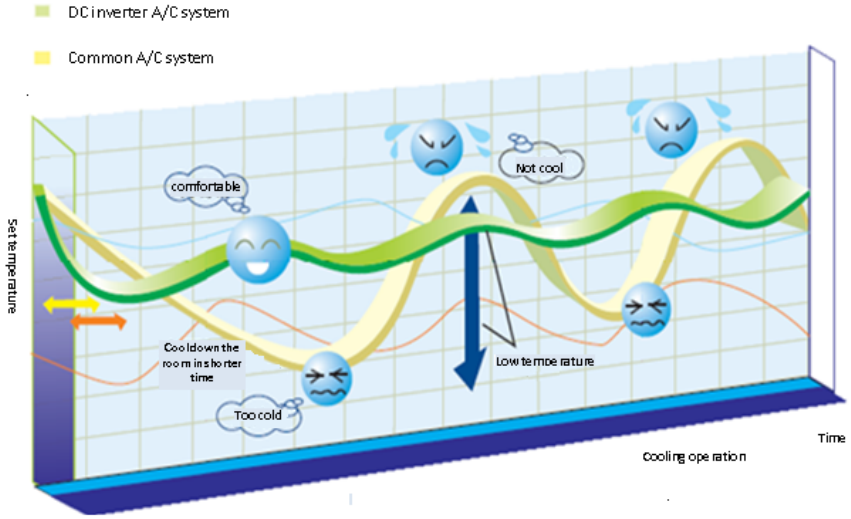
Restore to state "A" automatically

◇Advanced Quiet Technology

Based on state-level precision noise lab and noise spectrum analysis, parts such as motor and fan are strictly tested and selected, professional noise reduction design structure and pipeline are conducted and noise and unit is greatly reduced.

◇ Accurate Temperature Control

According to change trend of indoor ambient temperature, the unit can use PI algorithm to calculate capacity demand percentage of indoor unit, control operating frequency of compressor in real time and realize accurate control of room temperature.



◇ Fast Cooling/Heating Technology

According to change trend of indoor ambient temperature, the unit can use PI algorithm to calculate capacity demand percentage of indoor unit, control operating frequency of compressor in real time. Especially high indoor unit demand percentage at startup time can realize fast cooling or heating.

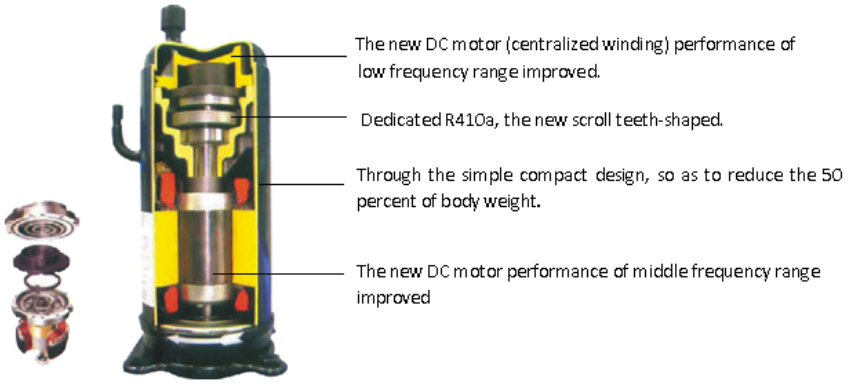
◇Wide temperature range

The unit uses advanced system design and has passed strict system matching and testing, which can ensure good operating effect and enable you to enjoy the feeling of everlasting spring whether under the temperature up to 52℃ or bitter cold climate of -15℃.

Leading DC inverter technology

◇DC Inverter Technology, Higher Efficiency

DC Inverter compressor can adjust operating frequency according to change of indoor demand and keep high IPLV either in cooling or heating operation mode;



It uses vortex DC inverter compressor whose key five parts are precisely machined in seven procedures, so DC inverter compressor features with low noise, high efficiency and long life. The minimum noise is as low as 40dB (A), energy and efficiency ratio is up to 3.85 in test condition and design life is up to 30 years.

◇Super-cooling technology

Super-cooling circuit design of outdoor heat exchanger ensures super-cooling of unit at maxium temperature of 12℃;

◇Efficient heat exchange technology

① Internal thread copper tube is used for heat exchange;

②High-efficient aluminum fine louver fin is used;

③ Hydrophilic membrane heat exchanging fin is high efficient and dirt-proof;

④ Optimized pipeline design of heat exchanger ensures more even heat exchanging of heat exchange tube and higher efficiency of heat exchange;

⑤ Better efficiency of heat exchange is available based on two-row heat exchanger optimized by CFD.

Net-typeoil return technology among compressors

An oil-gas separator is installed for each compressor. Part of the separated oil is used for its own oil return and the remaining part of the separated oil is used for oil return among compressors to keep balance of oil level of each compressor

Convenient Installation and Maintenance

◇Simple cabling: communication line between wired controller and indoor unit uses non-polar bi-core wire,requiring no line sequence, which can be installed easily and required no separate power supply.

◇Convenient setting system address

It’s very easy setting indoor unit system address by remote controller or wired controller

AUX offers a variety indoor unit, more than 100 models of 7 types. Capacity ranges are from 2.2kw to 14kw. It is full compliance with residential and light commerical place. Our systems can operate up to 130% of capacity which allows any system to be designed to the customers and applications needs.

2 External Appearance

Indoor units

Indoor unit type		Cassette	Ceiling & Floor	Low ESP Duct	Middle ESP Duct	High ESP Duct	Wall-mounted
Outline drawing							
Cooling capacity range of indoor unit (kW)	2.2	●		●			●
	2.8	●		●			●
	3.6	●		●			●
	4.5	●	●	●	●		●
	5.6	●	●	●	●		●
	7.1	●	●	●	●		●
	8.0	●	●		●		
	9.0	●	●		●		
	10.0	●	●		●		
	11.2	●	●		●	●	
	12.5	●	●		●	●	
	14.0	●	●		●	●	
	15.0				●	●	

Outdoor units

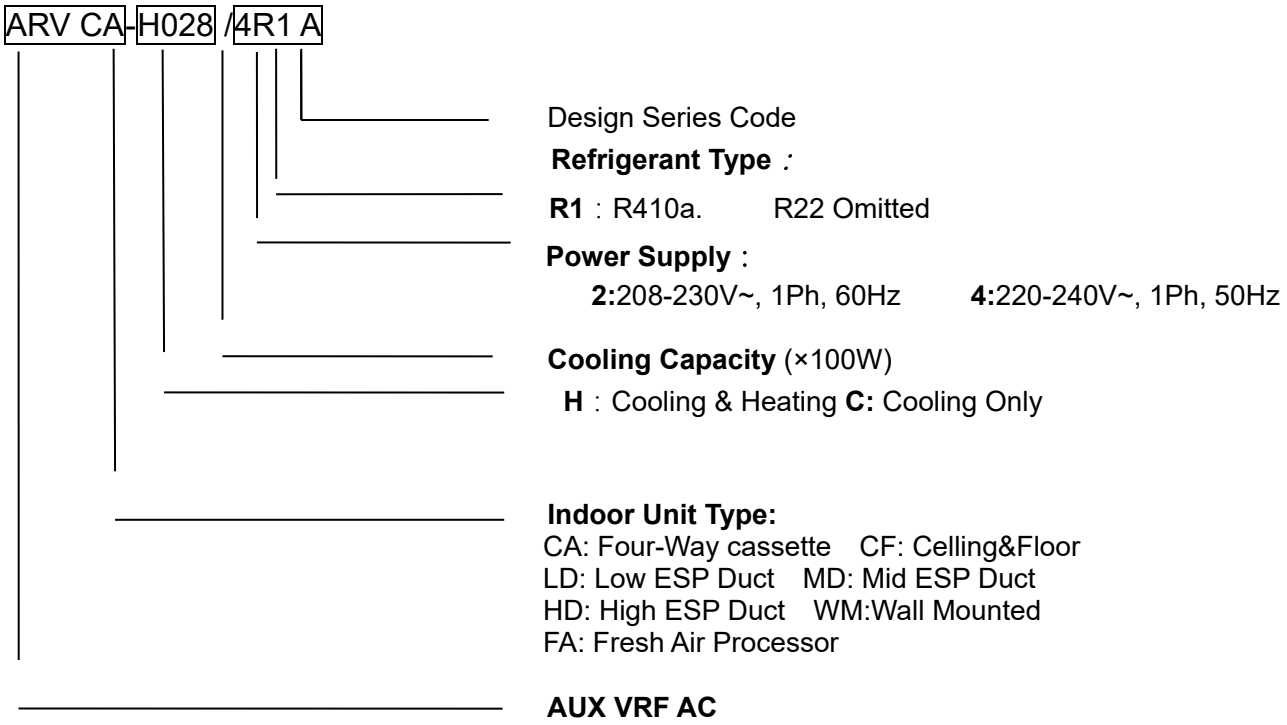
Outdoor unit	ARV-H080/4R1A	ARV-H100/4R1A	ARV-H120/4R1A	ARV-H140/4R1A	ARV-H160/4R1A
Outline drawing					

Outdoor unit	ARV-H220/5R1A	ARV-H280/4R1A
Outline drawing		

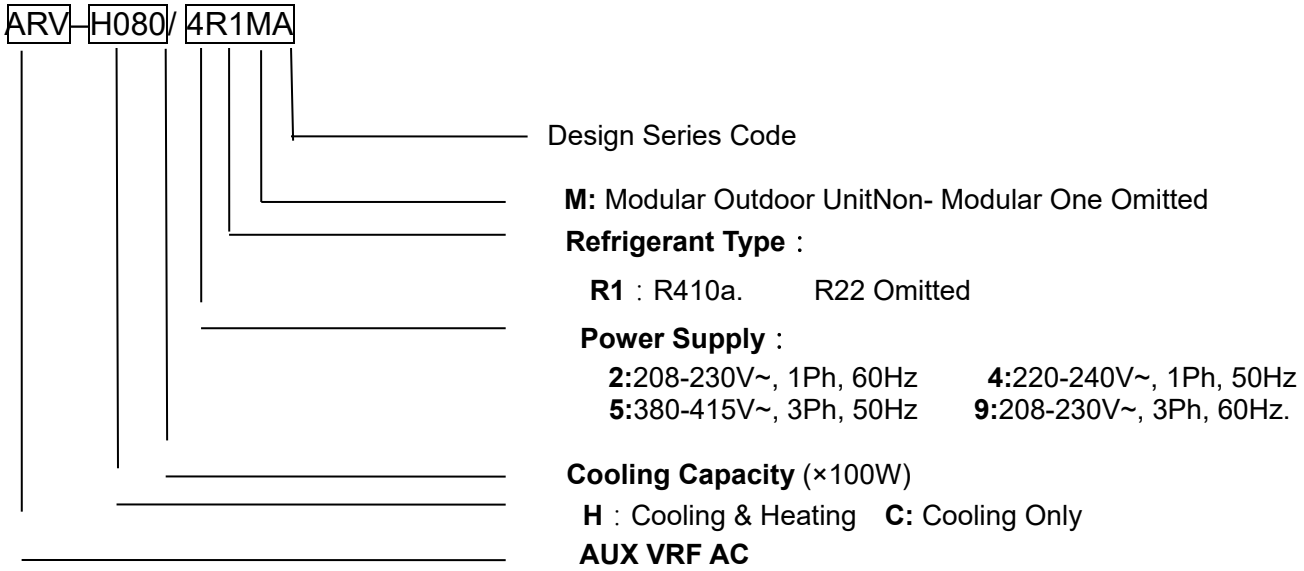
Electronic Expansion Valve

3Nomenclatures

Indoor unit



Outdoor Unit



Part 2 Indoor unit

Four-way cassette **10**

Ceiling&floor Type **39**

Wall-mounted Type **64**

Slim Duct **98**

Middle static pressure Duct Type **125**

High Static Pressure Duct Type **154**

Four-way cassette

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1. Features

(1) Concealed design

—Ceiling installation, room space saving, very suitable for family or office occasion.

(2) With Setting or Auto two operation modes

—Four-way blowing, strong circulating wind, multi wind speed

—the cooling or heating capacity can reach to each corner of the room

(3) One-step formed shell by mold

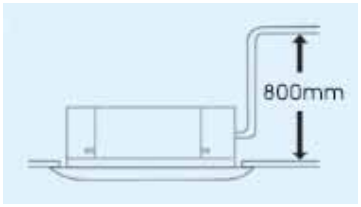
The appearance is elegant

(4) Special insulation design

—achieves high heat insulation efficiency, and no condensation water on shell

(5) Built-in drain pump

—Drain-head height is up to 0.8 meters, creating the ideal solution for perfect water drainage, also construction and installation is much easier and more convenient;



(6) Long term air filter

—Wash period is two times longer than normal filter, and maintenance is free

(7) 3D helix air blade ensures the air flow sufficiently

—reduces the unit thickness

—reduces the operation noise greatly

(8) Plastic drip tray adopts innovative foam combined with plastic technical

—The thickness of plastic reaches 1mm, avoid any leakage;

(9) 6 segments heat exchanger

—Increase exchanging area

—the efficiency of heat exchanging increased by 10%~15%

(10) Ingenious hook design

—the panel is convenient to install or remove

(11) Fresh air intake design

—Leading in fresh air to improve indoor air quality anytime

(12) All the units have low ambient temperature cooling function

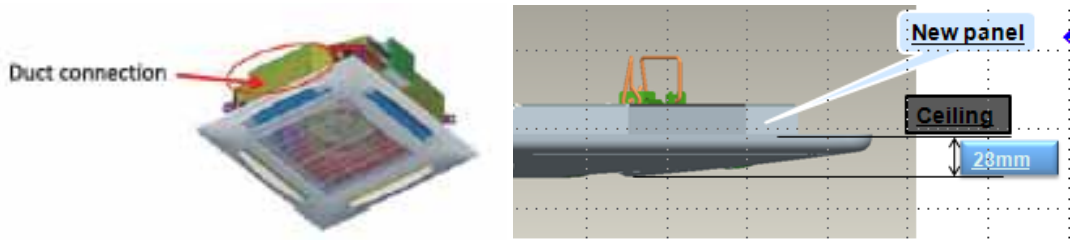
—makes the unit can run normally on the condition that the ambient temperature falls down to -15℃;

(13) Failure automatic detection

—The indicator will flash and the error code will display on the display board or remote controller, the failure code is easier to be found and make the malfunction checking easier. (C7 panel)

(14) Reserve spaces for air side-outlet

—Air duct can be connected from the four sides to nearby rooms



(15) Slimmer body

—The exposed height only has 18mm for small panel

(16) Two panels for choose: MB06, MB12

2. Specifications

Model	Indoor		ARVCA-H028/4R1A	ARVCA-H036/4R1A	ARVCA-H045/4R1A
	Panel		MB13	MB13	MB13
Factory Model	Indoor		ALCa-H09B4/R1DICA	ALCa-H12B4/R1DICA	ALCa-H16B4/R1DICA
	Panel		MB13	MB13	MB13
Code	Indoor		16104001000006	16104002000010	16104003000010

	Panel		16108004000004	16108004000004	16108004000004
Power Supply		V~,Hz, Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	2.8	3.6	4.5
	Heating	kW	3.0	4.3	5.0
Intdoor Fan Motor	Model		YDK30-6E1	YDK30-6E1	YDK30-6E1
	Brand		Sinjun	Sinjun	Sinjun
	Output Power	W	30	30	30
	Capacitor	uF	2.5	2.5	2.5
	Speed (Hi/Mi/Lo)	r/min	870/830/785	870/830/785	870/830/785
Indoor Coil	a.Number Of Row		2	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.5	1.5	1.5
	d.Fin Material		Hydrophilicaluminum fin	Hydrophilic aluminum fin	Hydrophobia aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7， Inner grooved	φ7， Inner grooved	φ7， Inner grooved
	f.Coil Length x Height x Width	mm	1160×185×25.4	1160×185×25.4	1160×185×25.4
	g.Heat Exchanging Area	m^2	5.76	5.76	5.76
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	620/496/434	620/496/434	850/680/595
	Noise Level(Hi/Mi/Lo)	dB(A)	38/35/32	38/35/32	39/36/33
	Net Dimension (W×D×H)	mm	615x615x263	615x615x263	615x615x263
	Packing Dimension (W×D×H)	mm	700x700x330	700x700x330	700x700x330
	Net Weight	Kg	20	20	20
	Gross Weight	Kg	25	25	25
Panel	Net Dimension (W×D×H)	mm	650x650x55	650x650x55	650x650x55
	Packing Dimension (W×D×H)	mm	710x710x80	710x710x80	710x710x80
	Net Weight	Kg	3	3	3
	Gross Weight	Kg	5	5	5
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	6.35
	Gas Side	mm	12.7	12.7	12.7
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	10~25	15~30	20~35
Stuffing Quantity	20/40/40H	Unit	140/299/345	140/299/345	140/299/345

Notes:

1. Cooling Capacity: Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m, level difference: 0 m.
2. Heating Capacity: Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m, level difference: 0 m.
3. Sound level is measured at 1.4m below the unit.

4. All the above specification will be changed due to product performance improvement. AUX reservesthe rights to change product design without prior notice, everything should subject to parameter on nameplate.

Model	Indoor		ARVCA-H056/4R1A	ARVCA-H071/4R1A	ARVCA-H080/4R1A
	Panel		MB13	MB12	MB12
Factory Model	Indoor		ALCa-H18B4/R1DICA	ALCa-H24B4/R1DICA	ALCa-H30A4/R1DICA
	Panel		MB13	MB12	MB12
Code	Indoor		16104005000010	16104007000013	16104008000014
	Panel		16108004000004	16108002000007	16108002000007
Power Supply		V~,Hz, Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	5.6	7.1	8.0
	Heating	kW	6.3	8.0	10.0
Intdoor Fan Motor	Model		YDK30-6E1	YDK30-6	YDK35-6 Q
	Brand		Sinjun	Sinjun	Sinjun
	Output Power	W	30	30	35
	Capacitor	uF	2.5	3	4
	Speed (Hi/Mi/Lo)	r/min	870/830/785	500/430/320	570/480/400
Indoor Coil	a.Number Of Row		2	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.5	1.6	1.4
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7， Inner grooved	φ7， Inner grooved	φ7， Inner grooved
	f.Coil Length x Height x Width	mm	1160×185×25.4	2142×205×25.4	2142×205×25.4
	g.Heat Exchanging Area	m^2	5.76	10.02	12.76
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^2	850/680/595	1100/880/770	1500/1200/1050
	Noise Level(Hi/Mi/Lo)	m^3/h	39/36/33	40/37/33	41/38/35
	Net Dimension (W×D×H)	dB(A)	615x615x263	835x835x240	835x835x240
	Packing Dimension (W×D×H)	mm	700x700x330	910x910x320	910x910x320
	Net Weight	mm	20	27	27
	Gross Weight	Kg	25	34	34
Panel	Net Dimension (W×D×H)	Kg	650x650x55	950x950x55	950x950x55
	Packing Dimension (W×D×H)	mm	710x710x80	1000x1000x100	1000x1000x100
	Net Weight	mm	3	5	5
	Gross Weight	Kg	5	7	7
Refrigerant Pipe	Liquid Side	Kg	6.35	9.52	9.52
	Gas Side	mm	12.7	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		mm	16~32	16~32	16~32

Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		℃	25~45	30~50	35~55
Stuffing Quantity	20/40/40H	m^2	140/299/345	77/164/175	77/164/175

Notes:

1. Cooling Capacity: Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m, level difference: 0 m.
2. Heating Capacity: Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m, level difference: 0 m.
3. Sound level is measured at 1.4m below the unit.
4. All the above specification will be changed due to product performance improvement. AUX reservesthe rights to change product design without prior notice, everything should subject to parameter on nameplate.

Model	Indoor		ARVCA-H090/4R1A	ARVCA-H100/4R1A	ARVCA-H112/4R1A
	Panel		MB12	MB12	MB12
Factory Model	Indoor		ALCa-H30B4/R1DICA	ALCa-H36A4/R1DICA	ALCa-H36B4/R1DICA
	Panel		MB12	MB12	MB12
Code	Indoor		16104009000010	16104010000009	16104011000012
	Panel		16108002000007	16108002000007	16108002000007
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	9.0	10.0	11.2
	Heating	kW	11.0	12.0	12.8
Intdoor Fan Motor	Model		YDK45-6 Q	YDK45-6 Q	YDK80-6-50 Q
	Brand		Sinjun	Sinjun	Weiling
	Output Power	W	45	45	80
	Capacitor	uF	4	4	6
	Speed (Hi/Mi/Lo)	r/min	650/520/450	650/520/450	695/585/495
Indoor Coil	a.Number Of Row		2	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.4	1.4	1.4
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7， Inner grooved	φ7， Inner grooved	φ7， Inner grooved
	f.Coil Length x Height x Width	mm	2142×205×25.4	2142×205×25.4	2142×246×25.4
	g.Heat Exchanging Area	m^2	12.76	12.76	15.6
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	1500/1200/1050	1500/1200/1050	1800/1440/1260
	Noise Level(Hi/Mi/Lo)	dB(A)	41/38/35	41/38/35	41/38/35
	Net Dimension (W×D×H)	mm	835x835x240	835x835x240	835x835x280
	Packing Dimension	mm	910x910x320	910x910x320	910x910x360

	(W×D×H)				
	Net Weight	Kg	27	27	30
	Gross Weight	Kg	34	34	37
Panel	Net Dimension (W×D×H)	mm	950x950x55	950x950x55	950x950x55
	Packing Dimension (W×D×H)	mm	1000x1000x100	1000x1000x100	1000x1000x100
	Net Weight	Kg	5	5	5
	Gross Weight	Kg	7	7	7
Refrigerant Pipe	Liquid Side	mm	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	40~60	45~65	50~75
Stuffing Quantity	20/40/40H	Unit	77/164/175	77/164/175	77/164/175

Notes:

1. Cooling Capacity: Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m, level difference: 0 m.

2. Heating Capacity: Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m, level difference : 0 m.

3. Sound level is measured at 1.4m below the unit.

4. All the above specification will be changed due to product performance improvement. AUX reservesthe rights to change product design without prior notice, everything should subject to parameter on nameplate.

Model	Indoor		ARVCA-H125/4R1A	ARVCA-H140/4R1A
	Panel		MB12	MB12
Factory Model	Indoor		ALCa-H42A4/R1DICA	ALCa-H48A4/R1DICA
	Panel		MB12	MB12
Code	Indoor		16104012000010	16104013000010
	Panel		16108002000007	16108002000007
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	12.5	14.0
	Heating	kW	13.3	15.0
Intdoor Fan Motor	Model		YDK80-6-50 Q	YDK80-6-50 Q
	Brand		Weiling	Weiling
	Output Power	W	80	80
	Capacitor	uF	6	6
	Speed (Hi/Mi/Lo)	r/min	695/585/495	695/585/495
Indoor Coil	a.Number Of Row		2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.4	1.4
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7， Inner grooved	φ7， Inner grooved
	f.Coil Length x Height x Width	mm	2142×246×25.4	2142×246×25.4
	g.Heat Exchanging Area	m^2	15.6	15.6
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^2	1800/1440/1260	1800/1440/1260
	Noise Level(Hi/Mi/Lo)	m^3/h	41/38/35	41/38/35
	Net Dimension (W×D×H)	dB(A)	835x835x280	835x835x280
	Packing Dimension (W×D×H)	mm	910x910x360	910x910x360
	Net Weight	mm	30	30
	Gross Weight	Kg	37	37
Panel	Net Dimension (W×D×H)	Kg	950x950x55	950x950x55
	Packing Dimension (W×D×H)	mm	1000x1000x100	1000x1000x100
	Net Weight	mm	5	5
	Gross Weight	Kg	7	7
Refrigerant Pipe	Liquid Side	Kg	9.52	9.52
	Gas Side	mm	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		mm	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24
Application Area		℃	50~90	60~100
Stuffing Quantity	20/40/40H	m^2	77/164/175	77/164/175

Notes:

1. Cooling Capacity: Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m, level difference: 0 m.

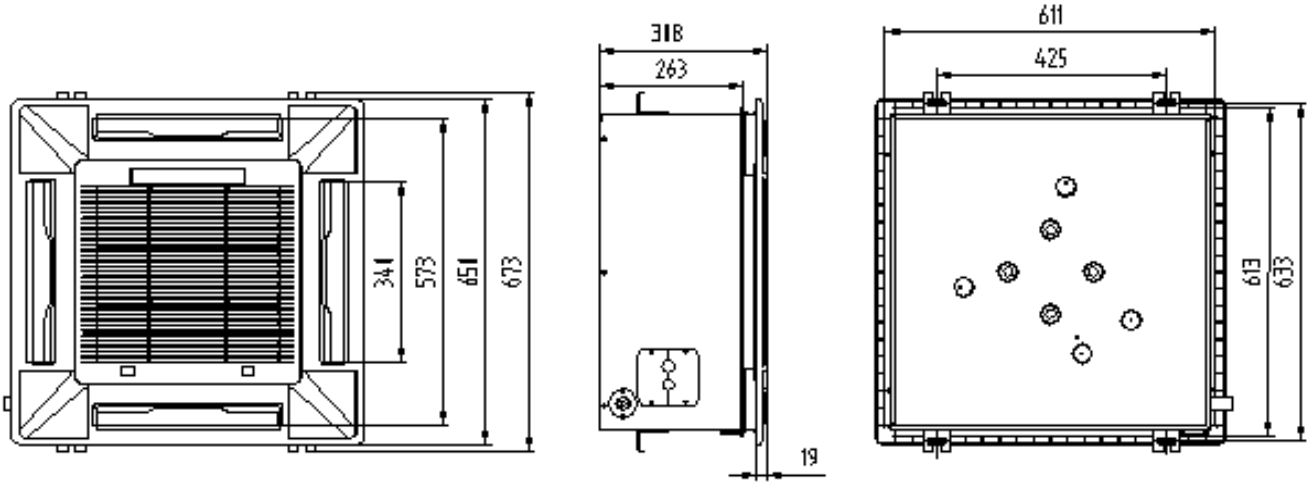
2. Heating Capacity: Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m, level difference: 0 m.

3. Sound level is measured at 1.4m below the unit.

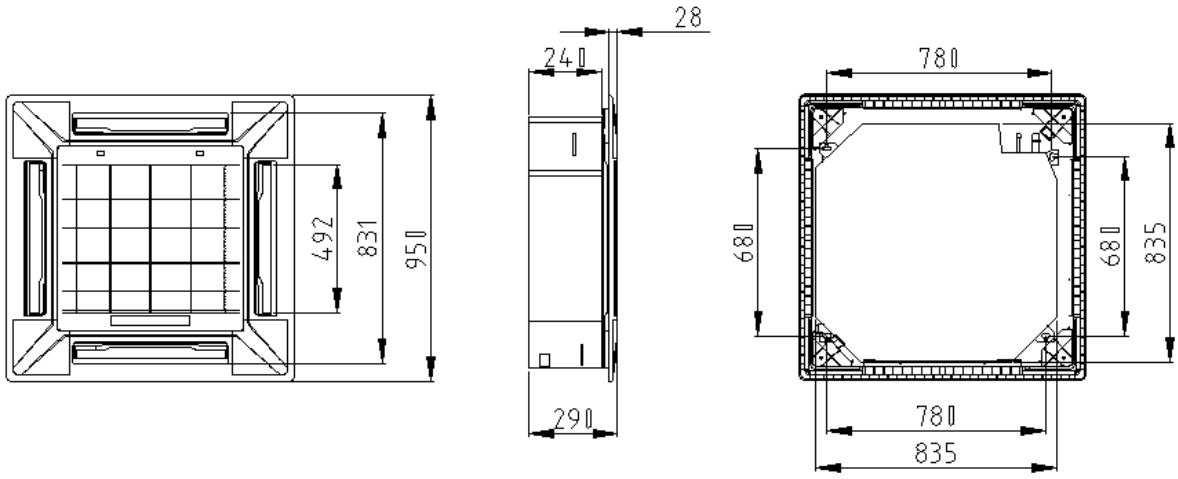
4. All the above specification will be changed due to product performance improvement. AUX reservesthe rights to change product design without prior notice, everything should subject to parameter on nameplate.

3. Dimensions

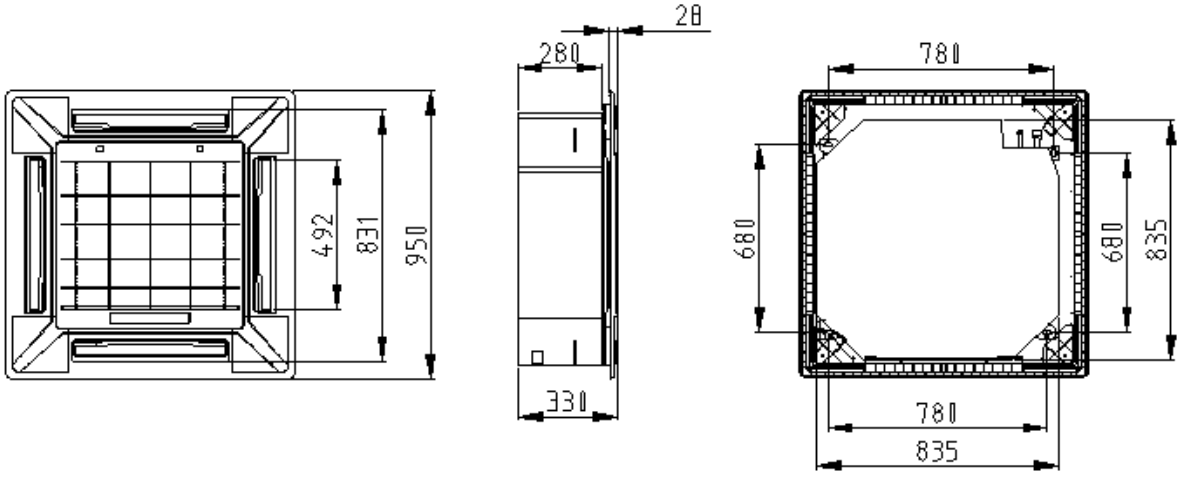
ARVCA-H028/4R1A; ARVCA-H036/4R1A; ARVCA-H045/4R1A; ARVCA-H056/4R1A;



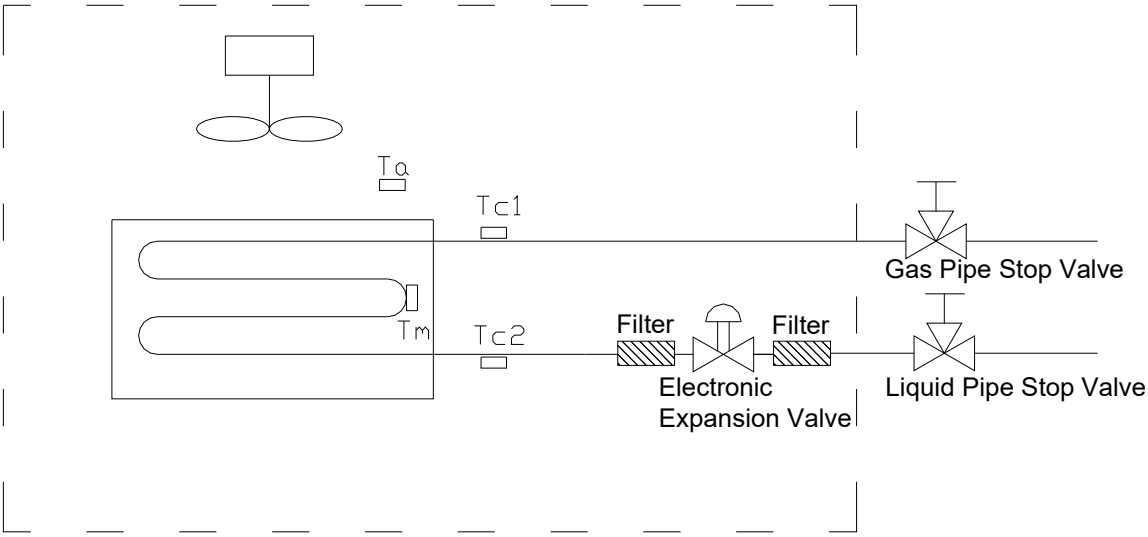
ARVCA-H071/4R1A; ARVCA-H080/4R1A; ARVCA-H090/4R1A; ARVCA-H100/4R1A;



ARVCA-H112/4R1A; ARVCA-H125/4R1A; ARVCA-H140/4R1A;



4. Piping Diagrams

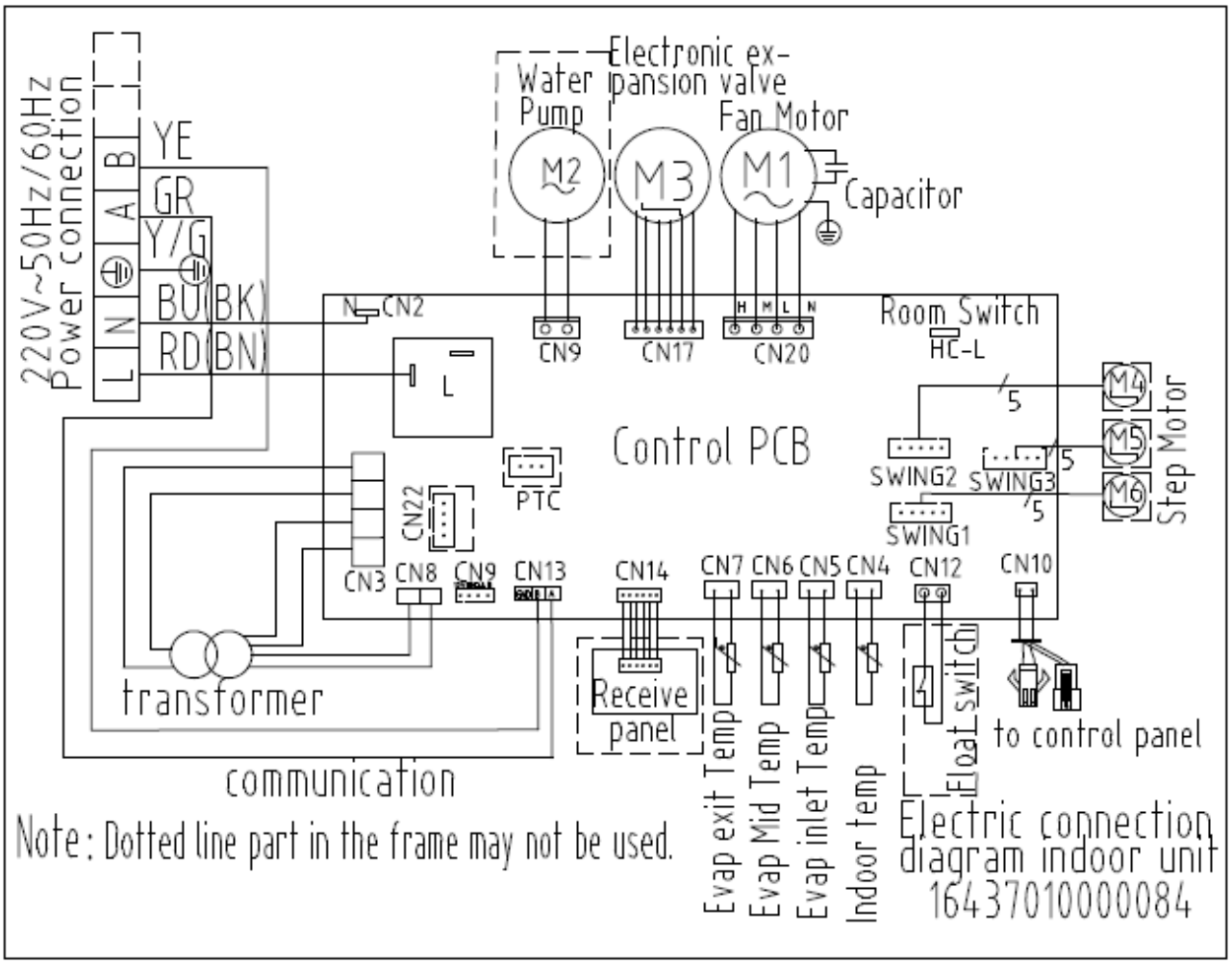


Refrigerant pipe connection port diameters

(mm)

Model	Gas	Liquid
ARVCA-H028/036/045/056/4R1A	Φ12.7	Φ6.35
ARVCA-H071/080/090/100/4R1A	Φ15.88	Φ9.52
ARVCA-H112/125/140/4R1A	Φ15.88	Φ9.52

5. Wiring Diagram



6.Electric characteristics

Model	Indoor Unit				Power supply		IFM	
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
ARVCA-H028/4R1A	50	220-240	198	264	0.34	10	0.03	0.27
ARVCA-H036/4R1A	50	220-240	198	264	0.34	10	0.03	0.27
ARVCA-H045/4R1A	50	220-240	198	264	0.34	10	0.03	0.27
ARVCA-H056/4R1A	50	220-240	198	264	0.34	10	0.03	0,.27
ARVCA-H071/4R1A	50	220-240	198	264	0.35	10	0.03	0.28
ARVCA-H080/4R1A	50	220-240	198	264	0.4	10	0.035	0.32
ARVCA-H090/4R1A	50	220-240	198	264	0.53	16	0.045	0.42
ARVCA-H100/4R1A	50	220-240	198	264	0.53	16	0.045	0.42
ARVCA-H112/4R1A	50	220-240	198	264	1.16	16	0.08	0.93
ARVCA-H125/4R1A	50	220-240	198	264	1.16	16	0.08	0.93
ARVCA-H140/4R1A	50	220-240	198	264	1,.16	16	0.08	0.93

Symbols:
MCA: Min. Circuit Amps.(A)
MFA: Max. Circuit Breaker Amps.
kW : Fan Motor Rated Output(kW)
FLA: Full Load Amps.(A)
IFM:Indoor Fan Motor

Note:
1. Min. and Max. Voltage :Units are suitable for use on electrical system where voltage supplied to unit terminals is not below or above listed rang limits.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MCA =1.25 x FLA
4. Select wire size based on the MCA.

7. Capacity Tables

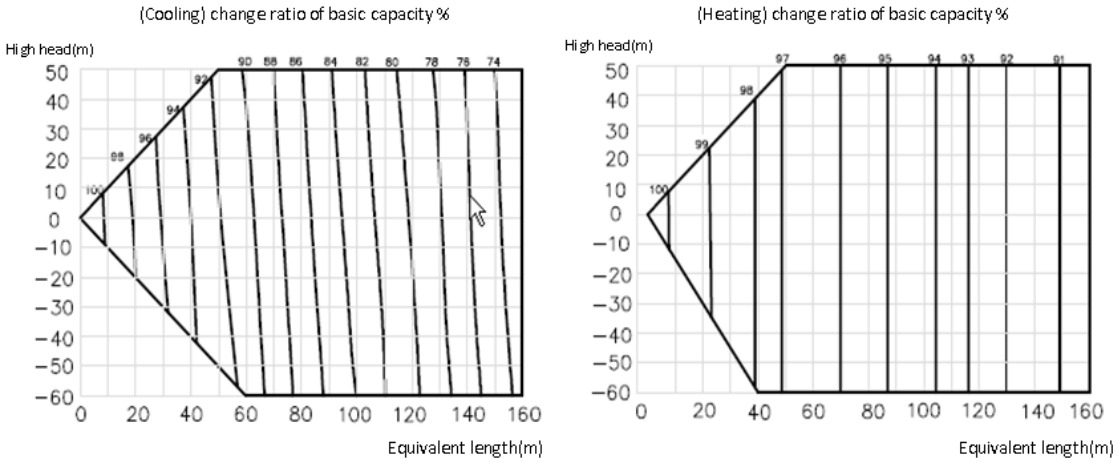
Cooling Capacity of Outdoor Dry Bulb Temperature and Indoor Dry/Wet Bulb Temperature or Power Consumption Correction Coefficient

Outdoor dry bulb temperature [^{0}C]	Correction coefficient	Indoor dry/wet bulb temperature[^{0}C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.1	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	0.92	0.98	1.05	1.11	1.17
	Power	0.88	0.89	0.91	0.92	0.93
35	Cooling capacity	0.87	0.94	1	1.06	1.13
	Power	0.96	0.97	1	1.01	1.03
40	Cooling capacity	0.96	0.89	0.95	1.02	1.08
	Power	1.05	1.07	1.08	1.09	1.11
45	Cooling capacity	0.77	0.84	0.9	0.96	1.02
	Power	1.16	1.18	1.19	1.2	1.23
50	Cooling capacity	0.75	0.8	0.86	0.91	0.98
	Power	1.24	1.27	1.28	1.3	1.32

Heating Capacity of Outdoor Dry/Wet Bulb Temperature and Indoor Dry Bulb Temperature or Power Consumption Correction Coefficient

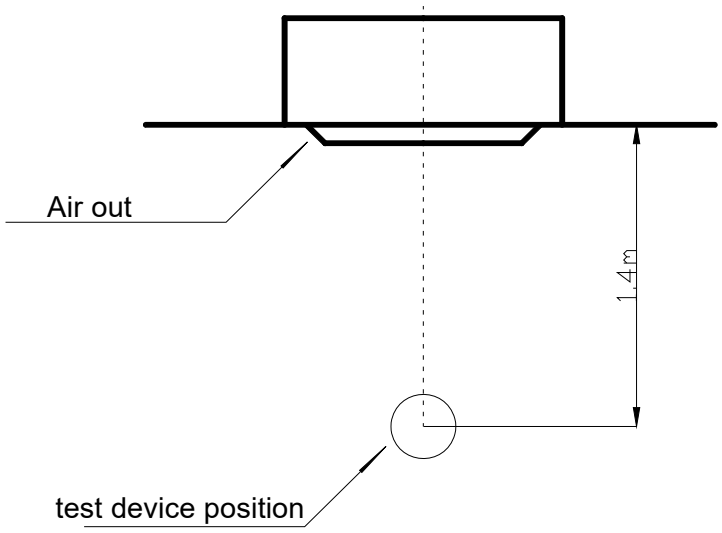
Outdoor ambient temperature of dry/wet bulb[^{0}C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [^{0}C]		
		15	**20**	**25**
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.6	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	Power	0.72	0.78	0.84
-7/-8	Heating capacity	0.76	0.72	0.67
	Power	0.81	0.87	0.93
-1/-2	Heating capacity	0.79	0.74	0.7
	Power	0.86	0.92	0.98
2/1	Heating capacity	0.81	0.76	0.72
	Power	0.89	0.95	1.01
7/6	Heating capacity	1.04	1	0.96
	Power	0.94	1	1.06
10/9	Heating capacity	1.1	1.06	1.01
	Power	0.99	1.05	1.11
15/12	Heating capacity	1.16	1.12	1.07
	Power	1.05	1.11	1.17
15-24	Heating capacity	0.85 – 1.05 of nominal		
	Power	0.80 – 1.20 of nominal		

Length Correction Coefficient of Indoor/Outdoor Unit Connecting Tube



Positive side of high head means installation height of outdoor unit should be higher than indoor unit; negative side of high head means installation height of outdoor unit should be lower than indoor unit; (change ratio of basic capacity)

8. Sound levels



Model	220~240V 50Hz		
	H	M	L
ARVCA-H028/4R1A	38	35	32
ARVCA-H036/4R1A	38	35	32
ARVCA-H045/4R1A	39	36	33
ARVCA-H056/4R1A	39	36	33
ARVCA-H071/4R1A	40	37	33
ARVCA-H080/4R1A	41	38	35
ARVCA-H090/4R1A	41	38	35
ARVCA-H100/4R1A	41	38	35
ARVCA-H112/4R1A	41	38	35
ARVCA-H125/4R1A	41	38	35
ARVCA-H140/4R1A	41	38	35

Note:

1. The operating condition is assumed to be standard (JIS Condition).
2. These operating values were obtained in a dead room (conversion values).Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of the particular room in which the equipment installed.

9. Installation

9.1 Preparation and Tools before Installation

◇Please buy the following parts from the market before installation

Hanging bolt (4 per unit)
PVC drain pipe
Some cable ties
Connecting copper tube
Branch manifold (choose according to actual installation situation)
Thermal insulation materials for connecting copper tube (PEF foaming materials with thickness above 8mm)
Power cord and power connection line (it's required to wire according to requirement for line diameter in wiring diagram)

Note:

Due to the difference between the characteristics of R410A and R22 refrigerant, it's necessary touse dedicated tools of R410A for some tools during installation.

◇ The selected position hanging indoor unit should be able to support the weight of unit without noise and additional vibration. It's necessary to reinforce before installation if reinforcement is required;

◇ The space of selected ceiling should be enough for holding indoor unit;

◇ The installation location should be easy for drainage;

◇ It shouldn't be installed in places (such as kitchen, laundry and mechanical workshop, etc.) of heat source, vapor source and more oil mist to prevent degradation of heat exchanger, electric shock and unit damage caused by plastic parts corrosion;

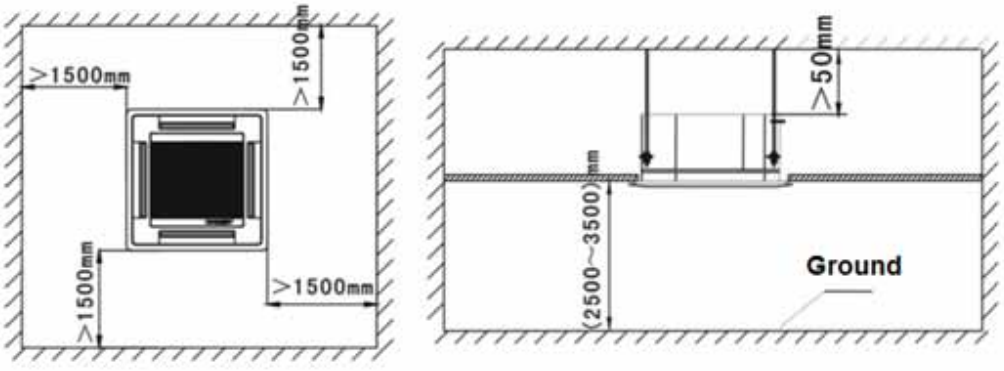
◇ Install in the place at least one meter away from TV and radio to prevent interfering TV and radio.

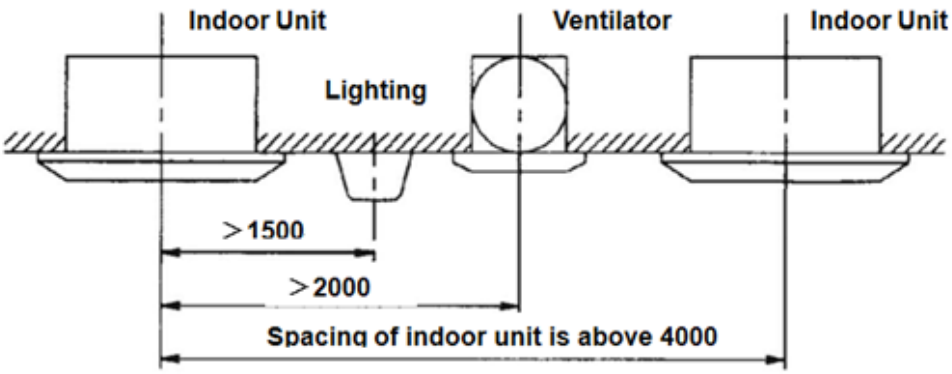
◇ There is no barrier blocking ventilation nearby and cold air should be able to evenly distribute to each indoor corner;

◇ There should be certain spacing between the surrounding and barrier of indoor unit to ease maintenance;

◇ The unit uses R410A environment-friendly refrigerant that is a kind of nonflammable and nontoxic gas. Since the refrigerant has larger specific gravity than air, it will suffuse on the ground in case of leakage. Therefore, the unit must be well ventilated if installed in closed room to prevent suffocation. In case of refrigerant leakage, immediately stop unit operation, timely contact maintenance personnel and avoid any open fire on site because refrigerant will decompose hazardous gas when exposed to open fire.

9.2 Space to be reserved between the Surrounding of Indoor Unit and Barrie

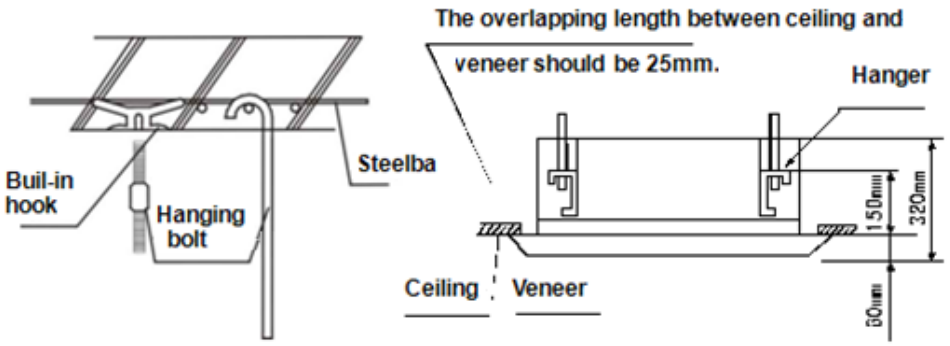




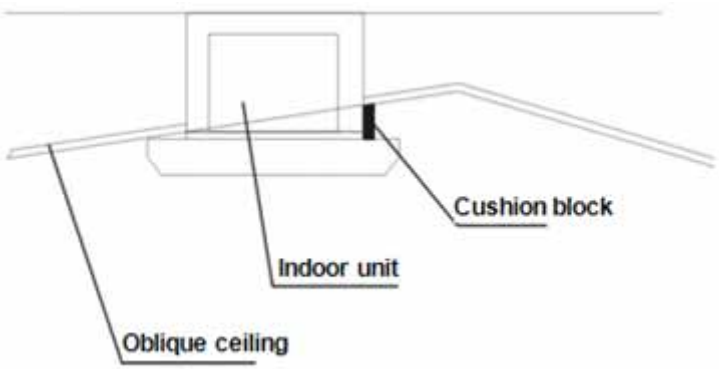
9.3 Hoisting of indoor unit

◇ Selection of hanging foundation: the foundation must be wooden frame and reinforced concrete structure, which is firm and reliable,able to stand a weight four times of the unit's weight and stand a certain vibration for a long time.

◇ Fixing of hanging foundation: fix hanging bolt as shown in the diagram or fix it with iron bracket and wooden bracket.

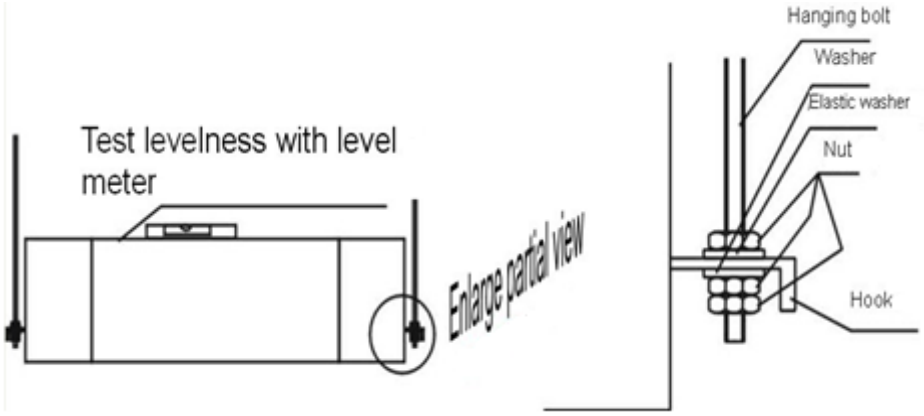


◇ If the unit body is installed on oblique ceiling, it's necessary to put cushion block between ceiling and air outlet panel to ensure the unit body is installed on horizontal position.



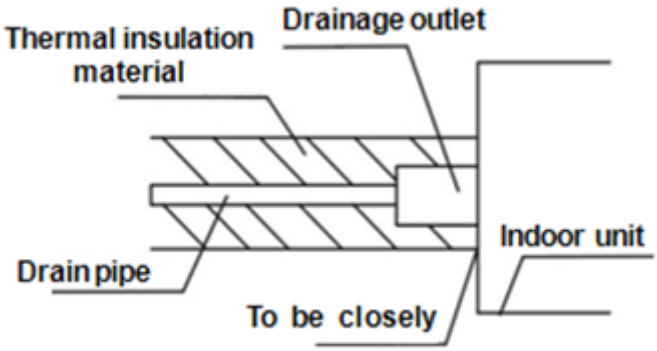
◇ Dual nuts should be adopted to fix the indoor unit under the ceiling.
◇ Adjust the relative position of hook on hanging bolt to keep the main unit horizontal in each direction. Check with level meter after installation to ensure horizontal indoor main unit and prevent possible failures such as water leakage and air leakage.
◇ Tighten nut to ensure tight contact among nut, washer and four mounting hooks without loose hanging;
◇ Ensure there is no loose positioning such as shaking of main unit after installation;
◇ Ensure rough alignment between the center of indoor main unit and the opening of ceiling;

9.4 Schematic Diagram of Hanging



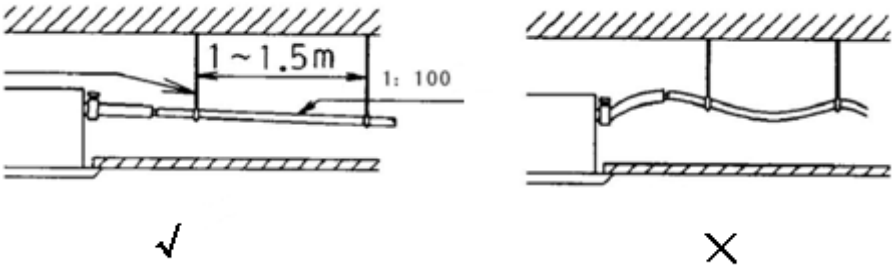
9.5 Installation of drain pipe

◇ Drain pipe must be wrapped with thermal insulation material as follows to prevent condensation or dripping.

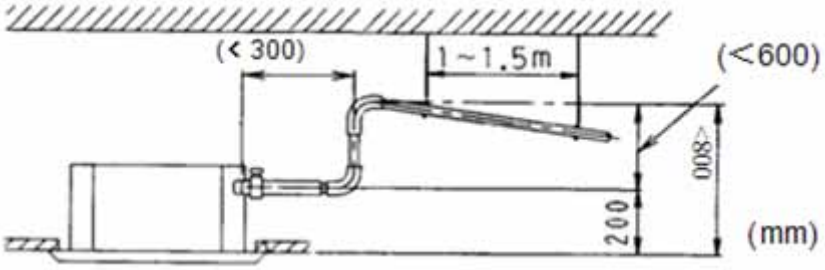


◇ Thermal insulation material should be rubber & plastic thermal insulation pipe with thickness above 8mm.

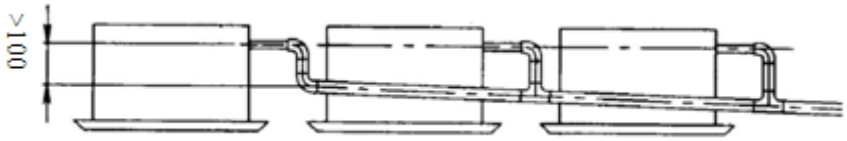
◇ Drain pipe should incline downwards with gradient of 1/50-1/100, which will subject to failure such as back flow or water leakage in case of up-and-down fluctuation or upward inclination.



◇ Although draining pump of unit has a lift of 1200mm, considering the protective shutdown of float switch will be caused due to the back flow of condensed water after shutdown, please arrange drain pipe according to the following diagram where possible.



◇ When install drain pipes for multiple units, it's necessary to install utility piping at 100mm under the drainage outlet of each unit as shown in the following diagram.

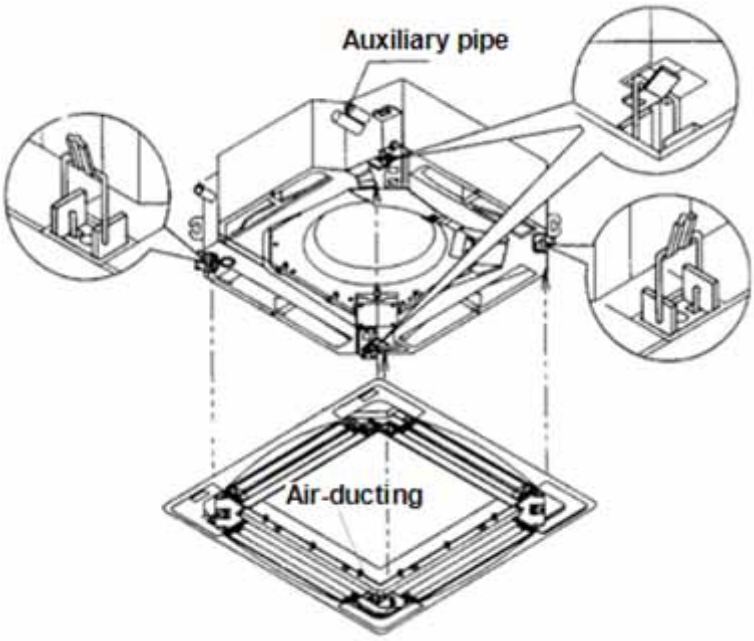


◇ After installation, conduct drainage test to determine if water correctly flows through pipeline and carefully observe the connection to ensure there is no leakage. If the unit is installed in new house, it's recommended to test before decorating ceiling. Conduct drainage test for the unit used for heating only.

9.6 Installation of Panel

◇ Installation of Panel:

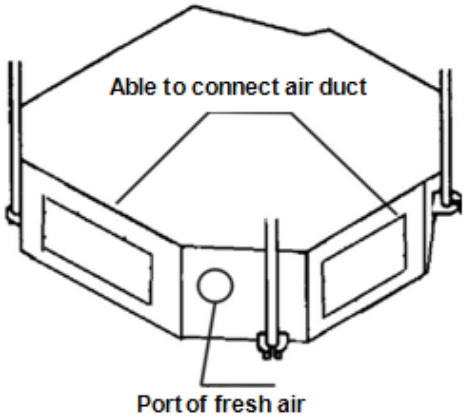
Refer to the following diagram for MB06, buckle four hooks of panel on corresponding hooks of main unit and tighten adjusting bolt.



Note:
Please ensure the position of air-ducting motor of panel corresponds to the auxiliary pipe side of main unit

9.7 Connection of Air Duct and Ventilation of Fresh Air
Note:
1) It's allowed to connect air duct only under special installation environment and he length shouldn't be over five meters;
2) Please use air duct that can prevent condensation and absorb sound.
3) Wrap air duct and the connection between air duct and main unit for thermal insulation and sealing.

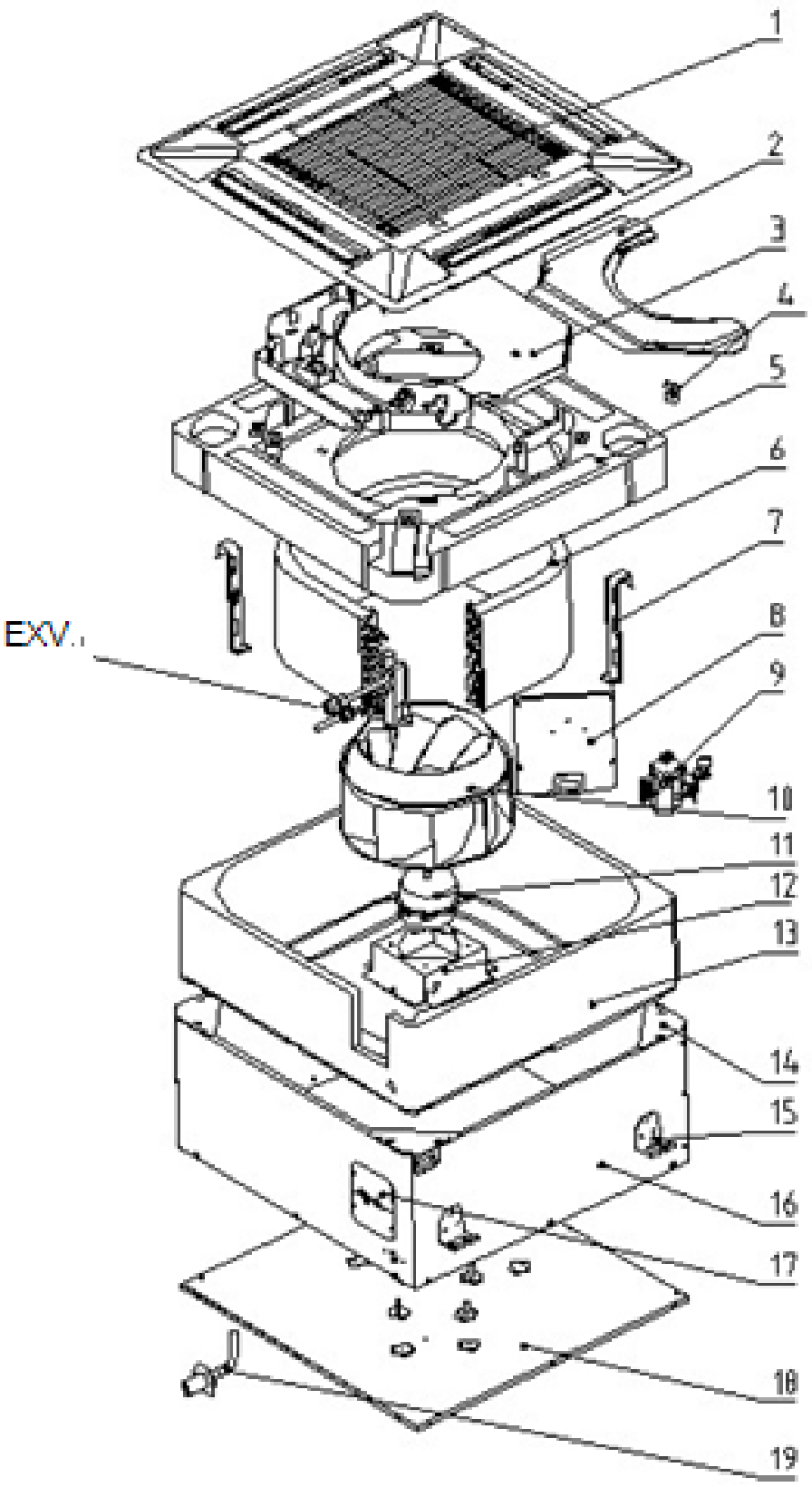
To meet user's different using requirements and environments, reserve an interface for ventilating fresh air and four air duct interfaces for indoor unit of 3HP and 5HP or connect air duct on unit.



◇ Ventilation of fresh air: a round interface for ventilating fresh air is reserved at edge angle of unit. User can cut off the round sheet metal and lead it to outdoors after connecting air duct if user needs this function. Interface for ventilating fresh air is connected with air return inlet of indoor unit, which can introduce fresh air from outdoors due to the action of negative pressure during unit operation.
◇ Connection of air duct: four square interfaces are reserved on four sides of unit, among which, air outlet on the side for connecting air duct can be blocked. Cut off sheet metal of square interface.

10. Exploded View

ARVCA-H028/4R1A, ARVCA-H036/4R1A, ARVCA-H045/4R1A, ARVCA-H056/4R1A

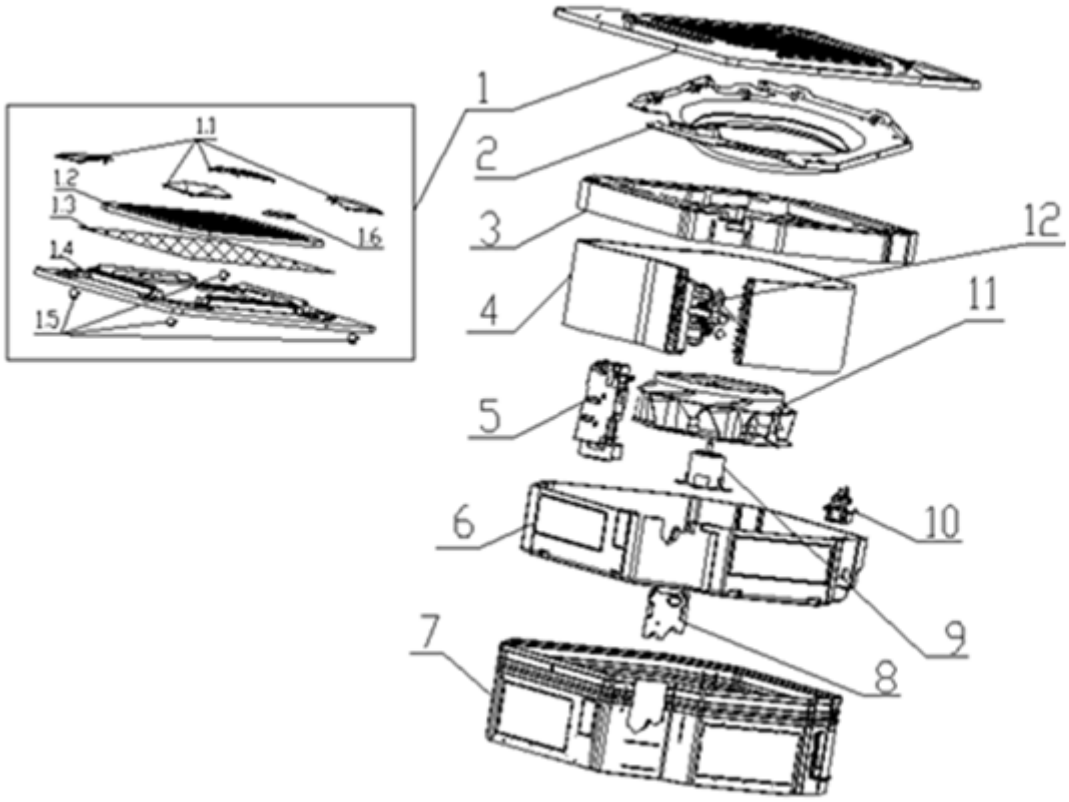


ARVCA-H028/4R1A, ARVCA-H036/4R1A, ARVCA-H045/4R1A, ARVCA-H056/4R1A

N0.	AUX Code	Part Name (Chinese)	Part Name	Quantity	Unit
1	16108004000004	面板 MB13(英文)	Panel MB13	1	Pc
1.1	16420010000015	回风格栅组件	Return-air grille grill	1	Set
1.2	16420012000004	空气过滤网	Air filter	1	Pc
1.3	16420007000023	导风叶片	Air blade	4	Pcs
1.4	16430001000133	步进电机	Step motor	4	Pcs
1.5	16422015000007	显示灯板	Display board	1	Set
1.6	16420014000019	面板围框组件	Panel frame assembly	1	Set
2	16420016000005	电控盒盖	Control box cover	1	Pc
3	16322001000038	电控盒总成	Control box assembly	1	Set
3.1	16430015000031	电容	Capacitor 2.0μF/450V a.c	1	Pc
3.2	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	Pc
3.3	16422005000009	变压器	Transformer	1	Pc
3.4	16427001000008	端子板 7 位	Terminal board	1	Pc
3.5	16430007000004	传感器 15K3950 XH2(白) 0.7m(塑封)	Sensor	1	Pc
3.6	16430007000018	传感器 20K3950 XH2(蓝) 1.2m(铜)	Sensor	1	Pc
3.7	16430007000016	传感器 20K3950 XH2(黄) 1.2m(铜)	Sensor	1	Pc
3.8	16430007000021	传感器 20K3950 XH2(绿) 1.2m(铜)	Sensor	1	Pc
4	16432016000037	橡胶塞	Rubber plug	1	Pc
5	16320005000018	接水盘组件	Drain pan	1	Set
6	16324001000063	蒸发器总成	Evaporator assembly	1	Set
6.1	16324005000025	蒸发器组件	Evaporator part	1	Set
6.2	16325005000033	蒸发器出气管组件	Evaporator outlet tube assembly	1	Set
6.3	16325001000103	蒸发器进液管组件	Evaporator inlet tube assembly	1	Set
7	16421040000020	蒸发器挂钩	Evaporator Pothook	2	Pcs
8	16421007000035	蒸发器连接板	Evaporator connect board	1	Pc
9	16440001000004	排水泵	Drain pump	1	Pc
9.1	16445034000003	浮子开关	Float switch	1	Pc
9.2	16421026000129	排水泵支架	Drain pump support	1	Pc
10	16444001000006	风轮	Wind wheelΦ283×166	1	Pc
11	16430001000135	电机	Fan motor YSK30-6E1	1	Pc
12	16421035000014	电机支架	motor holder	1	Pc
13	16421999000052	风道	Air passage	1	Pc
14	16421002000192	接水盘固定板	Water pan holder	4	Pcs
15	16421040000019	挂钩	Pothook	4	Pcs
16	16421010000022	围板 A	Boarding A	1	Pc

16.1	16421010000023	围板 B	Boarding B	1	Pc
17	16421014000037	阀板 A	Valve board A	1	Pc
17.1	16421014000038	阀板 B	Valve board B	1	Pc
18	16321005000011	底盘组件	Chassis	1	Pc
19	16432019000008	塑料排水接管	Plastic drainage pipe	1	Set
19.1	16432019000009	塑料排水软管	Plastic drainage hose	1	Pc
20	16441015000002	电子膨胀阀	EXV coil	1	Pc

ARVCA-H071/4R1A, ARVCA-H080/4R1A, ARVCA-H090/4R1A, ARVCA-H100/4R1A, ARVCA-H112/4R1A, ARVCA-H125/4R1A, ARVCA-H140/4R1A



ARVCA-H071/4R1A

N0.	AUX code	Part Name (Chinese)	Part Name	Quantity	Unit
1	16108002000007	面板 MB12(英文)	Panel MB12	1	Pc
1.1	16420014000011	面板边角盖板	Panel cover board	2	Pcs
1.2	16420010000004	回风格栅组件	Return-air grille assembly	2	Sets
1.3	16420012000001	空气过滤网	Air filter	1	Pc
1.4	16420014000010	面板围框组件	Panel frame assembly	1	Set

1.4.1	16434099000356	面板围框密封海面	Panel frame	1	Pc
1.4.2	16420007000009	导风叶片	Air blade	4	Pcs
1.5	16430001000133	步进电机	Step motor	1	Pc
1.6	16422015000007	显示灯板	Display board	1	Pc
2	16421025000015	导风圈总成	Guide wind loop assembly	1	Set
2.1	16420004000002	导风圈	Guide wind loop	1	Pc
2.2	16420014000022	导风圈配板	Guide wind board	1	Pc
2.3	16427001000008	端子板 7 位	Terminal board	1	Pc
3	16320005000010	接水盘组件	Drain pan	1	Set
4	16324001000041	蒸发器总成	Evaporator assembly	1	Set
4.1	16324005000005	蒸发器组件	Evaporator part	1	Set
4.2	16325005000019	蒸发器出气管组件	Evaporator outlet tube assembly	1	Set
4.3	16325001000058	蒸发器进液管组件	Evaporator inlet tube assembly	1	Set
5	16322001000053	电控盒总成	Electric box assembly	1	Set
5.1	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	Pc
5.2	16422005000009	变压器	Transformer	1	Pc
5.3	16430015000002	电容	capacitor 4μF/450V a.c	1	Pc
5.4	16430007000005	传感器 15K3950 XH2(白) 0.9m(塑封)	Sensor 1 White15K	1	Pc
5.5	16430007000018	传感器 20K3950 XH2(蓝) 1.2m(铜)	Sensor 2 Blue20K	1	Pc
5.6	16430007000016	传感器 20K3950 XH2(黄) 1.2m(铜)	Sensor 3 Yellow20K		Pc
5.7	16430007000021	传感器 20K3950 XH2(绿) 1.2m(铜)	Sensor 4 Green20K		Pc
6	16320005000015	底盘泡沫组件	Chassis foam assembly	1	Set
7	16321005000002	底盘组件	Chassis assembly	1	Set
8	16421005000181	配管盖板	Piping cover board	1	Pc
9	16430001000310	电机	Fan motor YDK45-6 Q	1	Pc
10	16330005000006	排水泵总成	Drain pump assembly	1	Set
10.1	16421026000010	排水泵支架	Drain pump support	1	Pc
10.2	16432016000035	水泵减振橡胶	Pump damping rubber	3	Pcs
10.3	16440001000009	排水泵	Drain pump PLD-1200	1	Pc
10.4	16432019000006	排水软管(水泵用)	Drain flexible pipe (for drain pump)	1	Pc
10.5	16432019000007	排水接管	Drain pipe	1	Pc
10.6	16445034000001	浮子开关 GMF-31	Float switch	1	Pc
11	16444001000015	风轮 Φ462×147	Windwheel (3P)	1	Set
12	16441015000002	电子膨胀阀线圈	EXV coil	1	Set

N0.	AUX code	Chinese name	Part Name	Quantity	Unit
1	16108002000007	面板 MB12(英文)	Panel MB12	1	Pc
1.1	16420014000011	面板边角盖板	Panel cover board	2	Pcs
1.2	16420010000004	回风格栅组件	Return-air grille assembly	2	Sets
1.3	16420012000001	空气过滤网	Air filter	1	Pc
1.4	16420014000010	面板围框组件	Panel frame assembly	1	Set
1.4.1	16434099000356	面板围框	Panel frame	1	Pc
1.4.2	16420007000009	导风叶片	Air blade	4	Pcs
1.5	16430001000133	步进电机	Step motor	1	Pc
1.6	16422015000007	显示灯板	Display board	1	Pc
2	16421025000015	导风圈总成	Guide wind loop assembly	1	Set
2.1	16420004000002	导风圈	Guide wind loop	1	Pc
2.2	16420014000022	导风圈配板	Guide wind board	1	Pc
2.3	16427001000008	端子板 7 位	Terminal board	1	Pc
3	16320005000010	接水盘组件	Drain pan	1	Set
4	16324001000060	蒸发器总成	Evaporator assembly	1	Set
4.1	16324001000060	蒸发器组件	Evaporator part	1	Set
4.2	16325005000011	蒸发器出气管组件	Evaporator outlet tube assembly	1	Set
4.3	16325001000083	蒸发器进液管组件	Evaporator inlet tube assembly	1	Set
5	16322001000050	电控盒总成	Electric box assembly	1	Set
5.1	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	Pc
5.2	16422005000009	变压器	Transformer	1	Pc
5.3	16430015000016	电容	Capacitor	1	Pc
5.4	16430007000005	传感器 15K3950 XH2(白) 0.9m(塑封)	Sensor 1 White15K	1	Pc
5.5	16430007000018	传感器 20K3950 XH2(蓝) 1.2m(铜)	Sensor 2 Blue20K	1	Pc
5.6	16430007000016	传感器 20K3950 XH2(黄) 1.2m(铜)	Sensor 3 Yellow20K	1	Pc
5.7	16430007000021	传感器 20K3950 XH2(绿) 1.2m(铜)	Sensor 4 Green20K	1	Pc
6	16320005000015	底盘泡沫组件	Chassis foam assembly	1	Set
7	16321005000002	底盘组件	Chassis assembly	1	Set
8	16421005000181	配管盖板	Piping cover board	1	Pc
9	16430001000059	电机	Fan motor	1	Pc
10	16330005000006	排水泵总成	Drain pump assembly	1	Set
10.1	16421026000010	排水泵支架	Drain pump support	1	Pc
10.2	16432016000035	水泵减振橡胶	Pump damping rubber	3	Pcs
10.3	16440001000009	排水泵	Drain pump	1	Pc
10.4	16432019000006	排水软管(水泵用)	Drain flexible pipe (Drain pump)	1	Pc
10.5	16432019000007	排水接管	Drain pipe	1	Pc
10.6	16445034000001	浮子开关 GMF-31	Float switch	1	Pc
11	16444001000001	风轮	Wind wheel	1	Set

12	16441015000002	电子膨涨阀线圈	EXV coil	1	Pc

ARVCA-H090/4R1A, ARVCA-H100/4R1A

N0.	AUX code	Chinese name	Part Name	Quantity	Unit
1	16108002000007	面板 MB12(英文)	Panel MB12	1	Pc
1.1	16420014000011	面板边角盖板	Panel cover board	2	Pcs
1.2	16420010000004	回风格栅组件	Return-air grille assembly	2	Sets
1.3	16420012000001	空气过滤网	Air filter	1	Pc
1.4	16420014000010	面板围框组件	Panel frame assembly	1	Set
1.4.1	16434099000356	面板围框	Panel frame	1	Pc
1.4.2	16420007000009	导风叶片	Air blade	4	Pcs
1.5	16430001000133	步进电机	Step motor	1	Pc
1.6	16422015000007	显示灯板	Display board	1	Pc
2	16421025000015	导风圈总成	Guide wind loop assembly	1	Set
2.1	16420004000002	导风圈	Guide wind loop	1	Pc
2.2	16420014000022	导风圈配板	Guide wind board	1	Pc
2.3	16427001000008	端子板 7 位	Terminal board	1	Pc
3	16320005000010	接水盘组件	Water pan	1	Set
4	16324001000060	蒸发器总成	Evaporator assembly	1	Set
4.1	16324005000016	蒸发器组件	Evaporator part	1	Set
4.2	16325005000011	蒸发器出气管组件	Evaporator outlet tube assembly	1	Set
4.3	16325001000083	蒸发器进液管组件	Evaporator inlet tube assembly	1	Set
5	16322001000050	电控盒总成	Electric box assembly	1	Set
5.1	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	Pc
5.2	16422005000009	变压器	Transformer	1	Pc
5.3	16430015000016	电容	capacitor	1	Pc
5.4	16430007000005	传感器 15K3950XH2(白)0.9m(塑封)	Sensor 1 White 15K	1	Pc
5.5	16430007000018	传感器 20K3950 XH2(蓝) 1.2m(铜)	Sensor 2 Blue 20K	1	Pc
5.6	16430007000016	传感器 20K3950 XH2(黄) 1.2m(铜)	Sensor 3 Yellow 20K	1	Pc
5.7	16430007000021	传感器 20K3950 XH2(绿) 1.2m(铜)	Sensor 4 Green 20K	1	Pc
6	16320005000015	底盘泡沫组件	Chassis foam assembly	1	Set
7	16321005000002	底盘组件	Chassis assembly	1	Set
8	16421005000181	配管盖板	Piping cover board	1	Pc
9	16430001000062	电机	Fan motor	1	Pc
10	16330005000006	排水泵总成	Drain pump assembly	1	Set
10.1	16421026000010	排水泵支架	Drain pump support	1	Pc
10.2	16432016000035	水泵减振橡胶	Pump damping rubber	3	Pcs
10.3	16432019000006	排水泵	Drain pump	1	Pc
10.4	16432019000007	排水软管(水泵用)	Drain flexible pipe (Drain pump)	1	Pc
10.5	16445034000001	排水接管	Drain pipe	1	Pc

10.6	16440001000009	浮子开关 GMF-31	Float switch	1	Pc
11	16444001000001	风轮	Wind wheel	1	Set
12	16441015000002	电子膨胀阀线圈	EXV coil	1	Pc

ARVCA-H112/4R1A, ARVCA-H125/4R1A , ARVCA-H140/4R1A

N0.	AUX code	Chinese name	Part Name	Quantity	Unit
1	16108002000007	面板 MB12(英文)	Panel MB12	1	Pc
1.1	16420014000011	面板边角盖板	Panel cover board	2	Pcs
1.2	16420010000004	回风格栅组件	Return-air grille assembly	2	Sets
1.3	16420012000001	空气过滤网	Air filter	1	Pc
1.4	16420014000010	面板围框组件	Panel frame assembly	1	Set
1.4.1	16434099000356	面板围框	Panel frame	1	Pc
1.4.2	16420007000009	导风叶片	Air blade	4	Pcs
1.5	16430001000133	步进电机	Step motor	1	Pc
1.6	16422015000007	显示灯板	Display board	1	Pc
2	16322001000001	导风圈总成	Guide wind loop assembly	1	Set
2.1	16420004000002	导风圈	Guide wind loop	1	Pc
2.2	16420014000022	导风圈配板	Guide wind board	1	Pc
2.3	16427001000008	端子板 7 位	Terminal board	1	Pc
3	16320005000010	接水盘组件	Defrosting pan	1	Set
4	16324001000001	蒸发器总成	Evaporator assembly	1	Set
4.1	16324005000003	蒸发器组件	Evaporator part	1	Set
4.2	16325005000010	蒸发器出气管组件	Evaporator outlet tube assembly	1	Set
4.3	16325001000001	蒸发器进液管组件	Evaporator inlet tube assembly	1	Set
5	16322001000051	电控盒总成	Electric box assembly	1	Set
5.1	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	Pc
5.2	16422005000009	变压器	Transformer	1	Pc
5.3	16430015000034	电容	capacitor	1	Pc
5.4	16430007000005	传感器 15K3950XH2(白)0.9m(塑封)	Sensor 1 White 15K	1	Pc
5.5	16430007000018	传感器 20K3950 XH2(蓝) 1.2m(铜)	Sensor 2 Blue 20K	1	Pc
5.6	16430007000016	传感器 20K3950 XH2(黄) 1.2m(铜)	Sensor 3 Yellow 20K	1	Pc
5.7	16430007000021	传感器 20K3950 XH2(绿) 1.2m(铜)	Sensor 4 Green 20K	1	Pc
6	16320005000012	底盘泡沫组件	Chassis foam assembly	1	Set
7	16321005000001	底盘组件	Chassis assembly	1	Set
8	16421005000181	配管盖板	Piping cover board	1	Pc
9	16430001000209	电机	Fan motor	1	Pc
10	16330005000006	排水泵总成	Drain pump assembly	1	Set
10.1	16421026000010	排水泵支架	Drain pump support	1	Pc
10.2	16432016000035	水泵减振橡胶	Pump damping rubber	3	Pcs
10.3	16432019000006	排水泵	Drain pump	1	Pc
10.4	16432019000007	排水软管(水泵用)	Drain flexible pipe (Drain pump)	1	Pc

10.5	16445034000001	排水接管	Drain pipe	1	Pc
10.6	16440001000009	浮子开关 GMF-31	Float switch	1	Pc
11	16444001000017	风轮	Wind wheel	1	Set
12	16441015000002	电子膨胀阀线圈	EXV coil	1	Pc

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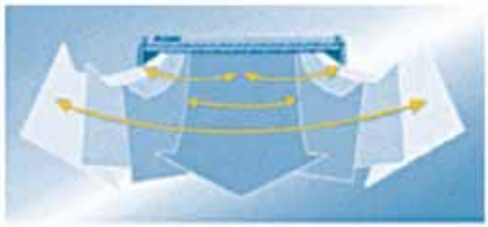
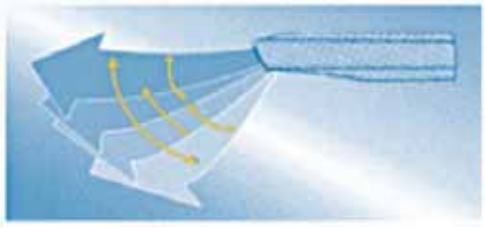
1.Feature

ARVCF-H045/4R1A ARVCF-H056/4R1A
ARVCF-H071/4R1A ARVCF-H080/4R1A
ARVCF-H090/4R1A ARVCF-H100/4R1A
ARVCF-H112/4R1A ARVCF-H125/4R1A
ARVCF-H140/4R1A

- Dual-direction swing,wide swing angle

Vertical and horizontal swing function make it possible to blow air to every corner of the room.



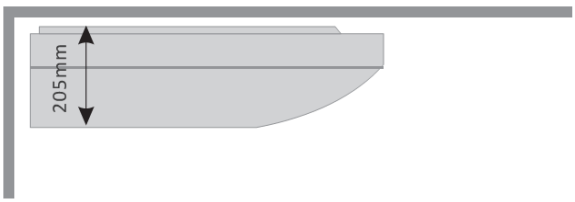


- Flexible installation

Can be vertically installed against the wall or horizontally installed under the ceiling.

- Ultra slim design

Thinner and lighter,Only 250mm.



- Adjustable fan speed

All units are equipped with 3 speed controlled fan mode,adjust the air flow rate in accordance with the ceiling height.

2. Specifications

Model			ARVCF-H045/4R1A	ARVCF-H056/4R1A	ARVCF-H071/4R1A
Factory Model			ALCe-H16B4/R1DICA	ALCe-H18B4/R1DICA	ALCe-H24B4/R1DICA
Code			16104086000007	16104088000006	16104090000007
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	4.5	5.6	7.1
	Heating	kW	5.0	6.0	8.0
Indoor Fan Motor	Model		YSK-40W-4	YSK-40W-4	YSK-70W-4
	Brand		Weiling	Weiling	Weiling
	Output Power	W	40	40	70
	Capacitor	uF	2.5	2.5	4
	Speed (Hi/Mi/Lo)	r/min	1250/1100/900	1250/1010/900	1386/1108/970
Indoor Coil	a.Number Of Row		3	3	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.6	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7， Inner grooved	φ7， Inner grooved	φ7， Inner grooved
	f.Coil Length x Height x Width	mm	599×246×38.1	599×246×38.1	950×246×38.1
	g.Heat Exchanging Area	m^2	6.31	6.31	10
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	950/760/665	950/760/665	1300/1040/910
	Noise Level(Hi/Mi/Lo)	dB(A)	42/39/36	42/39/36	45/42/39
	Net Dimension (W×D×H)	mm	929×660×205	929×660×205	1280×660×205
	Packing Dimension (W×D×H)	mm	1010×720×290	1010×720×290	1360×720×290
	Net Weight	Kg	26	26	35
	Gross Weight	Kg	29	29	39
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	9.52
	Gas Side	mm	12.7	12.7	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	20~35	25~45	30~50
Stuffing Quantity	20/40/40H	Unit	149/300/350	149/300/350	104/222/246

Note:.

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m, level difference: 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m, level difference: 0 m.
3. Anechoic chamber conversion value, measured in test room.During actual operation.These values is normally

somewhat higher as a result of ambient conditions.

4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model			ARVCF-H080/4R1A	ARVCF-H090/4R1	ARVCF-H100/4R1A
Factory Model			ALCe-H30A4/R1DICA	ALCe-H30B4/R1DICA	ALCe-H36A4/R1DICA
Code			16104091000006	16104092000006	16104093000005
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	8.0	9.0	10.0
	Heating	kW	10.0	11.0	12.0
Indoor Fan Motor	Model		YSK-70W-4	YSK-70W-4	YSK-70W-4
	Brand		Weiling	Weiling	Weiling
	Output Power	W	70	70	70
	Capacitor	uF	4	4	4
	Speed (Hi/Mi/Lo)	r/min	1386/1108/970	1386/1108/970	1386/1108/970
Indoor Coil	a.Number Of Row		3	3	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	22×19.05	22×19.05
	c.Fin Pitch	mm	1.6	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7， Inner grooved	φ7.94，Inner grooved	φ7.94，Inner grooved
	f.Coil Length x Height x Width	mm	950×246×38.1	950X264X57.15	950X264X57.15
	g.Heat Exchanging Area	m^2	10	13.65	15.02
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	1500/1200/1050	1500/1200/1050	1500/1200/1050
	Noise Level(Hi/Mi/Lo)	dB(A)	47/44/41	47/44/41	47/44/41
	Net Dimension (W×D×H)	mm	1280×660×205	1280×660×205	1280×660×205
	Packing Dimension (W×D×H)	mm	1360×720×290	1360×720×290	1360×720×290
	Net Weight	Kg	35	35	35
	Gross Weight	Kg	39	39	39
Refrigerant Pipe	Liquid Side	mm	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	35~55	40~60	45~65
Stuffing Quantity	20/40/40H	Unit	104/222/246	104/222/246	104/222/246

Note:.

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m, level difference : 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m, level difference : 0 m.
3. Anechoic chamber conversion value, measured in test room.During actual operation.These values is normally

somewhat higher as a result of ambient conditions.

4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model			ARVCF-H112/4R1A	ARVCF-H125/4R1A	ARVCF-H140/4R1A
Factory Model			ALCe-H36B4/R1DICA	ALCe-H42B4/R1DICA	ALCe-H48A4/R1DICA
Code			16104094000005	16104095000006	16104096000005
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	11.2	12.5	14.0
	Heating	kW	12.8	13.3	15.0
Indoor Fan Motor	Model		YSK-105W-4	YSK-105W-4	YSK-105W-4
	Brand		Weiling	Weiling	Weiling
	Output Power	W	105	105	105
	Capacitor	uF	5	5	5
	Speed (Hi/Mi/Lo)	r/min	1387/1109/970	1387/1109/970	1387/1109/970
Indoor Coil	a.Number Of Row		3	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	22×19.05	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.6	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7.94，Inner grooved	φ7.94，Inner grooved	φ7.94，Inner grooved
	f.Coil Length x Height x Width	mm	1300×242×57.15	1300×242×57.15	1300×242×57.15
	g.Heat Exchanging Area	m^2	20.55	20.55	20.55
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	1800/1440/1260	1800/1440/1260	1800/1440/1260
	Noise Level(Hi/Mi/Lo)	dB(A)	48/45/42	48/45/42	48/45/42
	Net Dimension (W×D×H)	mm	1631×660×205	1631×660×205	1631×660×205
	Packing Dimension (W×D×H)	mm	1710×720×290	1710×720×290	1710×720×290
	Net Weight	Kg	45	45	45
	Gross Weight	Kg	51	51	51
Refrigerant Pipe	Liquid Side	mm	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	50~75	50~90	60~100
Stuffing Quantity	20/40/40H	Unit	86/173/202	86/173/202	86/173/202

Note:

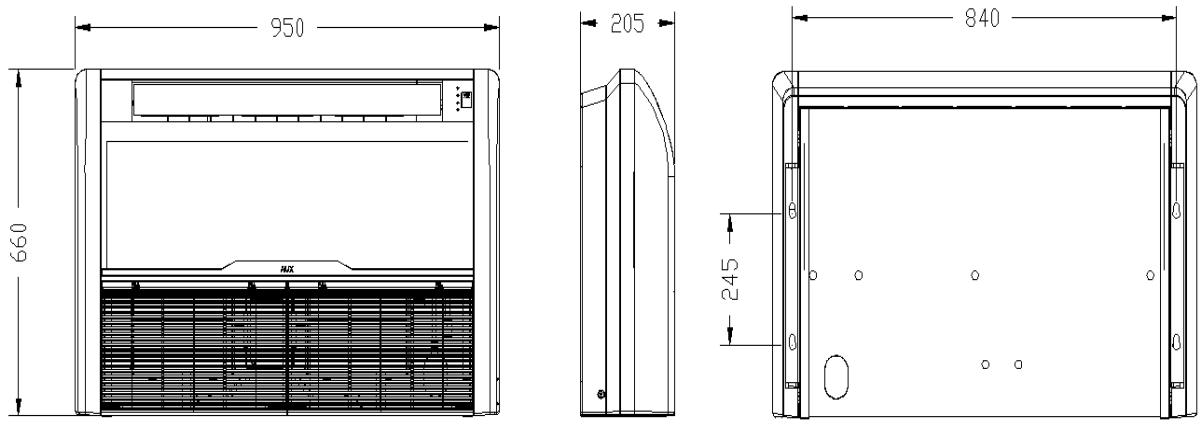
1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m, level difference: 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m, level difference: 0 m.
3. Anechoic chamber conversion value, measured in test room.During actual operation.These values is normally

somewhat higher as a result of ambient conditions.

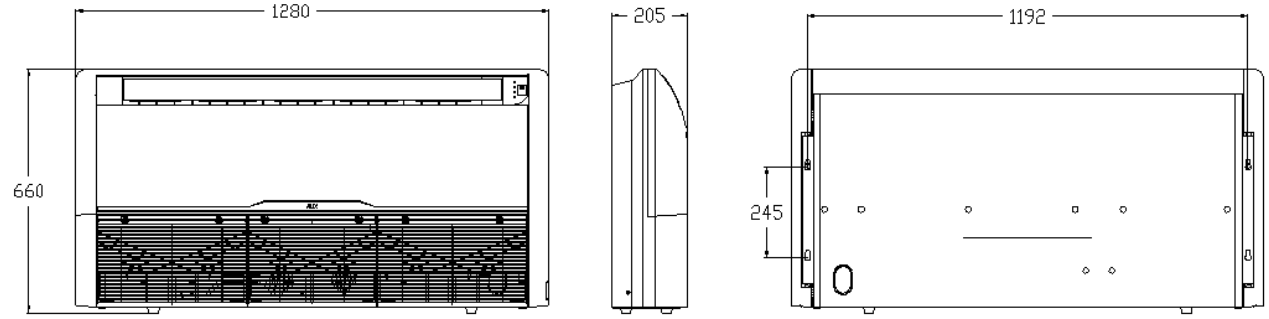
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

3. Dimension

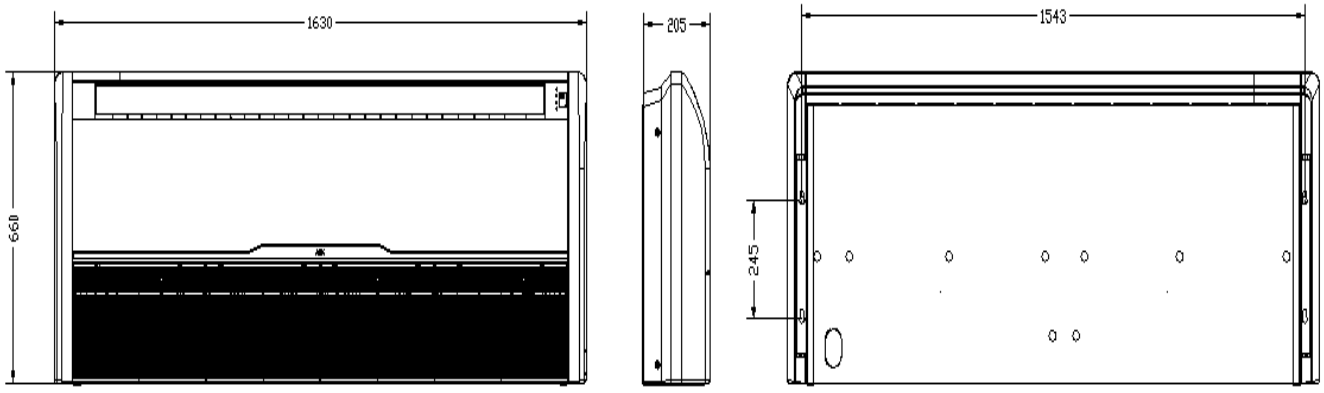
ARVCF-H045/4R1A.ARVCF-H056/4R1A



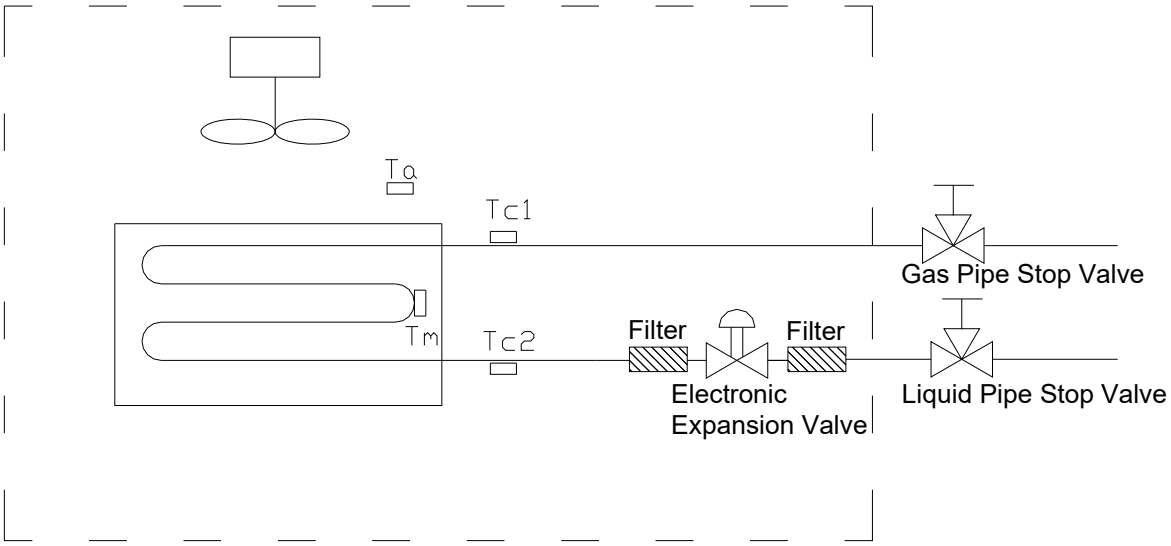
ARVCF-H071/4R1A.ARVCF-H080/4R1A.ARVCF-H090/4R1A.ARVCF-H100/4R1A



ARVCF-H112/4R1A.ARVCF-H125/4R1A.ARVCF-H140/4R1A



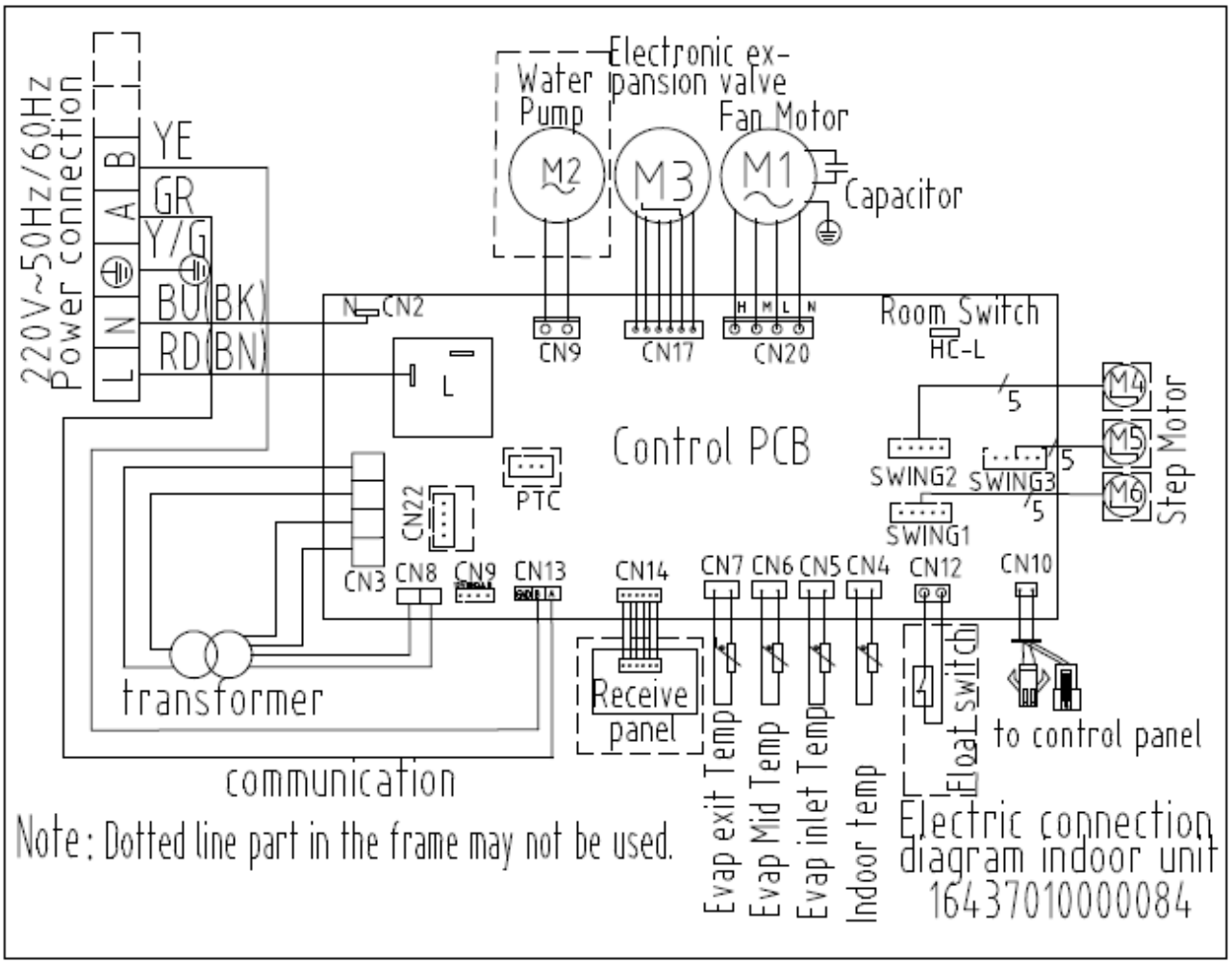
4.Piping Diagram



Refrigerant pipe connection port diameters

Model	Gas pipe(mm)	Liquid pipe(mm)
ARVCF-H045/4R1A ARVCF-H056/4R1A, ARVCF-H071/4R1A ARVCF-H080/4R1A ARVCF-H090/4R1A ARVCF-H100/4R1A ARVCF-H112/4R1A ARVCF-H125/4R1A ARVCF-H140/4R1A	15.88	9.52

5. Wiring Diagram



6. Electric Characteristics

Model	Indoor Unit				Supply Power		IFW	
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
ARVCF-H045/4R1A	50	220-240	198	264	0.51	10	0.04	0.41
ARVCF-H056/4R1A	50	220-240	198	264	0.51	10	0.04	0.41
ARVCF-H071/4R1A	50	220-240	198	264	1.13	10	0.07	0.90
ARVCF-H080/4R1A	50	220-240	198	264	1.13	10	0.07	0.90
ARVCF-H090/4R1A	50	220-240	198	264	1.13	16	0.07	0.90
ARVCF-H100/4R1A	50	220-240	198	264	1.13	16	0.07	0.90
ARVCF-H112/4R1A	50	220-240	198	264	1.50	16	0.105	1.20
ARVCF-H125/4R1A	50	220-240	198	264	1.50	16	0.105	1.20
ARVCF-H140/4R1A	50	220-240	198	264	1.50	16	0.105	1.20

Symbols:
MCA: Min. Circuit Amps.(A)
MFA: Max. Circuit Breaker Amps.
kW : Fan Motor Rated Output(kW)
FLA: Full Load Amps.(A)
IFM:Indoor Fan Motor

Note:
1.Min. and Max. Voltage :Units are suitable for use on electrical system where voltage supplied to unit terminals is not below or above listed rang limits.
2.Maximum allowable voltage unbalance between phases is 2%.
3.MCA/MFA
MCA =1.25 x FLA
4.Select wire size based on the MCA.

7.Capacity Tables

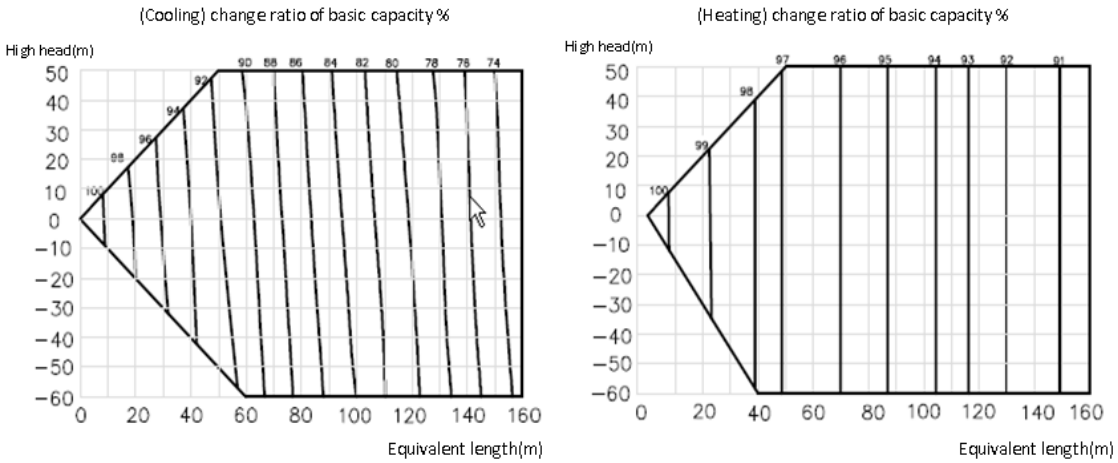
Cooling Capacity of Outdoor Dry Bulb Temperature and Indoor Dry/Wet Bulb Temperature or Power Consumption Correction Coefficient

Outdoor dry bulb temperature [^{0}C]	Correction coefficient	Indoor dry/wet bulb temperature [^{0}C]				
		22/15	**24/17**	**27/19**	**29/21**	**32/23**
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	0.92	0.98	1.05	1.11	1.17
	Power	0.88	0.89	0.91	0.92	0.93
35	Cooling capacity	0.87	0.94	1.0	1.06	1.13
	Power	0.96	0.97	1.0	1.01	1.03
40	Cooling capacity	0.96	0.89	0.95	1.02	1.08
	Power	1.05	1.07	1.08	1.09	1.11
45	Cooling capacity	0.77	0.84	0.90	0.96	1.02
	Power	1.16	1.18	1.19	1.2	1.23
50	Cooling capacity	0.75	0.80	0.86	0.91	0.98
	Power	1.24	1.27	1.28	1.3	1.32

Heating Capacity of Outdoor Dry/Wet Bulb Temperature and Indoor Dry Bulb Temperature or Power Consumption Correction Coefficient

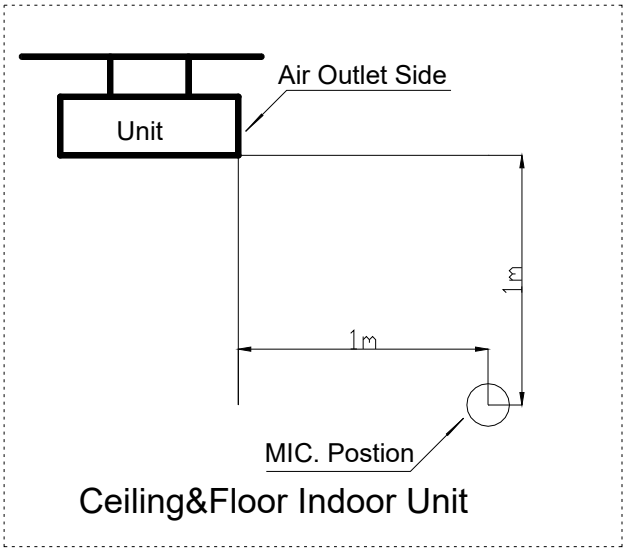
Outdoor ambient temperature of dry/wet bulb[^{0}C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [^{0}C]		
		15	**20**	**25**
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	Power	0.72	0.78	0.84
-7/-8	Heating capacity	0.76	0.72	0.67
	Power	0.81	0.87	0.93
-1/-2	Heating capacity	0.79	0.74	0.70
	Power	0.86	0.92	0.98
2/1	Heating capacity	0.81	0.76	0.72
	Power	0.89	0.95	1.01
7/6	Heating capacity	1.04	1.0	0.96
	Power	0.94	1.0	1.06
10/9	Heating capacity	1.1	1.06	1.01
	Power	0.99	1.05	1.11
15/12	Heating capacity	1.16	1.12	1.07
	Power	1.05	1.11	1.17
15-24	Heating capacity	0.85 – 1.05 of nominal		
	Power	0.80 – 1.20 of nominal		

Length Correction Coefficient of Indoor/Outdoor Unit Connecting Tube



Positive side of high head means installation height of outdoor unit should be higher than indoor unit; negative side of high head means installation height of outdoor unit should be lower than indoor unit; (change ratio of basic capacity)

8. Sound Levels



Note:

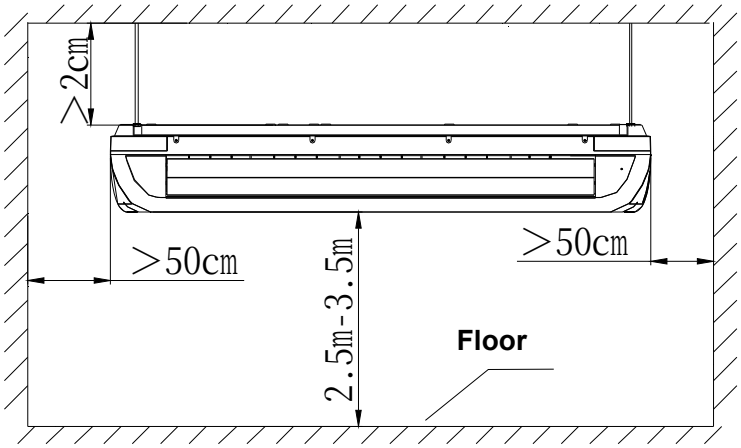
1. The operating condition is assumed to be standard (JIS Condition).
2. These operating values were obtained in a dead room (conversion values).
3. Sound level will vary depending on a range of factors such as the construction (acoustic absorption coetficient) of the particular room in which the equipments installed.

Model	220-240V 50Hz		
	High (dB)	Medium (dB)	Low (dB)
ARVCF-H045/4R1A	42	39	36
ARVCF-H056/4R1A			
ARVCF-H071/4R1A	45	42	39
ARVCF-H080/4R1A	47	44	41
ARVCF-H090/4R1A			
ARVCF-H100/4R1A			
ARVCF-H112/4R1A	48	45	42
ARVCF-H125/4R1A			
ARVCF-H140/4R1A			

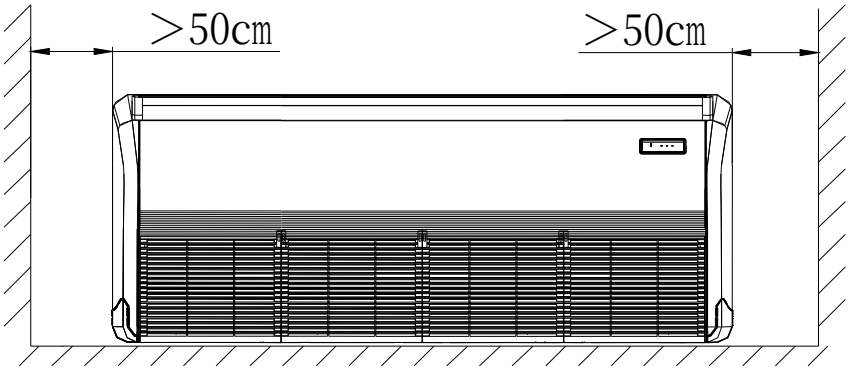
9. Installation

9.1Service Space

◇ Hoisting Installation

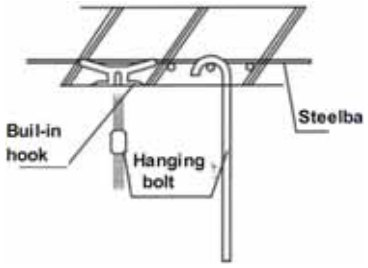


◇Floor-standing Installation



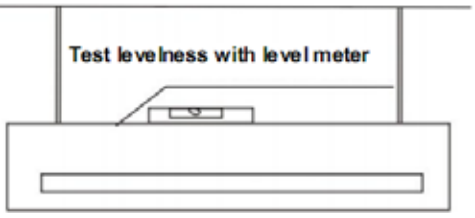
9.2 Hoisting of Indoor Unit

◇Selection of hanging foundation: The foundation must be wooden frame and reinforced concrete structure, which is firm and reliable, able to stand a weight four times of the unit's weight and stand a certain vibration for a long time.



◇Fixing of hanging foundation: Fix hanging bolt as shown in the diagram or fix it with iron bracket and wooden bracket.

◇Adjust the relative position of hook on hanging bolt to keep the main unit horizontal in each direction. Check with level meter after installation to ensure horizontal indoor main unit and prevent possible failures such as water leakage and air leakage.

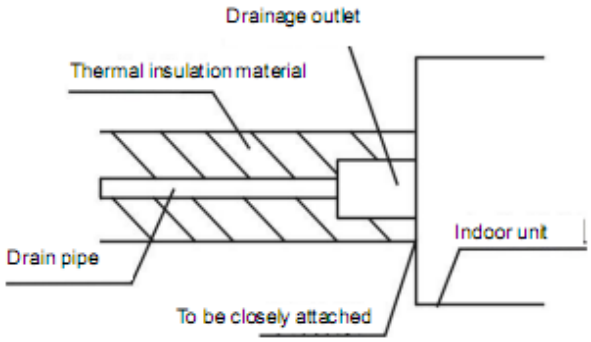


◇Tighten nut to ensure tight contact among nut, washer and four mounting hooks without loose hanging;

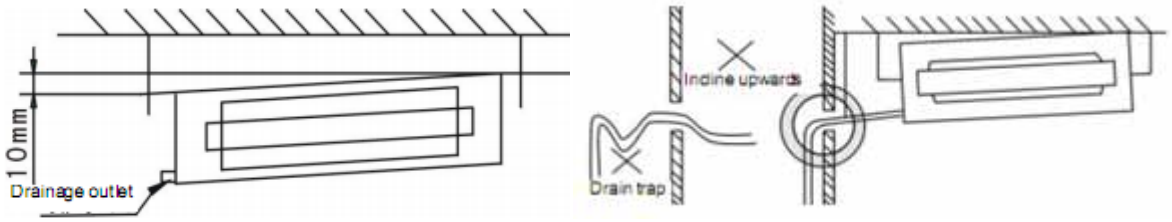
◇Ensure there is no loose positioning such as shaking of main unit after installation;

Installation of Drain Pipe

◇Drain pipe must be wrapped with thermal insulation material as follows to prevent condensation or dripping. Thermal insulation material should be rubber & plastic thermal insulation pipe with thickness above 8mm.



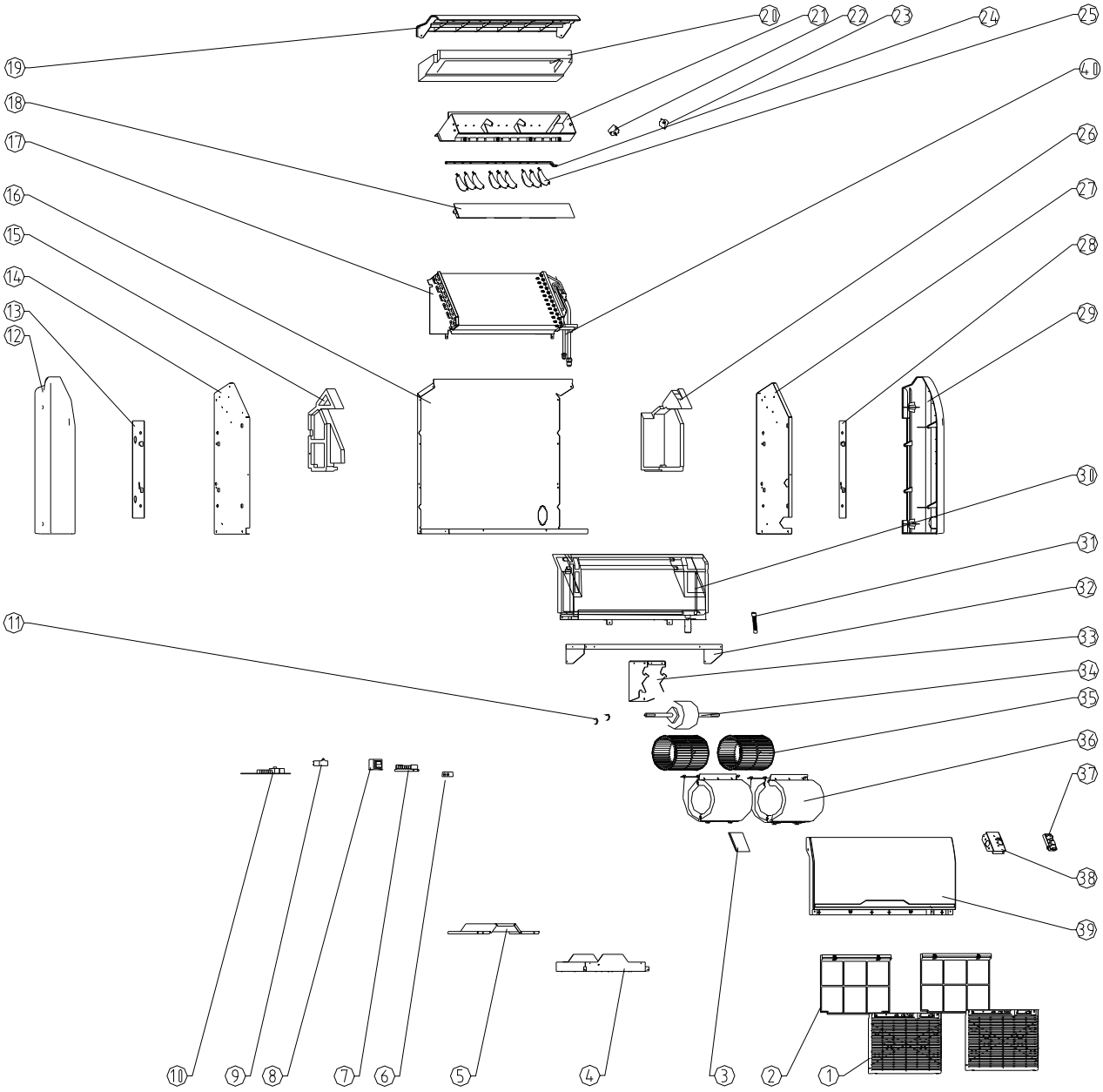
◇ Drain pipe should incline downwards with gradient of 1/50-1/100, which will subject to failure such as back flow or water leakage in case of up-and-down fluctuation or upward inclination.



◇After installation, conduct drainage test to determine if water correctly flows through pipeline and carefully observe the connection to ensure there is no leakage. If the unit is installed in new house, it's recommended to test before decorating ceiling. Conduct drainage test for the unit used for heating only.

10. Exploded View

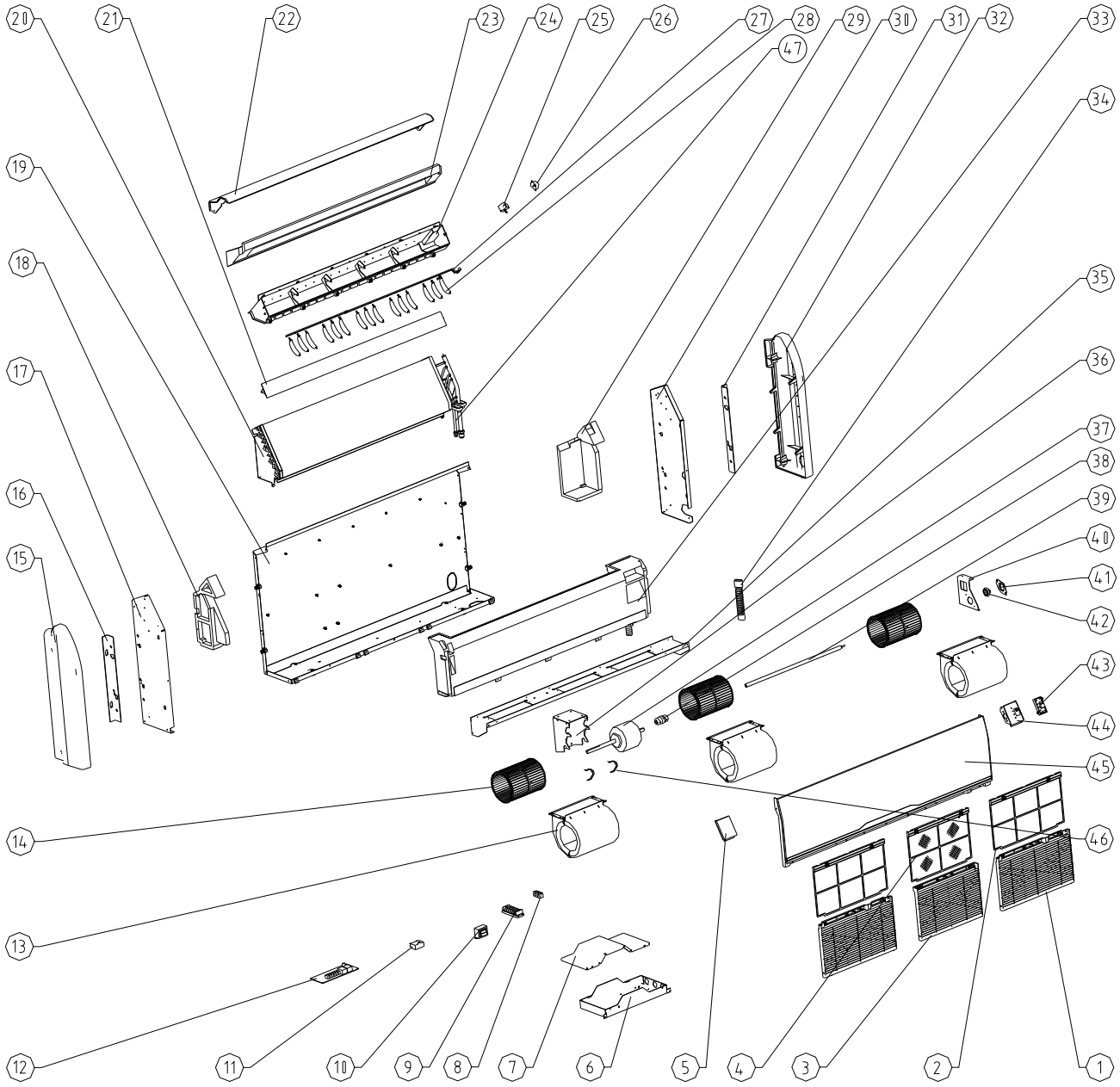
ARVCF-H045/4R1A, ARVCF-H056/4R1A



ARVCF-H045/4R1A, ARVCF-H056/4R1A

N0.	BOM Number	Chinese name	Part Name	Quantity	Unit
1	16420012000002	ALCe-H24B4/C5 滤网	Filter net	2	PCS
2	16420010000002	ALCe-H24B4/C5 格栅	Grille	2	PCS
3	16420015000002	ALCe-H24B4/C5 左装饰板	Left decorative plate	1	PC
4	16421038000009	ALCe-H24B4/C5 电控盒	Control box	1	PC
5	16421005000205	ALCe-H24B4/C5 电控盒盖	Control box cover	1	PC
6	11220544000008	R51L/C(5)双联压线座组件	Twin cable clamp assembly	1	Set
7	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
8	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
9	16430015000003	(ROHS)电容 2.5μF/450V a.c	Capacitor 2.5μF/450V a.c	1	PC
10	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	PC
11,33,34	16430001000196	电机 YSK-40W-4	Motor YSK-40W-4	1	PC
12	16420014000007	ALCe-H24B4/C5 左盖板	Left cover	1	PC
13	16421001000029	ALCe-H24B4/C5 左挂架	Left suspend plate	1	PC
14	16321006000005	ALCe-H24B4/C5 左侧板组件	Left side plate assembly	1	Set
15	16428001000017	ALCe-H24B4/C5 左泡沫	Left side foam	1	PC
16	16321006000023	ALCe-H18A4/C5 背板组件	Back plate assembly	1	Set
17	16324001000066	DLR-45D/DCZC5 蒸发器总成	Evaporator assembly	1	Set
40	16441014000012	电子膨胀阀阀体 CAM-BD18FKS-1	EXV CAM-BD18FKS-1	1	PC
18	16420005000005	ALCe-H18A4/C5 导风门	Air louver	1	PC
19	16420014000016	ALCe-H18A4/C5 顶盖板	Top covers	1	PC
20	16428001000023	ALCe-H18A4/C5 顶泡沫	Top foam	1	PC
21	16420006000007	ALCe-H18A4/C5 导风架	Air –vent frame	1	PC
22	16430001000018	步进电机 35BYJ46-QC120	Step motor 35BYJ46-QC120	1	PC
23	16430001000022	(ROHS)步进电机 35BYJ46-QC50	(ROHS)Step motor 35BYJ46-QC50	1	PC
24	16420008000003	ALCe-H24B4/C5 垂直叶片连杆 A	Vertical blade connecting rod A	1	PC
25	16420007000008	ALCe-H24B4/C5 垂直叶片	Vertical blade	9	PCS
26	16428001000018	ALCe-H24B4/C5 右泡沫	Right foam	1	PC
27	16321006000006	ALCe-H24B4/C5 右侧板组件	Right side plate assembly	1	Set
28	16421001000030	ALCe-H24B4/C5 右挂架	Right suspend plate	1	PC
29	16420014000008	ALCe-H24B4/C5 右盖板	Right covers plate	1	PC
30	16321006000008	ALCe-H18A4/C5 集水盘组件	Draining tray assembly	1	Set
31	16432019000004	排水保温管 QR-120N/A	Drainage pipe(thermal insulation)	1	PC
32	16421002000190	ALCe-H18A4/C5 电机固定板	Motor fixed plate	1	PC
35	16444001000013	风轮 Φ145×190(Φ12)	Wind wheel	2	PCS
36	16444002000003	ALCe-H24B4/C5 上蜗壳	Top plastics	2	PCS
	16444002000004	ALCe-H24B4/C5 下蜗壳	Under plastics	2	PCS
37	11222023000333	R 显示灯板 SX-DISP(ZDJ)-02-SYE1	Display board	1	PC
38	16420017000002	ALCe-H24B4/C5 显示盒	Display board cover	1	PC
39	16420013000019	ALCe-H18A4/C5 面板	Panel	1	PC

ARVCF-H071/4R1A, ARVCF-H080/4R1A, ARVCF-H090/4R1A, ARVCF-H100/4R1A



ARVCF-H071/4R1A, ARVCF-H080/4R1A

N0.	BOM Number	Chinese name	Part Name	Quantity	Unit
1	16420012000002	ALCe-H24B4/C5 滤网	Filter	2	PCS
2	16420010000002	ALCe-H24B4/C5 格栅	Grille	2	PCS
3	16420012000003	ALCe-H24B4/C5 中滤网	Middle filter	1	PC
4	16420010000003	ALCe-H24B4/C5 中格栅	Middle grille	1	PC
5	16420015000002	ALCe-H24B4/C5 左装饰板	Left decorative plate	1	PC
6	16421038000009	ALCe-H24B4/C5 电控盒	Control box	1	PC
7	16421005000205	ALCe-H24B4/C5 电控盒盖	Control box cover	1	PC
8	11220544000008	R51L/C(5)双联压线座组件	Twin cable clamp assembly	1	Set

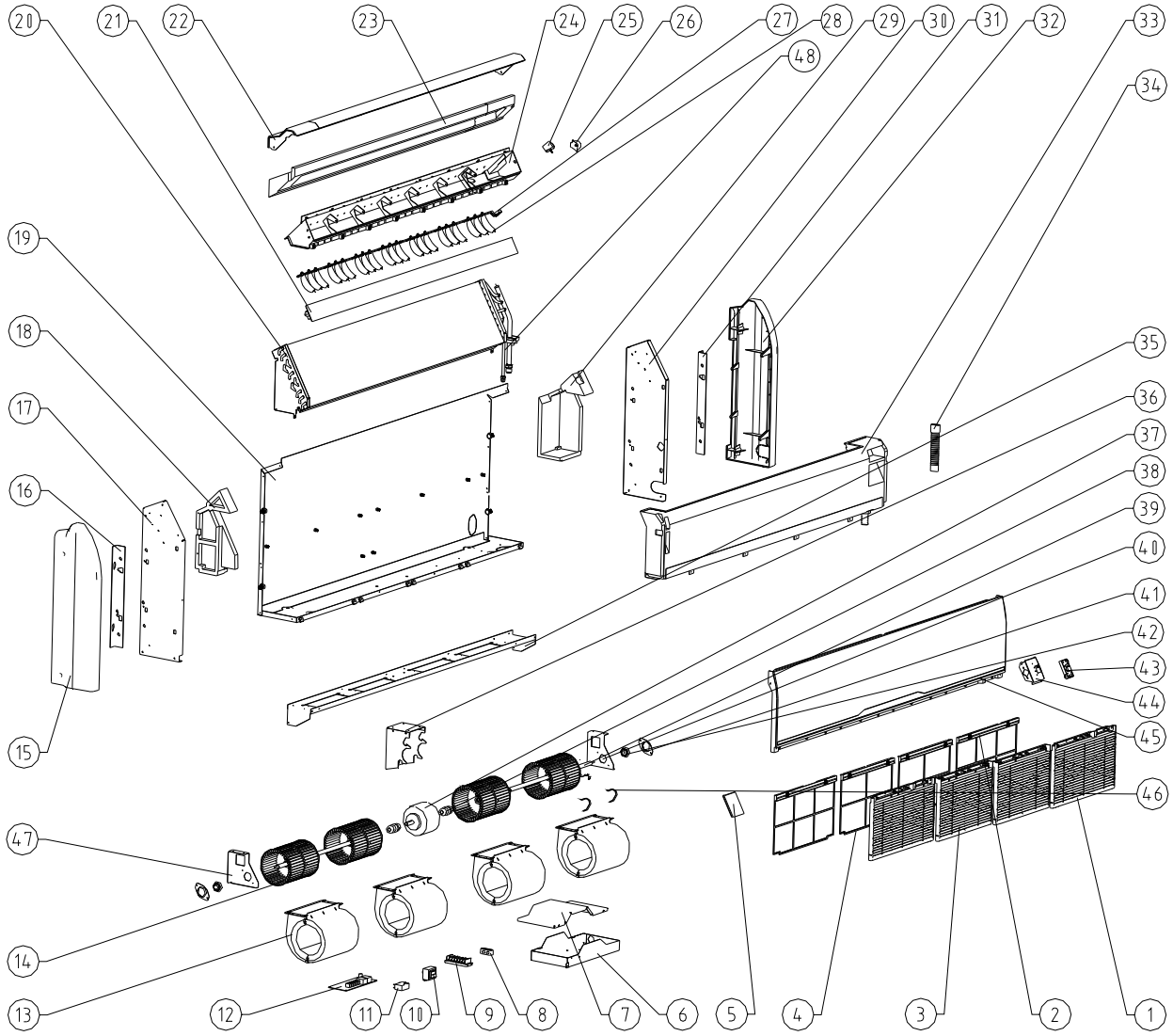
9	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
10	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
11	16430015000016	(ROHS)电容 4μF/450V a.c	Capacitor 4μF/450V a.c	1	PC
12	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	PC
13	16444002000003	ALCe-H24B4/C5 上蜗壳	Uppervolute	3	PCS
	16444002000004	ALCe-H24B4/C5 下蜗壳	Lower volute	3	PCS
14	16444001000004	风轮 Φ145×190(Φ15)	Wind wheel	3	PCS
15	16420014000007	ALCe-H24B4/C5 左盖板	Left covers	1	PC
16	16421001000029	ALCe-H24B4/C5 左挂架	Left suspend plate	1	PC
17	16321006000005	ALCe-H24B4/C5 左侧板组件	Left side board assembly	1	Set
18	16428001000017	ALCe-H24B4/C5 左泡沫	Left side foam	1	PC
19	16321006000003	ALCe-H24B4/C5 背板组件	Back plate assembly	1	Set
20	16324001000064	DLR-63D/DCZC5 蒸发器总成	Evaporator assembly	1	Set
47	16441014000013	电子膨胀阀阀体 CAM-BD22FKS-1	EXV CAM-BD22FKS-1	1	PC
21	16420005000003	ALCe-H24B4/C5 导风门	Air louver	1	PC
22	16420014000009	ALCe-H24B4/C5 顶盖板	Top covers plate	1	PC
23	16428001000019	ALCe-H24B4/C5 顶泡沫	Top foam	1	PC
24	16420006000004	ALCe-H24B4/C5 导风架	Air vent frame	1	PC
25	16430001000018	步进电机 35BYJ46-QC120	Step motor 35BYJ46-QC120	1	PC
26	16430001000022	(ROHS)步进电机 35BYJ46-QC50	(ROHS)Step motor 35BYJ46-QC50	1	PC
27	16420008000003	ALCe-H24B4/C5 垂直叶片连杆 A	Vertical blade connecting rod A	1	PC
	16420008000004	ALCe-H24B4/C5 垂直叶片连杆 B	Vertical blade connecting rod B	1	PC
28	16420007000008	ALCe-H24B4/C5 垂直叶片	Vertical blade	15	PCS
29	16428001000018	ALCe-H24B4/C5 右泡沫	Right side foam	1	PC
30	16321006000006	ALCe-H24B4/C5 右侧板组件	Right side board assembly	1	Set
31	16421001000030	ALCe-H24B4/C5 右挂架	Right suspend plate	1	PC
32	16420014000008	ALCe-H24B4/C5 右盖板	Right cover	1	PC
33	16321006000002	ALCe-H24B4/C5 集水盘组件	Draining tray assembly	1	Set
34	16432019000004	排水保温管 QR-120N/A	Drainage pipe(thermal insulation)	1	PC
35	16421002000185	ALCe-H24B4/C5 电机固定板	Motor fixed plate	1	PC
36,37,46	16430001000019	电机 YSK-70W-4	Motor YSK-70W-4	1	PC
38	16444007000001	联轴器 Φ15	Coupling	1	PC
39	16444007000003	加长轴 Φ15×565	Lengthening shaft	1	PC
40	16421002000011	ALCe-H24B4/C5 轴承固定座	Bearing permanent seat	1	PC
41	16421002000219	GR-50D/DC2 橡胶轴承压板	Rubber bearing holder	1	PC
42	16432016000033	GR-50D/DC2 橡胶轴承	Rubber bearing	1	PC
43	11222023000333	R 显示灯板 SX-DISP(ZDJ)-02-SYE1	Display board	1	PC
44	16420017000002	ALCe-H24B4/C5 显示盒	Display board cover	1	PC
45	16420013000016	ALCe-H24B4/C5 面板	Panel	1	PC

ARVCF-H090/4R1A, ARVCF-H100/4R1A

N0.	BOM Number	Chinese name	Part Name	Quantity	Unit
1	16420012000002	ALCe-H24B4/C5 滤网	Air filter	2	PCS
2	16420010000002	ALCe-H24B4/C5 格栅	Grille	2	PCS
3	16420012000003	ALCe-H24B4/C5 中滤网	Middle air filter	1	PC
4	16420010000003	ALCe-H24B4/C5 中格栅	Middle grille	1	PC
5	16420015000002	ALCe-H24B4/C5 左装饰板	Left decorative plate	1	PC
6	16421038000009	ALCe-H24B4/C5 电控盒	Control box cover	1	PC
7	16421005000205	ALCe-H24B4/C5 电控盒盖	Control box cover	1	PC
8	11220544000008	R51L/C(5)双联压线座组件	Twin cable clamp assembly	1	Set
9	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
10	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
11	16430015000016	(ROHS)电容 4μF/450V a.c	Capacitor 4μF/450V a.c	1	PC
12	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	PC
13	16444002000003	ALCe-H24B4/C5 上蜗壳	Upper volute	3	PCS
	16444002000004	ALCe-H24B4/C5 下蜗壳	Lower volute	3	PCS
14	16444001000004	风轮 Φ145×190(Φ15)	Wind wheel	3	PCS
15	16420014000007	ALCe-H24B4/C5 左盖板	Left covers plate	1	PC
16	16421001000029	ALCe-H24B4/C5 左挂架	Left suspend plate	1	PC
17	16321006000005	ALCe-H24B4/C5 左侧板组件	Left side plate assembly	1	Set
18	16428001000017	ALCe-H24B4/C5 左泡沫	Left side foam	1	PC
19	16321006000003	ALCe-H24B4/C5 背板组件	Back plate assembly	1	Set
20	16324001000065	DLR-90D/DCZC5 蒸发器总成	Evaporator assembly	1	Set
47	16441014000013	电子膨胀阀阀体 CAM-BD22FKS-1	EXV CAM-BD22FKS-1	1	PC
21	16420005000003	ALCe-H24B4/C5 导风门	Air louver	1	PC
22	16420014000009	ALCe-H24B4/C5 顶盖板	Top covers	1	PC
23	16428001000019	ALCe-H24B4/C5 顶泡沫	Top foam	1	PC
24	16420006000004	ALCe-H24B4/C5 导风架	Air vent frame	1	PC
25	16430001000018	步进电机 35BYJ46-QC120	Step motor 35BYJ46-QC120	1	PC
26	16430001000022	(ROHS)步进电机 35BYJ46-QC50	(ROHS)Step motor 35BYJ46-QC50	1	PC
27	16420008000003	ALCe-H24B4/C5 垂直叶片连杆 A	Vertical blade connecting rod A	1	PC
	16420008000004	ALCe-H24B4/C5 垂直叶片连杆 B	Vertical blade connecting rod B	1	PC
28	16420007000008	ALCe-H24B4/C5 垂直叶片	Vertical blade	15	PCS
29	16428001000018	ALCe-H24B4/C5 右泡沫	Right side foam	1	PC
30	16321006000006	ALCe-H24B4/C5 右侧板组件	Right side boardassembly	1	Set
31	16421001000030	ALCe-H24B4/C5 右挂架	Right suspend plate	1	PC
32	16420014000008	ALCe-H24B4/C5 右盖板	Right covers plate	1	PC

33	16321006000002	ALCe-H24B4/C5 集水盘组件	Draining tray assembly	1	Set
34	16432019000004	排水保温管 QR-120N/A	Drainage pipe(thermal insulation)	1	PC
35	16421002000185	ALCe-H24B4/C5 电机固定板	Motor fixed plate	1	PC
36,37,46	16430001000019	电机 YSK-70W-4	Motor YSK-70W-4	1	PC
38	16444007000001	联轴器 Φ15	Coupling	1	PC
39	16444007000003	加长轴 Φ15×565	Lengthening shaft	1	PC
40	16421002000011	ALCe-H24B4/C5 轴承固定座	Bearing permanent seat	1	PC
41	16421002000219	GR-50D/DC2 橡胶轴承压板	Rubber bearing holder	1	PC
42	16432016000033	GR-50D/DC2 橡胶轴承	Rubber bearing	1	PC
43	11222023000333	R 显示灯板 SX-DISP(ZDJ)-02-SYE1	Display board	1	PC
44	16420017000002	ALCe-H24B4/C5 显示盒	Display board cover	1	PC
45	16420013000016	ALCe-H24B4/C5 面板	Panel	1	PC

ARVCF-H112/4R1A, ARVCF-H125/4R1A, ARVCF-H140/4R1A



ARVCF-H112/4R1A, ARVCF-H125/4R1A, ARVCF-H140/4R1A

N0.	BOM Number	Chinese name	Part Name	Quanti ty	Unit
1	16420012000002	ALCe-H24B4/C5 滤网	Air filter	2	PCS
2	16420010000002	ALCe-H24B4/C5 格栅	Grille	2	PCS
3	16420012000003	ALCe-H24B4/C5 中滤网	Middle air filter	2	PCS
4	16420010000003	ALCe-H24B4/C5 中格栅	Middle grille	2	PCS
5	16420015000002	ALCe-H24B4/C5 左装饰板	Left decorative plate	1	PC
6	16421038000009	ALCe-H24B4/C5 电控盒	Control box assembly	1	PC
7	16421005000205	ALCe-H24B4/C5 电控盒盖	Control box cover	1	PC
8	11220544000008	R51L/C(5)双联压线座组件	Twin cable clamp assembly	1	Set
9	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
10	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
11	16430015000005	(ROHS)电容 5μF/450V a.c	Capacitor 4μF/450V a.c	1	PC
12	16422001000092	控制板 DCZ-SN3F-SYE2(R8C)	PCB board	1	PC
13	16444002000003	ALCe-H24B4/C5 上蜗壳	Upper volute	4	PCS
	16444002000004	ALCe-H24B4/C5 下蜗壳	Lower volute	4	PCS
14	16444001000004	风轮 Φ145×190(Φ15)	Wind wheel	4	PCS
15	16420014000007	ALCe-H24B4/C5 左盖板	Left covers plate	1	PC
16	16421001000029	ALCe-H24B4/C5 左挂架	Left suspend plate	1	PC
17	16321006000005	ALCe-H24B4/C5 左侧板组件	Left side board assembly	1	Set
18	16428001000017	ALCe-H24B4/C5 左泡沫	Left side foam	1	PC
19	16321006000020	ALCe-H42A5/C5 背板组件	Back plate assembly	1	Set
20	16324001000062	DLR-112D/DCZC5 蒸发器总成	Evaporator assembly	1	Set
47	16441014000003	电子膨胀阀阀体 CAM-BD24FKS-1	EXV CAM-BD24FKS-1	1	PC
21	16420005000004	ALCe-H42A5/C5 导风门	Air louver	1	PC
22	16420014000015	ALCe-H42A5/C5 顶盖板	Top covers plate	1	PC
23	16428001000022	ALCe-H42A5/C5 顶泡沫	Top foam	1	PC
24	16420006000006	ALCe-H42A5/C5 导风架	Air vent frame	1	PC
25	16430001000018	步进电机 35BYJ46-QC120	Step motor 35BYJ46-QC120	1	PC
26	16430001000022	(ROHS)步进电机 35BYJ46-QC50	(ROHS)Step motor 35BYJ46-QC50	1	PC
27	16420008000003	ALCe-H24B4/C5 垂直叶片连杆 A	Vertical blade connecting rod A	1	PC
	16420008000005	ALCe-H42A5/C5 垂直叶片连杆	Vertical blade connecting rod B	1	PC
28	16420007000008	ALCe-H24B4/C5 垂直叶片	Vertical blade	21	PCS
29	16428001000018	ALCe-H24B4/C5 右泡沫	Right side foam	1	PC
30	16321006000006	ALCe-H24B4/C5 右侧板组件	Right side board assembly	1	Set
31	16421001000030	ALCe-H24B4/C5 右挂架	Right suspend plate	1	PC
32	16420014000008	ALCe-H24B4/C5 右盖板	Right covers plate	1	PC
33	16321006000007	ALCe-H42A5/C5 集水盘组件	Draining tray components	1	Set
34	16432019000004	排水保温管 QR-120N/A	Drainage pipe(thermal insulation)	1	PC
35	16421002000187	ALCe-H42A5/C5 电机固定板	Motor fixed plate	1	PC
36,37,46	16430001000026	电机 YSK-105W-4	Motor YSK-70W-4	1	PC
38	16444007000001	联轴器 Φ15	Coupling	2	PCS

39	16444007000003	加长轴 Φ15×565	Lengthening shaft	2	PCS
40	16421002000011	ALCe-H24B4/C5 轴承固定座	Bearing permanent seat	1	PC
41	16421002000219	GR-50D/DC2 橡胶轴承压板	Rubber bearing holder	2	PCS
42	16432016000033	GR-50D/DC2 橡胶轴承	Rubber bearing	2	PCS
43	11222023000333	R 显示灯板 SX-DISP(ZDJ)-02-SYE1	Display board	1	PC
44	16420017000002	ALCe-H24B4/C5 显示盒	Display board cover	1	PC
45	16420013000017	ALCe-H42A5/C5 面板	Panel	1	PC
47	16421002000189	ALCe-H42A5/C5 轴承固定座	Display board cover	1	PC

Wall-mounted Type

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1.Features

Anti-cold-air (Heat pump only)

When starting the heating operation, the fan speed is regulated automatically from the lowest grade to the preset level, according to the temperature rising of evaporator. The function can prevent cold air blowing out at the beginning of the operation, which avoids the discomfort to the user.

Self-diagnosis function

Monitoring some abnormal operations or parts failures, which happens microcomputer of the air conditionerwhichswitch off and protect the system automatically. Meanwhile, the error or protection code will be displayed on the indoor unit.

24-hour timer

User can set on the timer to turn on or off the air conditioner any time within 24 hours.

Force cooling

This function is convenient when user can’t find the remote controller.

Low ambient cooling

The air conditioner with a special built-in low ambient cooling component can be used in temperature as low as -15C for cooling operation.

Auto restart

If the machine is suddenly shut down during operation, the unit will record the operating

Sleep Mode

User can select mode after pressing time-off button, this function will adjust temperature automatically, which makes a comfortable sleep environment and save energy.

Intelligent defrosting

Normal defrost function can only be operated in certain time, but AUX commercial air conditioner’s intelligent defrost can start automatically according to the surrounding condition.

LI

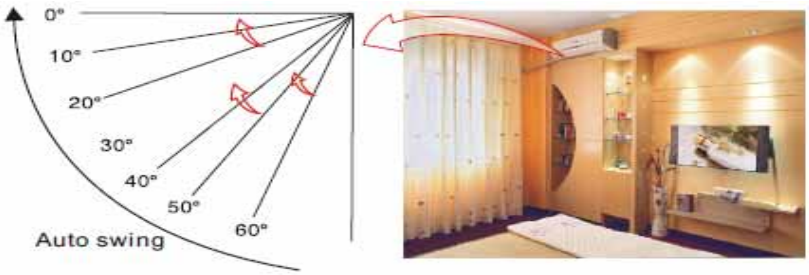
LH

◇ EXV inside type have two kind panels choose : LI/LH

◇ Easy and flexible installation, which can satisfy the different space demands

◇ Low noise, creates quite and comfortable environment.

◇ Adopt cross fan and optimization wind path design, supply air is strong and quiet.



2.Specifications

Model	LI Type		ARVWM-H022/4R1A(LI)	ARVWM-H028/4R1A(LI)	ARVWM-H036/4R1A(LI)
	LH Type		ARVWM-H022/4R1A(LH)	ARVWM-H028/4R1A(LH)	ARVWM-H036/4R1A(LH)
Power Supply		V~,Hz, Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	2.2	2.8	3.6
	Heating	kW	2.5	3.0	4.3
Indoor Fan Motor	Model		YYK18-4B	YYK18-4B	YYK18-4B
	Brand		dongfang	dongfang	dongfang
	Output Power	W	18	18	18
	Capacitor	uF	1.5	1.5	1.5
	Speed (Hi/Mi/Lo)	r/min	1110/1000/900	1110/1000/900	1110/1000/900
Indoor Coil	a.Number Of Row		2	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.3	1.3	1.3
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7, Inner grooved	φ7, Inner grooved	φ7, Inner grooved
	f.Coil Length x Height x Width	mm	639x225x25.4	639x225x25.4	639x225x25.4
	g.Heat Exchanging Area	m^2	5.16	5.16	5.16
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	650/600/580	650/600/580	650/600/580
	Noise Level(Hi/Mi/Lo)	dB(A)	38/33/27	38/33/27	38/33/27
	External Static Pressure	Pa	0	0	0
	Net Dimension (W×D×H)	mm	850×300×198	850×300×198	850×300×198
	Packing Dimension (W×D×H)	mm	905×357×267	905×357×267	905×357×267
	Net Weight	Kg	10	10	10
	Gross Weight	Kg	13	13	13
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	6.35
	Gas Side	mm	9.52	9.52	9.52
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24

Range(Cooling/Heating)					
Stuffing Quantity	20/40/40H	Unit	328/680/850	328/680/850	328/680/850

Notes:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length :7.5m,level difference: 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length :7.5m,level difference: 0 m.
3. Anechoic chamber conversion value, measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model	LI Type		ARVWM-H045/4R1A(LI)	ARVWM-H056/4R1A(LI)	ARVWM-H071/4R1A(LI)
	LH Type		ARVWM-H045/4R1A(LH)	ARVWM-H056/4R1A(LH)	ARVWM-H071/4R1A(LH)
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	4.5	5.6	7.1
	Heating	kW	5.0	6.0	8.0
Indoor Fan Motor	Model		YYK30-4	YYK30-4	YYK50-4
	Brand		Zhuhaitongde	zhuhaitongde	weiling
	Output Power	W	30	30	50
	Capacitor	uF	3	3	3
	Speed (Hi/Mi/Lo)	r/min	1110/1000/900	1110/1000/900	1110/1000/900
Indoor Coil	a.Number Of Row		2	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.3	1.3	1.3
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7， Inner grooved	φ7， Inner grooved	φ7， Inner grooved
	f.Coil Length x Height x Width	mm	800x225x25.4	800x225x25.4	1030x219x25.4
	g.Heat Exchanging Area	m^2	6.46	6.46	12.79
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	850/750/650	850/750/650	1200/950/800
	Noise Level(Hi/Mi/Lo)	dB(A)	45/41/35	45/41/35	48/45/39

	Extemal Static Pressure	Pa	0	0	0
	Net Dimension (W×D×H)	mm	970×315×235	970×315×235	1100×330×235
	Packing Dimension (W×D×H)	mm	1010×370×300	1010×370×300	1140×385×300
	Net Weight	Kg	14	14	16
	Gross Weight	Kg	18	18	20
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	6.35
	Gas Side	mm	12.7	12.7	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Stuffing Quantity	20/40/40H	Unit	238/476/544	238/476/544	210/434/496

Notes:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length :7.5m,level difference: 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length :7.5m,level difference: 0 m.
3. Anechoic chamber conversion value, measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model	LI Type		ARVWM-H022/2R1A(LI)	ARVWM-H028/2R1A(LI)	ARVWM-H036/2R1A(LI)
	LH Type		ARVWM-H022/2R1A(LH)	ARVWM-H028/2R1A(LH)	ARVWM-H036/2R1A(LH)
Power Supply		V~,Hz,Ph	208~230,60,1	208~230,60,1	208~230,60,1
Capacity	Cooling	kW	2.2	2.8	3.6
	Heating	kW	2.5	3.0	4.3
Indoor Fan Motor	Model		YYK18-4B-60	YYK18-4B-60	YYK18-4B-60
	Brand		dongfang	dongfang	dongfang
	Output Power	W	18	18	18
	Capacitor	uF	1.5	1.5	1.5
	Speed (Hi/Mi/Lo)	r/min	1110/1000/900	1110/1000/900	1110/1000/900
Indoor Coil	a.Number Of Row		2	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.3	1.3	1.3

	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7, Inner grooved	φ7, Inner grooved	φ7, Inner grooved
	f.Coil Length x Height x Width	mm	639x225x25.4	639x225x25.4	639x225x25.4
	g.Heat Exchanging Area	m^2	5.16	5.16	5.16
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	650/600/580	650/600/580	650/600/580
	Noise Level(Hi/Mi/Lo)	dB(A)	38/33/27	38/33/27	38/33/27
	External Static Pressure	Pa	0	0	0
	Net Dimension (W×D×H)	mm	850×300×198	850×300×198	850×300×198
	Packing Dimension (W×D×H)	mm	905×357×267	905×357×267	905×357×267
	Net Weight	Kg	10	10	10
	Gross Weight	Kg	13	13	13
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	6.35
	Gas Side	mm	9.52	9.52	9.52
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Stuffing Quantity	20/40/40H	Unit	328/680/850	328/680/850	328/680/850

Notes:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length :7.5m,level difference: 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length :7.5m,level difference: 0 m.
3. Anechoic chamber conversion value, measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

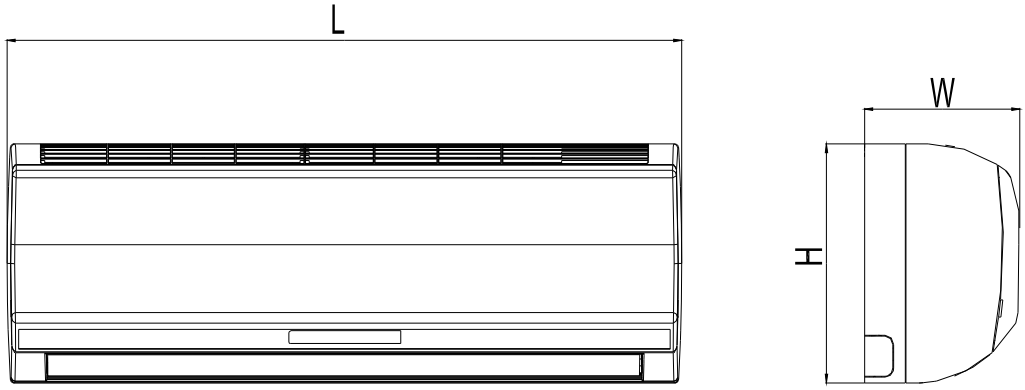
Model	Indoor LI		ARVWM-H045/2R1A(LI)	ARVWM-H056/2R1A(LI)	ARVWM-H071/2R1A(LI)
	Indoor LH		ARVWM-H045/2R1A(LH)	ARVWM-H056/2R1A(LH)	ARVWM-H071/2R1A(LH)
Power Supply		V~,Hz,Ph	208~230,60,1	208~230,60,1	208~230,60,1
Capacity	Cooling	kW	4.5	5.6	7.1
	Heating	kW	5.0	6.0	8.0
Indoor Fan Motor	Model		YYK50-4-60	YYK50-4-60	YYK50-4-60
	Brand		weiling	weiling	weiling
	Output Power	W	50	50	50
	Capacitor	uF	3	3	3
	Speed (Hi/Mi/Lo)	r/min	1110/1000/900	1110/1000/900	1110/1000/900
Indoor Coil	a.Number Of Row		2	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.3	1.3	1.3
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7， Inner grooved	φ7， Inner grooved	φ7， Inner grooved
	f.Coil Length x Height x Width	mm	800x225x25.4	800x225x25.4	1030x219x25.4
	g.Heat Exchanging Area	m^2	6.46	6.46	12.79
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	850/750/650	850/750/650	1200/950/800
	Noise Level(Hi/Mi/Lo)	dB(A)	45/41/35	45/41/35	48/45/39
	Extemal Static Pressure	Pa	0	0	0
	Net Dimension (W×D×H)	mm	970×315×235	970×315×235	1100×330×235
	Packing Dimension (W×D×H)	mm	1010×370×300	1010×370×300	1140×385×300
	Net Weight	Kg	14	14	16
	Gross Weight	Kg	18	18	20
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	6.35
	Gas Side	mm	12.7	12.7	15.88

	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Stuffing Quantity	20/40/40H	Unit	238/476/544	238/476/544	210/434/496

Notes:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length :7.5m,level difference: 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length :7.5m,level difference: 0 m.
3. Anechoic chamber conversion value, measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

3.Dimensions

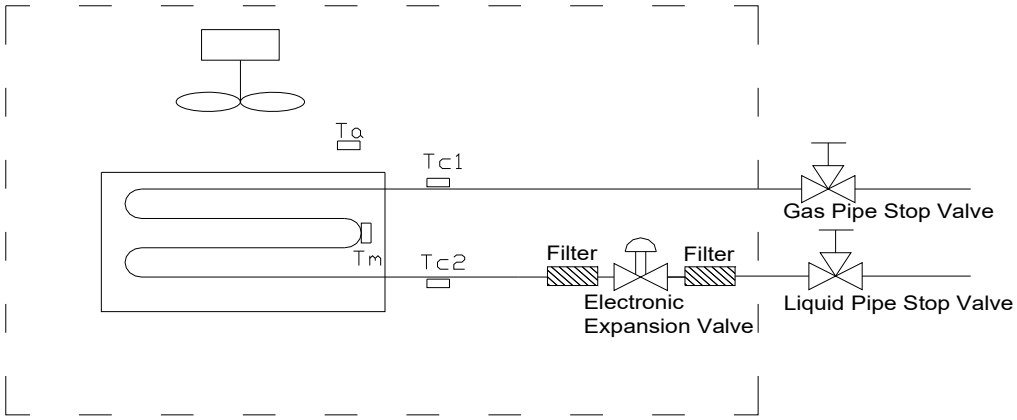


Physical Dimension		ARVWM-H022/2R1A(LI) ARVWM-H022/2R1A(LH)	ARVWM-H028/2R1A(LI) ARVWM-H028/2R1A(LH)	ARVWM-H036/2R1A(LI) ARVWM-H036/2R1A(LH)
Length	mm	850	850	850
Height	mm	300	300	300
Width	mm	198	198	198

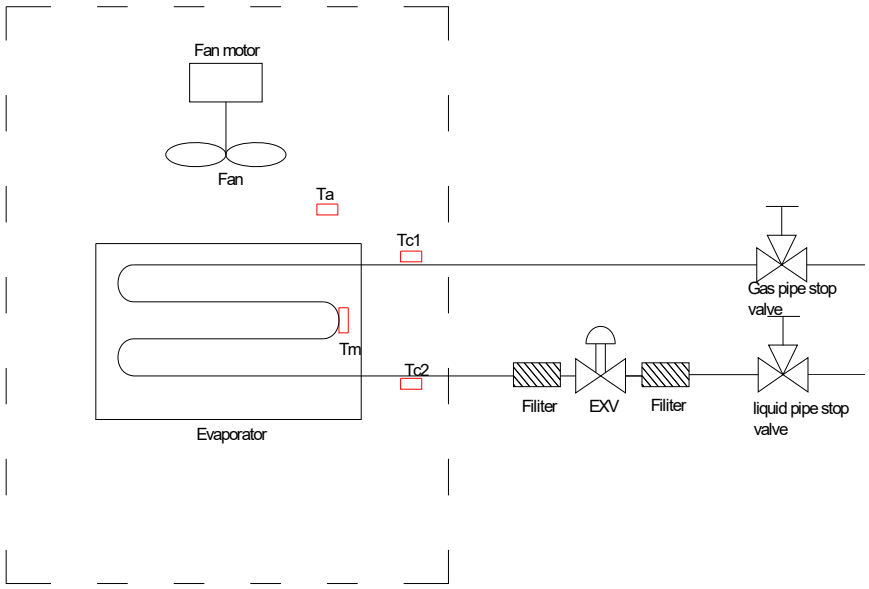
Physical Dimension		ARVWM-H045/2R1A(LI) ARVWM-H045/2R1A(LH)	ARVWM-H056/2R1A(LI) ARVWM-H056/2R1A(LH)	ARVWM-H071/2R1A(LI) ARVWM-H071/2R1A(LH)
Length	mm	970	970	1100
Height	mm	315	315	330
Width	mm	235	235	235

4.Piping Diagrams

EXV Built-in type



EXV separate type



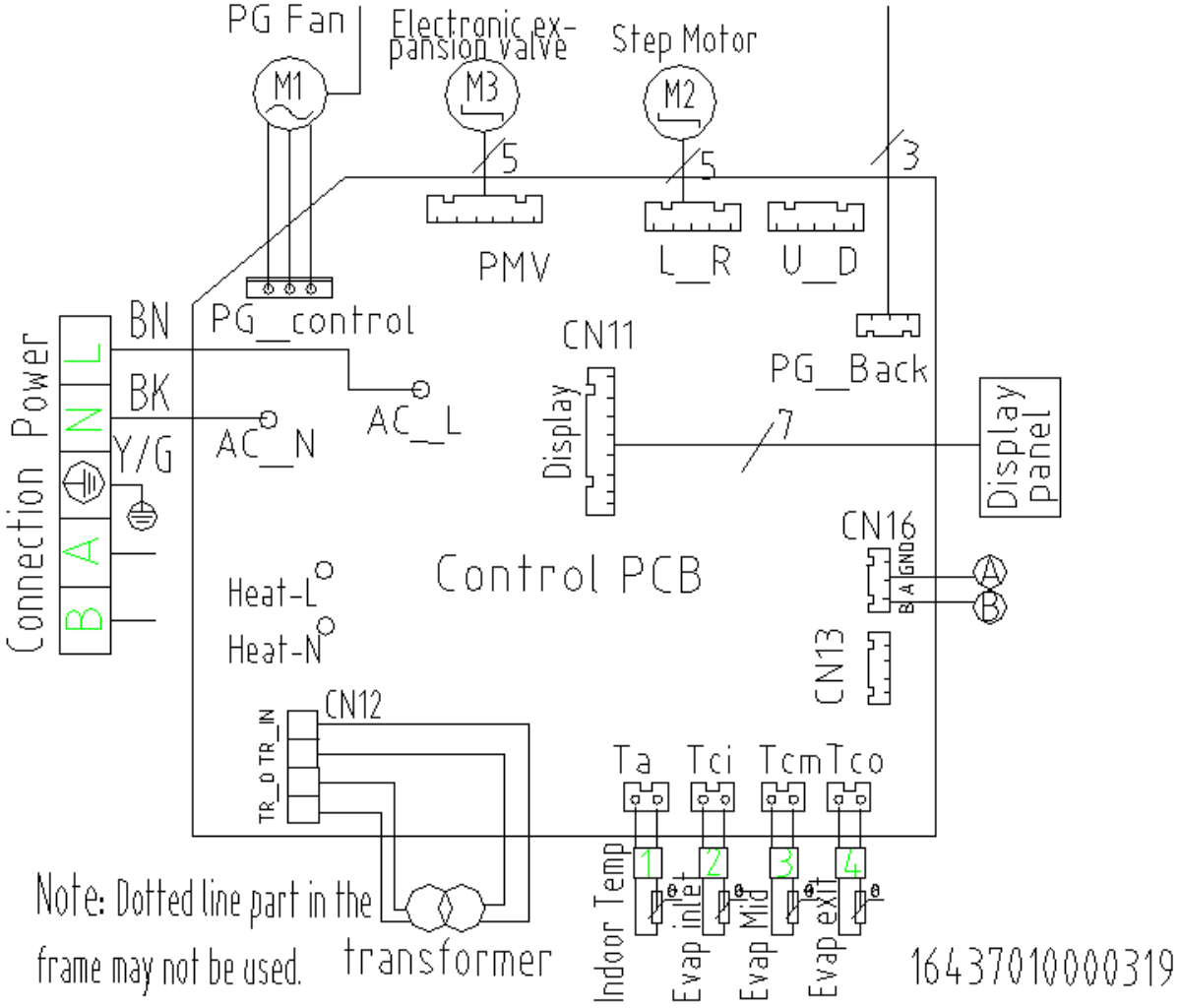
Refrigerant pipe connection port diameters

(mm)

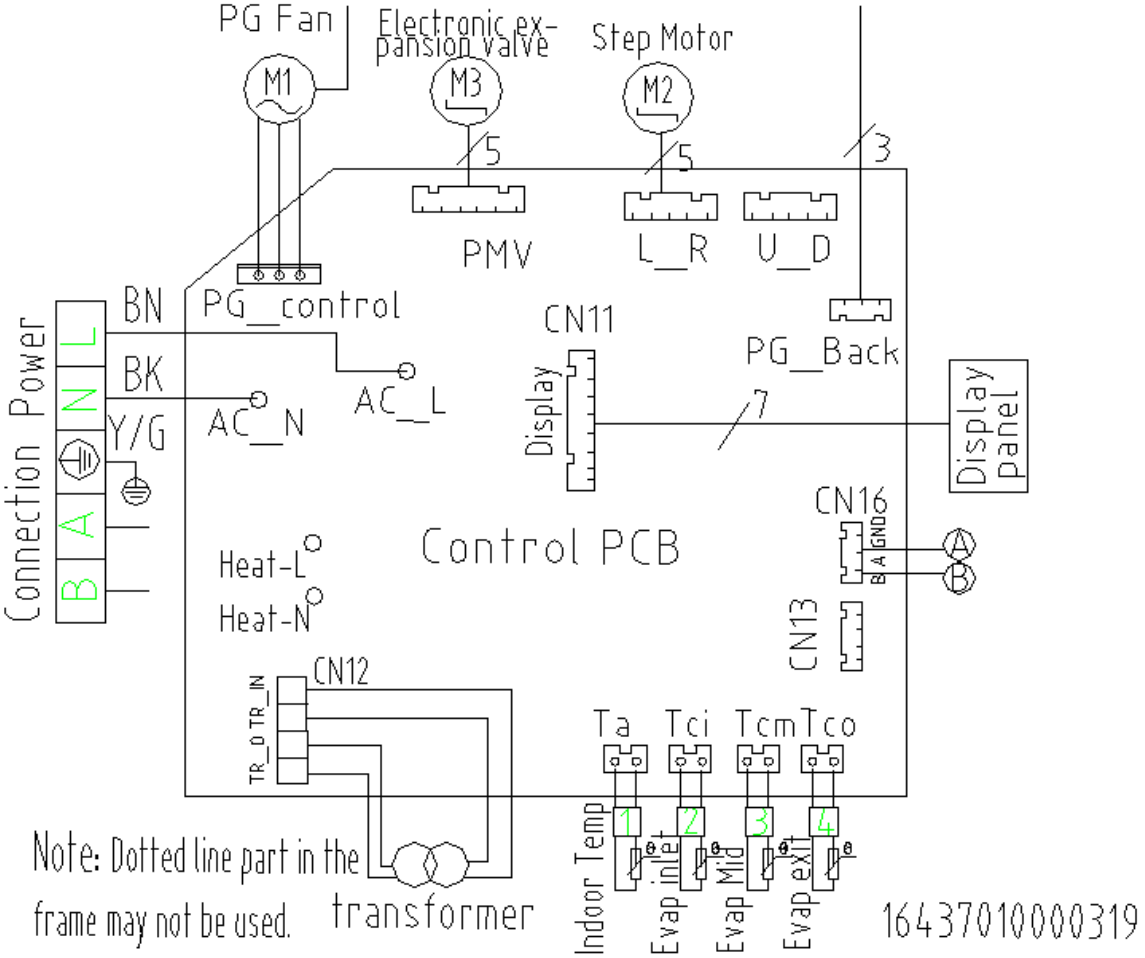
Model	Gas	Liquid
ARVWM-H022/28/36/4R1A(LI) ARVWM-H022/28/36/4R1A(LH)	Φ9.52	Φ6.35
ARVWM-H045/56/4R1A(LI) ARVWM-H045/56/4R1A(LH)	Φ12.7	Φ6.35
ARVWM-H071/4R1A(LI) ARVWM-H071/4R1A(LH)	Φ15.88	Φ6.35

5.Wiring Diagrams

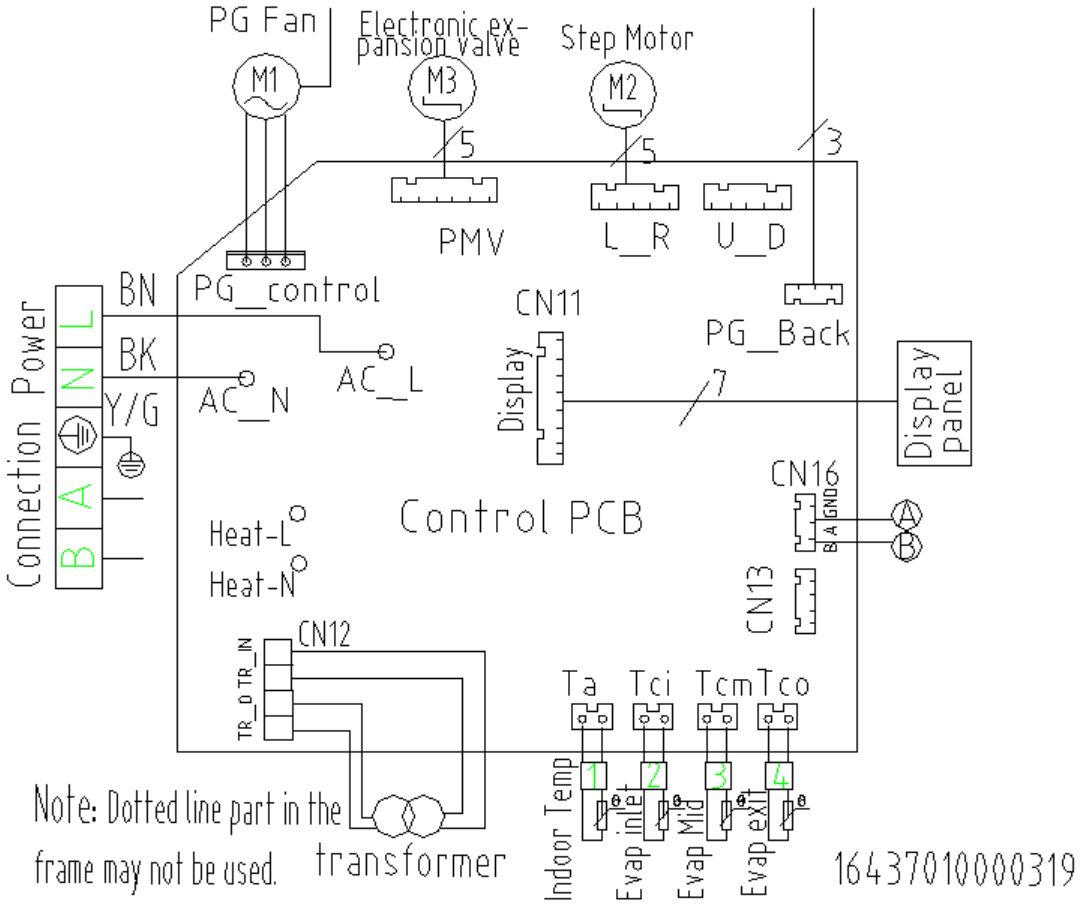
ARVWM-H022/4R1A(LI);ARVWM-H028/4R1A(LI);ARVWM-H036/4R1A(LI);ARVWM-H022/4R1A(LH); ARVWM-H028/4R1A(LH);ARVWM-H036/4R1A(LH);ARVWM-H022/2R1A(LI); ARVWM-H028/2R1A(LI); ARVWM-H036/2R1A(LI);ARVWM-H022/2R1A(LH);ARVWM-H028/2R1A(LH);ARVWM-H036/2R1A(LH)



ARVWM-H045/4R1A(LI);ARVWM-H056/4R1A(LI);ARVWM-H045/4R1A(LH);ARVWM-H056/4R1A(LH)
ARVWM-H045/2R1A(LI); ARVWM-H056/2R1A(LI); ARVWM-H045/2R1A(LH);ARVWM-H056/2R1A(LH)



ARVWM-H071/4R1A(LI);ARVWM-H071/4R1A(LH);ARVWM-H071/2R1A(LI); ARVWM-H071/2R1A(LH)



6.Electrical Characteristics

Model	Indoor Unit				Power Supply		IFM	
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
ARVWM-H022/4R1A(LI)	50	220-240V	187	254	0.19	1.14	0.018	0.24
ARVWM-H028/4R1A(LI)	50	220-240V	187	254	0.19	1.14	0.018	0.24
ARVWM-H036/4R1A(LI)	50	220-240V	187	254	0.19	1.14	0.018	0.24
ARVWM-H045/4R1A(LI)	50	220-240V	187	254	0.345	2.07	0.03	0.43
ARVWM-H056/4R1A(LI)	50	220-240V	187	254	0.345	2.07	0.03	0.43
ARVWM-H071/4R1A(LI)	50	220-240V	187	254	0.375	2.25	0.05	0.47
ARVWM-H022/4R1A(LH)	50	220-240V	187	254	0.19	1.14	0.018	0.24
ARVWM-H028/4R1A(LH)	50	220-240V	187	254	0.19	1.14	0.018	0.24
ARVWM-H036/4R1A(LH)	50	220-240V	187	254	0.19	1.14	0.018	0.24
ARVWM-H045/4R1A(LH)	50	220-240V	187	254	0.345	2.07	0.03	0.43
ARVWM-H056/4R1A(LH)	50	220-240V	187	254	0.345	2.07	0.03	0.43
ARVWM-H071/4R1A(LH)	50	220-240V	187	254	0.375	2.25	0.05	0.47
ARVWM-H022/2R1A(LI)	60	208-230V	187	254	0.19	1.14	0.018	0.24
ARVWM-H028/2R1A(LI)	60	208-230V	187	254	0.19	1.14	0.018	0.24
ARVWM-H036/2R1A(LI)	60	208-230V	187	254	0.19	1.14	0.018	0.24
ARVWM-H045/2R1A(LI)	60	208-230V	187	254	0.45	2.7	0.05	0.57
ARVWM-H056/2R1A(LI)	60	208-230V	187	254	0.45	2.7	0.05	0.57
ARVWM-H071/2R1A(LI)	60	208-230V	187	254	0.45	2.7	0.05	0.57
ARVWM-H022/2R1A(LH)	60	208-230V	187	254	0.19	1.14	0.018	0.24
ARVWM-H028/2R1A(LH)	60	208-230V	187	254	0.19	1.14	0.018	0.24
ARVWM-H036/2R1A(LH)	60	208-230V	187	254	0.19	1.14	0.018	0.24
ARVWM-H045/2R1A(LH)	60	208-230V	187	254	0.45	2.7	0.05	0.57
ARVWM-H056/2R1A(LH)	60	208-230V	187	254	0.45	2.7	0.05	0.57
ARVWM-H071/2R1A(LH)	60	208-230V	187	254	0.45	2.7	0.05	0.57

Symbols:
MCA: Min. Circuit Amps (A)
MFA: Max. Circuit BreakerAmps
KW: Fan Motor Rated Output(kW)
FLA: Full Load Amps (A)
IFM:Indoor Fan Motor

Note:

1. Min. and Max. Voltage:Units are suitable for use on electrical system where voltage supplied to unit terminals is not below or above listed rang limits.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MCA =1.25 x FLA
4. Select wire size based on the MCA.

7.Capacity Tables

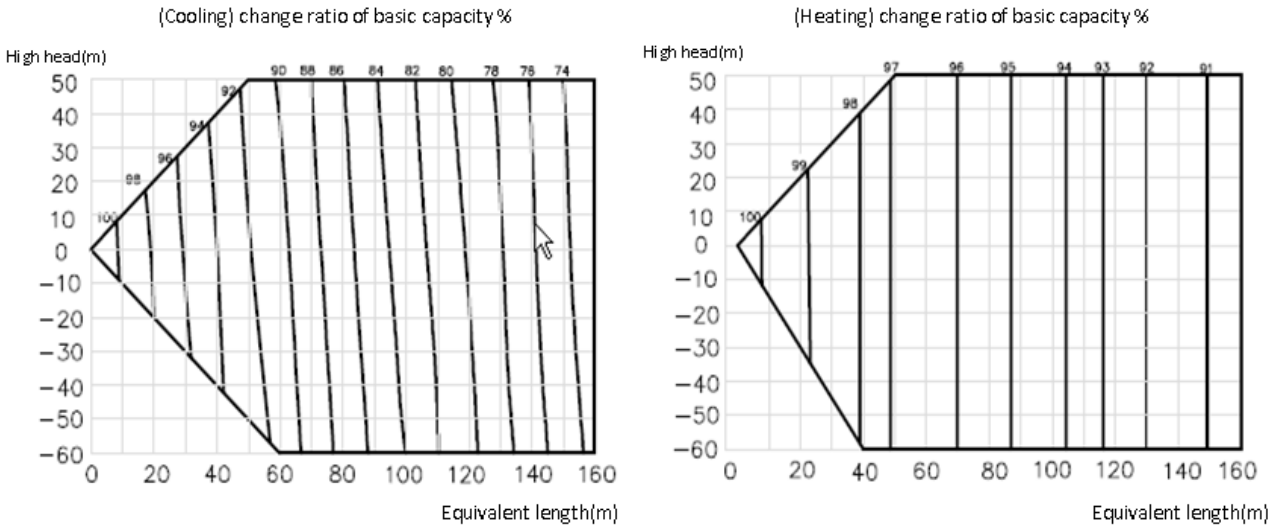
Cooling Capacity of Outdoor Dry Bulb Temperature and Indoor Dry/Wet Bulb Temperature or Power Consumption Correction Coefficient

Outdoor dry bulb temperature [^{0}C]	Correction coefficient	Indoor dry/wet bulb temperature [^{0}C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	0.92	0.98	1.05	1.11	1.17
	Power	0.88	0.89	0.91	0.92	0.93
35	Cooling capacity	0.87	0.94	1.0	1.06	1.13
	Power	0.96	0.97	1.0	1.01	1.03
40	Cooling capacity	0.96	0.89	0.95	1.02	1.08
	Power	1.05	1.07	1.08	1.09	1.11
45	Cooling capacity	0.77	0.84	0.90	0.96	1.02
	Power	1.16	1.18	1.19	1.2	1.23
50	Cooling capacity	0.75	0.80	0.86	0.91	0.98
	Power	1.24	1.27	1.28	1.3	1.32

Heating Capacity of Outdoor Dry/Wet Bulb Temperature and Indoor Dry Bulb Temperature or Power Consumption Correction Coefficient

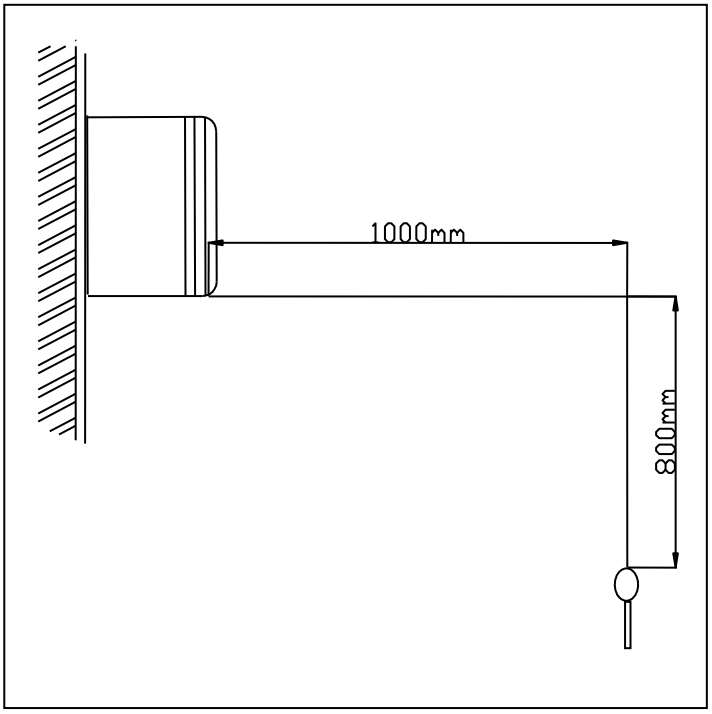
Outdoor ambient temperature of dry/wet bulb[^{0}C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [^{0}C]		
		15	**20**	**25**
-20/-21	Heating capacity	0.58	0.53	0.49
	Power	0.50	0.56	0.62
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	Power	0.72	0.78	0.84
-7/-8	Heating capacity	0.76	0.72	0.67
	Power	0.81	0.87	0.93
-1/-2	Heating capacity	0.79	0.74	0.70
	Power	0.86	0.92	0.98
2/1	Heating capacity	0.81	0.76	0.72
	Power	0.89	0.95	1.01
7/6	Heating capacity	1.04	1.0	0.96
	Power	0.94	1.0	1.06
10/9	Heating capacity	1.1	1.06	1.01
	Power	0.99	1.05	1.11
15/12	Heating capacity	1.16	1.12	1.07
	Power	1.05	1.11	1.17
15-24	Heating capacity	0.85 – 1.05 of nominal		
	Power	0.80 – 1.20 of nominal		

Length Correction Coefficient of Indoor/Outdoor Unit Connecting Tube



Positive side of high head means installation height of outdoor unit should be higher than indoor unit; negative side of high head means installation height of outdoor unit should be lower than indoor unit; (change ratio of basic capacity)

8.Sound levels

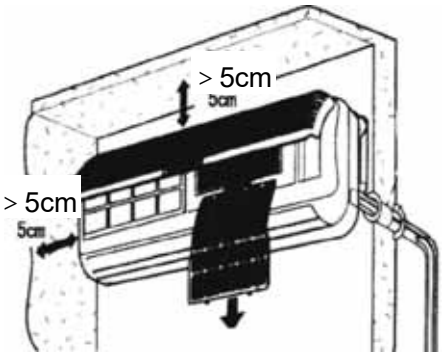


Model (EXV Built-in)	Noise level under three speeds of fan (dB(A))		
	H	M	L
ARVWM-H022/4R1A(LI)	38	33	27
ARVWM-H028/4R1A(LI)	38	33	27
ARVWM-H036/4R1A(LI)	38	33	27
ARVWM-H045/4R1A(LI)	45	41	35
ARVWM-H056/4R1A(LI)	45	41	35
ARVWM-H071/4R1A(LI)	48	45	39
ARVWM-H022/4R1A(LH)	38	33	27
ARVWM-H028/4R1A(LH)	38	33	27
ARVWM-H036/4R1A(LH)	38	33	27
ARVWM-H045/4R1A(LH)	45	41	35
ARVWM-H056/4R1A(LH)	45	41	35
ARVWM-H071/4R1A(LH)	48	45	39
ARVWM-H022/2R1A(LI)	38	33	27
ARVWM-H028/2R1A(LI)	38	33	27
ARVWM-H036/2R1A(LI)	38	33	27
ARVWM-H045/2R1A(LI)	45	41	35
ARVWM-H056/2R1A(LI)	45	41	35
ARVWM-H071/2R1A(LI)	48	45	39
ARVWM-H022/2R1A(LH)	38	33	27

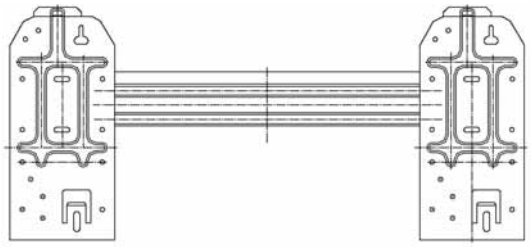
ARVWM-H028/2R1A(LH)	38	33	27
ARVWM-H036/2R1A(LH)	38	33	27
ARVWM-H045/2R1A(LH)	45	41	35
ARVWM-H056/2R1A(LH)	45	41	35
ARVWM-H071/2R1A(LH)	48	45	39

9. Installation

9.1 Spacing Reserved Between the Surrounding of Indoor Unit and Barrier



9.2 Hoisting of Indoor Unit



◇ The wall for installing indoor unit should be firm to prevent vibration. Horizontally install hanging plate on the wall with four cruciform *screws* to keep laterally horizontal and longitudinally vertical.

◇ Drill a Φ70 Auxiliary pipeline hole on lower left side or lower right side of hanging plate. The position of hole should slightly incline downwards.

◇ Hang indoor unit on hanging plate and move the unit to left or right to ensure hanging hook is correctly positioned on the hanging plate.

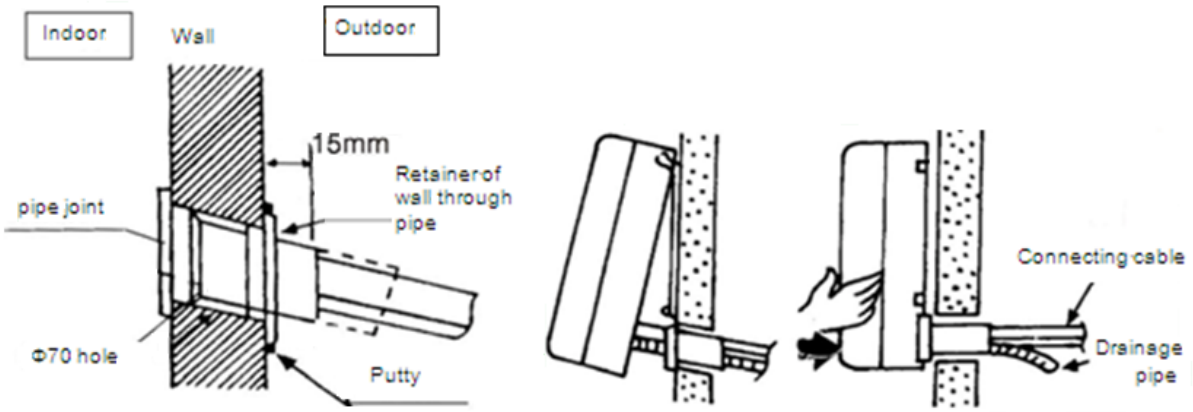
9.3 Installation of Sterilization Net

◇ Uplift panel of indoor unit, pull out the bulge in the middle of air filter downwards after uplifting;

◇ Completely snap sterilization net inside accessory bag into sterilization mounting support on air filter;

◇ Put back air filter in the original way, close the panel of indoor unit and tightly clamp;

◇ Push the lower left side and lower right side of indoor unit towards hanging plate until hanging hook inserts into groove and sends click sound.



9.4 Drainage Checking

In case of maintenance, remove grille from casing of the unit according to the following procedures:

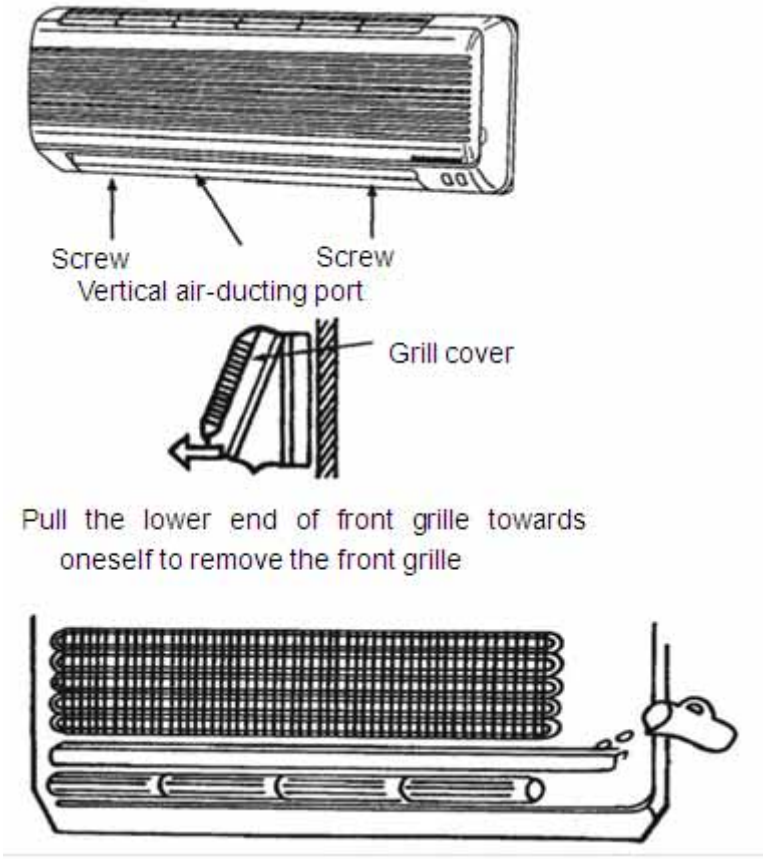
◇ As shown in right diagram, remove two screw caps on both sides of the front grille and then screw down two fixing screws.

◇ Pull the lower end of grille cover towards oneself to remove it.

◇ Reinstall grille cover, then install the grille cover to proper position according to the reverse sequence of the above.

◇ Pour a glass of water into plastic drainage groove;

◇ Confirm if the water flows through the drainage outlet of indoor unit.

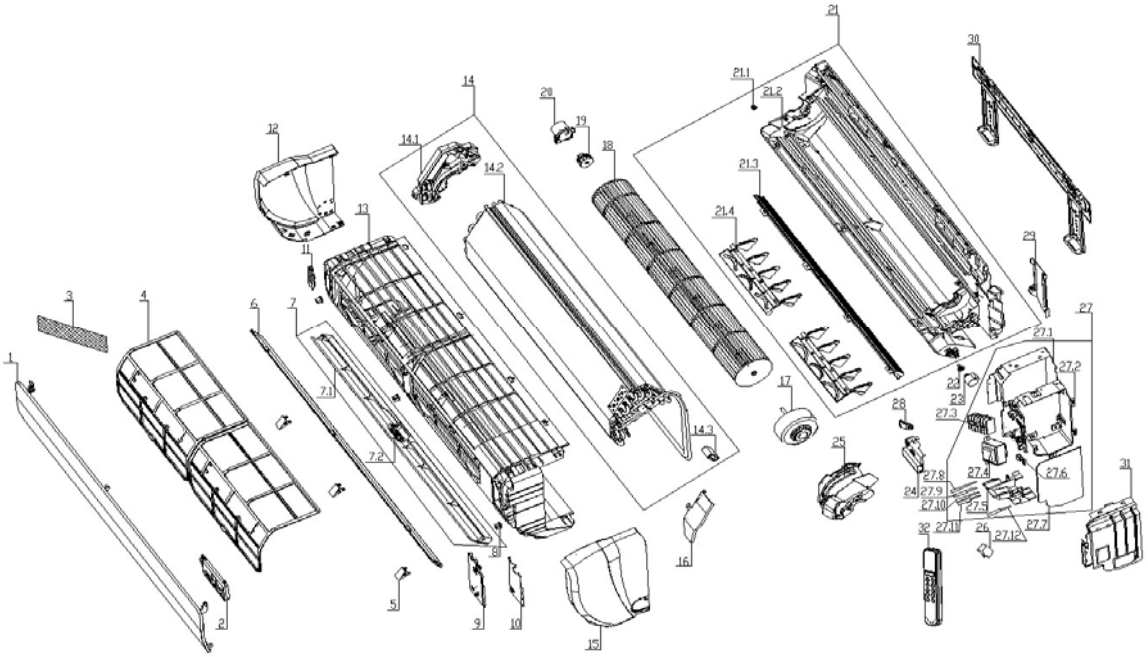


10. Explode view

ARVWM-H022/4R1A(LI)；ARVWM-H028/4R1A(LI)；ARVWM-H036/4R1A(LI)；

ARVWM-H022/4R1A(LH)；

ARVWM-H028/4R1A(LH);ARVWM-H036/4R1A(LH);ARVWM-H022/2R1A(LI);ARVWM-H028/2R1A(LI) ；
ARVWM-H036/2R1A(LI);ARVWM-H022/2R1A(LH);ARVWM-H028/2R1A(LH);ARVWM-H036/2R1A(LH)



ARVWM-H022/4R1A(LI)；ARVWM-H028/4R1A(LI)；ARVWM-H036/4R1A(LI)；

ARVWM-H022/4R1A(LH)；ARVWM-H028/4R1A(LH)；ARVWM-H036/4R1A(LH)

NO	AUX code	Components description	Components description	Qty.	Unit
1	11320003002241	R35G/LI 面板(ABS 窈青白)R	panle	1	Set
2	11222014000539	R 显示灯板组件 07LA 方形（全透黑膜全白仅双八*7*450)单灯 2464 线	display board	1	Sets
4	11220508000116	R35G/L 过滤网组件(PP 高密度、象牙白)ROHS	filter	2	Set
5	11320096000055	R35G/L 螺钉盖(窈青白)ROHS		3	Set
6	11320061000283	R35G/LI 装饰条(电镀,未确认)ROHS	decoration board	1	PC
7	11320005000247	R35G/L 导风门(窈青白)ROHS		1	PC
7.1	11320005000247	R35G/L 导风门(窈青白)ROHS		1	Set
7.2	11320080000007	R35G/VB 导风门固定销（POM,本色）ROHS		1	Set
8	11320106000008	R35G/LK 面板卡扣(POM 本色)ROHS	panel clasp	3	Set
9	11320076000063	R35G/LK 中框接线盖(象牙白,带敲落孔,阻燃 5VA)ROHS	medium frame wiring cover	1	PC
10	11321041000016	R35G/LK 中框接线盖防护板(ROHS)	medium frame wiring cover scaleboard	1	PC
11	11320043000032	R35G/LK 支撑杆(ABS 窈青白)ROHS		1	PC

12	11320035000010	R35G/L 左端盖(窈青白)ROHS	left cover	1	PC
13	11320002000199	R35G/L 中框(窈青白)ROHS	medium frame	1	Set
14	16324001000140	ALW-H12B4/R1DILI 蒸发器总成	evaporator assembly	1	PC
14.1	11320015000113	R35G/LA 蒸发器左支架(增强 PP、本色)ROHS	evaporator left side carriage	1	PC
14.2	11224009000200	B 蒸发器部件 R35G/BpLA800(A2) 7*5-1.3 蓝	evaporator assembly	1	PC
14.2	11224009000322	A 蒸发器部件 ALW-H07B4/R1DILI 7*9-1.3 蓝 商用	evaporator assembly	1	PC
14.3	11320101000018	R35G/VB 护套（PP,象牙白）ROHS	evaporator protecting bush	1	PC
15	11320036000010	R35G/L 右端盖(窈青白)ROHS	right cover	1	PC
16	11320065000020	R35G/LA 挡水板(PP、本色)ROHS	breakwater	1	PC
17	11230003000151	内 电 机 YYK18-4B(1330) 220-240(300/)1.5uF 中英	indoor fan motor	1	PC
18	11220513000054	R35G/BpL 贯流风叶组件φ92*647(本料通透蓝)	cross flow fan	1	PC
19	11220551000003	70G 贯流风叶轴承组合件	bearing assembly	1	PC
20	11320062000028	R35G/LA 轴承固定座(ABS、本色)ROHS	bearing fixed chassis	1	Set
21	11220500000180	R35G/LV 底座组件(自动,塞右，底座灰,外贸)ROHS	chassis assembly	1	PC
21.1	11320079000010	R35G/CC 轴套(本色)	chassis shaft sleeve	1	Set
21.2	11320001000217	R35G/LK 底座(底座灰,双出水,外贸)ROHS	chassis	1	PC
21.3	11320135000016	R35G/LK 蜗舌(底座灰)ROHS	air louver	1	PC
21.4	11320017000119	R35G/LV700 自动导风叶片(改性 PP 底座灰)ROHS	left-right swing blade	2	PC
22	11320079000013	R35G/LK 步进电机轴套(POM 本色)ROHS	step motor shaft sleeve	1	PC
23	11230002000058	R 步进电机 24BYJ48*350*XH-5 白	step motor	1	Set
24	11221526000003	R35G/LK 电控盒防护盖 ROHS	controller box metal plate	1	PCS
25	11320052000032	R35G/LA 电机压盖(增强 PP、本色)ROHS	motor cover	1	
27	16322001000086	ALW-H12B4/R1DILIW 电控总成	main controller	1	
27.1	11321012000006	R35G/LK 电控盒防护板 B(ROHS)	controller box sheet-metal B	1	
27.2	11320057000071	R35G/LK700 电控盒(阻燃 ABS,本色,增加过线槽)ROHS	controller box	1	
27.3	16427001000027	端子板 5 位(600V 4mm2)挂机	terminal board	1	
27.4	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	transformer	0	
27.5	11320104000008	R35G/LK 底座支撑板(ABS 本		1	

		色)ROHS			
27.6	11321001000009	R 抱攀 25H1		1	
27.7	11222542000015	CJ 控制板 DCZDLI —(09-12)KG-SNPG-SYE1	main PCB	1	
27.8	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	temperature sensor	1	
27.9	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	temperature sensor	1	
27.10	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	temperature sensor	1	
27.11	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	temperature sensor	1	
27.12	16422008000025	(ROHS)通讯线 2 芯 0.38m(XH3Y-U)	Communication line	1	
28	11320010000039	R 压线板 R35G/PA	power wire cable clamp	1	
29	11320084000015	R35G/LA 管路压攀(增强 PP、底座灰)ROHS	pipe clamp	1	
30	11321003000028	R35G/LA 壁挂板组件	mounting plate assembly	1	
31	11321012000005	R35G/LK 电控盒防护板 A(ROHS)	controller box sheet-metal A	1	
32	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	remote controller	1	Set

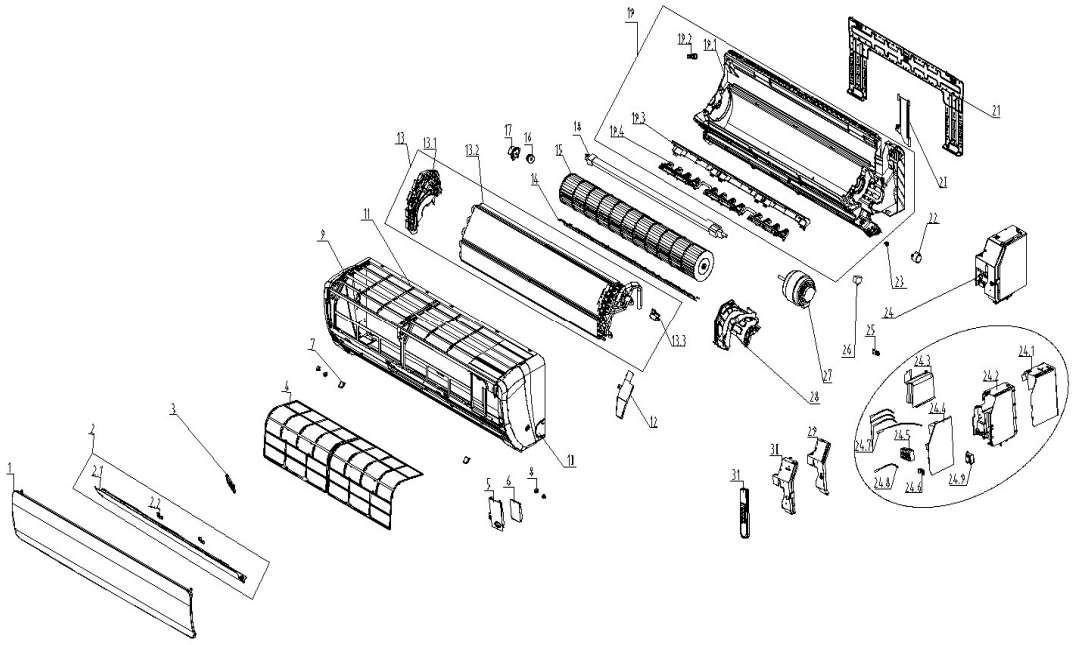
ARVWM-H022/2R1A(LI)；ARVWM-H028/2R1A(LI)；ARVWM-H036/2R1A(LI)；

ARVWM-H022/2R1A(LH)；ARVWM-H028/2R1A(LH)；ARVWM-H036/2R1A(LH)

NO	AUX code	Components description	Components description	Qty.	Unit
1	11320003002241	R35G/LI 面板(ABS 窈青白)R	panle	1	Set
2	11222014000539	R 显示灯板组件 07LA 方形 (全透黑膜全白仅双八*7*450)单灯 2464 线	display board	1	Sets
4	11220508000116	R35G/L 过滤网组件(PP 高密度、象牙白)ROHS	filter	2	Set
5	11320096000055	R35G/L 螺钉盖(窈青白)ROHS		3	Set
6	11320061000283	R35G/LI 装饰条(电镀,未确认)ROHS	decoration board	1	PC
7	11320005000247	R35G/L 导风门(窈青白)ROHS		1	PC
7.1	11320005000247	R35G/L 导风门(窈青白)ROHS		1	Set
7.2	11320080000007	R35G/VB 导风门固定销(POM,本色) ROHS		1	Set
8	11320106000008	R35G/LK 面板卡扣(POM 本色)ROHS	panel clasp	3	Set
9	11320076000063	R35G/LK 中框接线盖(象牙白,带敲落孔,阻燃 5VA)ROHS	medium frame wiring cover	1	PC
10	11321041000016	R35G/LK 中框接线盖防护板(ROHS)	medium frame wiring cover	1	PC

			scaleboard		
11	11320043000032	R35G/LK 支撑杆(ABS 窈青白)ROHS		1	PC
12	11320035000010	R35G/L 左端盖(窈青白)ROHS	left cover	1	PC
13	11320002000199	R35G/L 中框(窈青白)ROHS	medium frame	1	Set
14	16324001000140	ALW-H12B4/R1DILI 蒸发器总成	evaporator assembly	1	PC
14.1	11320015000113	R35G/LA 蒸发器左支架(增强 PP、本色)ROHS	evaporator left side carriage	1	PC
14.2	11224009000200	B 蒸发器部件 R35G/BpLA800(A2) 7*5-1.3 蓝	evaporator assembly	1	PC
14.2	11224009000322	A 蒸发器部件 ALW-H07B4/R1DILI 7*9-1.3 蓝 商用	evaporator assembly	1	PC
14.3	11320101000018	R35G/VB 护套（PP,象牙白）ROHS	evaporator protecting bush	1	PC
15	11320036000010	R35G/L 右端盖(窈青白)ROHS	right cover	1	PC
16	11320065000020	R35G/LA 挡水板(PP、本色)ROHS	breakwater	1	PC
17	11230003000141	R 室内电机 YYK18-4B-60 208-230V/60Hz	indoor fan motor	1	PC
18	11220513000054	R35G/BpL 贯流风叶组件 φ92*647(本料通透蓝)	cross flow fan	1	PC
19	11220551000003	70G 贯流风叶轴承组合件	bearing assembly	1	PC
20	11320062000028	R35G/LA 轴承固定座(ABS、本色)ROHS	bearing fixed chassis	1	Set
21	11220500000180	R35G/LV 底座组件(自动,塞右，底座灰,外贸)ROHS	chassis assembly	1	PC
21.1	11320079000010	R35G/CC 轴套(本色)	chassis shaft sleeve	1	Set
21.2	11320001000217	R35G/LK 底座(底座灰,双出水,外贸)ROHS	chassis	1	PC
21.3	11320135000016	R35G/LK 蜗舌(底座灰)ROHS	air louver	1	PC
21.4	11320017000119	R35G/LV700 自动导风叶片(改性 PP 底座灰)ROHS	left-right swing blade	2	PC
22	11320079000013	R35G/LK 步进电机轴套(POM 本色)ROHS	step motor shaft sleeve	1	PC
23	11230002000058	R 步进电机 24BYJ48*350*XH-5 白	step motor	1	Set
24	11221526000003	R35G/LK 电控盒防护盖 ROHS	controller box metal plate	1	PC
25	11320052000032	R35G/LA 电机压盖(增强 PP、本色)ROHS	motor cover	1	
27	16322001000086	ALW-H12B4/R1DILIW 电控总成	main controller	1	
27.1	11321012000006	R35G/LK 电控盒防护板 B(ROHS)	controller box sheet-metal B	1	
27.2	11320057000071	R35G/LK700 电控盒(阻燃 ABS,本色,增加过线槽)ROHS	controller box	1	
27.3	16427001000027	端子板 5 位(600V 4mm2)挂机	terminal board	1	
27.4	16422005000034	(ROHS) 变压器 TDB-8-B2(PTC 11.5V 650mA)	transformer	0	
27.5	11320104000008	R35G/LK 底座支撑板(ABS 本色)ROHS		1	

27.6	11321001000009	R 抱攀 25H1		1	
27.7	11222542000015	CJ 控制板 DCZDLI —(09-12)KG-SNPG-SYE1	main PCB	1	
27.8	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	temperature sensor	1	
27.9	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	temperature sensor	1	
27.10	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	temperature sensor	1	
27.11	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	temperature sensor	1	
27.12	16422008000025	(ROHS) 通讯线 2 芯 0.38m(XH3Y-U)	Communication line	1	
28	11320010000039	R 压线板 R35G/PA	power wire cable clamp	1	
29	11320084000015	R35G/LA 管路压攀(增强 PP、底座灰)ROHS	pipe clamp	1	
30	11321003000028	R35G/LA 壁挂板组件	mounting plate assembly	1	
31	11321012000005	R35G/LK 电控盒防护板 A(ROHS)	controller box sheet-metal A	1	
32	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	remote controller	1	Set



ARVWM-H045/4R1A(LI);ARVWM-H056/4R1A(LI);ARVWM-H045/4R1A(LH);ARVWM-H056/4R1A(LH)

NO	AUX code	Components description	Components description	Qty.	Unit
1	11320003002251	R50G/LH 面板(ABS 窈青白)R	panle	1	
	11320003002226	R50G/LI 面板(ABS 窈青白)R	panle	1	
2.1	11320005000308	导风门		1	
2.2	11320080000007	导风门固定销		2	
3	11222014000539	R 显示灯板组件 07LA 方形	display board	1	
4	11220508000101	过滤网组件	filter	2	
5	11320076000057	R70G/L 中框接线盖(象牙白)ROHS	medium frame wiring cover	1	
6	11321071000006	R70G/L 中框接线盖衬板(DC51D t=0.5,ROHS)	medium frame wiring cover scaleboard	1	
7	11320096000075	R50G/L 螺钉盖(窈青白)ROHS		2	
8	11320106000008	面板卡扣(POM 本色)	panel clasp	4	
9	11320078000065	R50G/L 左端盖(ABS 窈青白)ROHS	left cover	1	
10	11320078000066	R50G/L 右端盖(ABS 窈青白)ROHS	right cover	1	
11	11320002000247	R50G/L 中框(ABS 窈青白)ROHS	medium frame	1	
12	11320065000020	R35G/LA 挡水板(PP、本色)ROHS	breakwater	1	
13.1	11320015000122	蒸发器左支架	evaporator left side carriage	1	
13.2	16324001000139	ALW-H18B4/R1DILI 蒸发器总成	evaporator assembly	1	
13.3	/	护套		1	可选
14	/	护指网罩		1	可选
15	11220513000058	贯流风叶组件	cross flow fan	1	
16	11220551000003	70G 贯流风叶轴承组合件	bearing assembly	1	
17	11320062000026	R35G/VB 轴承座固定座	bearing fixed chassis	1	PC
18	/	PTC 电加热	PTC electric heating	1	可选
19.1	11220500000168	R50G/L 底座(底座灰)	chassis	1	PC
19.2	11333003000009	水塞	Water plug	1	PC

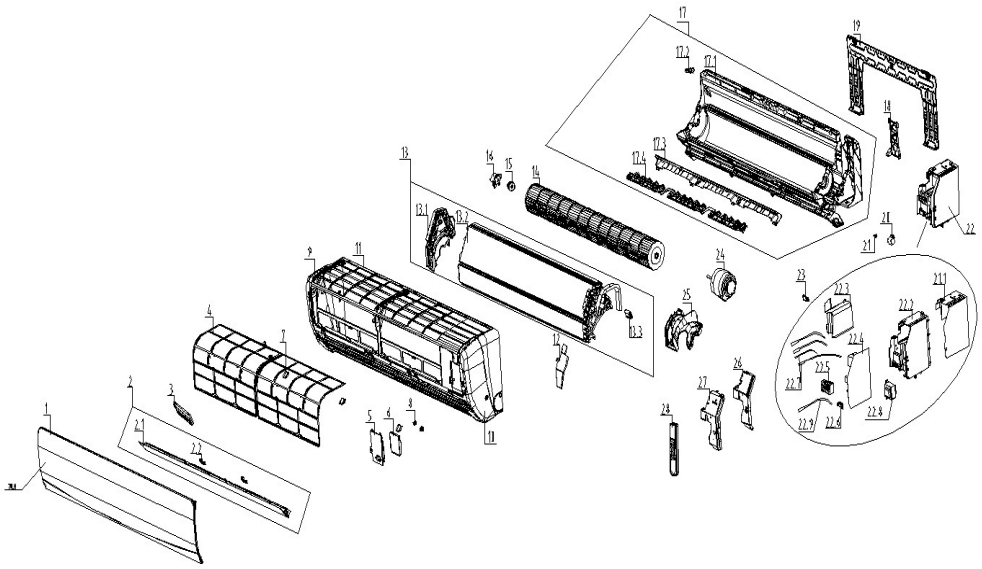
19.3	11320135000007	R50G/L 蜗舌(底座灰)	air louver	1	PC
19.4	11320017000108	左右扫风叶片	left-right swing blade	3	Set
20	11320084000015	R35G/LA 管路压攀	pipe clamp	1	PC
21	11221500000028	R50G/LK 挂板组件	mounting plate assembly	1	Set
22	11230002000071	R 步进电机	step motor	1	PC
23	11320079000012	R50G/SA 步进电机轴套Φ14X17.5(ROHS)	step motor shaft sleeve	1	PC
24	16322001000087	ALW-H18B4/R1DILIW 电控总成	main controller	1	PC
24.1	11321035000022	电控盒钣金 A	controller box sheet-metal A	1	PC
24.2	11320057000066	电控盒	controller box	1	PC
24.3	11321035000023	电控盒钣金 B	controller box sheet-metal B	1	Set
24.4	11222542000016	CJ 控制板 DCZDLI-(18-24)KG-SNPG-SY E1	main PCB	1	PC
24.5	16427001000027	端子板 5 位(600V 4mm2)挂机	terminal board	1	PCS
24.6	11321001000009	电源线抱攀(φ10.5)		1	
24.7	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	temperature sensor	1	
	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	temperature sensor	1	
	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	temperature sensor	1	
	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	temperature sensor	1	
24.8	16422008000025	(ROHS) 通讯线 2 芯 0.38m(XH3Y-U)	Communication line	1	
24.9	16422005000034	(ROHS) 变压器 TDB-8-B2(PTC 11.5V 650mA)	transformer	1	
25	11320010000046	压线板 R70G/L PP	power wire cable clamp	1	
26	/	负离子发生器组件		1	可选
27	11230003000145	R 室内电机 YYK30-4 220-240(300/VH-5)3uF 中英	indoor fan motor	1	
28	11320052000034	R50G/L 电机压盖	motor cover	1	
29	11320058000055	R70G/L 电控盒盖	controller box metal plate	1	
30	11321020000029	R70G/L 电控盒盖钣金	controller box sheet-metal	1	
31	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	remote controller	1	

ARVWM-H045/2R1A(LI); ARVWM-H056/2R1A(LI); ARVWM-H045/2R1A(LH);ARVWM-H056/2R1A(LH)

NO	AUX code	Components description	Components description	Qty.	Unit
1	11320003002251	R50G/LH 面板(ABS 窈青白)R	panle	1	
	11320003002226	R50G/LI 面板(ABS 窈青白)R	panle	1	
2.1	11320005000308	导风门		1	
2.2	11320080000007	导风门固定销		2	

3	11222014000539	R 显示灯板组件 07LA 方形	display board	1	
4	11220508000101	过滤网组件	filter	2	
5	11320076000057	R70G/L 中框接线盖(象牙白)ROHS	medium frame wiring cover	1	
6	11321071000006	R70G/L 中框接线盖衬板(DC51D t=0.5,ROHS)	medium frame wiring cover scaleboard	1	
7	11320096000075	R50G/L 螺钉盖(窈青白)ROHS		2	
8	11320106000008	面板卡扣(POM 本色)	panel clasp	4	
9	11320078000065	R50G/L 左端盖(ABS 窈青白)ROHS	left cover	1	
10	11320078000066	R50G/L 右端盖(ABS 窈青白)ROHS	right cover	1	
11	11320002000247	R50G/L 中框(ABS 窈青白)ROHS	medium frame	1	
12	11320065000020	R35G/LA 挡水板(PP、本色)ROHS	breakwater	1	
13.1	11320015000122	蒸发器左支架	evaporator left side carriage	1	
13.2	16324001000139	ALW-H18B4/R1DILI 蒸发器总成	evaporator assembly	1	
15	11220513000058	贯流风叶组件	cross flow fan	1	
16	11220551000003	70G 贯流风叶轴承组合件	bearing assembly	1	
17	11320062000026	R35G/VB 轴承座固定座	bearing fixed chassis	1	PC
19.1	11220500000168	R50G/L 底座(底座灰)	chassis	1	PC
19.2	11333003000009	水塞	Water plug	1	PC
19.3	11320135000007	R50G/L 蜗舌(底座灰)	air louver	1	PC
19.4	11320017000108	左右扫风叶片	left-right swing blade	3	Set
20	11320084000015	R35G/LA 管路压攀	pipe clamp	1	PC
21	11221500000028	R50G/LK 挂板组件	mounting plate assembly	1	Set
22	11230002000071	R 步进电机	step motor	1	PC
23	11320079000012	R50G/SA 步进电机轴套 Φ 14X17.5(ROHS)	step motor shaft sleeve	1	PC
24	16322001000087	ALW-H18B4/R1DILIW 电控总成	main controller	1	PC
24.1	11321035000022	电控盒钣金 A	controller box sheet-metal A	1	PC
24.2	11320057000066	电控盒	controller box	1	PC
24.3	11321035000023	电控盒钣金 B	controller box sheet-metal B	1	Set
24.4	11222542000016	CJ 控制板 DCZDLI-(18-24)KG-SNPG-SY E1	main PCB	1	PC
24.5	16427001000027	端子板 5 位(600V 4mm2)挂机	terminal board	1	PCS
24.6	11321001000009	电源线抱攀(φ10.5)		1	
24.7	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	temperature sensor	1	
	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	temperature sensor	1	
	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	temperature sensor	1	
	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	temperature sensor	1	
24.8	16422008000025	(ROHS) 通讯线 2 芯 0.38m(XH3Y-U)	Communication line	1	
24.9	16422005000034	(ROHS) 变压器 TDB-8-B2(PTC	transformer	1	

		11.5V 650mA)			
25	11320010000046	压线板 R70G/L PP	power wire cable clamp	1	
27	11230003000137	室内电机 YYK50-4-60 208-230V/60Hz(300/VH5)3uF	indoor fan motor	1	
28	11320052000034	R50G/L 电机压盖	motor cover	1	
29	11320058000055	R70G/L 电控盒盖	controller box metal plate	1	
30	11321020000029	R70G/L 电控盒盖钣金	controller box sheet-metal	1	
31	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	remote controller	1	



ARVWM-H071/4R1A(LI);ARVWM-H071/4R1A(LH)

NO	AUX code	Components description	Components description	Qty.	Unit
1	11320003002256	R70G/LI 面板(ABS 窈青白)R	panle	1	
	11320003002253	R70G/LH 面板(ABS 窈青白)R	panle	1	
2.1	11320005000295	导风门		1	
2.2	11320080000007	导风门固定销		3	
3	11222014000539	R 显示灯板组件 07LA 方形	display board	1	
4	11220508000103	过滤网组件	filter	2	
5	11320076000057	R70G/L 中框接线盖(象牙白)ROHS	medium frame wiring cover	1	
6	11321071000006	R70G/L 中框接线盖衬板	medium frame wiring cover scaleboard	1	
7	11320096000075	R50G/L 螺钉盖(窈青白)ROHS		3	
8	11320106000008	面板卡扣(POM 本色)	panel clasp	4	
9	11320078000051	R70G/L 左端盖(窈青白)ROHS	left cover	1	
10	11320002000237	R70G/L 中框(窈青白)ROHS	medium frame	1	
11	11320078000052	R70G/L 右端盖(窈青白)ROHS	right cover	1	
12	11320065000020	R35G/LA 挡水板(PP、本色)ROHS	breakwater	1	
13.1	11320015000123	R70G/L 蒸发器左支架(增加 PP 本色)ROHS	evaporator left side carriage	1	
13.2	16324001000138	ALW-H24B4/R1DILI 蒸发器总成		1	

13.3	11320101000018	护套		1	
14	11220513000059	R70G/L 贯流风叶组件φ 107.9*839(通透蓝)ROHS	cross flow fan	1	
15	11220551000003	70G 贯流风叶轴承组合件	bearing assembly	1	
16	11320062000026	R35G/VB 轴承座固定座	bearing fixed chassis	1	
17.1	11220500000155	R70G/L 底座(底座灰)	chassis	1	
17.2	11333003000009	水塞	Water plug	1	
17.3	11320135000008	R70G/L 蜗舌(底座灰)	air louver	1	
17.4	11320017000109	左右扫风叶片	left-right swing blade	3	
18	11320084000014	R70G/L 管路压攀	pipe clamp	1	
19	11221500000029	R70G/L 挂板组件 ROHS	mounting plate assembly	1	
20	11230002000070	R 步进电机	step motor	1	
21	11320079000012	R35G/CC 轴套(本色)	step motor shaft sleeve	1	
22	16322001000087	ALW-H18B4/R1DILIW 电控总成	main controller	1	
22.1	11321035000022	电控盒钣金 A	controller box sheet-metal A	1	
22.2	11320057000066	电控盒	controller box	1	
22.3	11321035000023	电控盒钣金 B	controller box sheet-metal B	1	
22.4	11329021000615	CJ 控制板 DCZDLI-(18-24)KG-SNPG-SYE 1	main PCB	1	
22.5	11330037000078	端子板 5 位(600V 4mm2)挂机	terminal board	1	
22.6	11321001000020	电源线抱攀(φ10.5)		1	
22.7	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	temperature sensor	1	
	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	temperature sensor	1	
	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	temperature sensor	1	
	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	temperature sensor	1	
22.8	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	transformer	1	
22.9	16422008000025	(ROHS)通讯线 2 芯 0.38m(XH3Y-U)	Communication line	1	
23	11320010000045	电源连接线压板		1	
24	11230003000136	R 内电机 YYK50-4 220-240(300/VH5)3uF 中英	indoor fan motor	1	
25	11320052000035	R70G/L 电机压盖	motor cover	1	
26	11320058000055	R70G/L 电控盒盖	controller box metal plate	1	
27	11321020000029	R70G/L 电控盒盖钣金	controller box sheet-metal	1	
28	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	remote controller	1	

ARVWM-H071/2R1A(LI); ARVWM-H071/2R1A(LH)

NO	AUX code	Components description	Components description	Qty.	Unit

1	11320003002256	R70G/LI 面板(ABS 窈青白)R	panle	1	
	11320003002253	R70G/LH 面板(ABS 窈青白)R	panle	1	
2.1	11320005000295	导风门		1	
2.2	11320080000007	导风门固定销		3	
3	11222014000539	R 显示灯板组件 07LA 方形	display board	1	
4	11220508000103	过滤网组件	filter	2	
5	11320076000057	R70G/L 中框接线盖(象牙白)ROHS	medium frame wiring cover	1	
6	11321071000006	R70G/L 中框接线盖衬板	medium frame wiring cover scaleboard	1	
7	11320096000075	R50G/L 螺钉盖(窈青白)ROHS		3	
8	11320106000008	面板卡扣(POM 本色)	panel clasp	4	
9	11320078000051	R70G/L 左端盖(窈青白)ROHS	left cover	1	
10	11320002000237	R70G/L 中框(窈青白)ROHS	medium frame	1	
11	11320078000052	R70G/L 右端盖(窈青白)ROHS	right cover	1	
12	11320065000020	R35G/LA 挡水板(PP、本色)ROHS	breakwater	1	
13.1	11320015000123	R70G/L 蒸发器左支架(增加 PP 本色)ROHS	evaporator left side carriage	1	
13.2	16324001000138	ALW-H24B4/R1DILI 蒸发器总成		1	
13.3	11320101000018	护套		1	
14	11220513000059	R70G/L 贯流风叶组件φ107.9*839(通透蓝)ROHS	cross flow fan	1	
15	11220551000003	70G 贯流风叶轴承组合件	bearing assembly	1	
16	11320062000026	R35G/VB 轴承座固定座	bearing fixed chassis	1	
17.1	11220500000155	R70G/L 底座(底座灰)	chassis	1	
17.2	11333003000009	水塞	Water plug	1	
17.3	11320135000008	R70G/L 蜗舌(底座灰)	air louver	1	
17.4	11320017000109	左右扫风叶片	left-right swing blade	3	
18	11320084000014	R70G/L 管路压攀	pipe clamp	1	
19	11221500000029	R70G/L 挂板组件 ROHS	mounting plate assembly	1	
20	11230002000070	R 步进电机	step motor	1	
21	11320079000012	R35G/CC 轴套(本色)	step motor shaft sleeve	1	
22	16322001000087	ALW-H18B4/R1DILIW 电控总成	main controller	1	
22.1	11321035000022	电控盒钣金 A	controller box sheet-metal A	1	
22.2	11320057000066	电控盒	controller box	1	
22.3	11321035000023	电控盒钣金 B	controller box sheet-metal B	1	
22.4	11329021000615	CJ 控制板 DCZDLI-(18-24)KG-SNPG-SYE 1	main PCB	1	
22.5	11330037000078	端子板 5 位(600V 4mm2)挂机	terminal board	1	
22.6	11321001000020	电源线抱攀(φ10.5)		1	
22.7	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	temperature sensor	1	
	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	temperature sensor	1	

	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	temperature sensor	1	
	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	temperature sensor	1	
22.8	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	transformer	1	
22.9	16422008000025	(ROHS)通讯线 2 芯 0.38m(XH3Y-U)	Communication line	1	
23	11320010000045	电源连接线压板		1	
24	11230003000137	室内电机 YYK50-4-60 208-230V/60Hz(300/VH5)3uF	indoor fan motor	1	
25	11320052000035	R70G/L 电机压盖	motor cover	1	
26	11320058000055	R70G/L 电控盒盖	controller box metal plate	1	
27	11321020000029	R70G/L 电控盒盖钣金	controller box sheet-metal	1	
28	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	remote controller	1	

11. Spare parts list

ARVWM-H022/4R1A(LI)；ARVWM-H028/4R1A(LI)；ARVWM-H036/4R1A(LI)；

ARVWM-H022/4R1A(LH)；ARVWM-H028/4R1A(LH)；ARVWM-H036/4R1A(LH)

PCB board	11222542000015	CJ 控制板 DCZDLI—(09-12)KG-SNPG-SYE1	1
Transformer	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	1
Terminal board	16427001000027	端子板 5 位(600V 4mm2)挂机	1
Fan motor	11230003000151	内电机 YYK18-4B(1330) 220-240(300/)1.5uF 中英	1
Step motor	11230002000058	R 步进电机 24BYJ48*350*XH-5 白	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	11220513000054	R35G/BpL 贯流风叶组件φ92*647(本料通透蓝)	1
Remote controller	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	1

ARVWM-H045/4R1A(LI);ARVWM-H056/4R1A(LI);ARVWM-H045/4R1A(LH);ARVWM-H056/4R1A(LH)

PCB board	11329021000615	CJ 控制板 DCZDLI-(18-24)KG-SNPG-SYE1	1
Transformer	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	1
Terminal board	16427001000027	端子板 5 位(600V 4mm2)挂机	1
Fan motor	11230003000145	R 室内电机 YYK30-4 220-240(300/VH-5)3uF 中英	1
Step motor	11230002000071	R 步进电机	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1

temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	11220513000058	贯流风叶组件	1
Remote controller	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	1

ARVWM-H071/4R1A(LI);ARVWM-H071/4R1A(LH)

PCB board	11329021000615	CJ 控制板 DCZDLI-(18-24)KG-SNPG-SYE1	1
Transformer	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	1
Terminal board	16427001000027	端子板 5 位(600V 4mm2)挂机	1
Fan motor	11230003000136	R 内电机 YYK50-4 220-240(300/VH5)3uF 中英	1
Step motor	11230002000071	R 步进电机	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	11220513000059	R70G/L 贯流风叶组件φ107.9*839(通透蓝)ROHS	1
Remote controller	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	1

ARVWM-H022/2R1A(LI)；ARVWM-H028/2R1A(LI)；ARVWM-H036/2R1A(LI)；

ARVWM-H022/2R1A(LH)；ARVWM-H028/2R1A(LH)；ARVWM-H036/2R1A(LH)

PCB board	11222542000015	CJ 控制板 DCZDLI—(09-12)KG-SNPG-SYE1	1
Transformer	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	1
Terminal board	16427001000027	端子板 5 位(600V 4mm2)挂机	1
Fan motor	11230003000141	R 室内电机 YYK18-4B-60 208-230V/60Hz	1
Step motor	11230002000058	R 步进电机 24BYJ48*350*XH-5 白	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	11220513000054	R35G/BpL 贯流风叶组件φ92*647(本料通透蓝)	1
Remote controller	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	1

ARVWM-H045/2R1A(LI); ARVWM-H056/2R1A(LI); ARVWM-H045/2R1A(LH);ARVWM-H056/2R1A(LH)

PCB board	11329021000615	CJ 控制板 DCZDLI-(18-24)KG-SNPG-SYE1	1
Transformer	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	1
Terminal board	16427001000027	端子板 5 位(600V 4mm2)挂机	1
Fan motor	11230003000137	室内电机 YYK50-4-60 208-230V/60Hz(300/VH5)3uF	1
Step motor	11230002000071	R 步进电机	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1

temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	11220513000058	贯流风叶组件	1
Remote controller	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	1

ARVWM-H071/2R1A(LI); ARVWM-H071/2R1A(LH)

PCB board	11329021000615	CJ 控制板 DCZDLI-(18-24)KG-SNPG-SYE1	1
Transformer	16422005000034	(ROHS)变压器 TDB-8-B2(PTC 11.5V 650mA)	1
Terminal board	16427001000027	端子板 5 位(600V 4mm2)挂机	1
Fan motor	11230003000137	室内电机 YYK50-4-60 208-230V/60Hz(300/VH5)3uF	1
Step motor	11230002000071	R 步进电机	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	11220513000059	R70G/L 贯流风叶组件φ107.9*839(通透蓝)ROHS	1
Remote controller	11222001000139	遥控器 YKR-K/001E(按键荧光，背光源)	1

Slim Duct

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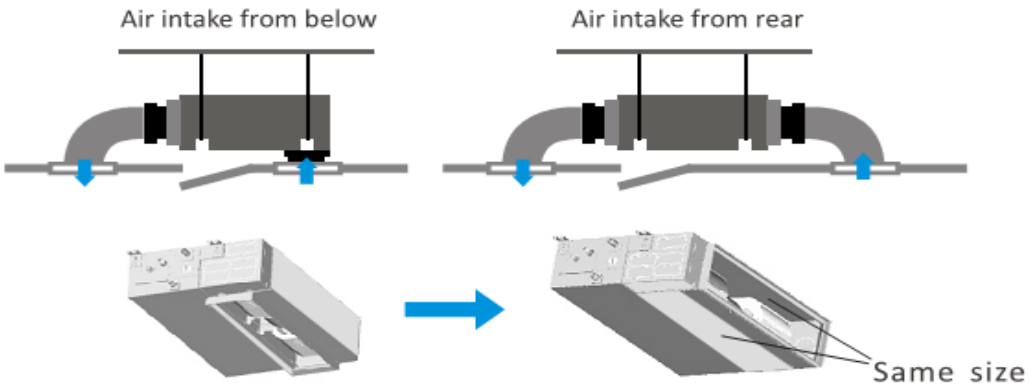
1. Features

- **Compact unit body**

Duct body designed thin and compact. The EXV is fixed inside of the indoor unit, Compact unit body. Concealed installation,combined with indoor decoration perfectly

- **Air inlet from back standard and from bottom optional.**

The size of the plate from bottom is the same as the flange from back, which makes it convenient to change installation style due to different



- **Built-in infrared receiver wire controller and remote controller**

2. Specifications

Model			ARVSD-H022/4R1A	ARVSD-H028/4R1A	ARVSD-H036/4R1A
Factory Model			ALDu-H07A4/R1DIE	ALDu-H09B4/R1DIE	ALDu-H12B4/R1DIE
Code			16104022000034	16104022000035	16104022000036
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	2.2	2.8	3.6
	Heating	kW	2.5	3.0	4.3
Fan motor	Model		YSK-20W-4(AG57)	YSK-20W-4(AG57)	YSK-25W-4（AG58)
	Brand		SINJUN	SINJUN	SINJUN
	Output Power	W	20	20	25
	Capacitor	uF	1.5	1.5	2.0
	Speed (Hi/Mi/Lo)	r/min	1060/790/610	11060/790/610	1060/890/800
Coil	Number Of Row		2	2	2
	Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	Fin Spacing	mm	1.4	1.4	1.4

	Fin Material		Hydrophilic	Hydrophilic	Hydrophilic
	Tube Outside Dia.and Material	mm	φ7,Inner grooved	φ7,Inner grooved	φ7,Inner grooved
	Coil Length x Height x Width	mm	640*205*25.4	640*205*25.4	640*205*25.4
Unit	Indoor Air Flow (Hi/Mi/Lo)	m3/h	420/336/294	420/336/294	630/504/441
	Noise Level(Hi/Mi/Lo)	dB(A)	30/26/23	30/26/23	32/28/25
	External Static Pressure	Pa	10/30	10/30	10/30
	Unit Dimension (W*H*D)	mm	840x440x185	840x440x185	840x440x185
	Packing (W*H*D)	mm	1030x525x250	1030x525x250	1030x525x250
	Net Weight	Kg	17.5	17.5	18.5
	Gross Weight	Kg	21	21	22
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	6.35
	Gas Side	mm	9.52	9.52	12.7
	Drainage	mm	R1in(DN25)	R1in(DN25)	R1in(DN25)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	10~20	10~25	10~35
Qty'per 20'& 40'&40HQ(Only For Reference)		Set	168/344/387	168/344/387	168/344/387

Notes:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length :7.5m,level difference: 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length :7.5m,level difference: 0 m.
3. Anechoic chamber conversion value,measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model			ARVSD-H045/4R1A	ARVSD-H056/4R1A	ARVSD-H071/4R1A
Factory Model			ALDu-H16B4/R1DIE	ALDu-H18B4/R1DIE	ALDu-H24B4/R1DIE
Code			16104022000037	16104022000038	16104022000039
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	4.5	5.6	7.1
	Heating	kW	5.0	6.0	8.0
Fan motor	Model		YSK-40W-4（AG59）	YSK-40W-4（AG59）	YSK-60W-4（AG60）
	Brand		SINJUN	SINJUN	SINJUN
	Output Power	W	40	40	60

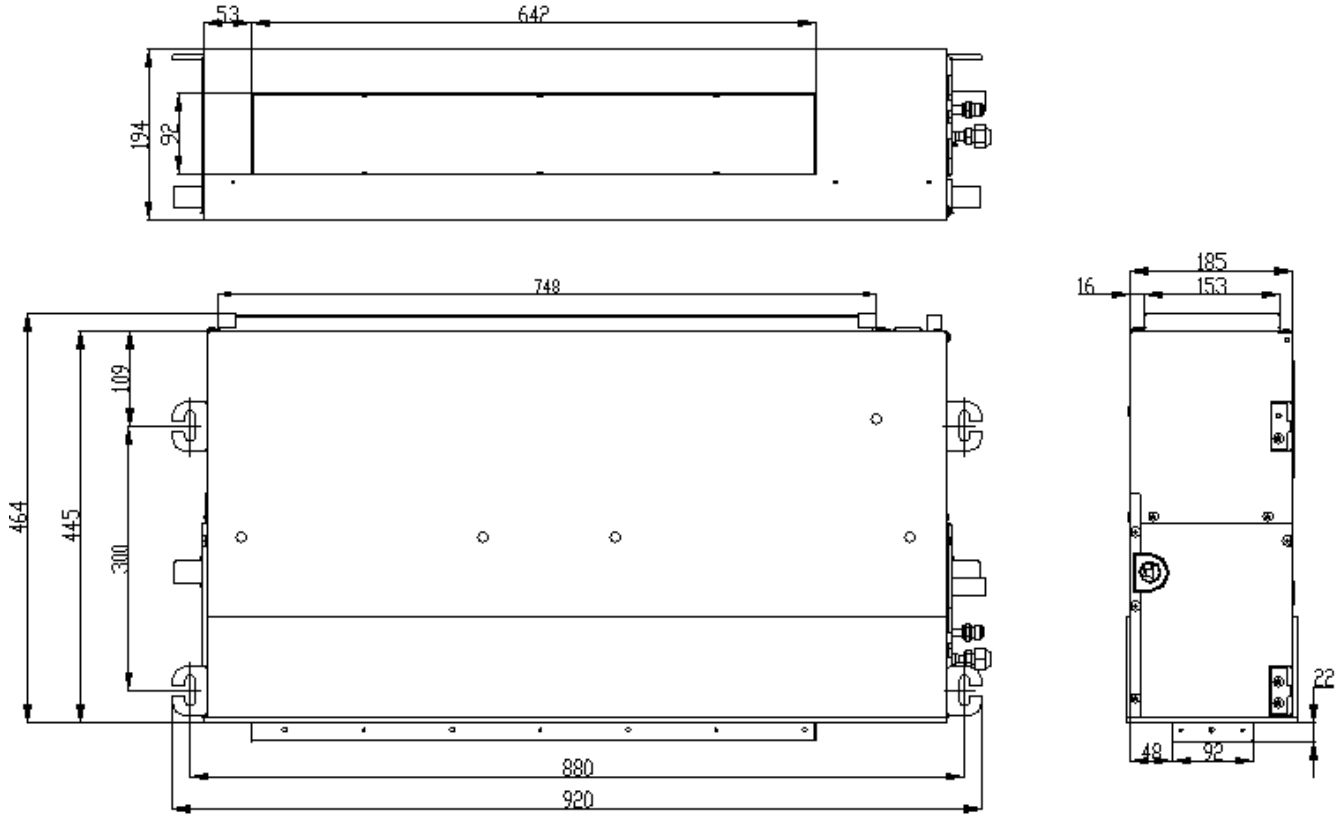
	Capacitor	uF	2.0	2.0	4.0
	Speed (Hi/Mi/Lo)	r/min	1160/1070/940	1160/1070/940	1300/1060/940
Coil	Number Of Row		2	2	3
	Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	Fin Spacing	mm	1.4	1.4	1.4
	Fin Material		Hydrophilic	Hydrophilic	Hydrophilic
	Tube Outside Dia.and Material	mm	φ7,Inner grooved	φ7,Inner grooved	φ7,Inner grooved
	Coil Length x Height x Width	mm	960*205*25.4	960*205*25.4	960*226*38.1
Unit	Indoor Air Flow (Hi/Mi/Lo)	m3/h	860/688/602	860/688/602	1200/960/840
	Noise Level(Hi/Mi/Lo)	dB(A)	38/35/32	38/35/32	39/36/32
	External Static Pressure	Pa	10/30	10/30	10/30
	Unit Dimension (W*H*D)	mm	1160x440x185	1160x440x185	1160x440x185
	Packing (W*H*D)	mm	1350x525x250	1350x525x250	1350x525x250
	Net Weight	Kg	22	22	24
	Gross Weight	Kg	26	26	28
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	9.52
	Gas Side	mm	12.7	12.7	15.88
	Drainage	mm	R1in(DN25)	R1in(DN25)	R1in(DN25)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	20~50	30~60	40~70
Qty'per 20'& 40'&40HQ(Only For Reference)		Set	104/224/252	104/224/252	104/216/243

Notes:

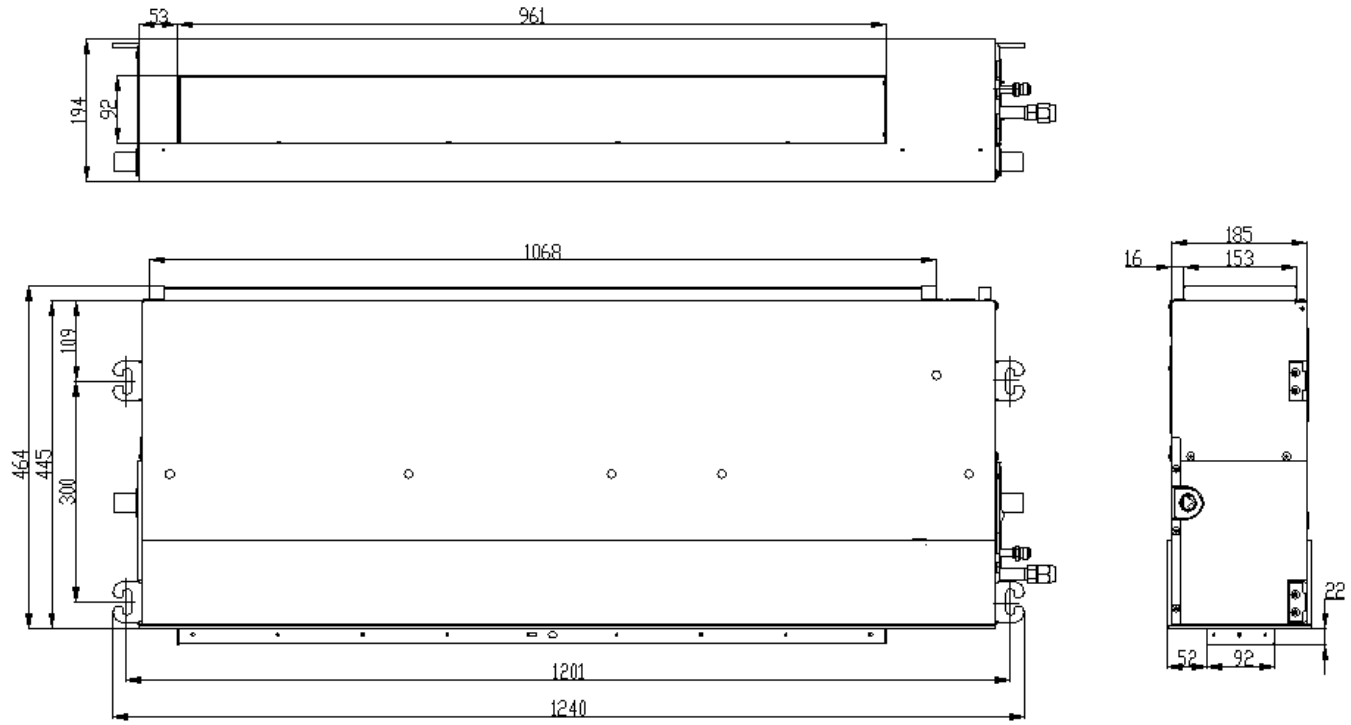
1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length :7.5m,level difference: 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length :7.5m,level difference: 0 m.
3. Anechoic chamber conversion value,measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

3. Dimensions

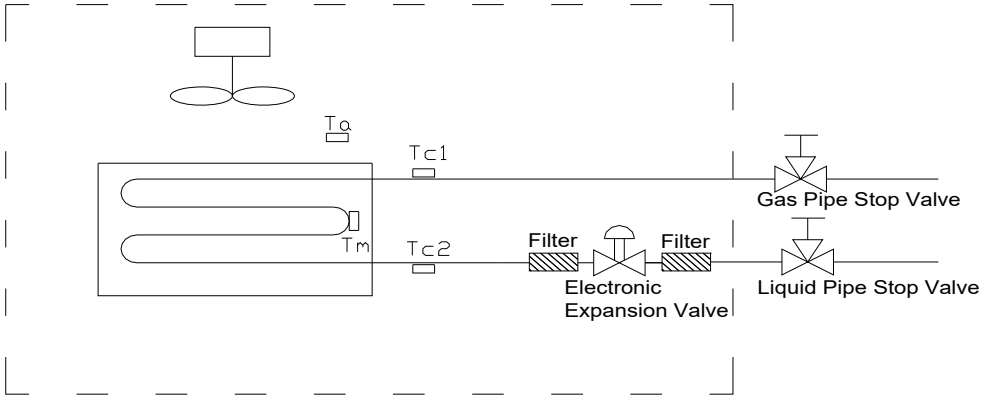
ARVSD-H022/4R1A, ARVSD-H028/4R1A, ARVSD-H036/4R1A



ARVSD-H045/4R1A, ARVSD-H056/4R1A, ARVSD-H071/4R1A



4. Piping Diagrams

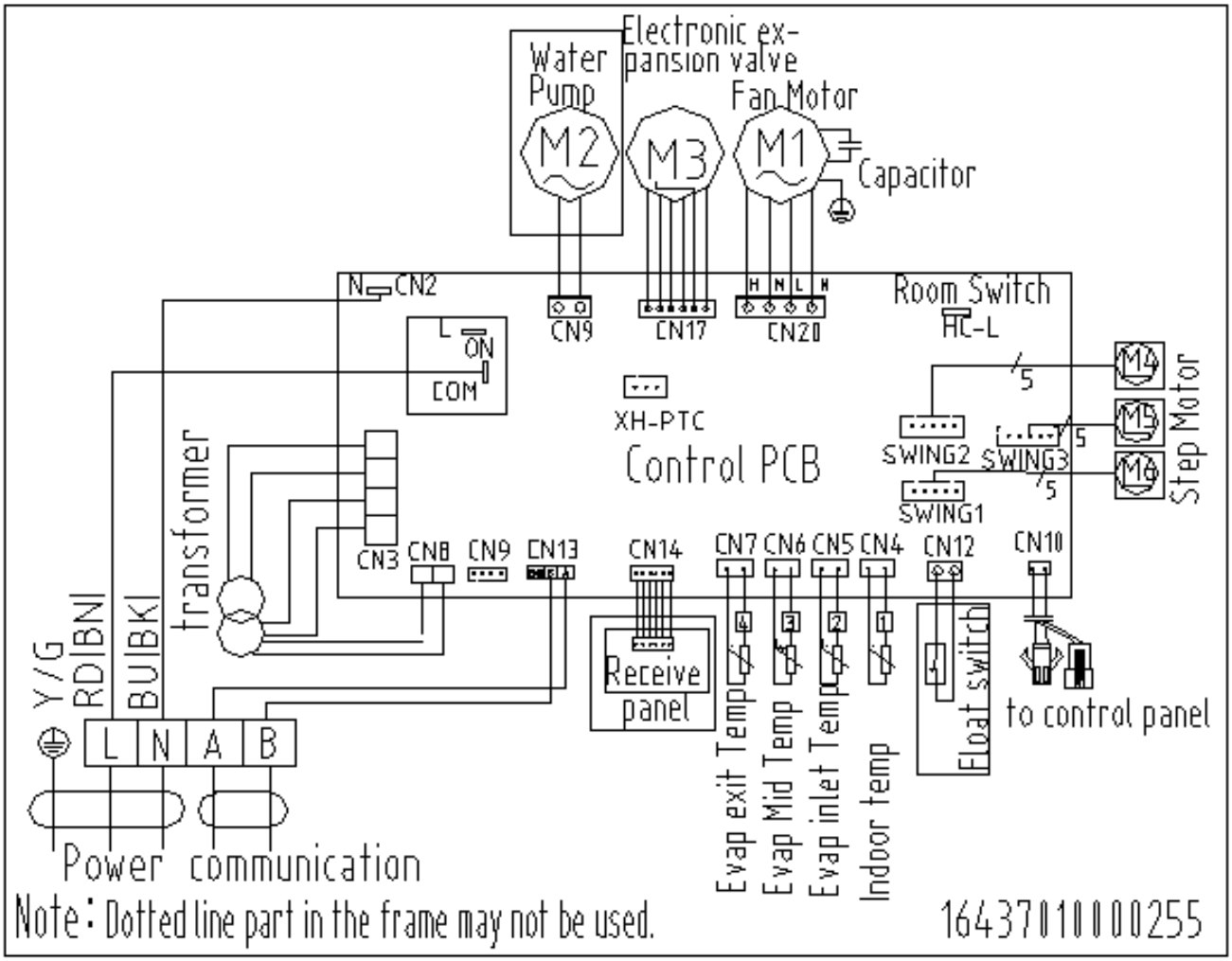


Refrigerant pipe connection port diameters

Model	Gas	Liquid
ARVSD-H022/28/4R1A	Φ9.52	Φ6.35
ARVSD-H036/45/56/4R1A	Φ12.7	Φ6.35
ARVSD-H071/4R1A	Φ15.88	Φ9.52

5. Wiring Diagrams

ARVSD-H022/28/36/45/56/71/4R1A



6. Electrical Characteristics

Model	Indoor Unit				Power Supply		IFM	
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
ARVSD-H022/4R1A	50	220-240V	198	254	0.40	10	0.02	0.32
ARVSD-H028/4R1A	50	220-240V	198	254	0.40	10	0.02	0.32
ARVSD-H036/4R1A	50	220-240V	198	254	0.45	10	0.025	0.36
ARVSD-H045/4R1A	50	220-240V	198	254	0.60	10	0.04	0.48
ARVSD-H0564R1A	50	220-240V	198	254	0.60	10	0.04	0.48
ARVSD-H071/4R1A	50	220-240V	198	254	0.73	10	0.06	0.58

Symbols:
MCA: Min. Circuit Amps (A)
MFA: Max. Circuit BreakerAmps
KW: Fan Motor Rated Output(kW)
FLA: Full Load Amps (A)
IFM:Indoor Fan Motor

Note:
1. Min. and Max. Voltage:Units are suitable for use on electrical system where voltage supplied to unit terminals is not below or above listed rang limits.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MCA =1.25 x FLA
4. Select wire size based on the MCA.

7. Capacity Tables

Cooling Capacity of Outdoor Dry Bulb Temperature and Indoor Dry/Wet Bulb Temperature or Power Consumption Correction Coefficient

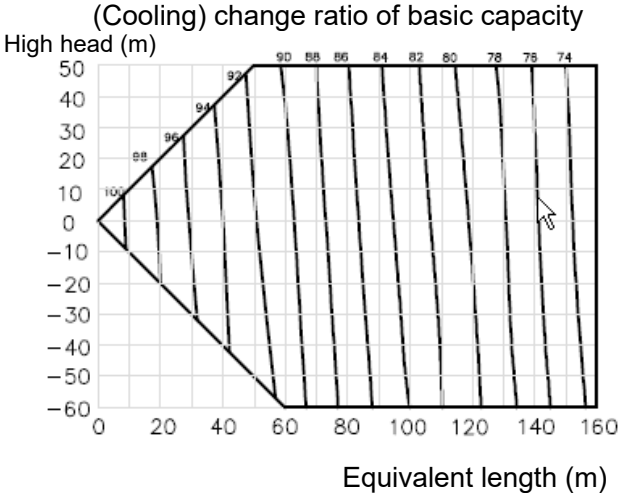
Outdoor dry bulb temperature [^{0}C]	Correction coefficient	Indoor dry/wet bulb temperature [^{0}C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	0.92	0.98	1.05	1.11	1.17
	Power	0.88	0.89	0.91	0.92	0.93
35	Cooling capacity	0.87	0.94	1.0	1.06	1.13
	Power	0.96	0.97	1.0	1.01	1.03
40	Cooling capacity	0.96	0.89	0.95	1.02	1.08
	Power	1.05	1.07	1.08	1.09	1.11
45	Cooling capacity	0.77	0.84	0.90	0.96	1.02
	Power	1.16	1.18	1.19	1.2	1.23
50	Cooling capacity	0.75	0.80	0.86	0.91	0.98
	Power	1.24	1.27	1.28	1.3	1.32

Heating Capacity of Outdoor Dry/Wet Bulb Temperature and Indoor Dry Bulb Temperature or Power Consumption Correction Coefficient

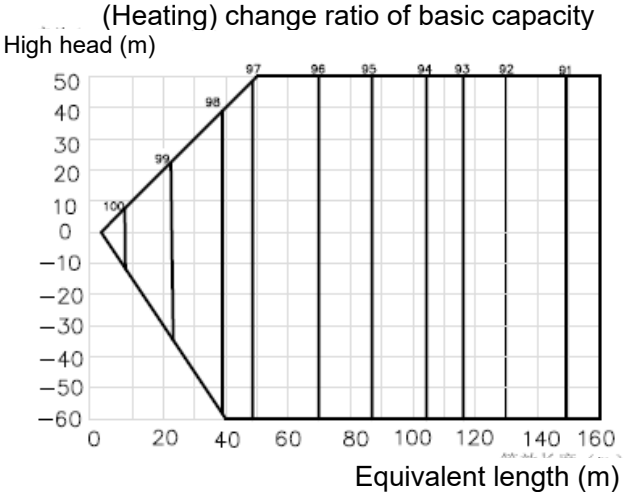
Outdoor ambient temperature of dry/wet bulb[^{0}C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [^{0}C]		
		15	**20**	**25**
-20/-21	Heating capacity	0.58	0.53	0.49
	Power	0.50	0.56	0.62
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	Power	0.72	0.78	0.84
-7/-8	Heating capacity	0.76	0.72	0.67
	Power	0.81	0.87	0.93
-1/-2	Heating capacity	0.79	0.74	0.70
	Power	0.86	0.92	0.98
2/1	Heating capacity	0.81	0.76	0.72
	Power	0.89	0.95	1.01
7/6	Heating capacity	1.04	1.0	0.96
	Power	0.94	1.0	1.06
10/9	Heating capacity	1.1	1.06	1.01
	Power	0.99	1.05	1.11
15/12	Heating capacity	1.16	1.12	1.07
	Power	1.05	1.11	1.17
15-24	Heating capacity	0.85 – 1.05 of nominal		
	Power	0.80 – 1.20 of nominal		

Length Correction Coefficient of Indoor/Outdoor Unit Connecting Tube

(Cooling) change ratio of basic capacity

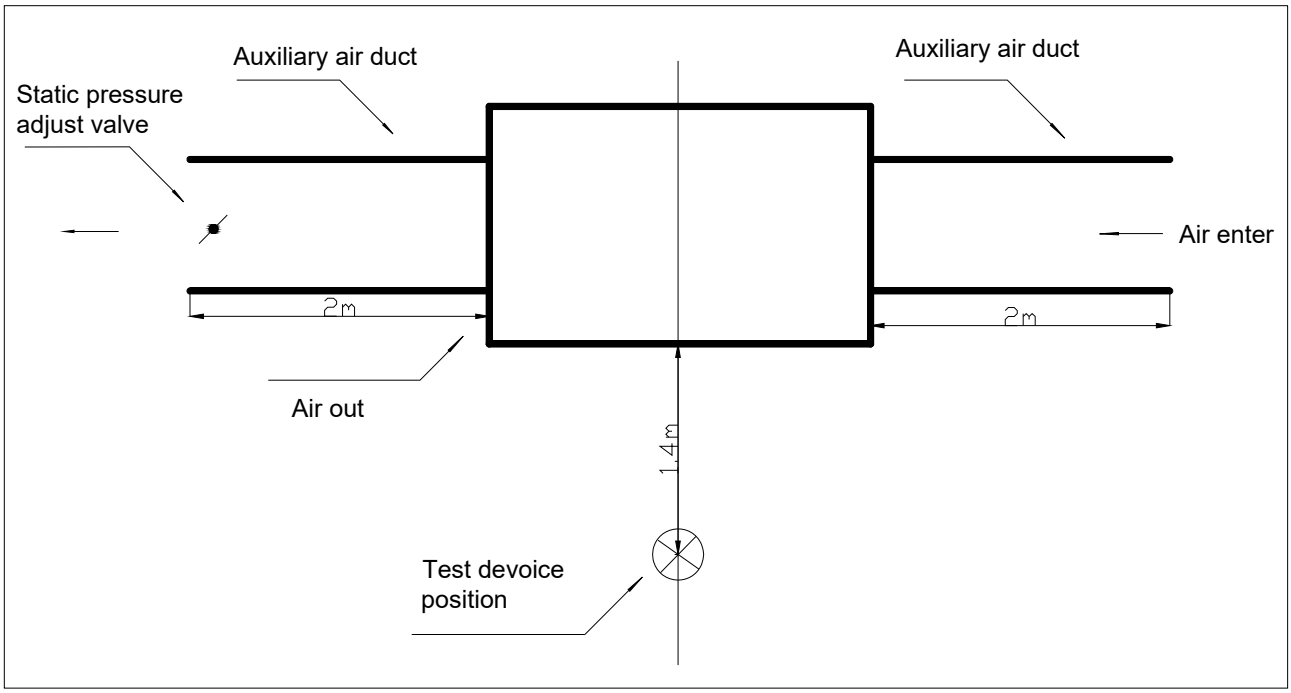


(Heating) change ratio of basic capacity



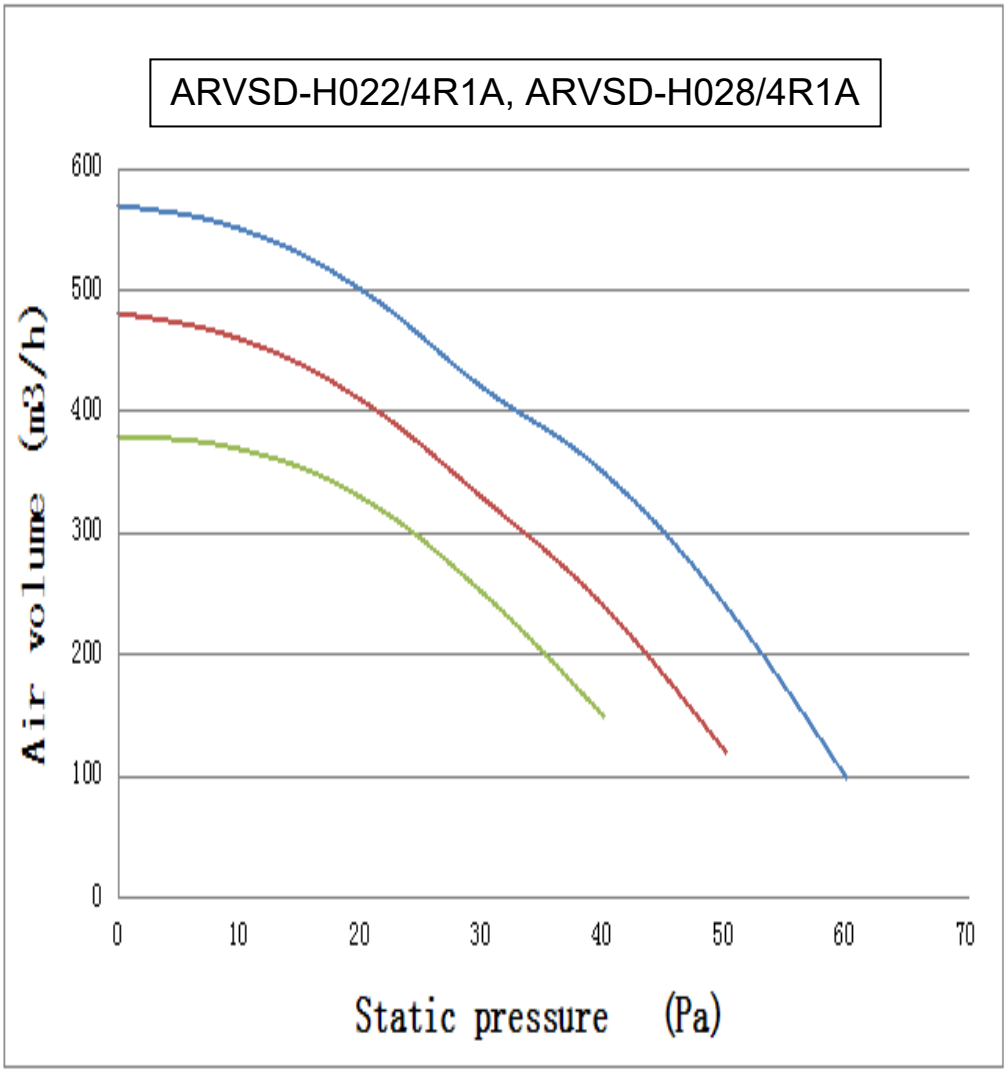
Positive side of high head means installation height of outdoor unit should be higher than indoor unit; negative side of high head means installation height of outdoor unit should be lower than indoor unit; (change ratio of basic capacity)

8. Sound levels

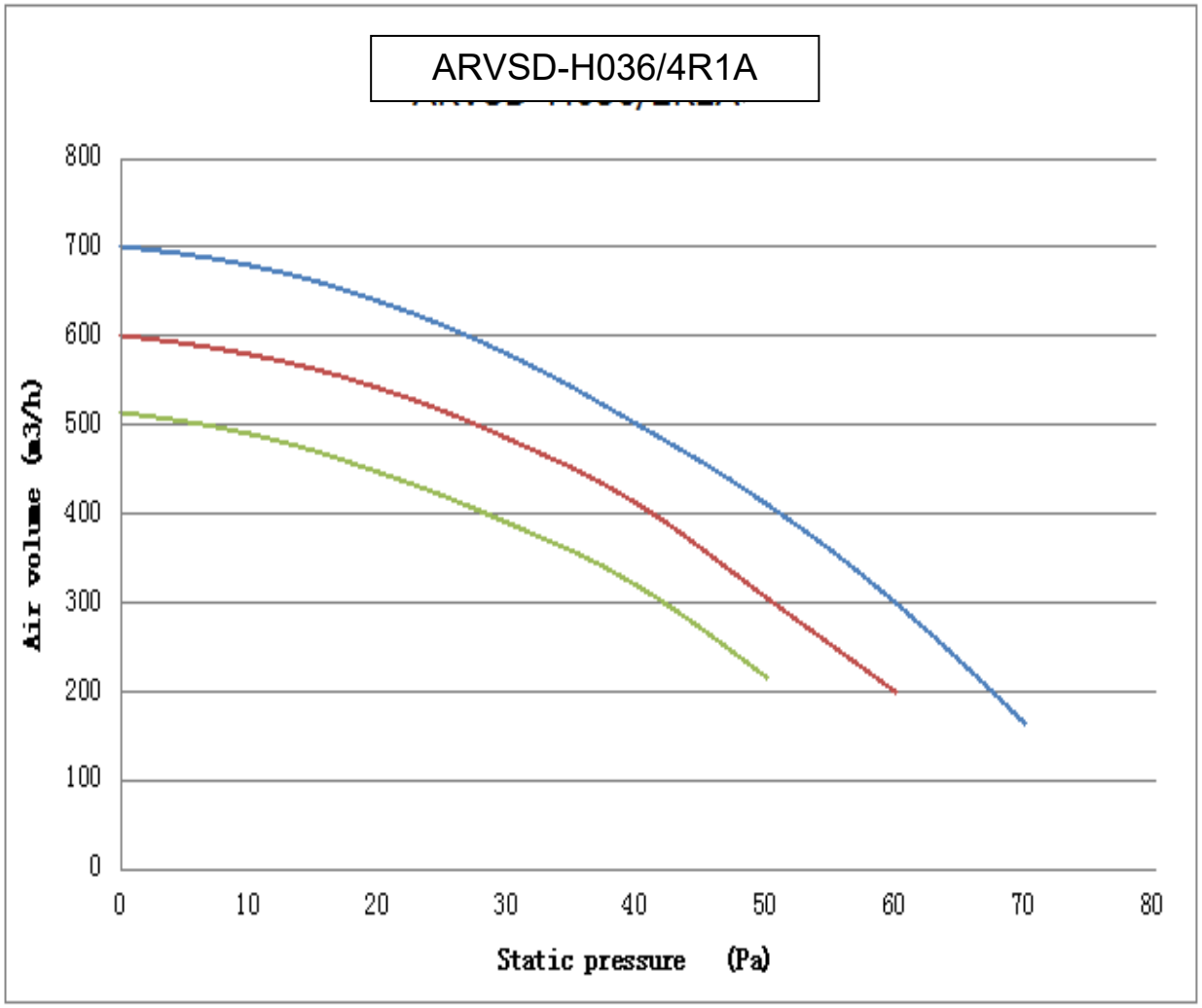


Model	Noise level under three speeds of fan (dB(A))		
	H	M	L
ARVSD-H022/4R1A	30	26	23
ARVSD-H028/4R1A	32	28	25
ARVSD-H036/4R1A	32	28	25
ARVSD-H045/4R1A	38	35	32
ARVSD-H056/4R1A	38	35	32
ARVSD-H071/4R1A	39	36	32

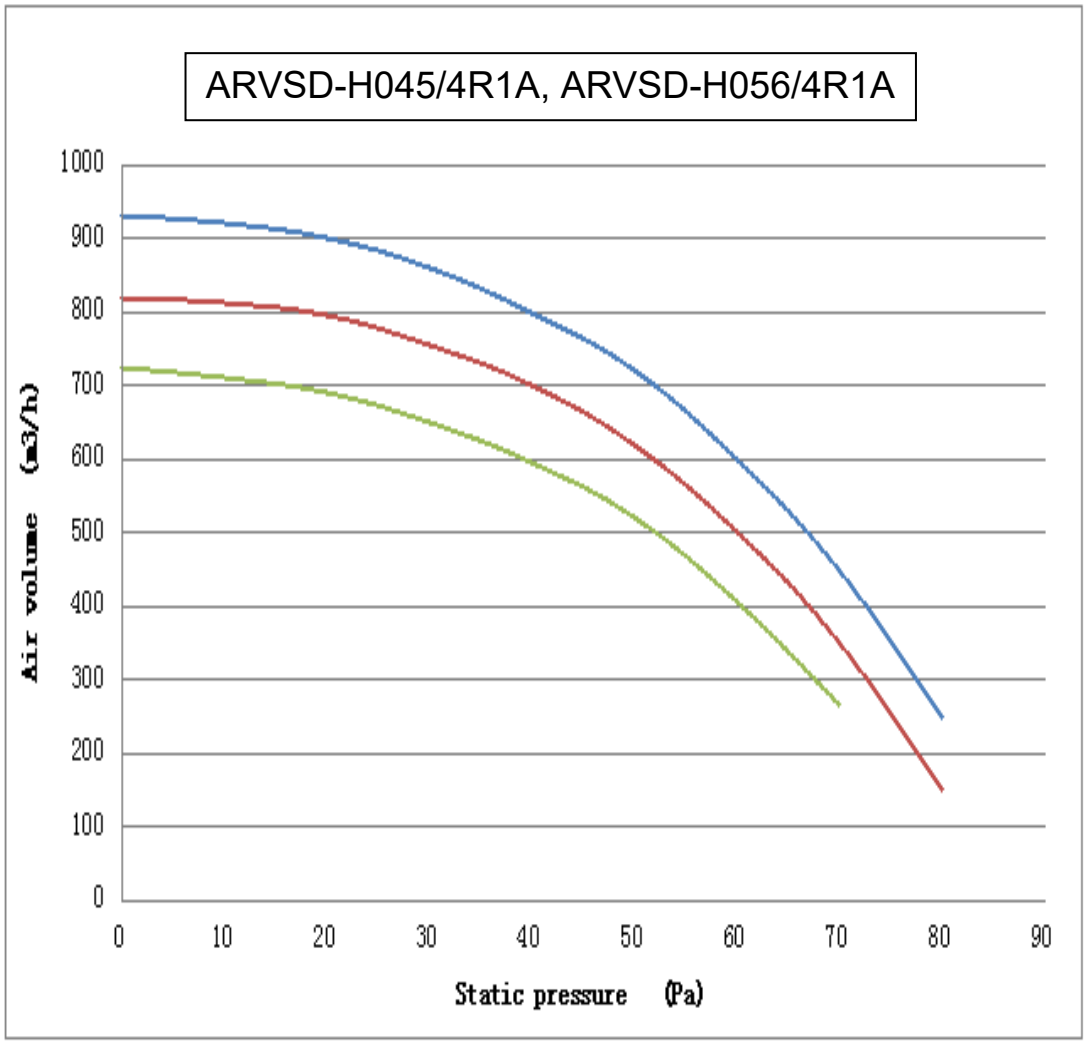
9. Fan performance



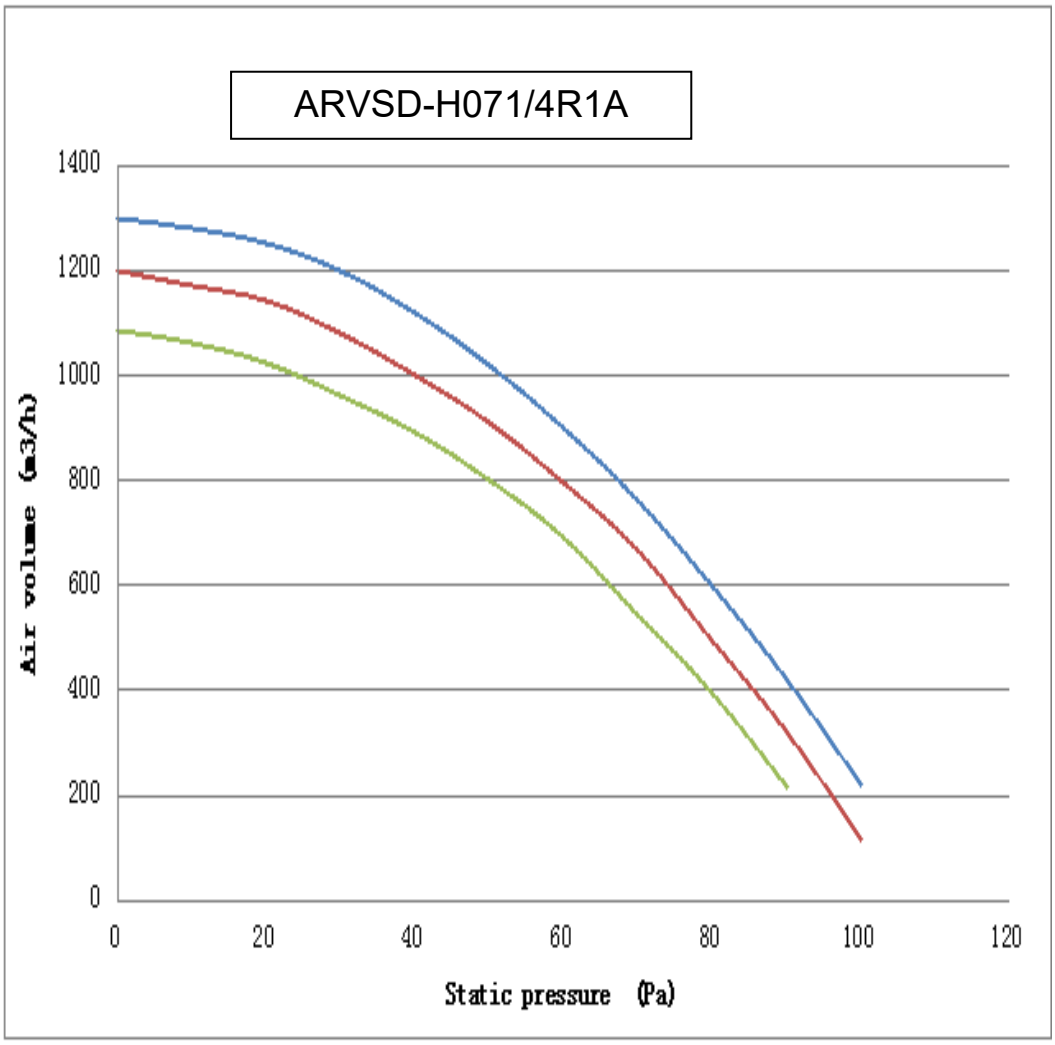
ARVSD-H022/4R1A; ARVSD-H028/4R1A			
Static (Pa)	Air volume m3/h		
	High speed	Middle speed	Low speed
0	570	480	380
10	550	460	370
20	500	410	330
30	420	330	250
40	350	240	150
50	240	120	/
60	100	/	/



ARVSD-H036/4R1A			
Static (Pa)	Air volume m3/h		
	High speed	Middle speed	Low speed
0	700	600	515
10	680	580	490
20	640	540	445
30	580	485	390
40	500	410	320
50	412	305	215
60	300	200	/
70	165	/	/



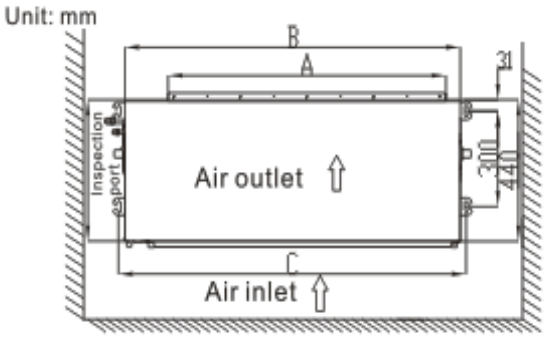
ARVSD-H045/4R1A, ARVSD-H056/4R1A			
Static (Pa)	Air volume m3/h		
	High speed	Middle speed	Low speed
0	930	820	725
10	920	812	710
20	900	795	690
30	860	755	650
40	800	700	595
50	720	620	520
60	600	500	405
70	450	350	265
80	250	150	/
90	/	/	/
100	/	/	/



ARVSD-H071/2R1A			
Static (Pa)	Air volume m3/h		
	High speed	Middle speed	Low speed
0	1300	1200	1085
10	1280	1170	1060
20	1250	1140	1025
30	1200	1080	960
40	1120	1000	890
50	1020	910	800
60	900	795	690
70	760	665	545
80	600	495	395
90	420	320	215
100	220	115	/

10. Installation

10.1Spacing Reserved Between the Surrounding of Indoor Unit and Barrier



Type	A	B	C
7000BTU 9000BTU 12000BTU	642	840	880
16000BTU 18000BTU 24000BTU	962	1160	1200

10.2 Hoisting of Indoor Unit

◇ Selection of hanging foundation: the foundation must be wooden frame and reinforced concrete structure, which is firm and reliable,able to stand a weight four times of the unit's weight and stand a certain vibration for a long time.

◇ Fixing of hanging foundation: fix hanging with bolt or iron frame or wooden frame as shown in the diagram.

◇ Adjust the relative position of hook on hanging bolt to make the main unit incline towards drainage outlet to facilitate draining.

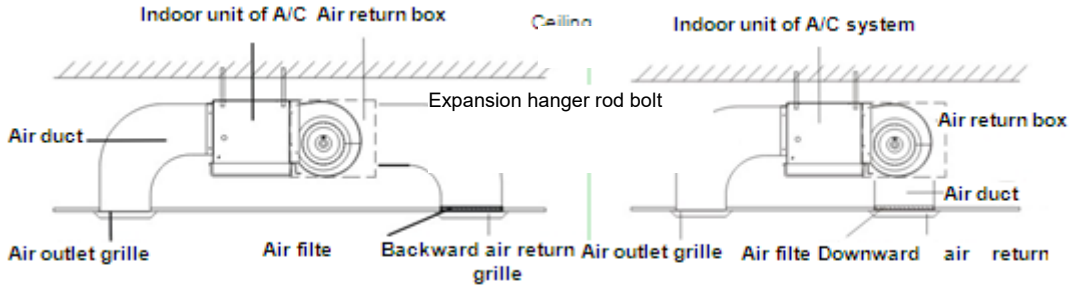
◇ Tighten nut to ensure tight contact among nut, washer and four mounting hooks without loose hanging;

◇ Ensure there is no loose positioning such as shaking of main unit after installation.

10.3 Installation of Ducting

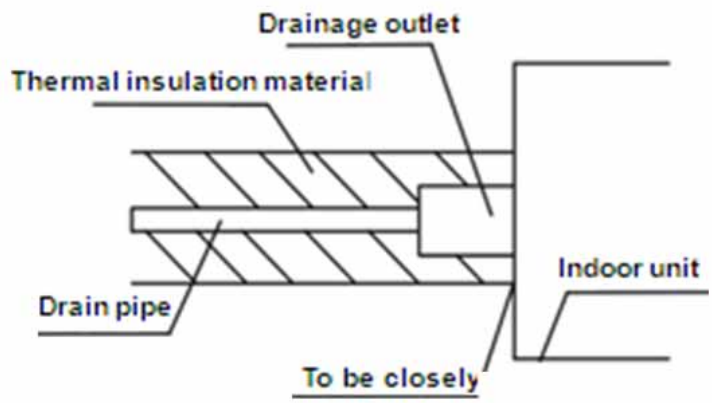
◇ Connect indoor unit and ducting with canvas to reduce unnecessary vibration;

◇ Ducting installation includes two methods such as backward air return and downward air return as shown in the following diagram:



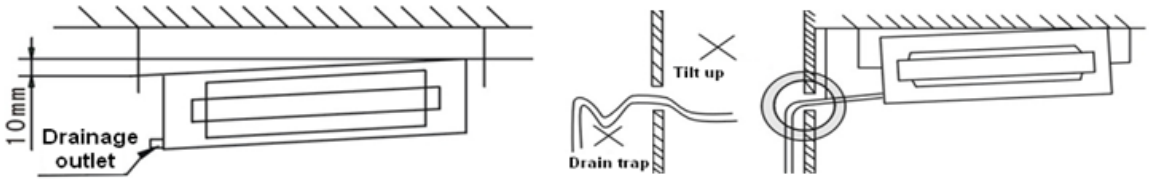
10.6 Installation of Drain Pipe

◇ Drain pipe must be wrapped with thermal insulation material as follows to prevent condensation or dripping.



Thermal insulation material should be rubber & plastic thermal insulation pipe with thickness above 8mm.

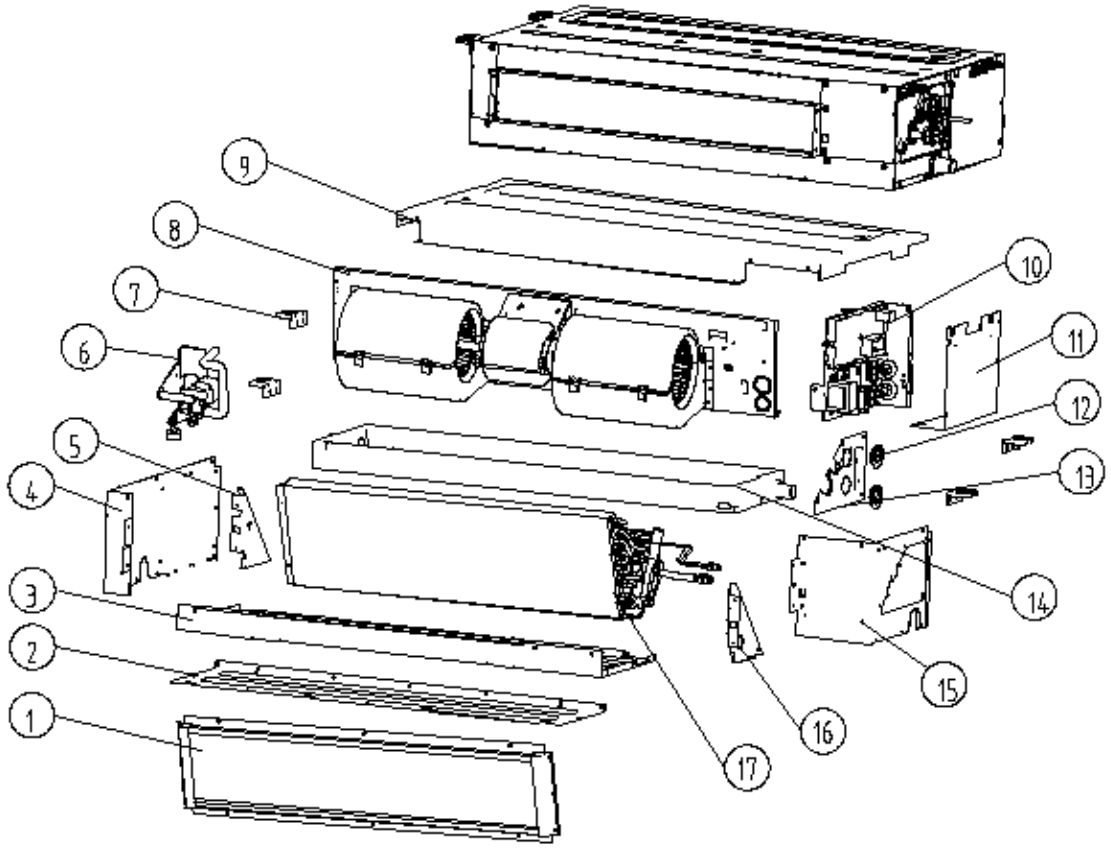
◇ Drain pipe should incline downwards with gradient of 1/50-1/100, which will subject to failure such as back flow or water leakage in case of up-and-down fluctuation or upward inclination.



◇After installation, conduct drainage test to determine if water correctly flows through pipeline and carefully observe the connection to ensure there is no leakage. If the unit is installed in new house, it's recommended to test before decorating ceiling. Conduct drainage test for the unit used for heating only.

11. Explode view

ARVSD-H022/4R1A, ARVSD-H028/4R1A

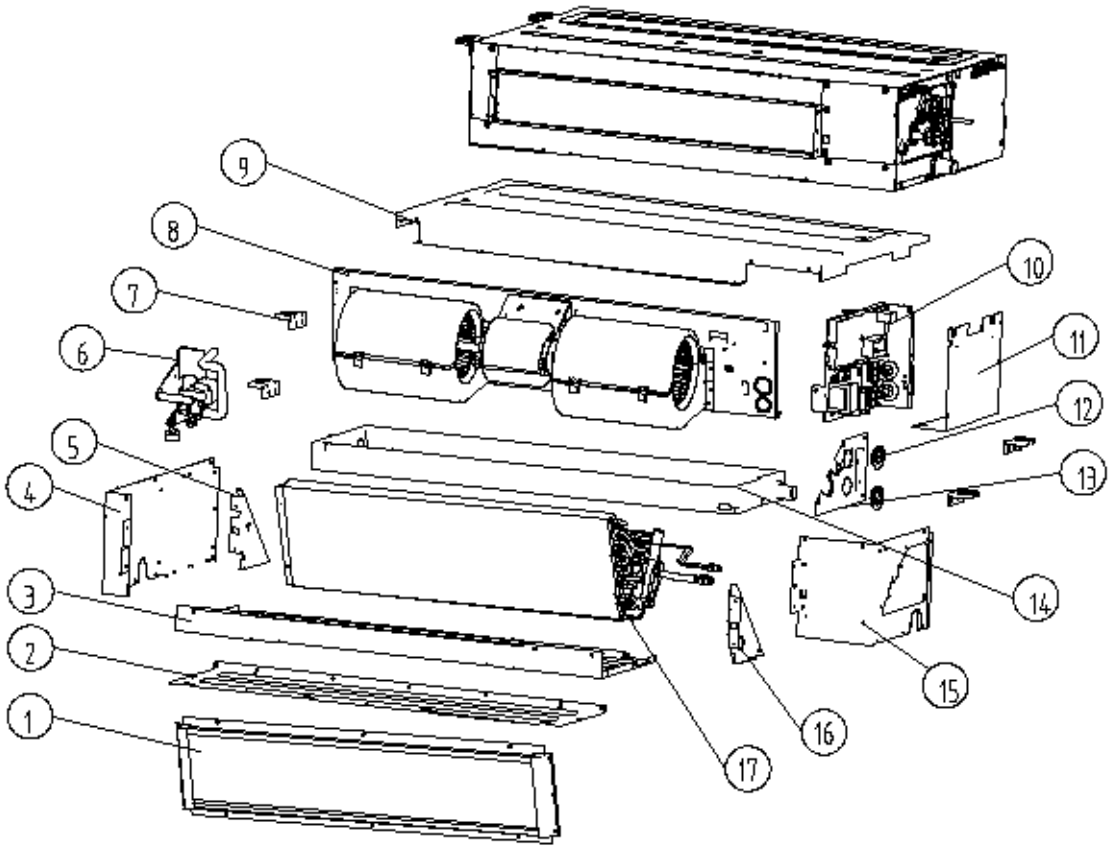


ARVSD-H022/4R1A, ARVSD-H028/4R1A

N0.	AUX code	Component description	Component description	Quantity	Unit
1	16321001000035	缝制过滤网组件	Air filter	1	
2	16421028000133	底盘B	Chassis B	1	
3	16421028000132	底盘A	Chassis A	1	
4	16421001000555	左侧板	Left cover board	1	
5	16421007000082	蒸发器左连接板	Left connecting board of evaporator	1	
6	16440001000008	排水泵组件	Drainage pump components	1	
7	16421040000042	挂耳	Peg	4	
8	16321001000042	蜗壳固定板总成	The fixed plate assembly	1	
9	16321009000187	顶盖板组件	Top cover boardassembly	1	
10	16322001000076	电控总成	Controller assembly	1	
11	16421038000242	电控盒盖	Electric cover	1	
12	16420011000010	旋钮	Knob	1	
13	16421014000060	阀板	Valve board	1	
14	16320009000001	接水盘组件	Drip trayassembly	1	
15	16421001000554	右侧板	Right cover board	1	
16	16421007000083	蒸发器右连接板	Right connecting board of evaporator	1	

17	16324001000129	蒸发器总成	The evaporator assembly		

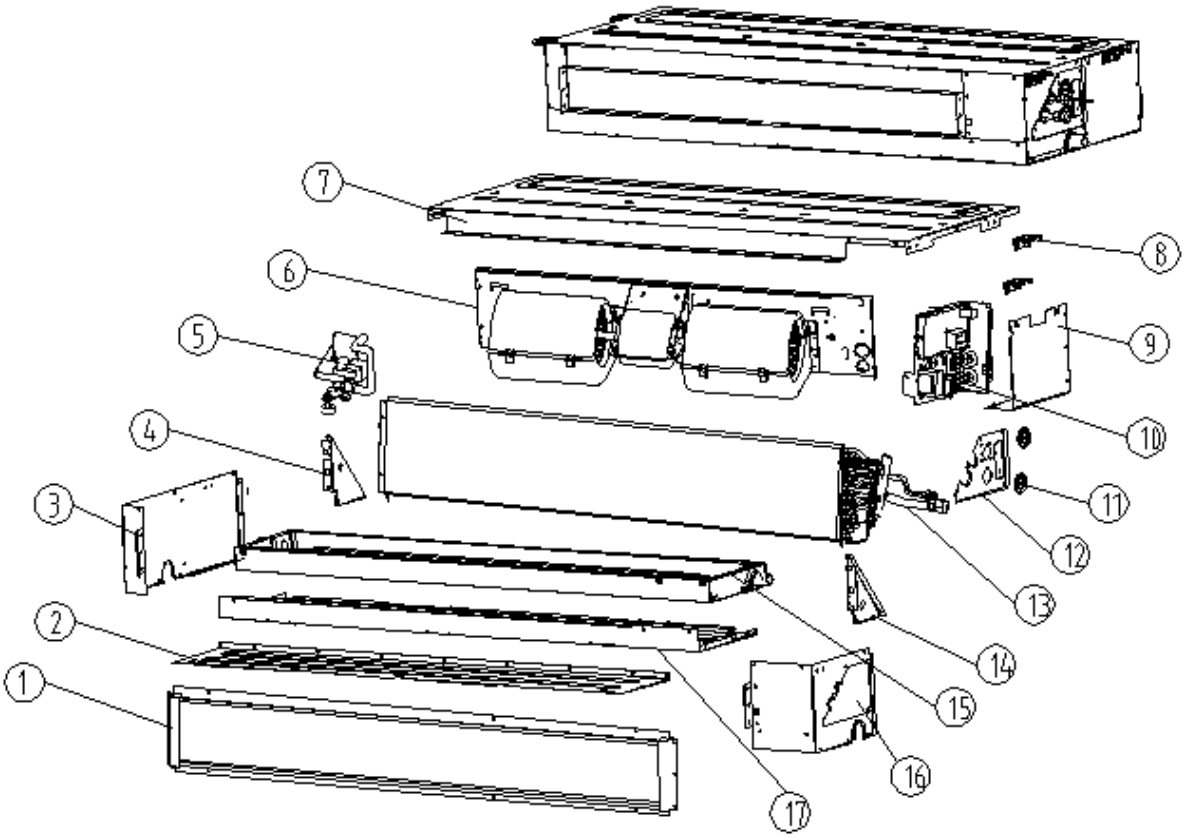
ARVSD-H036/4R1A



N0.	AUX code	Component description	Component description	Quantity	Unit
1	16321001000035	缝制过滤网组件	Air filter	1	
2	16421028000133	底盘B	Chassis B	1	
3	16421028000132	底盘A	Chassis A	1	
4	16421001000555	左侧板	Left cover board	1	
5	16421007000082	蒸发器左连接板	Left connecting board of evaporator	1	
6	16440001000008	排水泵组件	Drainage pump components	1	
7	16421040000042	挂耳	Peg	4	
8	16321001000042	蜗壳固定板总成	The fixed plate assembly	1	
9	16321009000187	顶盖板组件	Top cover boardassembly	1	
10	16322001000076	电控总成	Controller assembly	1	
11	16421038000242	电控盒盖	Electric cover	1	
12	16420011000010	旋钮	Knob	1	
13	16421014000060	阀板	Valve board	1	
14	16320009000001	接水盘组件	Drip trayassembly	1	
15	16421001000554	右侧板	Right cover board	1	
16	16421007000083	蒸发器右连接板	Right connecting board of evaporator	1	

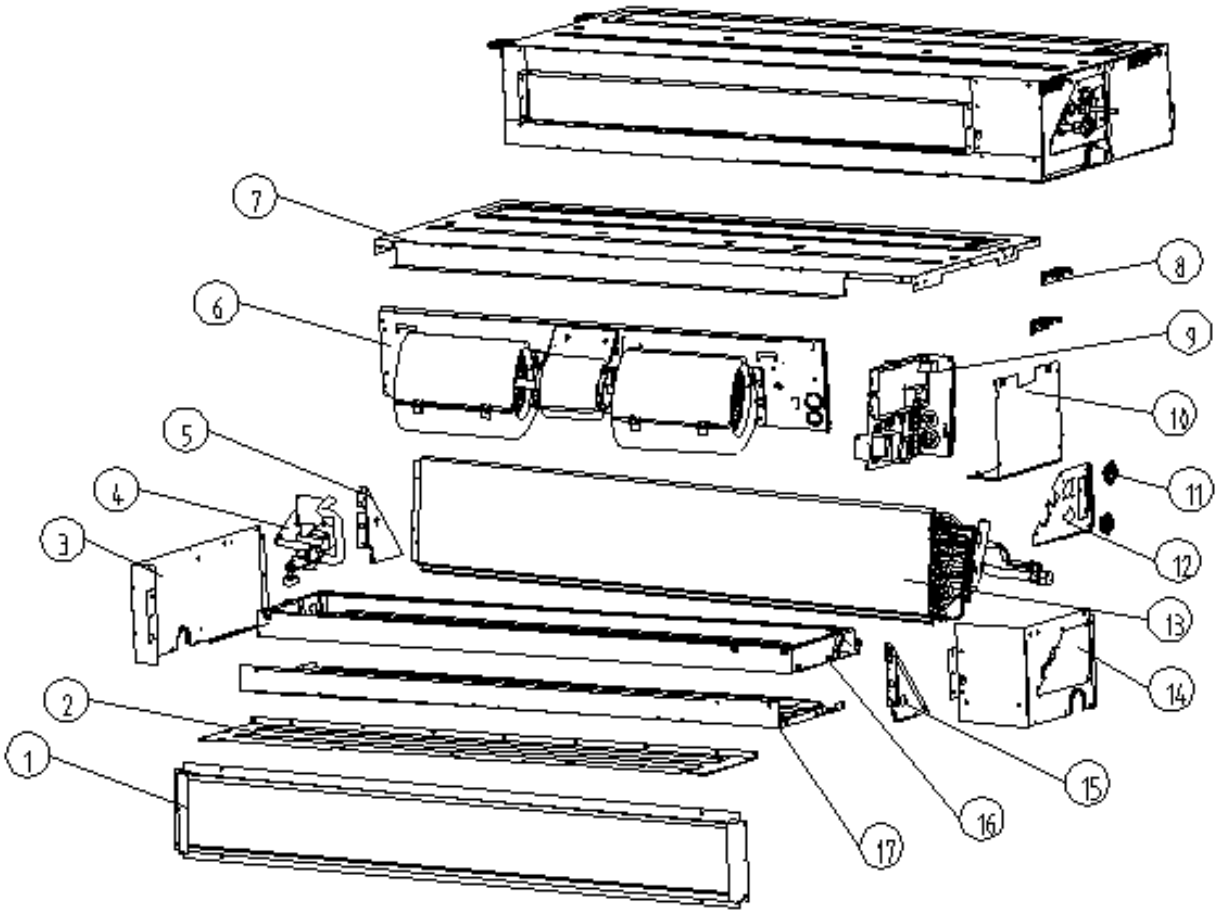
17	16324001000128	蒸发器总成	The evaporator assembly		

ARVSD-H045/4R1A, ARVSD-H056/4R1A



N0.	AUX code	Component description	Component description	Quantity	Unit
1	16321001000036	缝制过滤网组件	Air filter	1	
2	16421028000135	底盘B	Chassis B	1	
3	16421001000555	左侧板	Left cover board	1	
4	16421007000082	蒸发器左连接板	Left connecting board of evaporator	1	
5	16440001000008	排水泵组件	Drainage pump components	1	
6	16321001000044	蜗壳固定板总成	The fixed plate assembly	1	
7	16321009000188	顶盖板组件	Top cover boardassembly	1	
8	16421040000042	挂耳	Peg	4	
9	16421038000242	电控盒盖	Electric cover	1	
10	16322001000076	电控总成	Controller assembly	1	
11	16420011000010	旋钮	Knob	1	
12	16421014000060	阀板	Valve board	1	
13	16324001000127	蒸发器总成	The evaporator assembly	1	
14	16421007000083	蒸发器右连接板	Right connecting board of evaporator	1	
15	16320009000002	接水盘组件	Drip trayassembly	1	
16	16421001000554	右侧板	Right cover board	1	
17	16421028000134	底盘A	Chassis A	1	

ARVSD-H071/4R1A



N0.	AUX code	Component description	Component description	Quantity	Unit
1	16321001000036	缝制过滤网组件	Air filter	1	
2	16421028000135	底盘B	Chassis B	1	
3	16421001000555	左侧板	Left cover board	1	
4	16440001000008	排水泵组件	Drainage pump components	1	
5	16421007000082	蒸发器左连接板	Left connecting board of evaporator	1	
6	16321001000044	蜗壳固定板总成	The fixed plate assembly	1	
7	16321009000188	顶盖板组件	Top cover boardassembly	1	
8	16421040000042	挂耳	Peg	4	
9	16322001000076	电控总成	Controller assembly	1	
10	16421038000242	电控盒盖	Electric cover	1	
11	16420011000010	旋钮	Knob	1	
12	16421014000060	阀板	Valve board	1	
13	16324001000126	蒸发器总成	The evaporator assembly	1	
14	16421001000554	右侧板	Right cover board	1	
15	16421007000083	蒸发器右连接板	Right connecting board of evaporator	1	
16	16320009000002	接水盘组件	Drip trayassembly	1	
17	16421028000134	底盘A	Chassis A	1	

12. Spare parts list

ARVSD-H022/4R1A

Component description	Code	Description(Chinese)	Quantity
PCB board	11222542000002	CJ 控制板 DCZ-SN3F(R8C)-SYE2(三热)	1
Transformer	16422005000032	(ROHS)变压器 TDB-14-B3B(PTC)	1
Terminal board	16427001000062	端子板 4 位(600V 4mm2)LNAB(45 度)	1
Capacitor	11330010000052	R 风机电容 1.5μF/450VAC/70/2000h	1
Fan motor	16430001000510	电机(四速) FP20A	1
Upper shell	16444002000016	上涡壳 175/219(白色)	1
Lower shell	16444002000017	下涡壳 175/219(白色)	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	16444001000033	风轮 φ136×193(ABS 新料)(蓝色)	1
Remote controller	11222001000586	遥控器 YKR-H/009(普通按键无背光源)	1
Air Filter	16444013000099	缝制过滤网 742×145×4	1
Filter	16442001000024	过滤器 φ6×φ8-50	1
Filter	16442001000023	过滤器 φ6×φ6.35-50	1
Drain Pan/Condensate pan/Drain pump	16440001000017	(ROHS)排水泵 PLD-700(L=350)	1
The body of Electronic expansion valve	16441014000012	电子膨胀阀阀体 CAM-BD18FKS-1	1
The coil of Electronic expansion valve	16441015000017	电子膨胀阀线圈 CAM-MD12HRSZ-105 L=700	1

ARVSD-H028/4R1A

Component description	Code	Description(Chinese)	Quantity
PCB board	11222542000002	CJ 控制板 DCZ-SN3F(R8C)-SYE2(三热)	1
Transformer	16422005000032	(ROHS)变压器 TDB-14-B3B(PTC)	1
Terminal board	16427001000062	端子板 4 位(600V 4mm2)LNAB(45 度)	1
Capacitor	11330010000052	R 风机电容 1.5μF/450VAC/70/2000h	1
Fan motor	16430001000510	电机(四速) FP20A	1
Upper shell	16444002000016	上涡壳 175/219(白色)	1
Lower shell	16444002000017	下涡壳 175/219(白色)	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	16444001000033	风轮 φ136×193(ABS 新料)(蓝色)	1

Remote controller	11222001000586	遥控器 YKR-H/009(普通按键无背光源)	1
Air Filter	16444013000099	缝制过滤网 742×145×4	1
Filter	16442001000024	过滤器 φ6×φ8-50	1
Filter	16442001000023	过滤器 φ6×φ6.35-50	1
Drain Pan/Condensate pan/Drain pump	16440001000017	(ROHS)排水泵 PLD-700(L=350)	1
The body of Electronic expansion valve	16441014000012	电子膨胀阀阀体 CAM-BD18FKS-1	1
The coil of Electronic expansion valve	16441015000017	电子膨胀阀线圈 CAM-MD12HRSZ-105 L=700	1

ARVSD-H036/4R1A

Component description	Code	Description(Chinese)	Quantity
PCB board	11222542000002	CJ 控制板 DCZ-SN3F(R8C)-SYE2(三热)	1
Transformer	16422005000032	(ROHS)变压器 TDB-14-B3B(PTC)	1
Terminal board	16427001000062	端子板 4 位(600V 4mm2)LNAB(45 度)	1
Capacitor	11330010000053	R 风机电容 2.0μF/450VAC/70/2000h	1
Fan motor	16430001000510	电机(四速) FP25A	1
Upper shell	16444002000016	上涡壳 175/219(白色)	1
Lower shell	16444002000017	下涡壳 175/219(白色)	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	16444001000033	风轮 φ136×193(ABS 新料)(蓝色)	1
Remote controller	11222001000586	遥控器 YKR-H/009(普通按键无背光源)	1
Air Filter	16444013000099	缝制过滤网 742×145×4	1
Filter	16442001000024	过滤器 φ6×φ8-50	1
Filter	16442001000023	过滤器 φ6×φ6.35-50	1
Drain Pan/Condensate pan/Drain pump	16440001000017	(ROHS)排水泵 PLD-700(L=350)	1
The body of Electronic expansion valve	16441014000012	电子膨胀阀阀体 CAM-BD18FKS-1	1
The coil of Electronic expansion valve	16441015000017	电子膨胀阀线圈 CAM-MD12HRSZ-105 L=700	1

ARVSD-H045/4R1A

Component description	Code	Description(Chinese)	Quantity
PCB board	11222542000002	CJ 控制板 DCZ-SN3F(R8C)-SYE2(三热)	1
Transformer	16422005000032	(ROHS)变压器 TDB-14-B3B(PTC)	1
Terminal board	16427001000062	端子板 4 位(600V 4mm2)LNAB(45 度)	1
Capacitor	11330010000053	R 风机电容 2.0μF/450VAC/70/2000h	1
Fan motor	16430001000511	电机(四速) FP40A	1
Upper shell	16444002000016	上涡壳 175/219(白色)	1
Lower shell	16444002000017	下涡壳 175/219(白色)	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1

temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	16444001000033	风轮 φ136×193(ABS 新料)(蓝色)	1
Remote controller	11222001000586	遥控器 YKR-H/009(普通按键无背光源)	1
Air Filter	16444013000100	缝制过滤网 1066×145×4	1
Filter	16442001000024	过滤器 φ6×φ8-50	1
Filter	16442001000023	过滤器 φ6×φ6.35-50	1
Drain Pan/Condensate pan/Drain pump	16440001000017	(ROHS)排水泵 PLD-700(L=350)	1
The body of Electronic expansion valve	16441014000012	电子膨胀阀阀体 CAM-BD18FKS-1	1
The coil of Electronic expansion valve	16441015000017	电子膨胀阀线圈 CAM-MD12HRSZ-105 L=700	1
Longer shaft	16444007000015	加长轴(空心) φ15×590	
Shaft coupling	16444007000001	联轴器 φ15	1

ARVSD-H056/4R1A

Component description	Code	Description(Chinese)	Quantity
PCB board	11222542000002	CJ 控制板 DCZ-SN3F(R8C)-SYE2(三热)	1
Transformer	16422005000032	(ROHS)变压器 TDB-14-B3B(PTC)	1
Terminal board	16427001000062	端子板 4 位(600V 4mm2)LNAB(45 度)	1
Capacitor	11330010000053	R 风机电容 2.0μF/450VAC/70/2000h	1
Fan motor	16430001000511	电机(四速) FP40A	1
Upper shell	16444002000016	上涡壳 175/219(白色)	1
Lower shell	16444002000017	下涡壳 175/219(白色)	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	16444001000033	风轮 φ136×193(ABS 新料)(蓝色)	1
Remote controller	11222001000586	遥控器 YKR-H/009(普通按键无背光源)	1
Air Filter	16444013000100	缝制过滤网 1066×145×4	1
Filter	16442001000024	过滤器 φ6×φ8-50	1
Filter	16442001000023	过滤器 φ6×φ6.35-50	1
Drain Pan/Condensate pan/Drain pump	16440001000017	(ROHS)排水泵 PLD-700(L=350)	1
The body of Electronic expansion valve	16441014000012	电子膨胀阀阀体 CAM-BD18FKS-1	1
The coil of Electronic expansion valve	16441015000017	电子膨胀阀线圈 CAM-MD12HRSZ-105 L=700	1
Longer shaft	16444007000015	加长轴(空心) φ15×590	
Shaft coupling	16444007000001	联轴器 φ15	1

ARVSD-H071/4R1A

Component description	Code	Description(Chinese)	Quantity
PCB board	11222542000002	CJ 控制板 DCZ-SN3F(R8C)-SYE2(三热)	1
Transformer	16422005000032	(ROHS)变压器 TDB-14-B3B(PTC)	1
Terminal board	16427001000062	端子板 4 位(600V 4mm2)LNAB(45 度)	1
Capacitor	11330010000057	R 风机电容 4.0μF/450VAC/70/2000h	1
Fan motor	16430001000512	电机(四速) FP60A	1
Upper shell	16444002000016	上涡壳 175/219(白色)	1
Lower shell	16444002000017	下涡壳 175/219(白色)	1
temperature Sensor	16430007000003	温度传感器 15K3950 XH2 白 0.5m 塑封 1(组件)	1
temperature Sensor	16430007000010	温度传感器 20K3950 XH2 蓝 0.5m 铜壳 2(组件)	1
temperature Sensor	16430007000008	温度传感器 20K3950 XH2 黄 0.5m 铜壳 3(组件)	1
temperature Sensor	16430007000011	温度传感器 20K3950 XH2 绿 0.5m 铜壳 4(组件)	1
Fan wheel	16444001000033	风轮 φ136×193(ABS 新料)(蓝色)	1
Remote controller	11222001000586	遥控器 YKR-H/009(普通按键无背光源)	1
Air Filter	16444013000100	缝制过滤网 1066×145×4	1
Filter	16442001000024	过滤器 φ6×φ8-50	1
Filter	16442001000023	过滤器 φ6×φ6.35-50	1
Drain Pan/Condensate pan/Drain pump	16440001000017	(ROHS)排水泵 PLD-700(L=350)	1
The body of Electronic expansion valve	16441014000013	电子膨胀阀阀体 CAM-BD22FKS-1	1
The coil of Electronic expansion valve	16441015000017	电子膨胀阀线圈 CAM-MD12HRSZ-105 L=700	1
Longer shaft	16444007000015	加长轴(空心) φ15×590	
Shaft coupling	16444007000001	联轴器 φ15	1

Middle static pressure Duct Type

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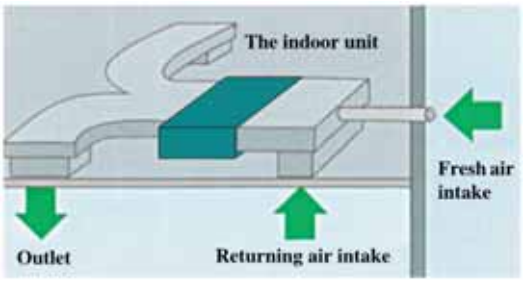
1.Feature

ARVMD-H045/4R1A ARVMD-H056/4R1A
ARVMD-H071/4R1A ARVMD-H080/4R1A
ARVMD-H090/4R1AARVMD-H100/4R1A
ARVMD-H112/4R1A ARVMD-H125/4R1A
ARVMD-H140/4R1A ARVMD-H150/4R1A

Middle static pressure allows for flexible duct design

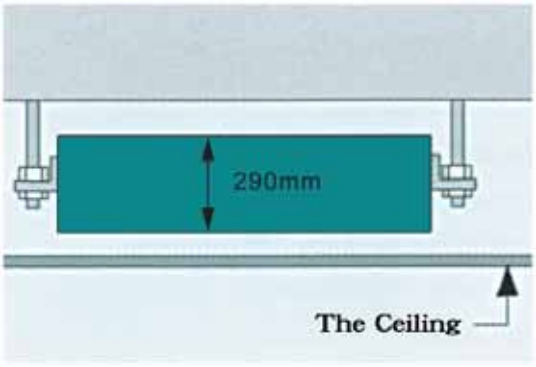
- **Fresh air intake**

Reversed fresh air intake hole, It's convenient to connect with air duct.



- **Ultra slim design**

Thinner and lighter, Only 290mm.

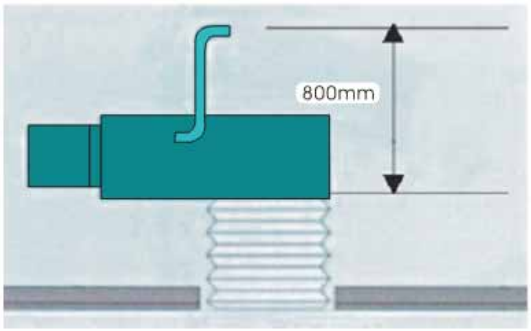


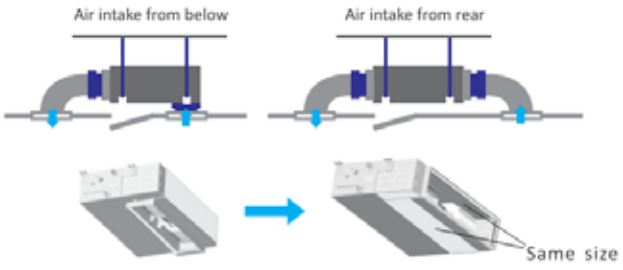
- **Flexible air intake options**

Air intake from rear as standard, from bottom is optional.
The size of the plate from bottom is the same as the flange from back, which makes it convenient to change installation style due to different decoration requirement.

- **Built-in water drainage pump(Optional)**

The built-in pump can lift condensing water up 800mm high from the drainage pan.





2. Specification

Model			ARVMD-H045/4R1A	ARVMD-H056/4R1A	ARVMD-H071/4R1A
Factory Model			ALHi-H16B4/R1DISA	ALHi-H18B4/R1DISA	ALHi-H24B4/R1DISA
Code			16104041000007	16104043000008	16104045000010
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	4.5	5.6	7.1
	Heating	kW	5.0	6.0	8.0
Indoor Fan Motor	Model		YSK100-4	YSK100-4	YSK160-4
	Brand		Kangbao	Kangbao	Kangbao
	Output Power	W	100	100	160
	Capacitor	uF	4	4	3.5
	Speed (Hi/Mi/Lo)	r/min	960/860/840	960/860/840	1050/1000/910
Indoor Coil	a.Number Of Row		2	2	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.5	1.5	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.and Material	mm	φ7, Inner grooved	φ7, Inner grooved	φ7, Inner grooved
	f.Coil Length x Height x Width	mm	625×369×25.4	625×369×25.4	625×369×38.1
	g.Heat Exchanging Area	m^2	6.98	6.98	9.87
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	950/760/665	950/760/665	1200/960/840
	Noise Level(Hi/Mi/Lo)	dB(A)	42/39/37	42/39/37	45/42/39
	External Static Pressure	Pa	50/80	50/80	50/80
	Net Dimension (W×D×H)	mm	890x785x290	890x785x290	890x785x290
	Packing Dimension (W×D×H)	mm	1100x870x360	1100x870x360	1100x870x360
	Net Weight	Kg	35	35	37
	Gross Weight	Kg	41	41	43
Refrigerant Pipe	Liquid Side	mm	6.35	6.35	9.52
	Gas Side	mm	12.7	12.7	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	20~35	25~45	30~50

Stuffing Quantity	20/40/40H	Unit	83/175/204	83/175/204	83/175/204

Note:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m,level difference : 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m,level difference : 0 m.
3. Anechoic chamber conversion value,measured in test roomduring actual operation. These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model			ARVMD-H080/4R1A	ARVMD-H090/4R1A	ARVMD-H100/4R1A
Factory Model			ALHi-H30A4/R1DISA	ALHi-H30B4/R1DISA	ALHi-H36A4/R1DISA
Code			16104046000007	16104047000009	16104048000008
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	8.0	9.0	10.0
	Heating	kW	10.0	11.0	12.0
Indoor Fan Motor	Model		YSK160-4	YSK180-4	YSK180-4
	Brand		Kangbao	Kangbao	Kangbao
	Output Power	W	160	180	180
	Capacitor	uF	3.5	8	8
	Speed (Hi/Mi/Lo)	r/min	1050/1000/910	1100/990/920	1100/990/920
Indoor Coil	a.Number Of Row		3	3	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.6	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7, Inner grooved	φ7, Inner grooved	φ7, Inner grooved
	f.Coil Length x Height x Width	mm	625×369×38.1	625×369×38.1	625×369×38.1
	g.Heat Exchanging Area	m^2	9.87	9.87	9.87
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	1500/1200/1050	1500/1200/1050	1500/1200/1050
	Noise Level(Hi/Mi/Lo)	dB(A)	48/45/42	48/45/42	48/45/42
	Extemal Static Pressure	Pa	50/80	50/80	50/80
	Net Dimension (W×D×H)	mm	890x785x290	890x785x290	890x785x290
	Packing Dimension (W×D×H)	mm	1100x870x360	1100x870x360	1100x870x360

	Net Weight	Kg	37	37	37
	Gross Weight	Kg	43	43	43
Refrigerant Pipe	Liquid Side	mm	9.52	9.52	9.52
	Gas Side	mm	15.88	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	35~55	40~60	45~65
Stuffing Quantity	20/40/40H	Unit	83/175/204	83/175/204	83/175/204

Note:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m,level difference : 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m,level difference : 0 m.
3. Anechoic chamber conversion value, measured in test room during actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model			ARVMD-H112/4R1A	ARVMD-H125/4R1A
Factory Model			ALHi-H36B4/R1DISA	ALHi-H42B4/R1DISA
Code			16104049000009	16104050000008
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	11.2	12.5
	Heating	kW	12.8	13.3
Indoor Fan Motor	Model		YSK180-4	YSK180-4
	Brand		Sanxiang	Sanxiang
	Output Power	W	180	180
	Capacitor	uF	8	8
	Speed (Hi/Mi/Lo)	r/min	1200/990/920	1200/990/920
Indoor Coil	a.Number Of Row		3	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.and Material	mm	φ7, Inner grooved	φ7, Inner grooved
	f.Coil Length x Height x Width	mm	985×369×38.1	985×369×38.1
	g.Heat Exchanging Area	m^2	15.56	15.56
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	2000/1600/1400	2000/1600/1400
	Noise Level(Hi/Mi/Lo)	dB(A)	51/43/40	51/43/40
	External Static Pressure	Pa	50/80	50/80

	Net Dimension (W×D×H)	mm	1250x785x290	1250x785x290
	Packing Dimension (W×D×H)	mm	1460x870x360	1460x870x360
	Net Weight	Kg	53	53
	Gross Weight	Kg	60	60
Refrigerant Pipe	Liquid Side	mm	9.52	9.52
	Gas Side	mm	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	50~75	50~90
Stuffing Quantity	20/40/40H	Unit	63/133/155	63/133/155

Note:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m,level difference : 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m,level difference : 0 m.
3. Anechoic chamber conversion valuemeasured in test room during actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model			ARVMD-H140/4R1A	ARVMD-H150/4R1A
Factory Model			ALHi-H48A4/R1DISA	ALHi-H60A4/R1DISA
Code			16104051000008	16104052000006
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	14.0	15.0
	Heating	kW	15.0	16.0
Indoor Fan Motor	Model		YSK180-4	YSK180-4
	Brand		Sanxiang	Sanxiang
	Output Power	W	180	180
	Capacitor	uF	8	8
	Speed (Hi/Mi/Lo)	r/min	1200/990/920	1200/990/920
Indoor Coil	a.Number Of Row		3	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7, Inner grooved	φ7, Inner grooved
	f.Coil Length x Height x Width	mm	985×369×38.1	985×369×38.1
	g.Heat Exchanging Area	m^2	15.56	15.56
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	2000/1600/1400	2200/1760/1540
	Noise Level(Hi/Mi/Lo)	dB(A)	51/43/40	51/43/40
	External Static Pressure	Pa	50/80	50/80

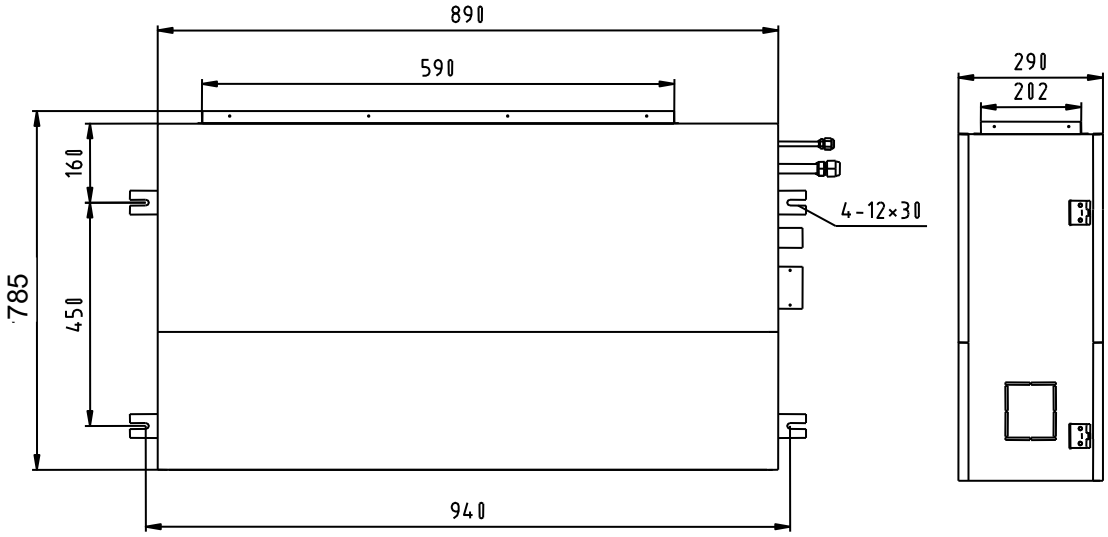
	Net Dimension (W×D×H)	mm	1250x785x290	1250x785x290
	Packing Dimension (W×D×H)	mm	1460x870x360	1460x870x360
	Net Weight	Kg	53	53
	Gross Weight	Kg	60	60
Refrigerant Pipe	Liquid Side	mm	9.52	9.52
	Gas Side	mm	15.88	15.88
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	60~100	65~110
Stuffing Quantity	20/40/40H	Unit	63/133/155	63/133/155

Note:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m,level difference : 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m,level difference : 0 m.
3. Anechoic chamber conversion value,measured in test room during actual operation.These values are normally somewhat higher as a result of ambient conditions.
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

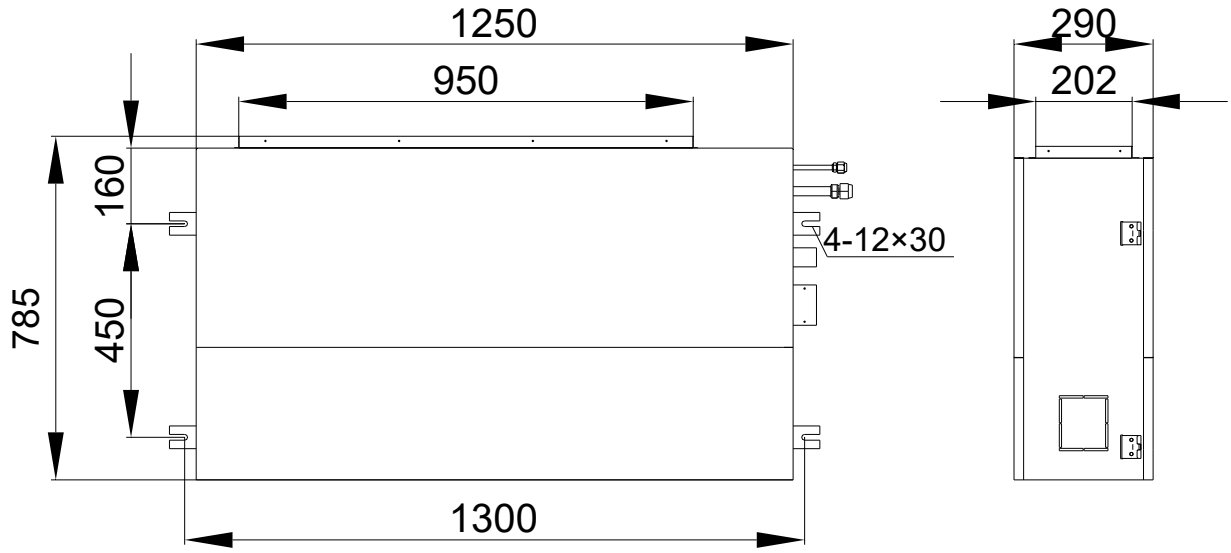
3. Dimension

ARVMD-H045/4R1A.ARVMD-H056/4R1A.ARVMD-H071/4R1A.ARVMD-H080/4R1A.ARVMD-H090/4R1A.ARVMD-H100/4R1A



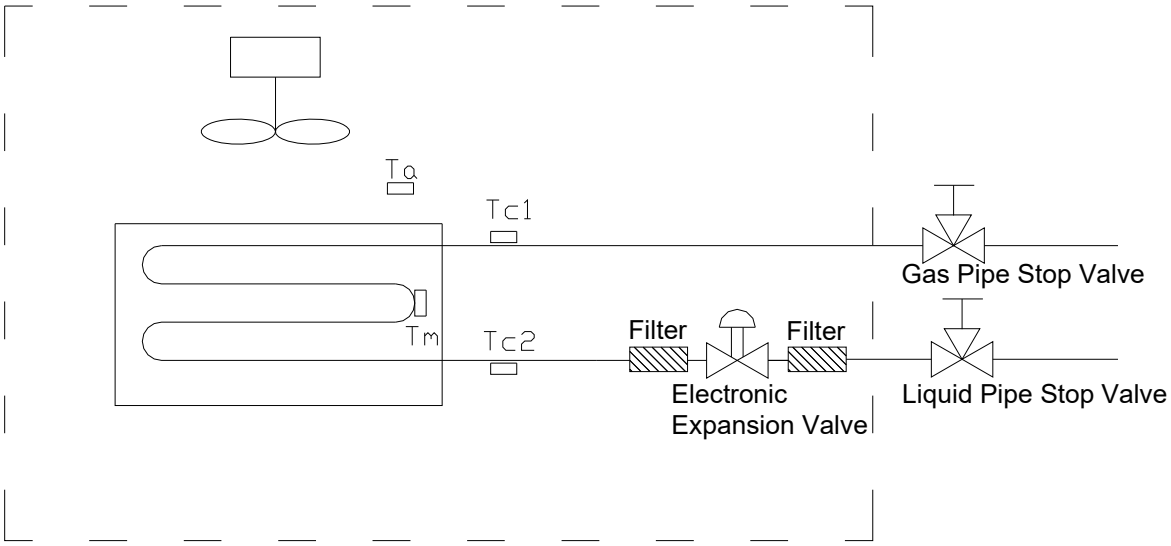
Unit: mm

ARVMD-H112/4R1A.ARVMD-H125/4R1A.ARVMD-H140/4R1A.ARVMD-H150/4R1A



Unit: mm

4. Piping Diagram

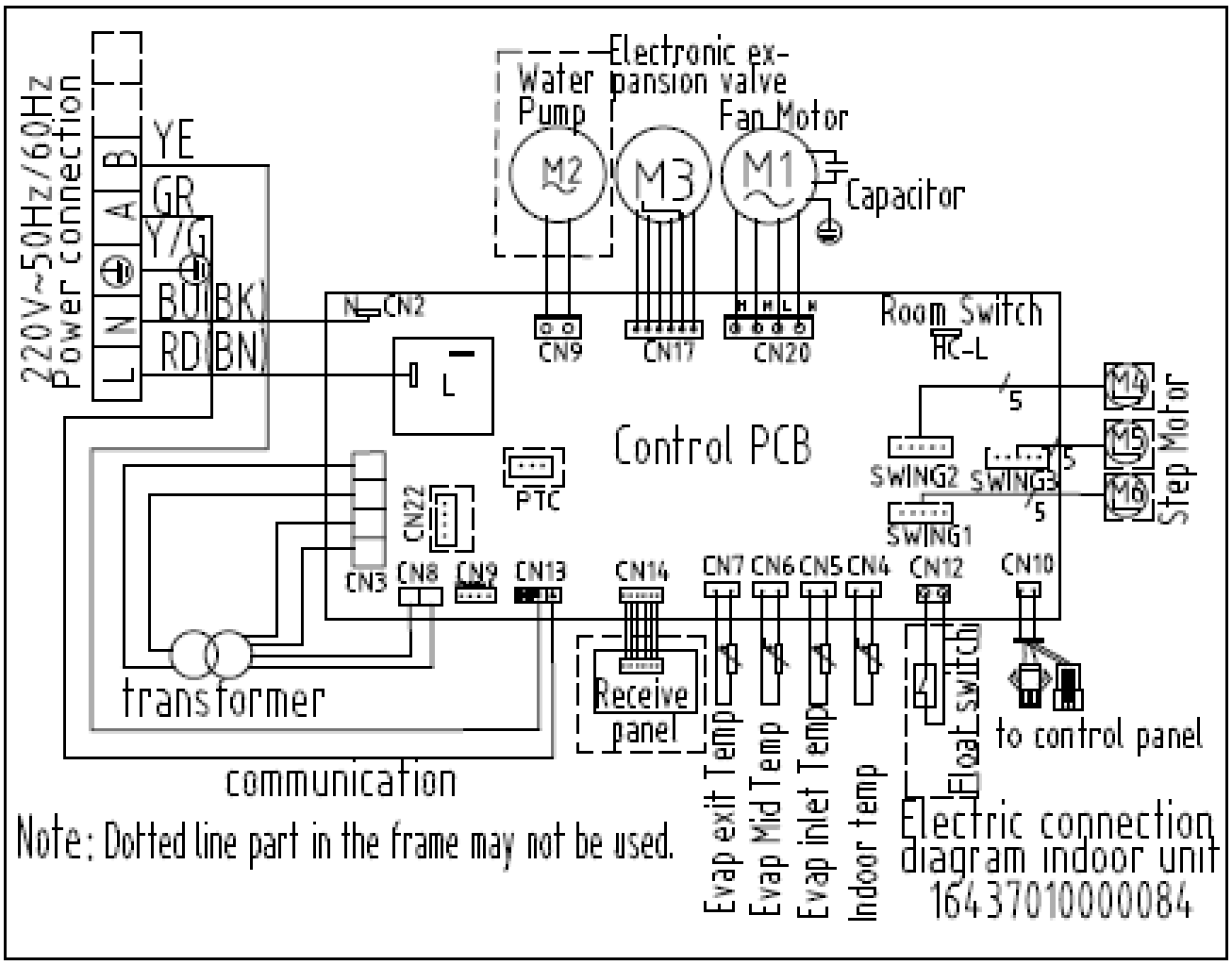


Refrigerant pipe connection port diameters

(mm)

Model	Gas	Liquid
ARVMD-H045/4R1A,ARVMD-H056/4R1A	12.7	6.35
ARVMD-H071/4R1A,ARVMD-H080/4R1A ARVMD-H090/4R1A,ARVMD-H100/4R1A	15.88	9.52
ARVMD-H112/4R1A,ARVMD-H125/4R1A, ARVMD-H140/4R1A, ARVMD-H150/4R1A		

5. Wiring Diagram



6. Electric Characteristics

Model	Indoor Unit				Supply Power		IFW	
	Hz	Voltage	Min.	Max.	MCA	MFA	kW	FLA
ARVMD-H045/4R1A	50	220-240	198	254	1.13	16	0.10	0.90
ARVMD-H056/4R1A	50	220-240	198	254	1.13	16	0.10	0.90
ARVMD-H071/4R1A	50	220-240	198	254	1.50	16	0.16	1.20
ARVMD-H080/4R1A	50	220-240	198	254	1.50	16	0.16	1.20
ARVMD-H090/4R1A	50	220-240	198	254	1.75	20	0.18	1.40
ARVMD-H100/4R1A	50	220-240	198	254	1.75	20	0.18	1.40
ARVMD-H112/4R1A	50	220-240	198	254	1.75	20	0.18	1.40
ARVMD-H125/4R1A	50	220-240	198	254	1.75	20	0.18	1.40
ARVMD-H140/4R1A	50	220-240	198	254	1.75	20	0.18	1.40
ARVMD-H150/4R1A	50	220-240	198	254	1.75	20	0.18	1.40

Symbols:
MCA: Min. Circuit Amps.(A)
MFA: Max.Breaker Amps.
kW: Fan Motor Rated Output(kW)
FLA: Full Load Amps.(A)
IFM:Indoor Fan Motor

Note:
1. Min. and Max. Voltage: Units are suitable for use on electrical system where voltage supplied to unit terminals is not below or above listed rang limits.
2.Maximum allowable voltage unbalance between phases is 2%.
3.MCA =1.25 x FLA

7. Capacity Tables

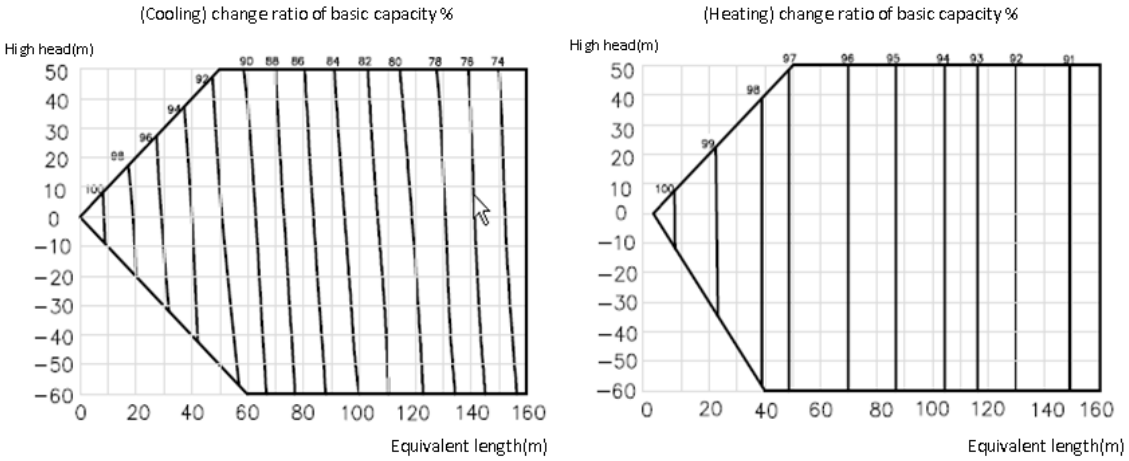
Cooling Capacity of Outdoor Dry Bulb Temperature and Indoor Dry/Wet Bulb Temperature or Power Consumption Correction Coefficient

Outdoor dry bulb temperature [^{0}C]	Correction coefficient	Indoor dry/wet bulb temperature [^{0}C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	0.92	0.98	1.05	1.11	1.17
	Power	0.88	0.89	0.91	0.92	0.93
35	Cooling capacity	0.87	0.94	1.0	1.06	1.13
	Power	0.96	0.97	1.0	1.01	1.03
40	Cooling capacity	0.96	0.89	0.95	1.02	1.08
	Power	1.05	1.07	1.08	1.09	1.11
45	Cooling capacity	0.77	0.84	0.90	0.96	1.02
	Power	1.16	1.18	1.19	1.2	1.23
50	Cooling capacity	0.75	0.80	0.86	0.91	0.98
	Power	1.24	1.27	1.28	1.3	1.32

Heating Capacity of Outdoor Dry/Wet Bulb Temperature and Indoor Dry Bulb Temperature or Power Consumption Correction Coefficient

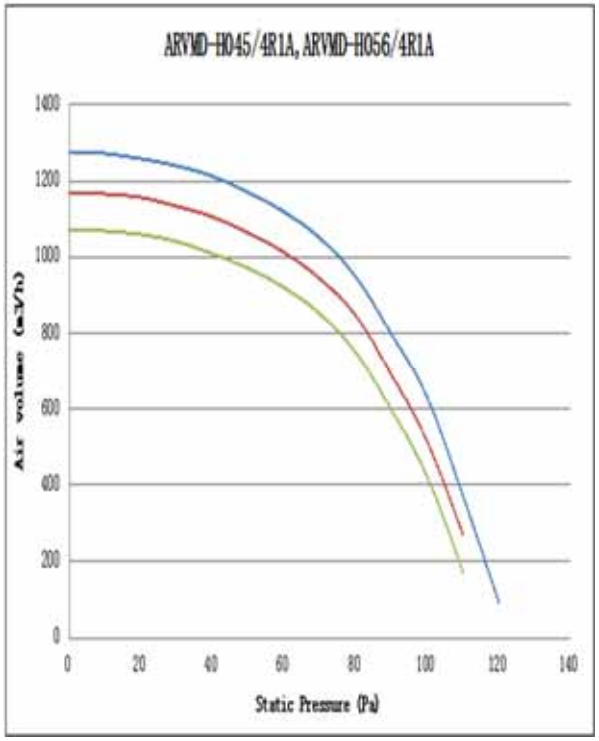
Outdoor ambient temperature of dry/wet bulb[^{0}C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [^{0}C]		
		15	**20**	**25**
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	Power	0.72	0.78	0.84
-7/-8	Heating capacity	0.76	0.72	0.67
	Power	0.81	0.87	0.93
-1/-2	Heating capacity	0.79	0.74	0.70
	Power	0.86	0.92	0.98
2/1	Heating capacity	0.81	0.76	0.72
	Power	0.89	0.95	1.01
7/6	Heating capacity	1.04	1.0	0.96
	Power	0.94	1.0	1.06
10/9	Heating capacity	1.1	1.06	1.01
	Power	0.99	1.05	1.11
15/12	Heating capacity	1.16	1.12	1.07
	Power	1.05	1.11	1.17
15-24	Heating capacity	0.85 – 1.05 of nominal		
	Power	0.80 – 1.20 of nominal		

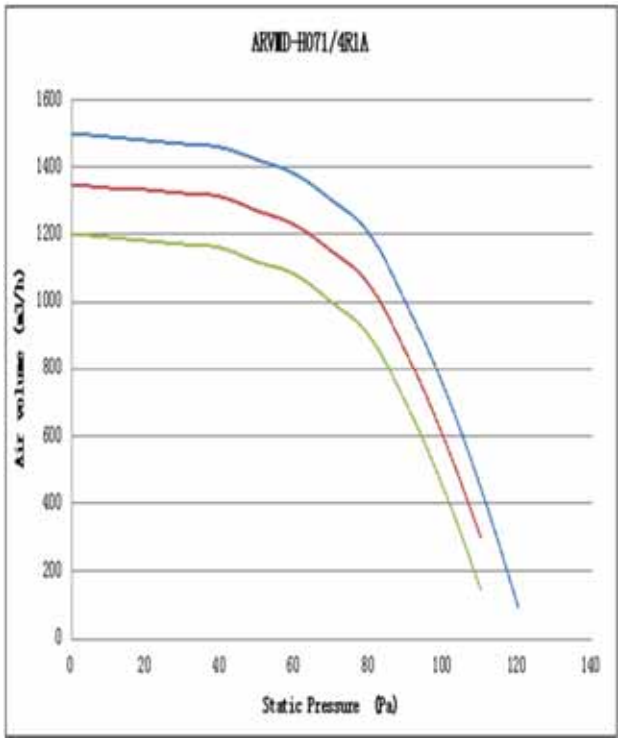
Length Correction Coefficient of Indoor/Outdoor Unit Connecting Tube



Positive side of high head means installation height of outdoor unit should be higher than indoor unit; negative side of high head means installation height of outdoor unit should be lower than indoor unit; (change ratio of basic capacity)

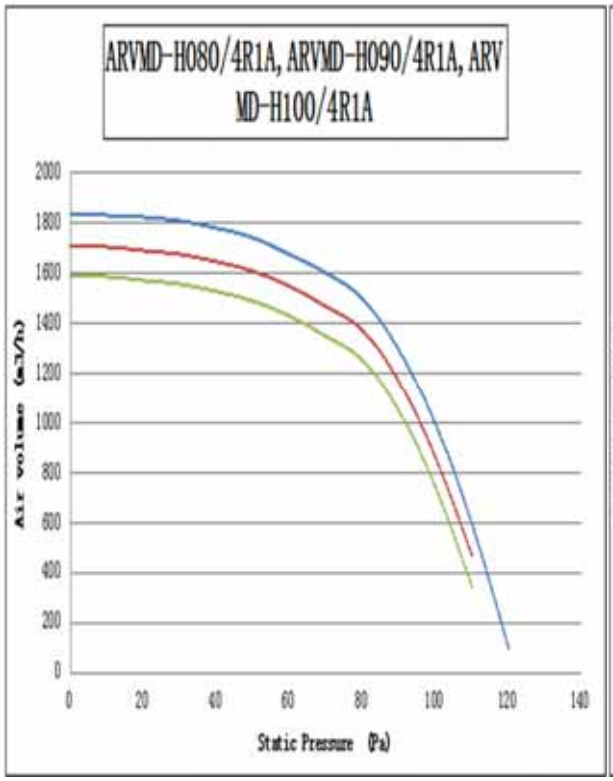
8. Fan Performance

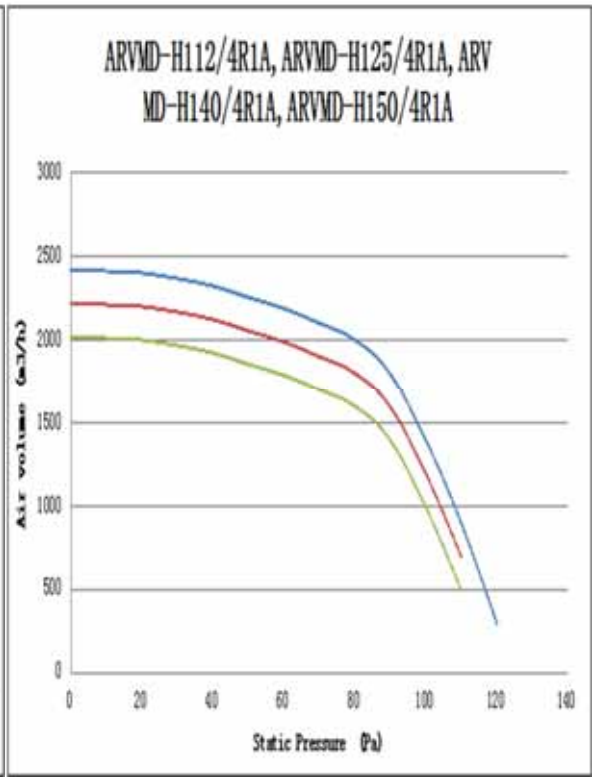




ARVMD-H045/4R1A, ARVMD-H056/4R1A			
Static Pressure	Air volume(m^3/h)		
(Pa)	High	Medium	Low
0	1275	1170	1075
10	1270	1165	1070
20	1260	1155	1060
30	1240	1135	1040
40	1210	1105	1010
50	1170	1065	970
60	1120	1015	920
70	1050	945	850
80	950	845	750
90	800	695	600
100	635	515	425
110	375	270	175
120	95	/	/

ARVMD-H071/4R1A			
Static Pressure	Air volume(m^3/h)		
(Pa)	High	Medium	Low
0	1500	1350	1200
10	1490	1340	1190
20	1480	1330	1180
30	1470	1320	1170
40	1460	1310	1160
50	1420	1270	1120
60	1380	1230	1080
70	1300	1150	1000
80	1200	1050	900
90	1000	850	700
100	750	600	450
110	450	300	150
120	100	/	/

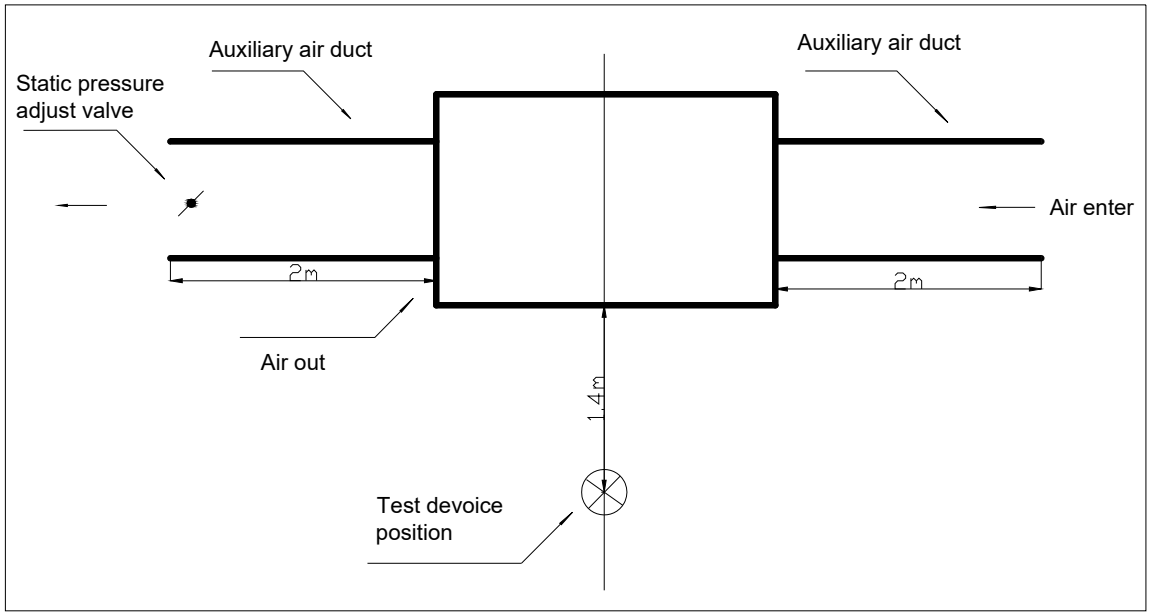




ARVMD-H080/4R1A,ARVMD-H090/4R1A, ARVMD-H100/4R1A			
Static Pressure (Pa)	Air volume (m^3/h)		
	High	Medium	Low
0	1840	1710	1590
10	1835	1705	1585
20	1825	1695	1575
30	1810	1680	1560
40	1780	1650	1530
50	1740	1610	1490
60	1680	1550	1430
70	1600	1470	1350
80	1500	1370	1250
90	1300	1170	1050
100	1000	870	750
110	600	470	350
120	100	/	/

ARVMD-H112/4R1A,ARVMD-H125/4R1A, ARVMD-H140/4R1A,ARVMD-H150/4R1A			
Static Pressure (Pa)	Air volume (m^3/h)		
	High	Medium	Low
0	2420	2220	2020
10	2410	2210	2010
20	2400	2200	2000
30	2370	2170	1970
40	2320	2120	1920
50	2260	2060	1860
60	2190	1990	1790
70	2100	1900	1700
80	2000	1800	1600
90	1800	1600	1400
100	1400	1200	1000
110	900	700	500
120	300	/	/

9. Sound Levels



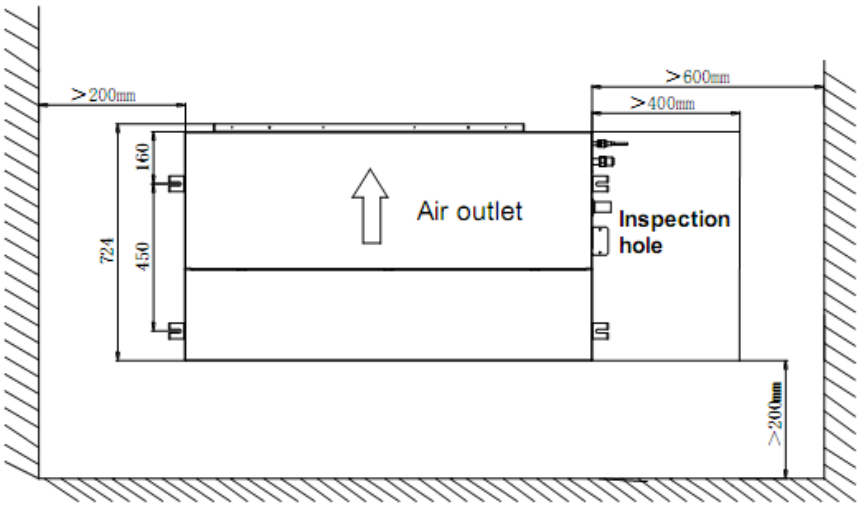
Note:

1. The operating condition are assumed to be standard.(JIS Condition).
2. These operating values were obtained in a dead room (conversion values).
   Sound level will vary depending on a range of factors such as the construction (acoustic absorption coetficient) of the particular room in which the equipments installed.

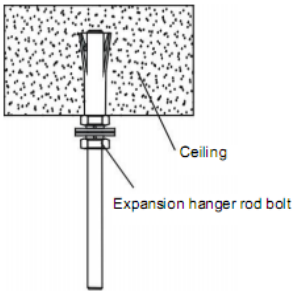
Model	220-240V 50Hz		
	High (dB)	Medium (dB)	Low (dB)
ARVMD-H045/4R1,A	42	39	37
ARVMD-H056/4R1A			
ARVMD-H071/4R1A	45	42	39
ARVMD-H080/4R1A	48	45	42
ARVMD-H090/4R1A,			
ARVMD-H100/4R1A			
ARVMD-H112/4R1A,	51	43	40
ARVMD-H125/4R1A,			
ARVMD-H140/4R1A			
ARVMD-H150/4R1A			

10. Installation Manual

10.1 Service Space



10.2 Hoisting of Indoor Unit



◇Selection of hanging foundation: the foundation must be wooden frame and reinforced concrete structure, which is firm an reliable,able to stand a weight four times of the unit's weight and stand a certain vibration for a long time.

◇Fixing of hanging foundation: fix hanging with bolt or iron frame or wooden frame as shown in the diagram.

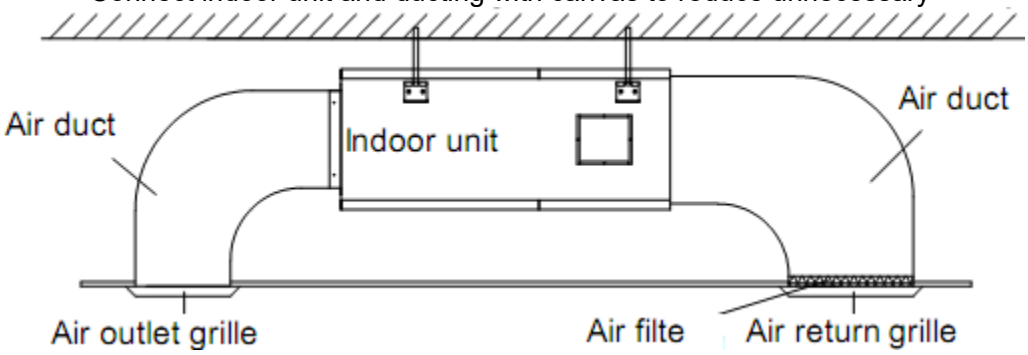
◇Adjust the relative position of hook on hanging bolt to make the main unit incline towards drainage outlet to facilitate draining.

◇Tighten nut to ensure tight contact among nut, washer and four mounting hooks without loose hanging; ;

◇Ensure there is no loose positioning such as shaking of main unit after installation.

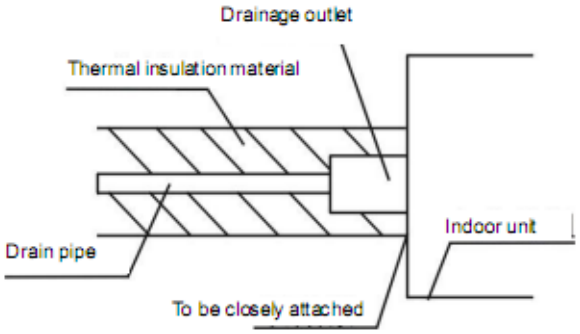
Installation of Ducting

Connect indoor unit and ducting with canvas to reduce unnecessary



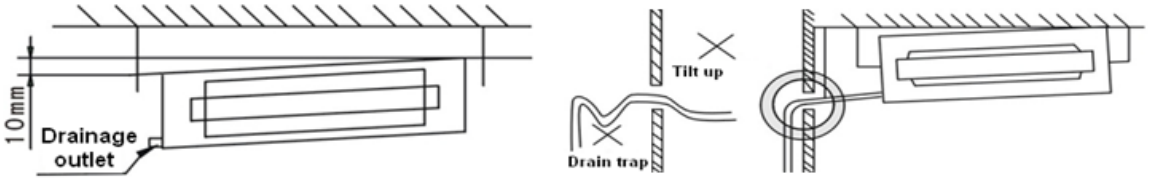
Installation of Drain Pipe

◇Drain pipe must be wrapped with thermal insulation material as follows to prevent condensation or dripping.



Thermal insulation material should be rubber & plastic thermal insulation pipe with thickness above 10mm

◇Drain pipe should incline downwards with gradient of 1/50-1/100, which will subject to failure such as back flow or water leakage in case of up-and-down fluctuation or upward inclination.



◇After installation, conduct drainage test to determine if water correctly flows through pipeline and carefully observe the connection to ensure there is no leakage. If the unit is installed in new house, it's recommended to test before decorating ceiling. Conduct drainage test for the unit used for heating only

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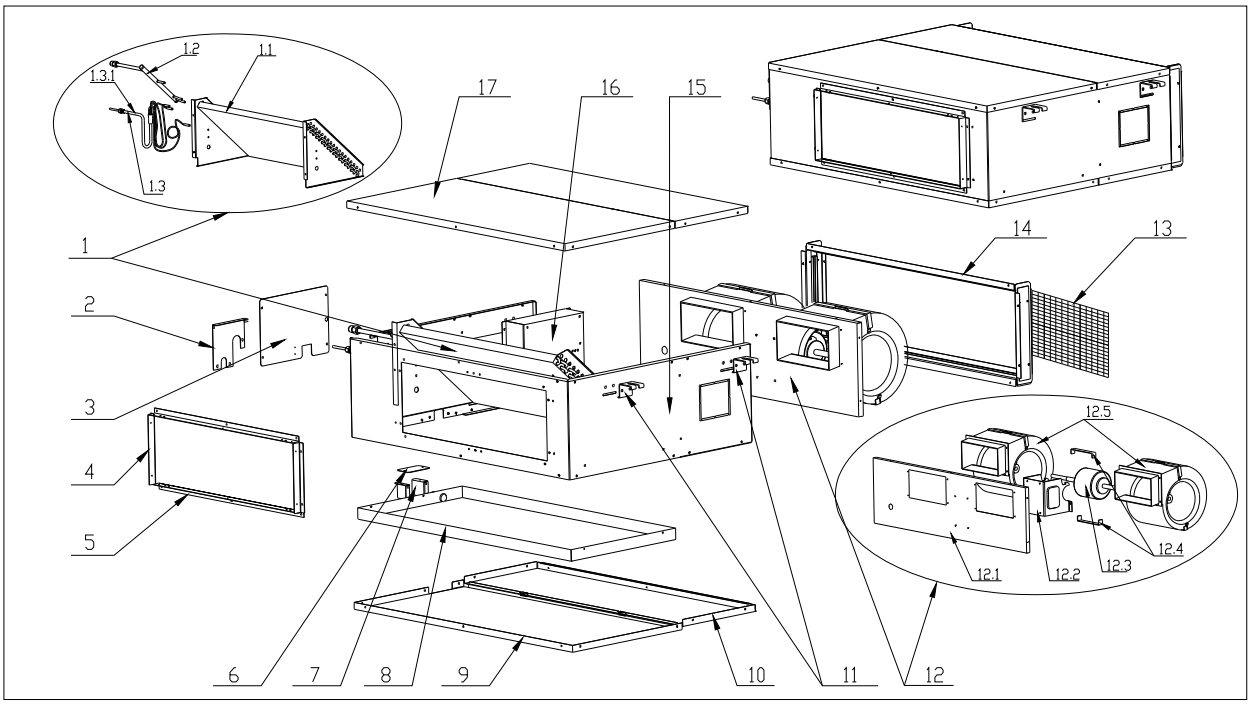
11. Exploded View

ARVMD-H045/4R1A,ARVMD-H056/4R1A,ARVMD-H071/4R1A,RVMD-H080/4R1A, RVMD-H090/4R1A, ARVMD-H100/4R1A



ARVMD-H045/4R1A

N0.	AUX code	Component description	Component description	Quantity	Unit
1	16324001000047	DLR-56F/DCZDGS3 蒸发器总成(内置)	Evaporator assembly(build-in)	1	Set
1.1	16324009000022	GR-51D/DGS3 蒸发器组件	Evaporator components	1	Set
1.2	16325009000022	GR-51D/DGS3 蒸发器出气管组件	Evaporator gas outlet pipe components	1	Set
1.3	16325001000061	DLR-56F/DCZDGS3 蒸发器进液管组件(内置)	Evaporator liquid inlet pipe components(built-in)	1	Set
1.31	16441014000012	电子膨胀阀阀体 CAM-BD18FKS-1	EXVCAM-BD18FKS-1	1	PC
2	16421014000035	ALDu-H42A4/R1DI 阀板	Valve plate	1	PC
3	16421005000191	ALDu-H42A4/R1DI 电控盒盖	Control box cover	1	PC
4	16421030000101	GR-51D/DGS3 出风法兰 A	Air outlet flange A	1	PC
5	16421030000102	GR-51D/DGS3 出风法兰 B	Air outlet flange B	1	PC
6	16421015000026	ALDu-H42A4/R1 排水管保护板 B	Drainpipe protection plate B	1	PC
7	16421015000025	ALDu-H42A4/R1 排水管保护板 A	Drainpipe protection plate A	1	PC
8	16321009000105	ALDu-H18A4/R1 凝水盘组件	Drip tray assembly	1	Set
9	16421005000318	ALDu-H18A4/R1 底板(新)	Chassis	1	PC
10	16421005000207	ALDu-H18A4/R1 回风盖板 A	Air return cover plate A	1	PC
	16421005000208	ALDu-H18A4/R1 回风盖板 B	Air return cover plate B	1	PC
11	16421040000024	ALDu-H42A4/R1DI 吊钩	Pothook	4	PCS

12	16321009000128	(ROHS)GR-51D/DGS3 蜗壳固定板组件	Volute fixed plate assembly	1	Set
12.1	16421002000173	ALDu-H18A4/R1 蜗壳固定板	Volute fixed plate	1	PC
12.2	16321001000013	ALDu-H42A4/R1DI 电机架组件	Motor bracket assembly	1	Set
12.3	16430001000218	(ROHS)电机 YSK100-4	Fan motor	1	PC
12.4	16421029000010	GR-250D/G 电机抱攀	Fan motor fixity	2	Pcs
12.5	16346001000004	(ROHS)离心风轮 185/170(塑料)	Centrifugal fan assembly	2	Sets
13	16442001000011	过滤器 Φ6.35×Φ9.52-70(R410A)	Air filter	2	Pcs
14	/	过滤网滑道组件	Filter slideway assembly	1	Set
14.1	16321001000010	ALDu-H42A4/R1DI 左右过滤器滑道组件	Left&Right slideway assembly	2	Sets
14.2	16321009000107	ALDu-H18A4/R1 上下过滤滑道组件	Up&down slideway assembly	2	Sets
14.3	16421030000091	ALDu-H42A4/R1DI 左右过滤器法兰	Left&Right filter flange	2	Pcs
14.4	16421030000096	ALDu-H18A4/R1 上下过滤器法兰	Up&down filter flange	2	Pcs
15	16421010000025	ALDu-H18A4/R1 围板	Coaming	1	PC
16	16322001000033	DLR-56F/DCZDGS3-Y 控制器	Electrical control assembly	1	Set
16.1	16422001000078	控制板 DCZ-SN3F-HCE1	PCB board	1	PC
16.2	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
16.3	16430007000005	传感器 XH2(白)15K3950 0.9M(塑封)	Coil sensor 15K3950 0.9M(plastic) White	1	PC
16.4	16430007000011	传感器 XH2(绿)20K3950 0.5M(铜)	Coil sensor 20K3950 1.2M(copper) Green	1	PC
16.5	16430007000016	传感器 XH2(黄)20K3950 1.2M(铜)	Coil sensor 20K3950 1.2M(copper) Yellow	1	PC
16.6	16430007000018	传感器 XH2(蓝)20K3950 1.2M(铜)	Coil sensor 20K3950 1.2M(copper) Blue	1	PC
16.7	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
16.8	16421038000081	ALDu-H42A4/R1DI 电控盒	Electrical control box	1	PC
17	16421005000192	ALDu-H18A4/R1 顶盖板	Top cover plate	1	PC

ARVMD-H056/4R1A

N0.	AUX code	Component description	Component description	Quantity	Unit
1	16324001000047	DLR-56F/DCZDGS3 蒸发器总成(内置)	Evaporator assembly(build-in)	1	Set
1.1	16324009000022	GR-51D/DGS3 蒸发器组件	Evaporator components	1	Set
1.2	16325009000022	GR-51D/DGS3 蒸发器出气管组件	Evaporator gas outlet pipe components	1	Set
1.3	16325001000061	DLR-56F/DCZDGS3 蒸发器进液管组件(内置)	Evaporator liquid inlet pipe components(built-in)	1	Set
1.31	16441014000012	电子膨胀阀阀体 CAM-BD18FKS-1	EXVbody CAM-BD18FKS-1	1	PC
2	16421014000035	ALDu-H42A4/R1DI 阀板	Valve plate	1	PC
3	16421005000191	ALDu-H42A4/R1DI 电控盒盖	Electrical control box cover	1	PC
4	16421030000101	GR-51D/DGS3 出风法兰 A	Air outlet flange A	1	PC

5	16421030000102	GR-51D/DGS3 出风法兰 B	Air outlet flange B	1	PC
6	16421015000026	ALDu-H42A4/R1DI 排水管保护板 B	Drainpipe protection plate B	1	PC
7	16421015000025	ALDu-H42A4/R1DI 排水管保护板 A	Drainpipe protection plate A	1	PC
8	16321009000105	ALDu-H18A4/R1 凝水盘组件	Drip tray assembly	1	Set
9	16421005000318	ALDu-H18A4/R1 底板(新)	Chassis	1	PC
10	16421005000207	ALDu-H18A4/R1 回风盖板 A	Air return cover plate A	1	PC
	16421005000208	ALDu-H18A4/R1 回风盖板 B	Air return cover plate B	1	PC
11	16421040000024	ALDu-H42A4/R1DI 吊钩	Pothook	4	Pcs
12	16321009000128	(ROHS)GR-51D/DGS3 蜗壳固定板组件	Volute fixed plate assembly	1	Set
12.1	16421002000173	ALDu-H18A4/R1 蜗壳固定板	Volute fixed plate	1	PC
12.2	16321001000013	ALDu-H42A4/R1DI 电机架组件	Motor bracket assembly	1	Set
12.3	16430001000218	(ROHS)电机 YSK100-4	Fan motor	1	PC
12.4	16421029000010	GR-250D/G 电机抱攀	Fan motor clamp	2	Pcs
12.5	16346001000004	(ROHS)离心风轮组件 185/170(塑料)	Centrifugal fan assembly	2	Sets
13	16442001000011	过滤器 Φ6.35×Φ9.52-70(R410A)	Air filter	2	Pcs
14	/	过滤网滑道组件	Filter slideway assembly	1	Set
14.1	16321001000010	ALDu-H42A4/R1DI 左右过滤器滑道组件	Left&Right slideway assembly	2	Sets
14.2	16321009000107	ALDu-H18A4/R1 上下过滤滑道组件	Up&down slideway assembly	2	Sets
14.3	16421030000091	ALDu-H42A4/R1DI 左右过滤器法兰	Left&Right filter flange	2	Pcs
14.4	16421030000096	ALDu-H18A4/R1 上下过滤器法兰	Up&down filter flange	2	Pcs
15	16421010000025	ALDu-H18A4/R1 围板(新)	Coaming	1	PC
16	16322001000010	DLR-56F/DCZDGS3 控制器总成	Electrical control assembly	1	Set
16.1	16422001000078	控制板 DCZ-SN3F-HCE1	PCB board	1	PC
16.2	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
16.3	16430007000005	传感器 XH2(白)15K3950 0.9M(塑封)	Coil sensor 15K3950 0.9M(plastic)	1	PC
16.4	16430007000011	传感器 XH2(绿)20K3950 0.5M(铜)	Coil sensor 20K3950 1.2M(copper)	1	PC
16.5	16430007000016	传感器 XH2(黄)20K3950 1.2M(铜)	Coil sensor 20K3950 1.2M(copper)	1	PC
16.6	16430007000018	传感器 XH2(蓝)20K3950 1.2M(铜)	Coil sensor 20K3950 1.2M(copper)	1	PC
16.7	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
16.8	16421038000081	ALDu-H42A4/R1DI 电控盒	Electrical control box	1	PC
17	16421005000192	ALDu-H18A4/R1 顶盖板	Top cover plate	1	PC

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N0.	AUX code	Component description	Component description	Quantity	Unit
1	16324001000046	DLR-71F/DCZDGS3 蒸发器总成(内置)	Evaporator assembly(build-in)	1	Set
1.1	16324009000024	GR-72D/DGS3 蒸发器组件	Evaporator components	1	Set
1.2	16325009000024	GR-72D/DGS3 蒸发器出气管组件	Evaporator gas outlet pipe components	1	Set
1.3	16325001000060	DLR-71F/DCZDGS3 蒸发器进液管组件(内置)	Evaporator liquid inlet pipe components(built-in)	1	Set
1.31	16441014000013	电子膨胀阀阀体 CAM-BD22FKS-1	EXV body CAM-BD18FKS-1	1	PC
2	16421014000035	ALDu-H42A4/R1DI 阀板	Valve plate	1	PC
3	16421005000191	ALDu-H42A4/R1DI 电控盒盖	Electrical control box cover	1	PC
4	16421030000101	GR-51D/DGS3 出风法兰 A	Air outlet flange A	1	PC
5	16421030000102	GR-51D/DGS3 出风法兰 B	Air outlet flange B	1	PC
6	16421015000026	ALDu-H42A4/R1DI 排水管保护板 B	Drainpipe protection plate B	1	PC
7	16421015000025	ALDu-H42A4/R1DI 排水管保护板 A	Drainpipe protection plate A	1	PC
8	16321009000105	ALDu-H18A4/R1 凝水盘组件	Drip tray assembly	1	Set
9	16421005000318	ALDu-H18A4/R1 底板(新)	Chassis	1	PC
10	16421005000207	ALDu-H18A4/R1 回风盖板 A	Air return cover plate A	1	PC
	16421005000208	ALDu-H18A4/R1 回风盖板 B	Air return cover plate B	1	PC
11	16421040000024	ALDu-H42A4/R1DI 吊钩	Pothook	4	Pcs
12	16321009000129	(ROHS)GR-72D/GS3 蜗壳固定板总成(改进)	Volute fixed plate assembly	1	Set
12.1	16421002000173	ALDu-H18A4/R1 蜗壳固定板	Volute fixed plate	1	PC
12.2	16321001000013	ALDu-H42A4/R1DI 电机架组件	Motor bracket assembly	1	Set
12.3	16430001000216	(ROHS)电机 YSK160-4	Fan motor	1	PC
12.4	16421029000010	GR-250D/G 电机抱攀	Fan motor clamp	2	Pcs
12.5	16346001000004	(ROHS)离心风轮组件 185/170	Centrifugal fan assembly	2	Sets
13	16442001000011	过滤器 Φ6.35×Φ9.52-70(R410A)	Air filter	2	Pcs
14	/	过滤网滑道组件	Filter slideway assembly	1	Set
14.1	16321001000010	ALDu-H42A4/R1DI 左右过滤器滑道组件	Left&Right slideway assembly	2	Sets
14.2	16321009000107	ALDu-H18A4/R1 上下过滤滑道组件	Up&down slideway assembly	2	Sets
14.3	16421030000091	ALDu-H42A4/R1DI 左右过滤器法兰	Left&Right filterflange	2	Pcs
14.4	16421030000096	ALDu-H18A4/R1 上下过滤器法兰	Up&down filter flange	2	Pcs
15	16421010000025	ALDu-H18A4/R1 围板(新)	Coaming	1	PC
16	16322001000010	DLR-56F/DCZDGS3 控制器总成	Electrical control assembly	1	Set
16.1	16422001000078	控制板 DCZ-SN3F-HCE1	PCB board	1	PC
16.2	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC

16.3	16430007000005	传感器 XH2(白)15K3950 0.9M	Coil sensor 15K3950 plastic)	1	PC
16.4	16430007000011	传感器 XH2(绿)20K3950 0.5M(铜)	Coil sensor 20K3950 (copper)	1	PC
16.5	16430007000016	传感器 XH2(黄)20K3950 1.2M(铜)	Coil sensor 20K3950 (copper)	1	PC
16.6	16430007000018	传感器 XH2(蓝)20K3950 1.2M(铜)	Coil sensor 20K3950 (copper)	1	PC
16.7	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
16.8	16421038000081	ALDu-H42A4/R1DI 电控盒	Electrical control box	1	PC
17	16421005000192	ALDu-H18A4/R1 顶盖板	Top cover	1	PC

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N0.	AUX code	Component description	Component description	Quantity	Unit
1	16324001000046	DLR-71F/DCZDGS3 蒸发器总成(内置)	Evaporatorassembly(build-in)	1	Set
1.1	16324009000024	GR-72D/DGS3 蒸发器组件	Evaporator components	1	Set
1.2	16325009000024	GR-72D/DGS3 蒸发器出气管组件	Evaporator gas outlet pipe components	1	Set
1.3	16325001000060	DLR-71F/DCZDGS3 蒸发器进液管组件(内置)	Evaporator liquid inlet pipe components(built-in)	1	Set
1.31	16441014000013	电子膨胀阀阀体 CAM-BD22FKS-1	EXV CAM-BD18FKS-1	1	PC
2	16421014000035	ALDu-H42A4/R1DI 阀板	Valve plate	1	PC
3	16421005000191	ALDu-H42A4/R1DI 电控盒盖	Electrical control box cover	1	PC
4	16421030000101	GR-51D/DGS3 出风法兰 A	Air outlet flange A	1	PC
5	16421030000102	GR-51D/DGS3 出风法兰 B	Air outlet flange B	1	PC
6	16421015000026	ALDu-H42A4/R1DI 排水管保护板 B	Drainpipe protection plate B	1	PC
7	16421015000025	ALDu-H42A4/R1DI 排水管保护板 A	Drainpipe protection plate A	1	PC
8	16321009000105	ALDu-H18A4/R1 凝水盘组件	Drip tray assembly	1	Set
9	16421005000318	ALDu-H18A4/R1 底板(新)	Chassis	1	PC
10	16421005000207	ALDu-H18A4/R1 回风盖板 A	Air return cover plate A	1	PC
	16421005000208	ALDu-H18A4/R1 回风盖板 B	Air return cover plate B	1	PC
11	16421040000024	ALDu-H42A4/R1DI 吊钩	Pothook	4	Pcs
12	16321001000018	DLR-90F/DCZDGS3 蜗壳固定板总成	Volute fixed plate assembly	1	Set
12.1	16421002000173	ALDu-H18A4/R1 蜗壳固定板	Volute fixed plate	1	PC
12.2	16321001000013	ALDu-H42A4/R1DI 电机架组件	Motor bracket assembly	1	Set
12.3	16430001000219	(ROHS)电机 YSK180-4	Fan motor	1	PC
12.4	16421029000010	GR-250D/G 电机抱攀	Fan motor clamp	2	Pcs
12.5	16346001000004	(ROHS)离心风轮组件 185/170	Centrifugal fan assembly	2	Sets
13	16442001000011	过滤器 Φ6.35×Φ9.52-70(R410A)	Air filter	2	Pcs
14	/	过滤网滑道组件	Filter slideway assembly	1	Set
14.1	16321001000010	ALDu-H42A4/R1D 左右过滤器滑道组件	Left&Right slideway assembly	2	Sets
14.2	16321009000107	ALDu-H18A4/R 上下过滤滑道组件	Upper&Lower slideway assembly	2	Sets
14.3	16421030000091	ALDu-H42A4/R1DI 左右过滤器法兰	Left&Right filter flange	2	Pcs
14.4	16421030000096	ALDu-H18A4/R1 上下过滤器法兰	Upper&Lower filter flange	2	Pcs
15	16421010000025	ALDu-H18A4/R1 围板(新)	Coaming	1	PC
16	16322001000010	DLR-56F/DCZDGS3 控制器总成	Electrical control assembly	1	Set

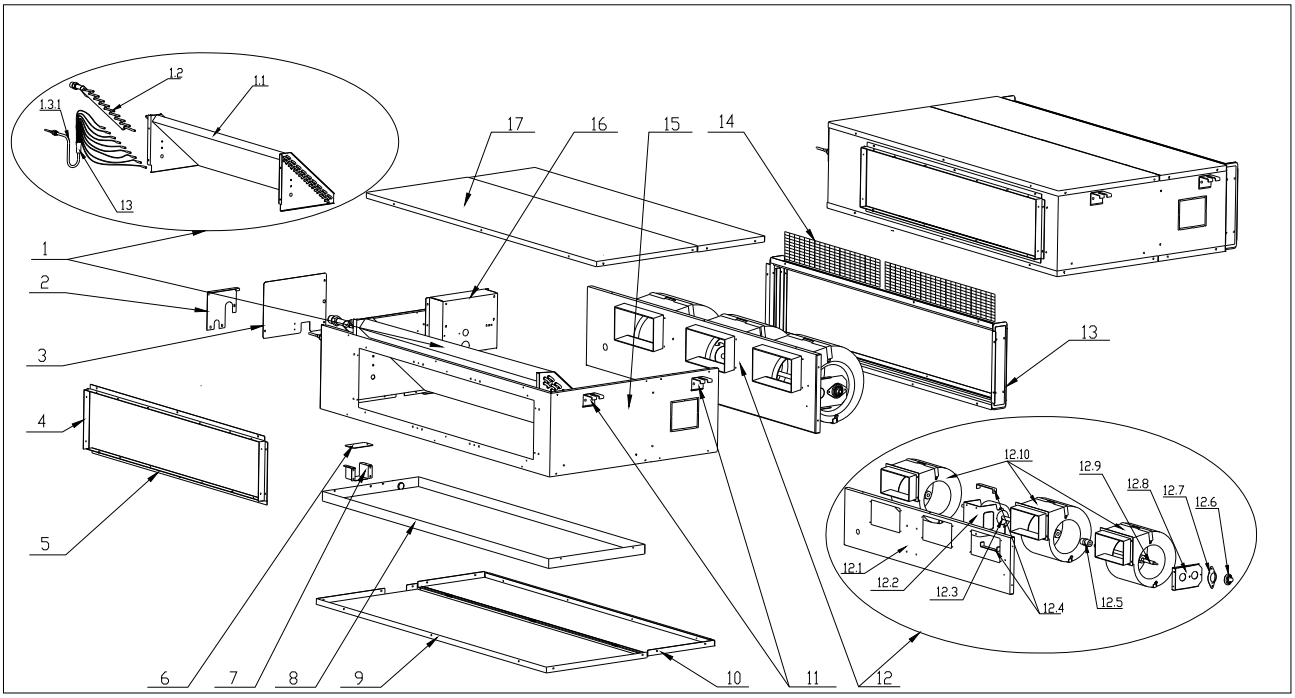
16.1	16422001000078	控制板 DCZ-SN3F-HCE1	PCB board	1	PC
16.2	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
16.3	16430007000005	传感器 XH2(白)15K3950 0.9M(塑封)	Coil sensor 15K0.9M(plastic)	1	PC
16.4	16430007000011	传感器 XH2(绿)20K3950 0.5M(铜)	Coil sensor 20K1.2M(copper)	1	PC
16.5	16430007000016	传感器 XH2(黄)20K3950 1.2M(铜)	Coil sensor 20K1.2M(copper)	1	PC
16.6	16430007000018	传感器 XH2(蓝)20K3950 1.2M(铜)	Coil sensor 20K1.2M(copper)	1	PC
16.7	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
16.8	16421038000081	ALDu-H42A4/R1DI 电控盒	Electrical control box	1	PC
17	16421005000192	ALDu-H18A4/R1 顶盖板	Top cover plate	1	PC

ARVMD-H100/4R1A

N0.	AUX code	Chinese name	Part Name	Quantity	Unit
1	16324001000051	DLR-100F/DCZDGS3 蒸发器总成(内置)	Evaporator assembly(build-in)	1	Set
1.1	16324009000024	GR-72D/DGS3 蒸发器组件	Evaporator components	1	Set
1.2	16325009000024	GR-72D/DGS3 蒸发器出气管组件	Evaporator gas outlet pipe components	1	Set
1.3	16325001000063	DLR-100F/DCZDGS3 蒸发器进液管组件(内置)	Evaporator liquid inletpipecomponents(built-in)	1	Set
1.31	16441014000003	电子膨胀阀阀体 CAM-BD24FKS-1	EXVCAM-BD18FKS-1	1	PC
2	16421014000035	ALDu-H42A4/R1DI 阀板	Valve plate	1	PC
3	16421005000191	ALDu-H42A4/R1DI 电控盒盖	Electrical control box cover	1	PC
4	16421030000101	GR-51D/DGS3 出风法兰 A	Air outlet flange A	1	PC
5	16421030000102	GR-51D/DGS3 出风法兰 B	Air outlet flange B	1	PC
6	16421015000026	ALDu-H42A4/R1DI 排水管保护板 B	Drainpipe protection plate B	1	PC
7	16421015000025	ALDu-H42A4/R1DI 排水管保护板 A	Drainpipe protection plate A	1	PC
8	16321009000105	ALDu-H18A4/R1 凝水盘组件	Drip tray assembly	1	Set
9	16421005000318	ALDu-H18A4/R1 底板(新)	Chassis	1	PC
10	16421005000207	ALDu-H18A4/R1 回风盖板 A	Air return cover plate A	1	PC
	16421005000208	ALDu-H18A4/R1 回风盖板 B	Air return cover plate B	1	PC
11	16421040000024	ALDu-H42A4/R1DI 吊钩	Pothook	4	Pcs
12	16321009000133	(ROHS)ALHi-H36A5/S3 蜗壳固定板总成	Volute fixed plate assembly	1	Set
12.1	16421002000173	ALDu-H18A4/R1 蜗壳固定板	Volute fixed plate	1	PC
12.2	16321001000013	ALDu-H42A4/R1DI 电机架组件	Motor bracket assembly	1	Set
12.3	16430001000219	(ROHS)电机 YSK180-4	Fan motor	1	PC
12.4	16421029000010	GR-250D/G 电机抱攀	Fan motor clamp	2	Pcs
12.5	16346001000004	(ROHS)离心风轮组件 185/170	Centrifugal fan assembly	2	Sets
13	16442001000011	过滤器 Φ6.35×Φ9.52-70(R410A)	Air filter	2	Pcs
14	/	过滤网滑道组件	Filter slideway assembly	1	Set
14.1	16321001000010	ALDu-H42A4/R1DI 左右过滤器滑	Left&Right slideway assembly	2	Sets

		道组件			
14.2	16321009000107	ALDu-H18A4/R1 上下过滤滑道组件	Upper&Lower slideway assembly	2	Sets
14.3	16421030000091	ALDu-H42A4/R1DI 左右过滤器法兰	Left&Right filter flange	2	Pcs
14.4	16421030000096	ALDu-H18A4/R1 上下过滤器法兰	Upper&Lower filter flange	2	Pcs
15	16421010000025	ALDu-H18A4/R1 围板(新)	Coaming	1	PC
16	16322001000010	DLR-56F/DCZDGS3 控制器总成	Electrical control assembly	1	Set
16.1	16422001000078	控制板 DCZ-SN3F-HCE1	PCB board	1	PC
16.2	16422005000009	(ROHS)变压器TDB-14-B2B(PTC)	Transformer	1	PC
16.3	16430007000005	传感器 XH2(白)15K 0.9M(塑封)	Coil sensor 15K3950 (plastic)	1	PC
16.4	16430007000011	传感器 XH2(绿)20K3950 0.5M(铜)	Coil sensor 20K3950 (copper)	1	PC
16.5	16430007000016	传感器 XH2(黄)20K3950 1.2M(铜)	Coil sensor 20K3950 (copper)	1	PC
16.6	16430007000018	传感器 XH2(蓝)20K3950 1.2M(铜)	Coil sensor 20K3950 (copper)	1	PC
16.7	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
16.8	16421038000081	ALDu-H42A4/R1DI 电控盒	Electrical control box	1	PC
17	16421005000192	ALDu-H18A4/R1 顶盖板	Top cover	1	PC

ARVMD-H112/4R1A, ARVMD-H125/4R1A, ARVMD-H140/4R1A, ARVMD-H150/4R1A



ARVMD-H112/4R1A, ARVMD-H125/4R1A, ARVMD-H140/4R1A

N0.	AUX code	Chinese name	Part Name	Quantity	Unit
1	16324001000048	DLR-112F/DCZDGS3 蒸发器总成(内置)	Evaporator assembly(build-in)	1	Set
1.1	16324009000026	GR-120D/DGS3 蒸发器组件	Evaporator components	1	Set
1.2	16325004000088	GR-120D/DGS3 集气管组件	Evaporator gas header components	1	Set
1.3	16325001000062	DLR-112F/DCZDGS3 蒸发器进液管组件(内置)	Evaporator liquid inlet pipe components(built-in)	1	Set
1.31	16441014000003	电子膨胀阀阀体 CAM-BD24FKS-1	EXVCAM-BD24FKS-1	1	PC
2	16421014000035	ALDu-H42A4/R1DI 阀板	Valve plate	1	PC
3	16421005000191	ALDu-H42A4/R1DI 电控盒盖	Control boxcover	1	PC
4	16421030000103	GR-120D/DGS3 出风法兰 A	Air outlet flange A	1	PC
5	16421030000104	GR-120D/DGS3 出风法兰 B	Air outlet flange B	1	PC
6	16421015000026	ALDu-H42A4/R1DI 排水管保护板 B	Drainpipe protection plate B	1	PC
7	16421015000025	ALDu-H42A4/R1DI 排水管保护板 A	Drainpipe protection plate A	1	PC
8	16321001000008	ALDu-H42A4/R1DI 凝水盘组件	Drip tray assembly	1	Set
9	16421005000317	ALDu-H42A4/R1DI 底板(新)	Chassis	1	PC
10	16421005000206	ALDu-H42A4/R1DI 回风盖板 A	Air return cover plate A	1	PC
	16421005000213	ALDu-H42A4/R1DI 回风盖板 B	Air return cover plate B	1	PC
11	16421040000024	ALDu-H42A4/R1DI 吊钩	Pothook	4	Pcs
12	16330009000016	GR-120D/GS2 风机总成	Fan assembly	1	Set
12.1	16421002000172	ALDu-H42A4/R1DI 蜗壳固定板	Volute fixed plate	1	PC
12.2	16321001000013	ALDu-H42A4/R1DI 电机架组件	Motor bracket assembly	1	Set

12.3	16430001000219	(ROHS)电机 YSK180-4	Fan motor	1	PC
12.4	16421029000010	GR-250D/G 电机抱攀	Fan motor clamp	2	Pcs
12.5	16444007000009	联轴器 Φ14	Coupling	1	PC
12.6	16432016000033	GR-50D/DC2 橡胶轴承	Rubber bearing	1	PC
12.7	16421002000219	GR-50D/DC2 橡胶轴承压板	Rubber bearing holder	1	PC
12.8	16432016000036	橡胶轴承支架 ALDu-H42A4/R1DI	Rubber bearing bracket	1	PC
12.9	16444007000006	加长轴 φ14×470	Lengthening shaft	1	PC
12.10	16346001000004	(ROHS)离心风轮组件 185/170(塑料)	Centrifugal fan assembly	3	Sets
13	/	过滤网滑道组件	Filter slideway assembly	1	Set
13.1	16321001000010	ALDu-H42A4/R1DI 左右过滤器滑道组件	Left&Right slideway assembly	2	Sets
13.2	16321001000011	ALDu-H42A4/R1DI 上下过滤滑道组件	Upper&Lower slideway assembly	2	Sets
13.3	16421030000091	ALDu-H42A4/R1DI 左右过滤器法兰	Left&Right filter flange	2	Pcs
13.4	16421030000092	ALDu-H42A4/R1DI 上下过滤器法兰	Upper&Lower filter flange	2	Pcs
14	16442001000011	过滤器 Φ6.35×Φ9.52-70(R410A)	Air filter	2	Pcs
15	16421010000024	ALDu-H42A4/R1DI 围板(新)	Coaming	1	PC
16	16322001000033	DLR-56F/DCZDGS3-Y 控制器总成	Electrical control assembly	1	Set
16.1	16422001000078	控制板 DCZ-SN3F-HCE1	PCB board	1	PC
16.2	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
16.3	16430007000005	传感器 XH2(白)15K3950 0.9M(塑封)	Coil sensor 15K3950 0.9M(plastic)	1	PC
16.4	16430007000011	传感器 XH2(绿)20K3950 0.5M(铜)	Coil sensor 20K3950 0.5M (copper)	1	PC
16.5	16430007000016	传感器 XH2(黄)20K3950 1.2M(铜)	Coil sensor 20K3950 1.2M(copper)	1	PC
16.6	16430007000018	传感器 XH2(蓝)20K3950 1.2M(铜)	Coil sensor 20K3950 1.2M(copper)	1	PC
16.7	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
16.8	16321001000009	ALDu-H42A4/R1DI 电控盒组件	Electrical control box	1	Set
17	16421005000189	ALDu-H42A4/R1DI 顶盖板	Top cover	1	PC

ARVMD-H150/4R1A

N0.	BOM Number	Chinese name	Part Name	Quantity	Unit
1	16324001000018	DLR-140F/DCZDGS3 蒸发器总成(内置)	Evaporator assembly(build-in)	1	Set
1.1	16324009000026	GR-120D/DGS3 蒸发器组件	Evaporator components	1	Set
1.2	16325004000088	GR-120D/DGS3 集气管组件	Evaporator gas header components	1	Set
1.3	16325001000014	DLR-140F/DCZDGS3 进液管组件(内置)	Evaporator liquid inletpipe components(built-in)	1	Set
1.31	16441014000003	电子膨胀阀阀体 CAM-BD24FKS-1	EXV CAM-BD24FKS-1	1	PC

2	16421014000035	ALDu-H42A4/R1DI 阀板	Valve plate	1	PC
3	16421005000191	ALDu-H42A4/R1DI 电控盒盖	Control box cover	1	PC
4	16421030000103	GR-120D/DGS3 出风法兰 A	Air outlet flange A	1	PC
5	16421030000104	GR-120D/DGS3 出风法兰 B	Air outlet flange B	1	PC
6	16421015000026	ALDu-H42A4/R1DI 排水管保护板 B	Drainpipe protection plate B	1	PC
7	16421015000025	ALDu-H42A4/R1DI 排水管保护板 A	Drainpipe protection plate A	1	PC
8	16321001000008	ALDu-H42A4/R1DI 凝水盘组件	Drip tray assembly	1	Set
9	16421005000317	ALDu-H42A4/R1DI 底板(新)	Chassis	1	PC
10	16421005000206	ALDu-H42A4/R1DI 回风盖板 A	Air return cover plate A	1	PC
	16421005000213	ALDu-H42A4/R1DI 回风盖板 B	Air return cover plate B	1	PC
11	16421040000024	ALDu-H42A4/R1DI 吊钩	Pothook	4	Pcs
12	16330009000016	GR-120D/GS2 风机总成	Fan assembly	1	Set
12.1	16421002000172	ALDu-H42A4/R1DI 蜗壳固定板	Volute fixed plate	1	PC
12.2	16321001000013	ALDu-H42A4/R1DI 电机架组件	Motor bracket assembly	1	Set
12.3	16430001000219	(ROHS)电机 YSK180-4	Fan motor	1	PC
12.4	16421029000010	GR-250D/G 电机抱攀	Fan motor clamp	2	Pcs
12.5	16444007000009	联轴器 Φ14	Coupling	1	PC
12.6	16432016000033	GR-50D/DC2 橡胶轴承	Rubber bearing	1	PC
12.7	16421002000219	GR-50D/DC2 橡胶轴承压板	Rubber bearing holder	1	PC
12.8	16432016000036	橡胶轴承支架 ALDu-H42A4/R1DI	Rubber bearing bracket	1	PC
12.9	16444007000006	加长轴 φ14×470	Lengthening shaft	1	PC
12.10	16346001000004	(ROHS)离心风轮组件 185/170(塑料)	Centrifugal fan assembly	3	Sets
13	/	过滤网滑道组件	Filter slideway assembly	1	Set
13.1	16321001000010	ALDu-H42A4/R1DI 左右过滤器滑道组件	Left&Right slideway assembly	2	Sets
13.2	16321001000011	ALDu-H42A4/R1DI 上下过滤滑道组件	Upper&Lower slideway assembly	2	Sets
13.3	16421030000091	ALDu-H42A4/R1DI 左右过滤器法兰	Left&Right filter flange	2	Pcs
13.4	16421030000092	ALDu-H42A4/R1DI 上下过滤器法兰	Upper&Lower filter flange	2	Pcs
14	16442001000013	过滤器 9.52×9.52-70	Air filter	2	Pcs
15	16421010000024	ALDu-H42A4/R1DI 围板(新)	Coaming	1	PC
16	16322001000010	DLR-56F/DCZDGS3 控制器总成	Electrical control assembly	1	Set
16.1	16422001000078	控制板 DCZ-SN3F-HCE1	PCB board	1	PC
16.2	16422005000009	(ROHS)变压器 TDB-14-B2B(PTC)	Transformer	1	PC
16.3	16430007000005	传感器 XH2(白)15K3950 0.9M(塑封)	Coil sensor 15K3950 0.9M(plastic)	1	PC
16.4	16430007000011	传感器 XH2(绿)20K3950 0.5M(铜)	Coil sensor 20K3950 1.2M(copper)	1	PC
16.5	16430007000016	传感器 XH2(黄)20K3950 1.2M(铜)	Coil sensor 20K3950 1.2M(copper)	1	PC
16.6	16430007000018	传感器 XH2(蓝)20K3950 1.2M(铜)	Coil sensor 20K3950 1.2M(copper)	1	PC

16.7	16427001000010	端子板 5 位(600V 4mm2)AB	Terminal board	1	PC
16.8	16321001000009	ALDu-H42A4/R1DI 电控盒组件	Control box assembly	1	Set
17	16421005000189	ALDu-H42A4/R1DI 顶盖板	Top cover plate	1	PC

High Static Pressure Duct Type

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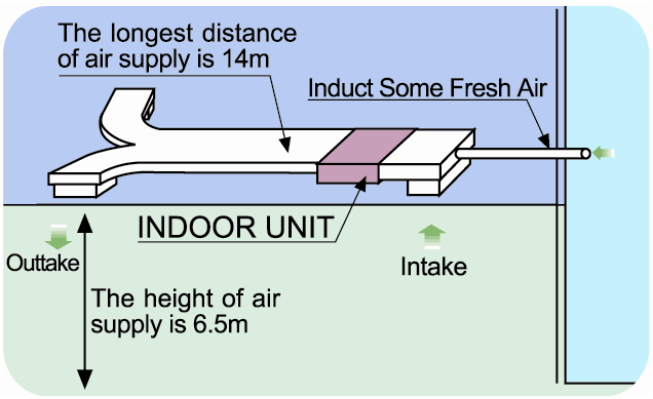
1. Features

(1) High External Static Pressure

External static pressure of Indoor Unit can be up to 196Pa, which allows extensive duct work for flexible applications. so the cool air can be delivered to every indoor corner even in a super-high ceiling. The max distance of air supply is about 14m; the height of air supply is about 6.5m.



(2) Innovative air supply

The type of air supply and air return was set flexibly and appropriately. It provides homogeneous conditioning of the room temperature.

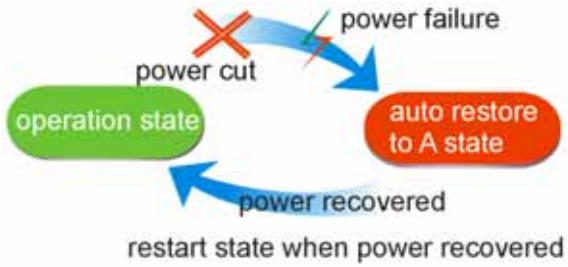
(3) Conceal design

The unit is installed inside of ceiling, doesn't take room space

(4) Setting or Auto two operation modes

Multi speed wind makes you feel more comfortable;

(5) Auto restart;



(6) Wired controller and remote controller and central controller can be available

(7) Special insulation design

Achieves high heat insulation efficiency and no condensation on shell

(8) with low ambient temperature cooling function

Makes the unit can run normally on the condition that the ambient temperature falls down to -15℃;

(9) Failure automatic detection

If there is a failure, the indicator will flash and the failure code will display on the wired controller, the failure cause is easier to be found.

(10) Fresh air supply

Fresh air can be drawn in by the Indoor Unit, which can improve the Indoor Air Quality greatly.

(11) High capacity of cooling/heating, efficient, and energy-saving.

(12) It is suitable be used for office, hospital, commercial place and home, the air conditioner will create the comfortable and elegance environment for you.

2. Specifications

Model			ARVHD-H112/4R1A	ARVHD-H125/4R1A
Factory Model			ALHi-H36B4/R1DIB-A	ALHi-H42B4/R1DIB-A
Code			16104156000004	16104157000005
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	11.2	12.5
	Heating	kW	12.8	13.3
Indoor Fan Motor	Model		YDK200-4	YDK200-4
	Brand		Sanxiang	Sanxiang
	Output Power	W	200	200
	Capacitor	uF	10	10
	Speed (Hi/Mi/Lo)	r/min	1230/1000/800	1230/1000/800
Indoor Coil	a.Number Of Row		3	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	20.5×12.7	20.5×12.7
	c.Fin Pitch	mm	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	Φ7.94 Inner grooved	Φ7.94 Inner grooved
	f.Coil Length x Height x Width	mm	900×328×38.1	900×328×38.1
	g.Heat Exchanging Area	m^2	12.64	12.64
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	2000/1600/1400	2000/1600/1400
	Noise Level(Hi/Mi/Lo)	dB(A)	60/57/51	60/57/51
	Extemal Static Pressure	Pa	196	196
	Net Dimension (W×D×H)	mm	1200x719x380	1200x719x380
	Packing Dimension (W×D×H)	mm	1235x760x415	1235x760x415
	Net Weight	Kg	56	56
	Gross Weight	Kg	59	59
Refrigerant Pipe	Liquid Side	mm	9.52	9.52
	Gas Side	mm	19.05	19.05
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	50~75	50~90
Stuffing Quantity	20/40/40H	Unit	68/147/168	68/147/168

Notes:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m,level difference : 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m,level difference : 0 m.
3. Anechoic chamber conversion value,measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditions.

4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

Model			ARVHD-H140/4R1A	ARVHD-H150/4R1A
Factory Model			ALHi-H48A4/R1DIB-A	ALHi-H60A4/R1DIB-A
Code			16104158000005	16104159000004
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1
Capacity	Cooling	kW	14.0	15.0
	Heating	kW	15.0	16.0
Indoor Fan Motor	Model		YDK200-4	YDK200-4
	Brand		Sanxiang	Sanxiang
	Output Power	W	200	200
	Capacitor	uF	10	10
	Speed (Hi/Mi/Lo)	r/min	1230/1000/800	1230/1000/800
Indoor Coil	a.Number Of Row		3	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	22.0×19.05	22.0×19.05
	c.Fin Pitch	mm	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	Φ7.94 Inner grooved	Φ7.94 Inner grooved
	f.Coil Length x Height x Width	mm	900×352×57.15	900×352×57.15
	g.Heat Exchanging Area	m^2	20.69	20.69
Indoor Unit	Indoor Air Flow (Hi/Mi/Lo)	m^3/h	2000/1600/1400	2000/1600/1400
	Noise Level(Hi/Mi/Lo)	dB(A)	60/57/51	60/57/51
	Extemal Static Pressure	Pa	196	196
	Net Dimension (W×D×H)	mm	1200x719x380	1200x719x380
	Packing Dimension (W×D×H)	mm	1235x760x415	1235x760x415
	Net Weight	Kg	56	56
	Gross Weight	Kg	59	59
Refrigerant Pipe	Liquid Side	mm	9.52	9.52
	Gas Side	mm	19.05	19.05
	Drainage	mm	R3/4in(DN20)	R3/4in(DN20)
Operation Temperature Range		℃	16~32	16~32
Ambient Temperature Range(Cooling/Heating)		℃	-5~52/-20~24	-5~52/-20~24
Application Area		m^2	60~100	65~110
Stuffing Quantity	20/40/40H	Unit	68/147/168	68/147/168

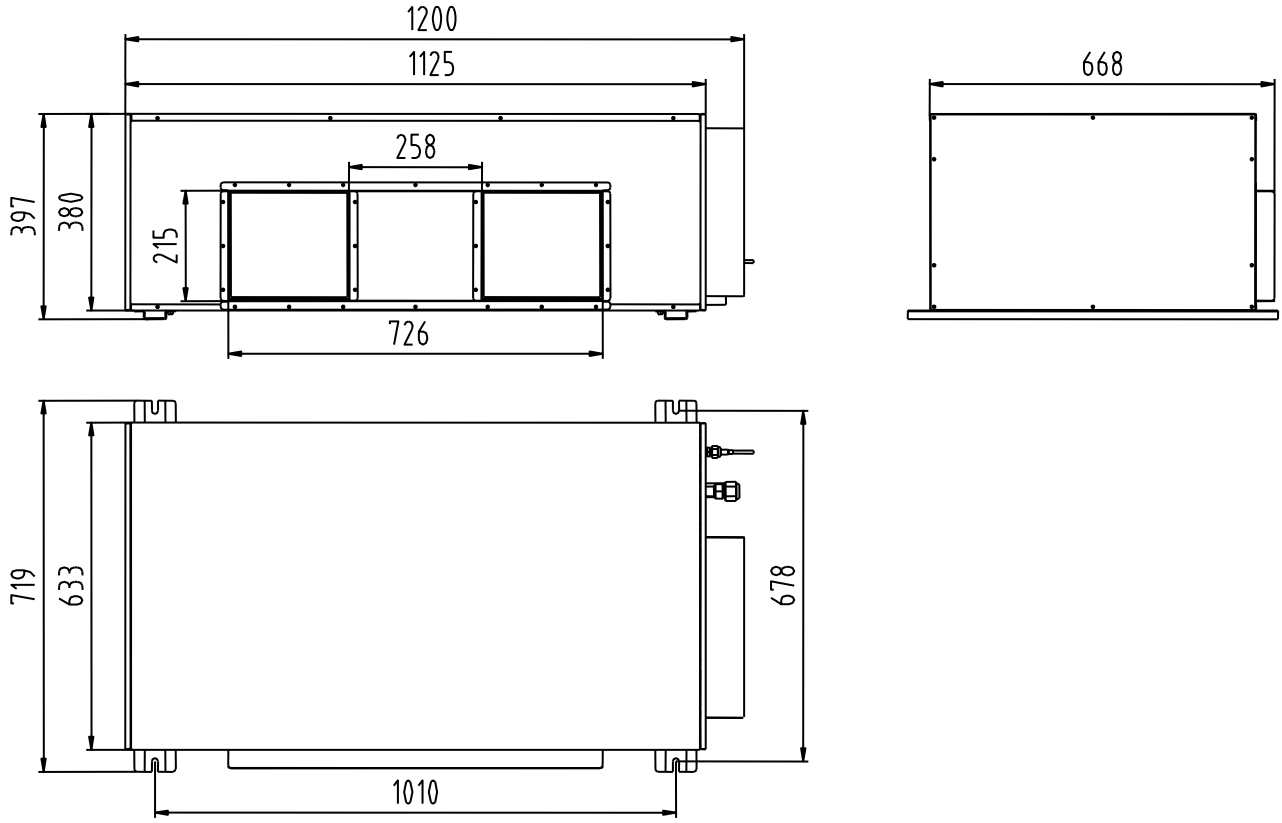
Notes:

1. Cooling Capacity:Indoor temp.27℃DB,19℃WB,outdoor temp.35℃DB,24℃WB /Equivalent piping length:7.5m,level difference : 0 m.
2. Heating Capacity:Indoor temp.20℃DB, outdoor temp.7℃DB,6℃WB /Equivalent piping length:7.5m,level difference : 0 m.
3. Anechoic chamber conversion value,measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditions.

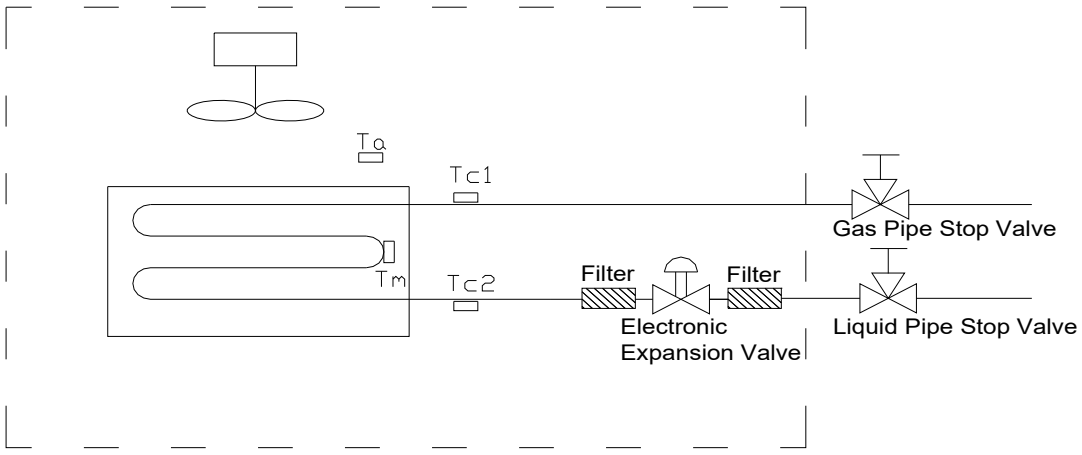
4. All the above specification will be changed due to product performance improvement. AUX reserves the right to change product design without prior notice, everything should subject to parameter on nameplate.

3. Dimension

ARVHD-H112/4R1A, ARVHD-H125/4R1A, ARVHD-H140/4R1A, ARVHD-H150/4R1A



4. Piping Diagram



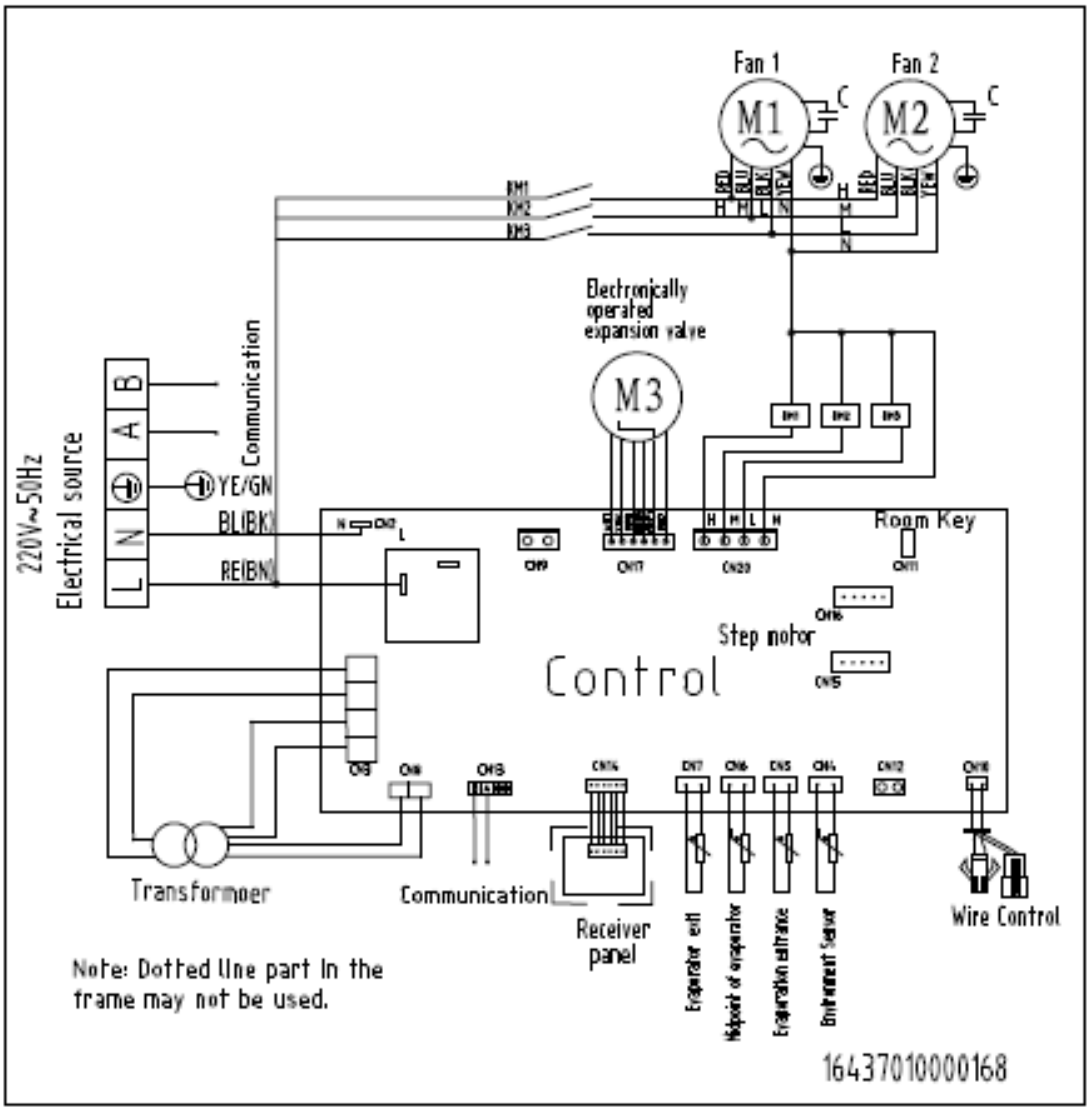
Refrigerant pipe connection port diameters

(mm)

model	Gas	Liquid

ARVHD-H112/125/140/150/4R1A	**Φ**19.05	**Φ**9.52

5. Wiring Diagram



6. Electric characteristics

Units					Power supply		IFM	
Model	**Hz**	**Volts**	**Min**	**Max**	**MCA**	**MFA**	**KW**	**FLA**
ARVHD-H112/4R1	50	220-240	198	264	5.5	30	0.4	4.4
ARVHD-H125/4R1	50	220-240	198	264	5.5	30	0.4	4.4
ARVHD-H140/4R1	50	220-240	198	264	5.5	30	0.4	4.4
ARVHD-H150/4R1	50	220-240	198	264	5.5	30	0.4	4.4

Symbols:
MCA: Min. Circuit Amps.(A)
MFA: Max.Breaker Amps.
kW : Fan Motor Rated Output(kW)
FLA: Full Load Amps.(A)
IFM:Indoor Fan Motor

Note:
1.Min. and Max. Voltage :Units are suitable for use on electrical system where voltage supplied to unit terminals is not below or above listed rang limits.
2.Maximum allowable voltage unbalance between phases is 2%.
3.MCA =1.25 x FLA

7. Capacity Tables

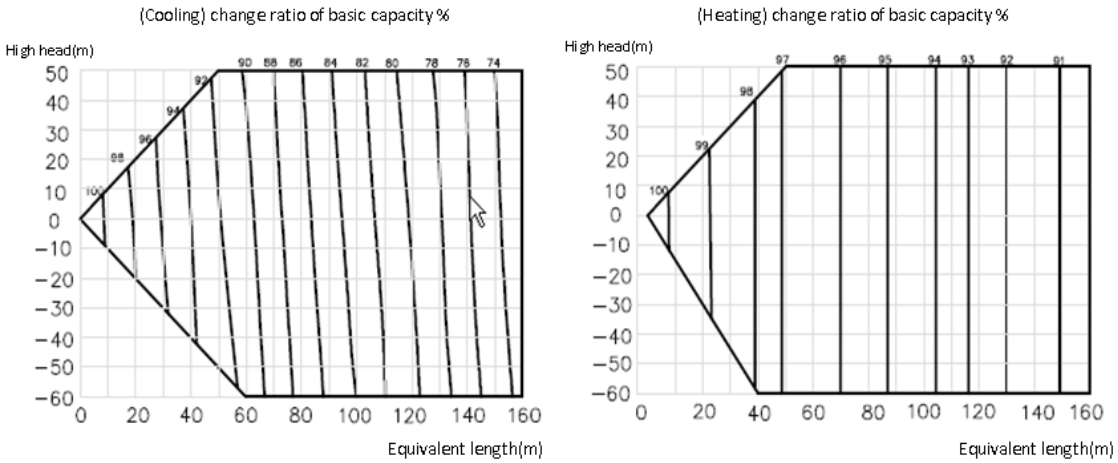
Cooling Capacity of Outdoor Dry Bulb Temperature and Indoor Dry/Wet Bulb Temperature or Power Consumption Correction Coefficient

Outdoor dry bulb temperature [^{0}C]	Correction coefficient	Indoor dry/wet bulb temperature[^{0}C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	0.92	0.98	1.05	1.11	1.17
	Power	0.88	0.89	0.91	0.92	0.93
35	Cooling capacity	0.87	0.94	1.0	1.06	1.13
	Power	0.96	0.97	1.0	1.01	1.03
40	Cooling capacity	0.96	0.89	0.95	1.02	1.08
	Power	1.05	1.07	1.08	1.09	1.11
45	Cooling capacity	0.77	0.84	0.90	0.96	1.02
	Power	1.16	1.18	1.19	1.2	1.23
50	Cooling capacity	0.75	0.80	0.86	0.91	0.98
	Power	1.24	1.27	1.28	1.3	1.32

Heating Capacity of Outdoor Dry/Wet Bulb Temperature and Indoor Dry Bulb Temperature or Power Consumption Correction Coefficient

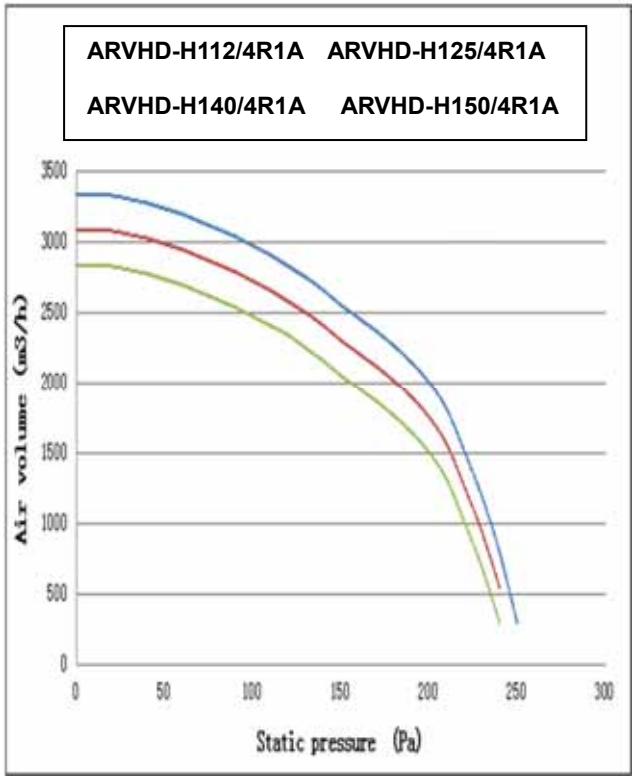
Outdoor ambient temperature of dry/wet bulb[^{0}C]	capacity/power correction	Indoor back temperature of dry bulb [^{0}C]		
		15	**20**	**25**
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	Power	0.72	0.78	0.84
-7/-8	Heating capacity	0.76	0.72	0.67
	Power	0.81	0.87	0.93
-1/-2	Heating capacity	0.79	0.74	0.70
	Power	0.86	0.92	0.98
2/1	Heating capacity	0.81	0.76	0.72
	Power	0.89	0.95	1.01
7/6	Heating capacity	1.04	1.0	0.96
	Power	0.94	1.0	1.06
10/9	Heating capacity	1.1	1.06	1.01
	Power	0.99	1.05	1.11
15/12	Heating capacity	1.16	1.12	1.07
	Power	1.05	1.11	1.17
15-24	Heating capacity	0.85 – 1.05 of nominal		
	Power	0.80 – 1.20 of nominal		

Length Correction Coefficient of Indoor/Outdoor Unit Connecting Tube



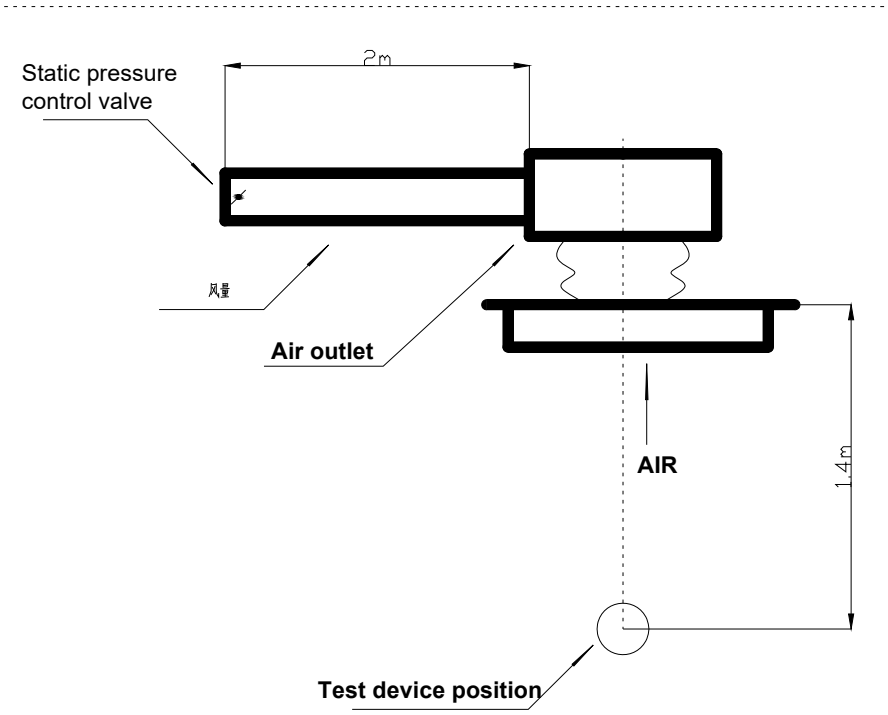
Positive side of high head means installation height of outdoor unit should be higher than indoor unit; negative side of high head means installation height of outdoor unit should be lower than indoor unit; (change ratio of basic capacity)

8. Fan performance



ARVHD-H112/4R1A, ARVHD-H125/4R1A, ARVHD-H140/4R1A, ARVHD-H150/4R1A			
Static Pressure	**Air Volumem^3/h)**		
(Pa)	**High**	**Mid**	**Low**
0	3345	3095	2845
10	3340	3090	2840
20	3330	3080	2830
30	3310	3060	2810
40	3280	3030	2780
50	3240	2990	2740
60	3200	2950	2700
70	3150	2900	2650
80	3100	2850	2600
90	3040	2790	2540
100	2980	2730	2480
110	2910	2660	2410
120	2840	2590	2340
130	2760	2510	2260
140	2665	2415	2165
150	2560	2310	2060
160	2470	2220	1970
170	2370	2120	1870
180	2270	2020	1770
190	2150	1900	1650
200	2000	1750	1500
210	1800	1550	1300
220	1500	1250	1000
230	1200	950	700
240	800	550	300
250	300	/	/

9. Sound Levels



Note:

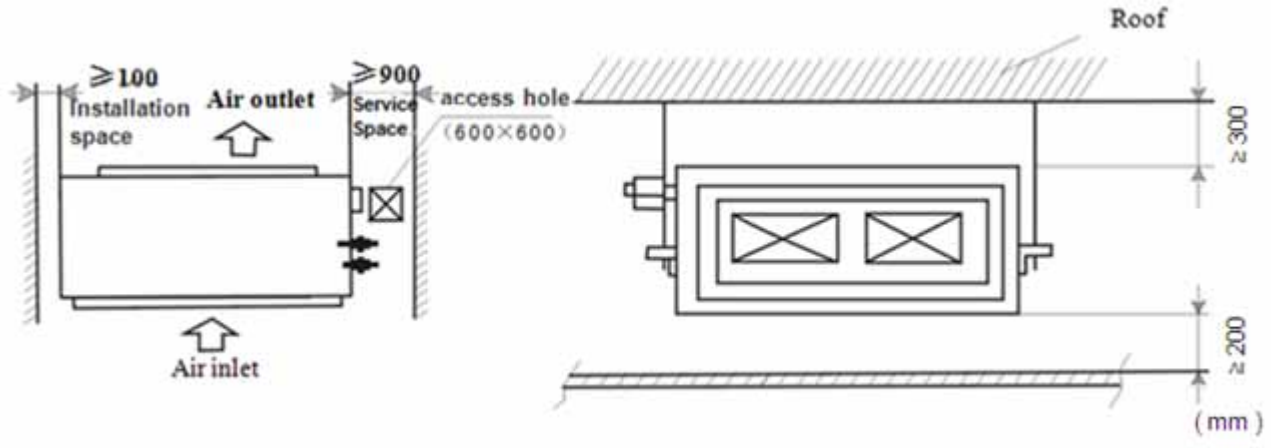
1. The operating condition are assumed to be standard(JIS Condition).
2. These operating values were obtained in a dead room (conversion values).

Sound level will vary depending on a range of factors such as the construction (acoustic absorption coetficient) of the particular room in which the equipments installed.

Model	220~240V 50Hz		
	H	M	L
ARVHD-H112/4R1A	60	57	51
ARVHD-H125/4R1A	60	57	51
ARVHD-H140/4R1A	60	57	51
ARVHD-H150/4R1A	60	57	51

10. Installation

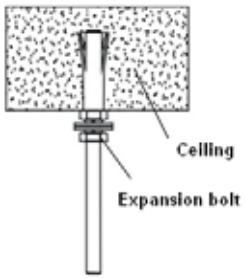
10.1 The distance between indoor unit and obstacle



10.2 Suspension unit

◇Select the suspension foundation

The suspension foundation is a structure of either wooden frame orreinforced concrete. It must be firm and reliable to bear at least 4 times weight of itself and capable of bearing vibration for long periods;



◇Fixing of suspension foundation

Fix the suspension bolts either as shown in the picture or by a steel or wooden bracket;

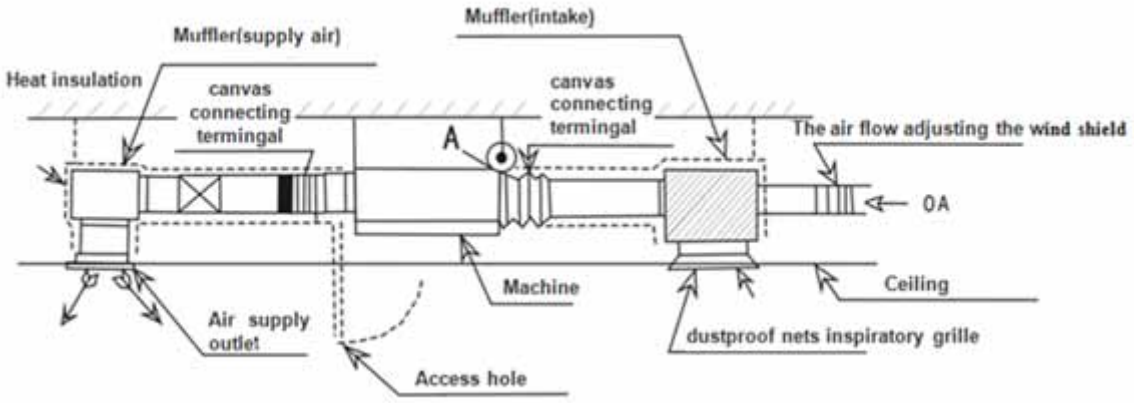
◇Adjust the relative positions of the suspension hooks to ensure the indoor unit is level in all directions. Use a spirit level to ensure this, otherwise water leakage, air leakage etc. will be resulted;

◇Tighten the nuts and ensure that the hooks are tightly connected to the nuts and shims, and there is no phenomenon of virtual hanging;

◇After the unit is installed ensure it is secure and does not shake or sway.

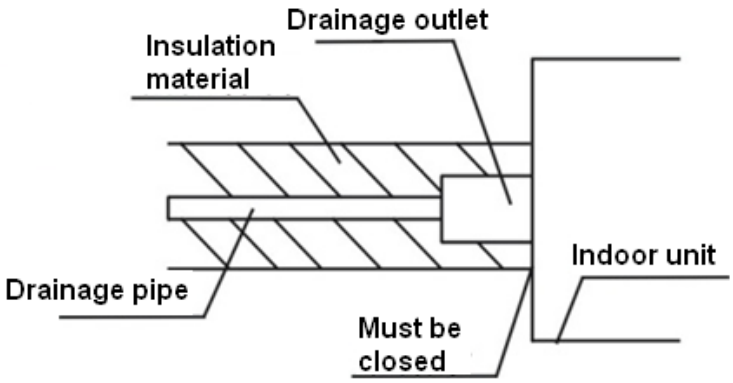
10.4 Duct pipeline installation

◇Using canvas to connect between indoor unit and duct pipeline, in order to save unnecessary vibration, as to the detail connection method please refer to the following picture.



10.5 Drainage pipe installation

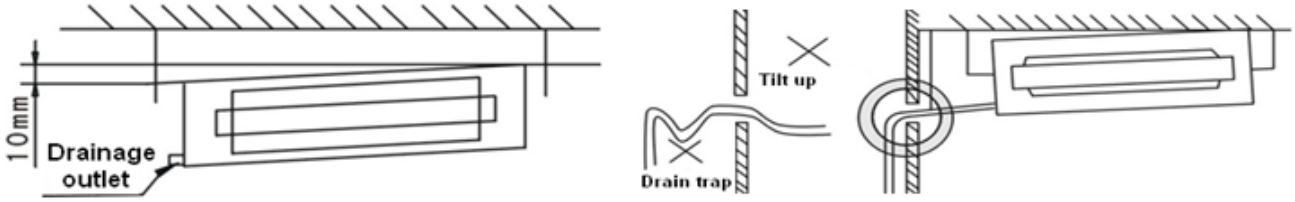
◇Drainage pipes must be wrapped with heat insulation materials, otherwise it will cause frost or droplets, see picture as follows:



Notice :

Heat insulation material: rubber insulation pipe with the thickness of more than 8mm

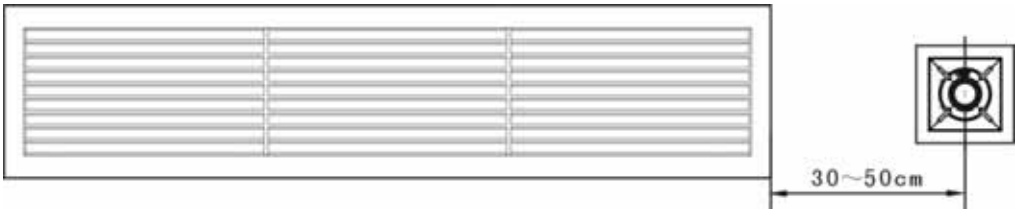
◇Drainage pipe must have a downward gradient (1/50--1/100).If the drain pipe is installed ups and downs, it will cause water backflow or leakage etc.



◇When finish installation please carry out the drainage test to ensure that the water flow through the pipeline fluently, and carefully observe the junction to ensure that there is no water leakage at the junction. If the unit is installed in the newly built house, strongly recommend that this test taken before the ceiling installation. Even it is the heating only unit, this test is unavoidable.

10.6 Remote controller receiver installation.

◇Installation site: Recommend that the receiver is mounted with the distance of 30~50 cm to the indoor unit air outlet (on your choice as well), while must ensure that the receiver can get the signal that the remote controller sends, please refer to the following installation picture:



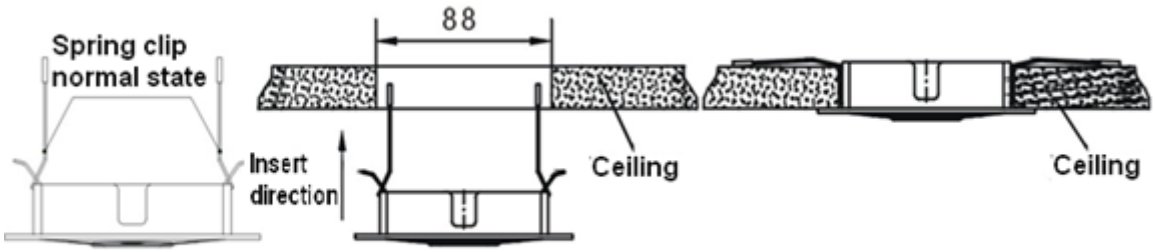
Notes:

The remote control signal effectively works for straight line from 8 meters, when the battery after the power consumption, effective work will shorten the distance.

◇Mounting hole set up: Please use certain instrument to dig a square hole with 88x88mm on the ceiling

◇Remote controller receiver installation.

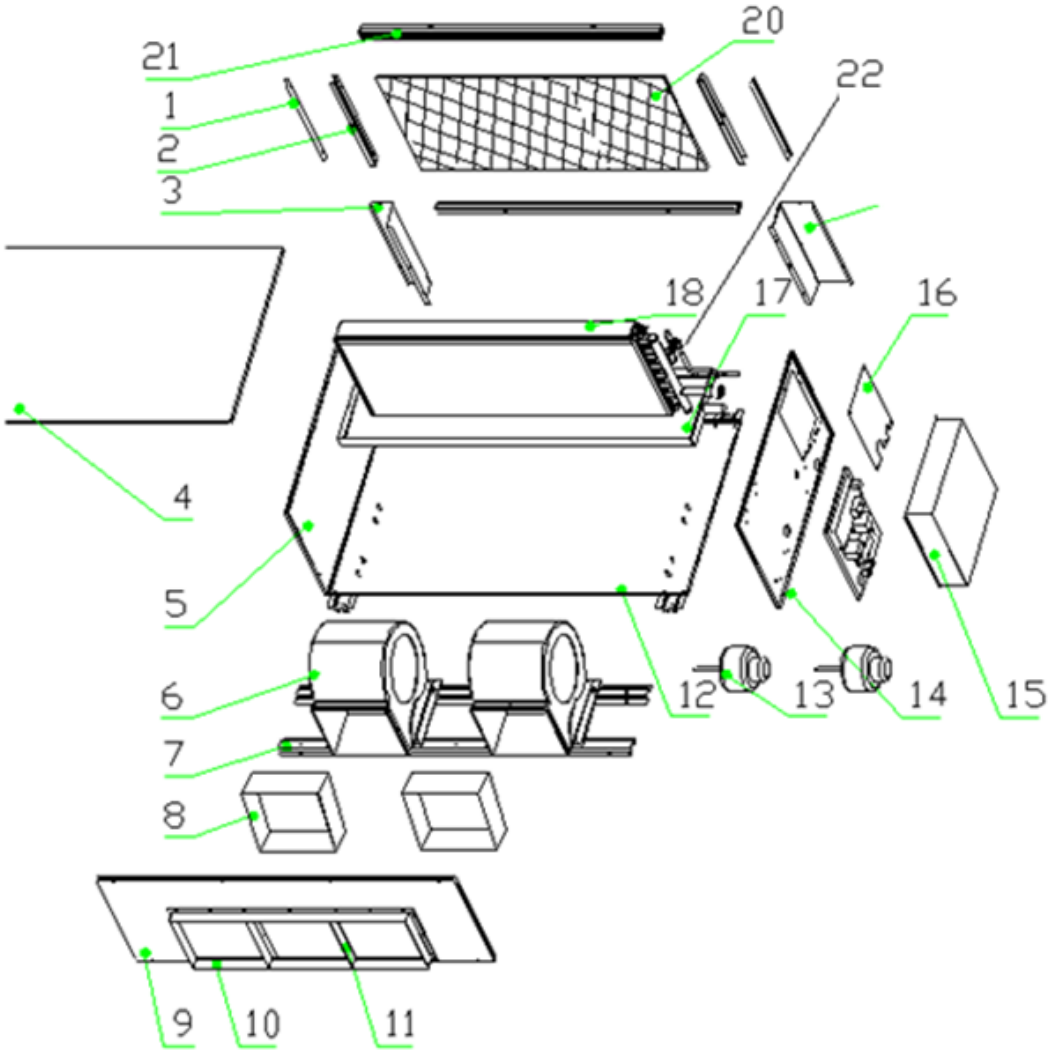
Hold the two sides (with clip sides) of the receiver, set the spring clip in the vertical way then put it into the mounting hole, if the two sides of the receiver is in the same level with the ceiling the installation is finished.



◇Signal line connection: Connect the wire of remote controller receiver to the CN-DISP terminal board on PCB of indoor unit wire box then fix it.

11. Exploded View

ARVHD-H112/4R1A, ARVHD-H125/4R1A, ARVHD-H140/4R1A, ARVHD-H150/4R1A



ARVHD-H112/4R1A, ARVHD-H125/4R1A, ARVHD-H140/4R1A, ARVHD-H150/4R1A

N0.	AUX code	Chinese name	Part Name	Quantity	Unit
1	16421032000042	空气过滤门 1	Air filtration door1	2	Pcs
2	16421023000032	进风框竖条	Into wind box erect bar	2	Pcs
3	16421001000186	侧板左连接板	Endplates left linking slab	1	Pc
4	16421005000120	顶盖板	Top cover	1	Pc
5	16421001000184	左侧板	Left side board	1	Pc
6	16444005000003	离心风轮组件 SYZ7-7I	Centrifugal rotor components SYZ7-7I	2	Sets
7	16321009000091	风机固定架组件	Fan fixed frame components	2	Sets
7.1	16421002000094	风机固定条	Fan stents	2	Pcs
7.2	16445999000015	六角头螺栓(不锈钢)M6*20 GB5783	Hex nut (stainless steel) M6*20 GB5783	8	Pcs

8	16432011000001	帆布软接	Canvas soft connect	2	Pcs
9	16421004000114	出风面板	The wind panel	1	Pc
10	16421030000085	出风法兰 A	Air inlet flange A	2	Pcs
11	16421030000087	出风法兰 B	Air inlet flangeB	4	Pcs
12	16321009000097	底盘组件	Chassis components	1	Set
12.1	16421027000009	底脚	Bottom feet	4	Pcs
12.2	16421028000049	底盘	Chassis	1	Pc
12.3	16445999000015	六角头螺栓(不锈钢)M6*20 GB5783	Hex nut(stainless steel) M6*20 B5783	8	Pcs
13	16430001000126	电机 YDK200-4	Motor YDK200-4	2	Pcs
14	16421001000185	右侧板	Right board	1	Pc
15	16322009000035	电控盒总成	Electric control box assembly	1	Set
15.1	16421038000036	电控盒盖	Electric control box incautiously	1	Pc
15.2	16421005000122	电控盒底板	Electric control box floor	1	Pc
15.3	11222009001192	R 控制板 FGJ(H)-RQD-3F-SYE2	R panel FGJ (H) - RQD - 3F - SYE2	1	Pc
15.4	16430007000046	传感器 5K3470 XH2 0.6m(铜壳)	Sensor 5K3470 XH2 0.6 m (copper)	1	Pc
15.5	16430007000102	传感器 5K3470 XH2 1.2m(塑封)	XH2 1.2 m (5K3470 encapsulation)	1	Pc
15.6	16427001000003	端子板 5 位(600V 4mm2)IV	Terminal board 5 (600V 4mm2) IV	1	Pc
15.7	16430015000012	(ROHS)电容 10Uf/450V AC	(ROHS) 10Uf / 450V AC capacitance	2	Pcs
15.8	16422005000017	(ROHS)变压器 TDB-8-B(PTC)	(ROHS) transformer TDB-large - 8 - B (PTC)	2	Pcs
16	16421014000020	阀板	Valve plate	1	Pc
17	16421034000047	接水盘	Water pan	1	Pc
18	16324009000049	蒸发器总成	Evaporator assembly	1	Set
18.1	16324009000050	蒸发器组件	Evaporator components	1	Set
18.2	16325009000070	蒸发器铜管套件	Evaporator brass suite	1	Set
19	16421001000187	侧板右连接板	Endplates right linking slab	1	Pc
20	16444013000006	空气过滤器	Air filter	1	Pc
21	16321009000090	滑槽组件 1	Sliding channel component 1	2	Sets
21.1	16421032000054	滑槽	Sliding channel	2	Pcs
21.2	16421023000022	进风框横条	Into wind box stripes	2	Pcs
22	16421023000022	电子膨胀阀	EXV	1	Pc

Part 3 Outdoor unit

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1. Function

Classification	Name	8kW,10kW,12kW	14kW,16kW,22kW,28kW
Protection function	high pressure protection	○	○
	low pressure protection	○	○
	over-current protection of compressor	○	○
	over-voltage protection of compressor	○	○
	over-current protection of complete unit	○	○
	over-high discharge temperature protection	○	○
	over-high suction temperature protection	○	○
	over-high temperature protection of indoor coil	○	○
	over-high temperature protection of outdoor coil	○	○
	delayed start protection function of compressor	○	○
	communication failure protection	○	○
	over-high temperature protection of radiator	○	○
	module failure protection	○	○
	temperature sensor failure protection	○	○
Control function	remote control function	○	○
	wired control function	○	○
	weekly timing function	○	○
	centralized control function	○	○
	building control function	○	○
	network monitoring and maintenance function	○	○
	room card function	○	○
	concurrent ON/OFF function of wire controller	○	○
Comfort function	fast cooling	○	○
	fast heating	○	○
	three selections of wind speed	○	○
	adjustable static pressure	○	○
	auto restart function (optional)	○	○
	function of cold wind prevention	○	○
	super-low temperature cooling function	○	○
	timing ON/OFF function	○	○
Health function	Removable air filter	○	○
	total heat exchange function	○	○
	filter cleaning remind function	○	○
	fresh air function preserved	○	○
Installation adaptability	flexible match series	○	○
	module combination function	○	○
	Optional left and right water drain on Low ESP Duct	○	○
	Optional left and right connection Auxiliary pipe on Low ESP Duct	○	○
	Optional rear and downward air return of Low ESP Duct	○	○
	Installation instruction plate is available for Cassette Slim unit	○	○
	Adjustable static pressure function of outdoor unit	○	○
	Adjustable static pressure function of Middle ESP Duct and Low ESP Duct	○	○

2. Specifications

Model			ARV-H080/4R1A	ARV-H100/4R1A	ARV-H120/4R1A
Factory Model			AL-H30A4/MuR1DIA	AL-H36A4/MuR1DIA	AL-H42A4/MuR1DIA
Code			16105003000010	16105005000009	16105006000013
Power Supply		V~,Hz, Ph	220~240,50,1	220~240,50,1	220~240,50,1
Cooling	Capacity	kW	8.0	10.0	12.0
	Input	kW	2.50	3.20	3.75
	Rated current	A	11.50	14.70	17.00
Heating	Capacity	kW	9.0	11.0	13.2
	Input	kW	2.63	3.20	3.80
	Rated current	A	12.00	14.60	17.50
IPLV			3.70	3.68	3.85
Max. Input Consumption		W	3530	4500	6500
Max. Current		A	16.0	20.0	30.0
Compressor	Model		DA250S2C-30MT	DA250S2C-30MT	ATQ420D1UMU
	Type		Rotary	Rotary	Rotary
	Brand		TOSHIBA	TOSHIBA	TOSHIBA
	Capacity	W	7690	7690	13100
	Input	W	2120	2120	3420
	Rated Current(RLA)	A	8.85	8.85	6.85
	Locked Rotor Amp(LRA)	A	/	/	/
	Thermal Protector	℃	115	115	115
	Capacitor	uF	/	/	/
	Refrigerant Oil	ml	820(VG74)	820(VG74)	1400(VG74)
Outdoor Fan Motor	Model		YDK120-6	YDK120-6	WC55-6
	Brand		Changba	Changba	Weiling
	Output Power x Fan quantity	W	120	120	55×2
	Capacitor	uF	6	5	2×3
	Speed	r/min	850/720/610	850/720/610	780/660/530
Outdoor Coil	a.Number Of Row		2	2	2
	b.Tube Pitch(a)x Row Pitch(b)	mm	22×19.05	22×19.05	22×19.05
	c.Fin Pitch	mm	1.6	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7.94， Inner grooved	φ7.94， Inner grooved	φ7.94， Inner grooved
	f.Coil Length x Height x Width	mm	851×748×38.1	851×748×38.1	969×1320×38.1
	g.Heat Exchanging Area	m^2	27.72	27.72	55.7
Air Flow Volume		CFM	2353	2353	2941
		m^3/h	4000	4000	5000
Noise Level		dB(A)	≤60	≤60	≤60

Dimension(W×D×H)	Net	mm	903x353x795	903x353x795	940x368x1366
	Packing	mm	1030x430x850	1030x430x850	1080x460x1488
Weight	Net	kg	65	67	100
	Gross	kg	70	72	113
Refrigerant type/Quantity	Type		R410a	R410a	R410a
	Charged Volume	kg	2.6	2.7	4.35
Design Pressure		MPa	4.2	4.2	4.2
Refrigerant Piping	Liquid Side	mm	φ9.52	φ9.52	φ9.52
	Gas Side	mm	φ15.88	φ15.88	φ19.05
	Max. Length	m	25	25	50
	Max. Heigth	m	15	15	25
Ambient Temperature Range(Cooling/Heating)		℃	-5～49/-15~24	-5～49/-15~24	-5～49/-15~24
Stuffing Quantity	20/40/40H	Unit	58/122/180	58/122/180	27/54/54

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, 24℃WB;
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB;

Model			ARV-H140/4R1A	ARV-H160/4R1A
Factory Model			AL-H48A4/MuR1DIA	AL-H60A4/MuR1DIA
Code			16105007000010	16105008000011
Power Supply		V~,Hz,Ph	220~240,50,1	220~240,50,1
Cooling	Capacity	kW	14.0	16.0
	Input	kW	4.38	4.95
	Rated current	A	20.00	22.50
Heating	Capacity	kW	15.4	17.0
	Input	kW	4.53	5.00
	Rated current	A	20.60	22.80
IPLV			3.80	3.72
Max. Input Consumption		W	6700	7000
Max. Current		A	30.5	32.0
Compressor	Model		ATQ420D1UMU	ATQ420D1UMU
	Type		Rotary	Rotary
	Brand		TOSHIBA	TOSHIBA
	Capacity	W	13100	13100
	Input	W	3420	3420
	Rated Current(RLA)	A	6.85	6.85
	Locked Rotor Amp(LRA)	A	/	/
	Thermal Protector	℃	115	115
	Capacitor	uF	/	/

	Refrigerant Oil	ml	1400(VG74)	1400(VG74)
Outdoor Fan Motor	Model		WC55-6	WC55-6
	Brand		Weiling	Weiling
	Output Power x Fan quantity	W	55×2	55×2
	Capacitor	uF	2×3	2×3
	Speed	r/min	780/660/531	780/660/532
Outdoor Coil	a.Number Of Row		2	3
	b.Tube Pitch(a)x Row Pitch(b)	mm	22×19.05	22×19.05
	c.Fin Pitch	mm	1.6	1.6
	d.Fin Material		Hydrophilic aluminum fin	Hydrophilic aluminum fin
	e.Tube Outside Dia.And Material	mm	φ7.94， Inner grooved	φ7.94， Inner grooved
	f.Coil Length x Height x Width	mm	969×1320×38.1	969×1320×57.15
	g.Heat Exchanging Area	m^2	55.7	83.55
Air Flow Volume		CFM	2941	3529
		m^3/h	5000	6000
Noise Level		dB(A)	≤60	≤63
Dimension(W×D×H)	Net	mm	940x368x1366	940x368x1366
	Packing	mm	1080x460x1488	1080x460x1488
Weight	Net	kg	100	102
	Gross	kg	113	115
Refrigerant type/Quantity	Type		R410a	R410a
	Charged Volume	kg	4.35	4.35
Design Pressure		MPa	4.2	4.2
Refrigerant Piping	Liquid Side	mm	φ9.52	φ9.52
	Gas Side	mm	φ19.05	φ19.05
	Max. Length	m	50	50
	Max. Heigth	m	25	25
Ambient Temperature Range(Cooling/Heating)		℃	-5～49/-15~24	-5～49/-15~24
Stuffing Quantity	20/40/40H	Unit	27/54/54	27/54/54

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, 24℃WB;
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB;

Model	Outdoor		ARV-H220/5R1A	ARV-H280/5R1A
Capacity	Cooling	kW	22.40	26.00
	Heating	kW	24.50	28.50
Electric Data	Power Supply	V~,Hz,Ph	220~240,50(60),1	220~240,50(60),1

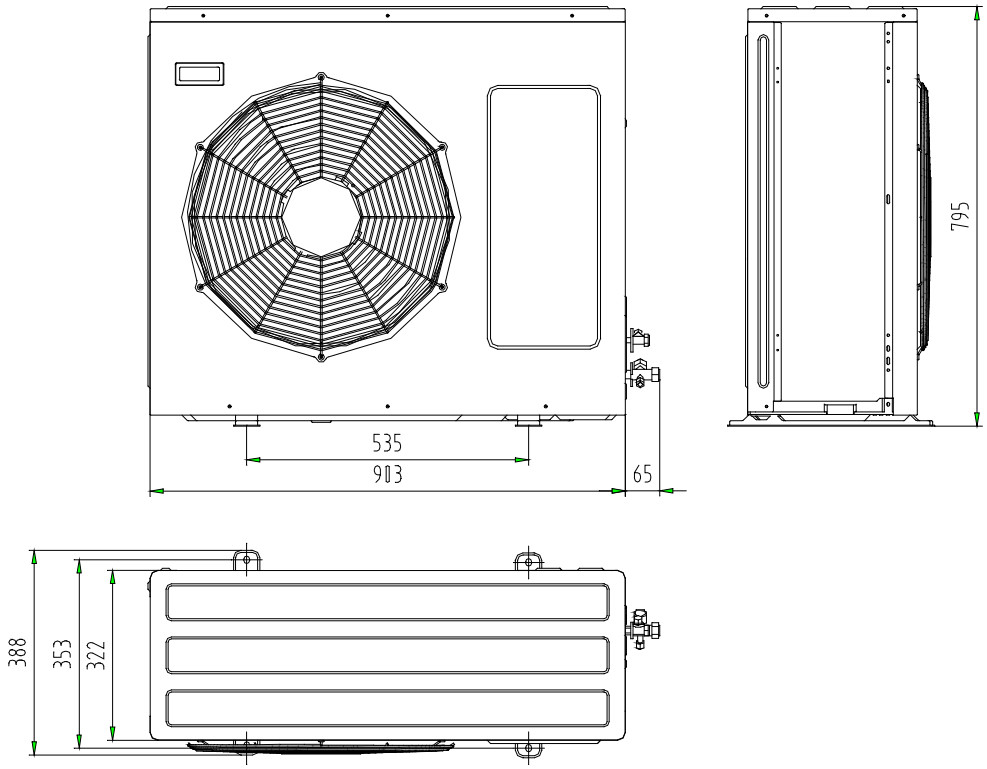
	Cooling Power Input	kW	7.20	8.40
	Heating Power Input	kW	6.70	7.90
	Cooling Current	A	11.60	13.50
	Heating Current	A	11.00	13.00
	EER		3.11	3.10
	COP		3.66	3.61
Performance	Air Flow Volume	m^3/h	15300	15300
	Noise Level	dB(A)	60	60
Piping Limite	Vertical Pipe Length	m	≤30	≤30
	Actual Pipe Length	m	45	45
	Equivalent Pipe Length	m	50	50
	Total Pipe length	m	100	100
Max. No. of Indoor Units		unit	11	12
Connection Ratio		%	50~130	50~130
Dimension(WxDxH)	Net	mm	1120×400×1510	1120×400×1510
	Packing	mm	1270×560×1710	1270×560×1710
Weight	Net	kg	150	150
	Gross	kg	170	170
Refrigerant Type			R410a	R410a
Pipe Diameter	Liquid Side	mm(inch)	9.52(3/8)	9.52(3/8)
	Gas Side	mm(inch)	22.22(7/8)	22.22(7/8)
Operation Range	Cooling	℃	-5~49	-5~49
	Heating	℃	-15~24	-15~24

Notes：

1. Cooling Capacity: Indoor temperature 27℃DB/19℃WB;Outdoor temperature:35℃DB/24℃WB.
2. Heating Capacity:Indoor temperature 20℃DB;Outdoor temperature:7℃DB/6℃WB.
3. Piping Length:Equivalent piping length:7.5m,level differernce:0m.
4. Anechoic chamber conversion value,measured in test room.During actual operation.These values are normally somewhat higher as a result of ambient conditons.
5. The above designs and specifications are subject to change without prior notice.Final specifications please refer to technical specification provided by sales representative.

6. Demensions

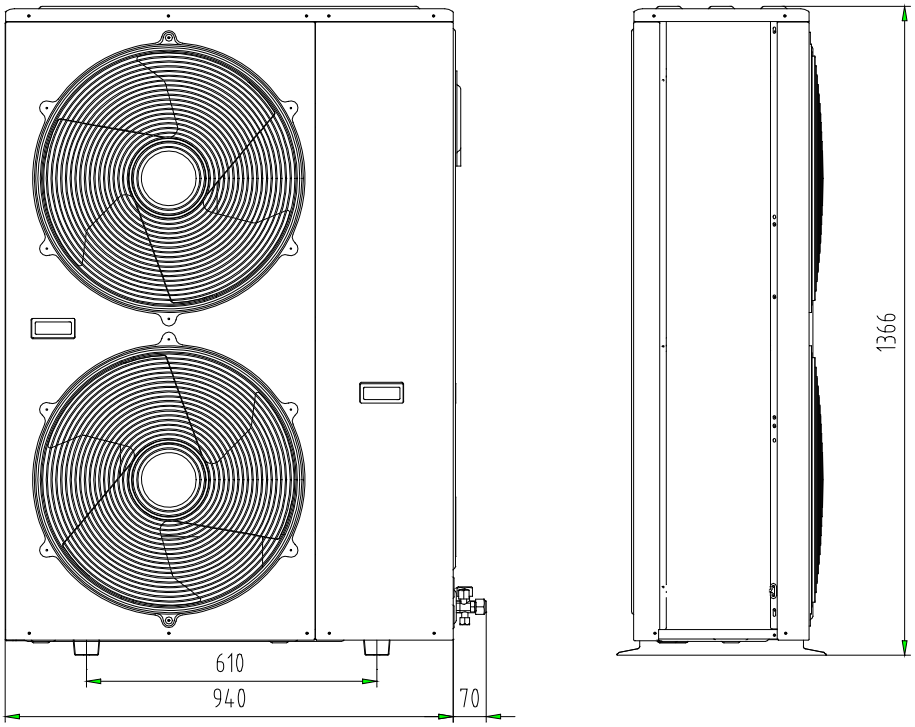
ARV-H080/4R1A ARV-H100/4R1A

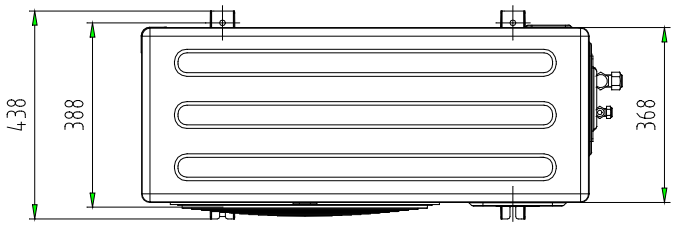


ARV-H080/4R1 ARV-H100/4R1

Mode	Wideth	Depth	Height
ARV-H080/4R1	900	320	790
ARV-H100/4R1	900	320	790

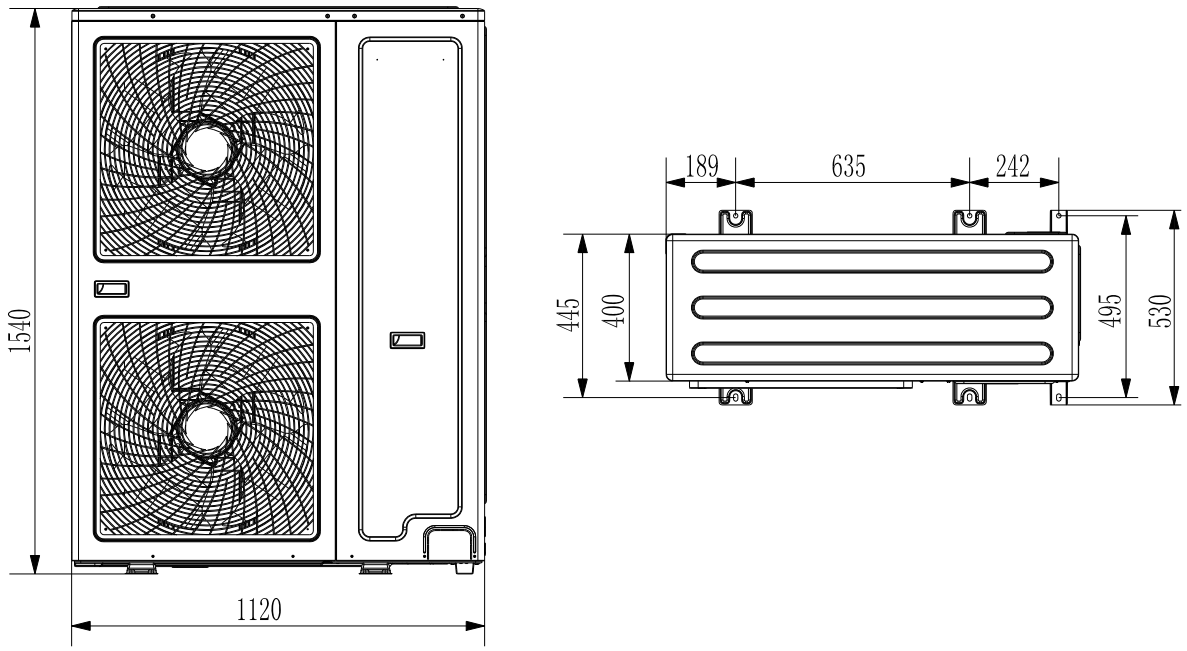
ARV-H120/4R1A ARV-H140/4R1A ARV-H160/4R1A



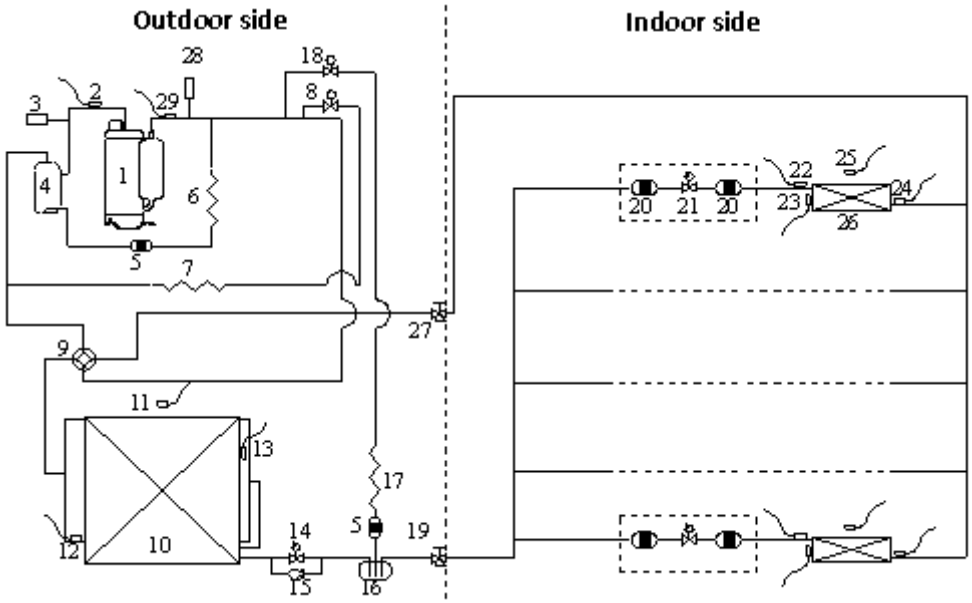


Mode	Wideth	Depth	Height
ARV-H120/4R1A	940	368	1366
ARV-H140/4R1A	940	368	1366
ARV-H160/4R1A	940	368	1366

ARV-H220/5R1A ARV-H280/5R1A



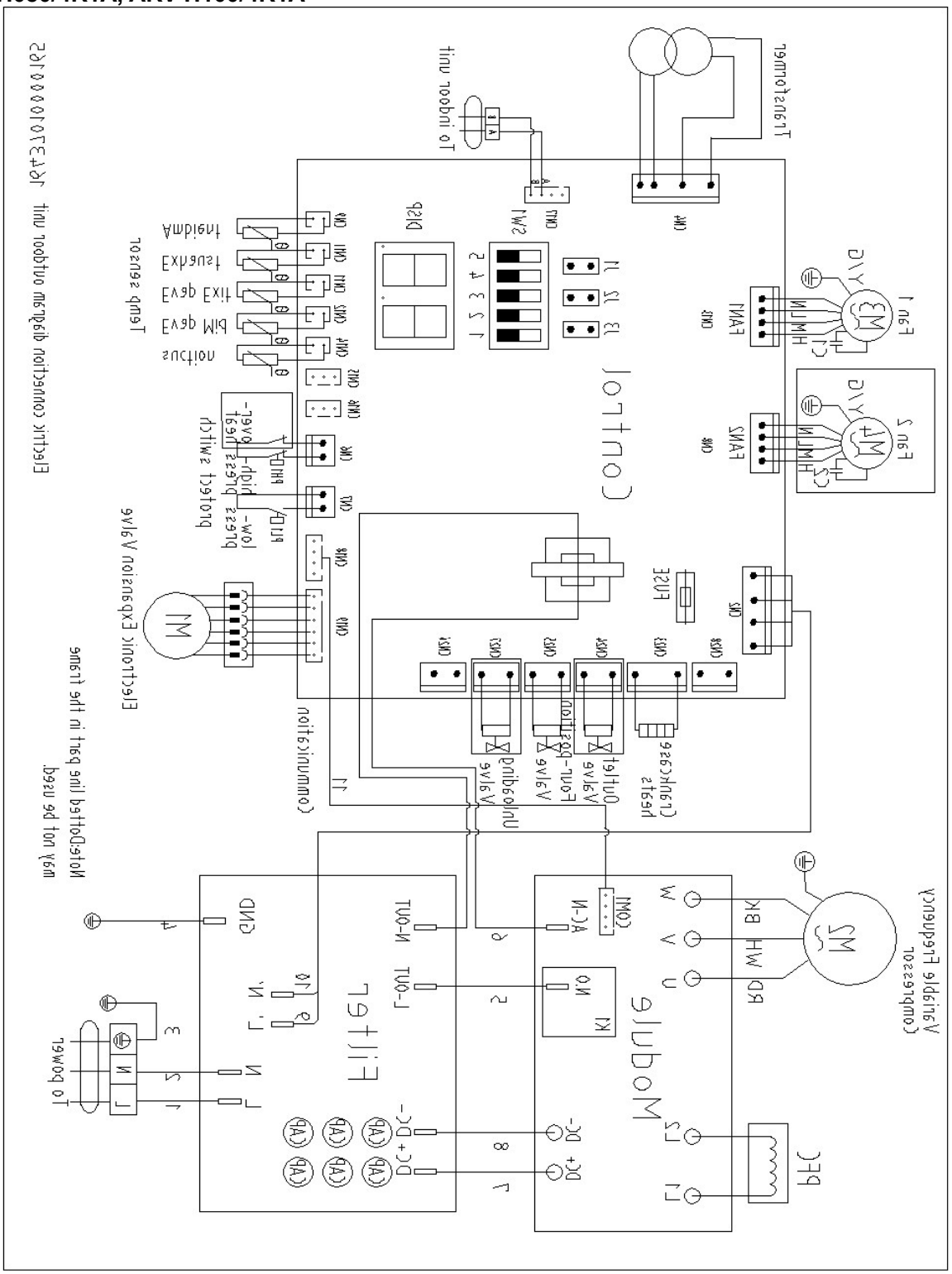
4 Pipe diagram



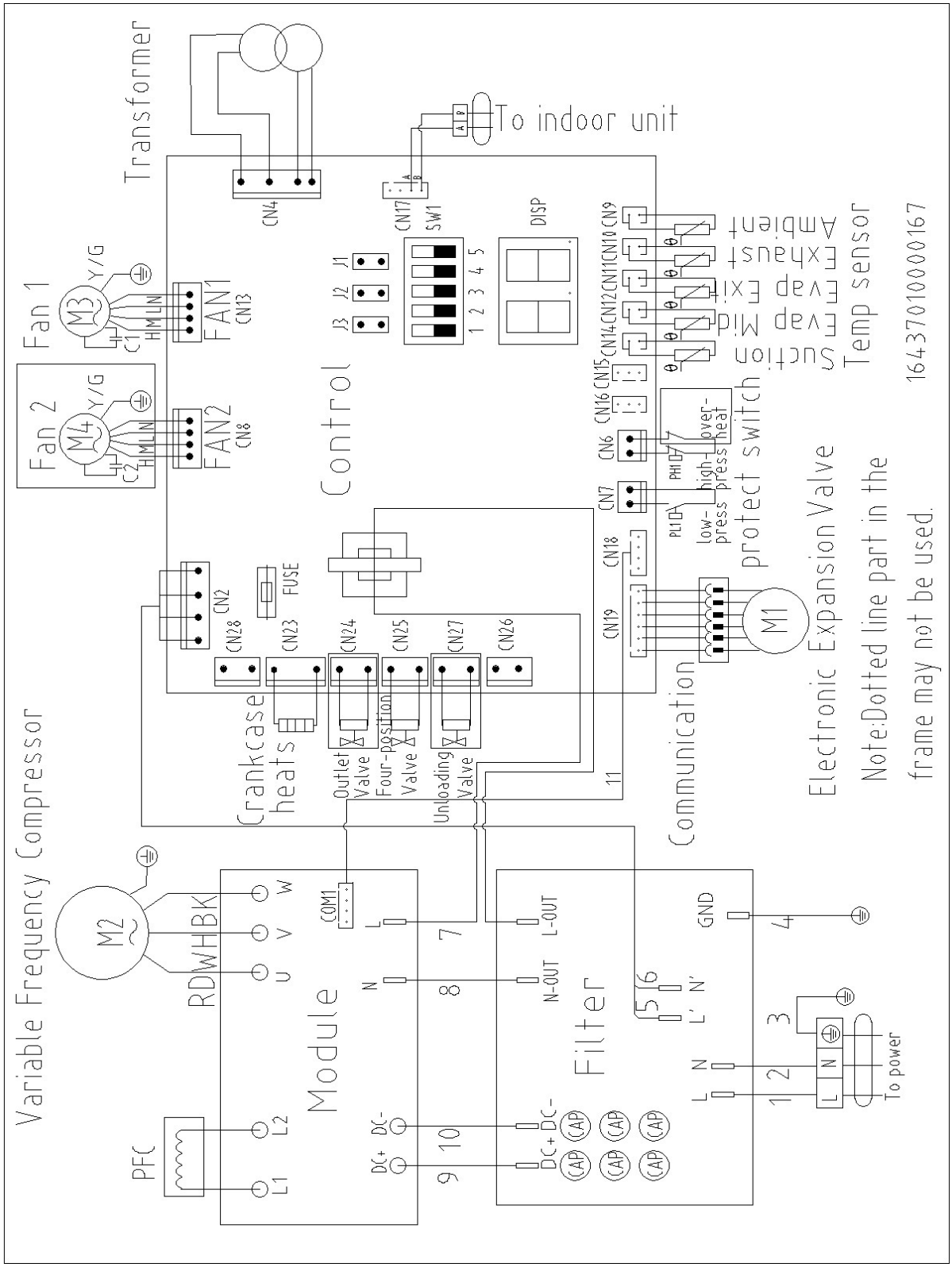
No	Component description	No	Component description
1	DC inverter compressor	16	Liquid refrigerant reservoir
2	Compressor discharge temperature	17	Spray capillary
3	High pressure switch	18	Spray EXV
4	Oil-gas separator	19	Liquid stop valve
5	Filter	20	Filter
6	Oil return capillary	21	EXV
7	Unload capillary	22	Evaporator inlet temperature
8	Unload EXV	23	Middle of evaporator temperature
9	4-way valve	24	Evaporator outlet temperature
10	Condensor	25	Room temperature
11	Outdoor ambient temperature	26	Evaporator
12	Defrost control temperature	27	Gas stop valve
13	Middle of condensor temperature	28	Low pressure switch
14	Heating control EXV	29	Air reture temperature
15	One-way valve		

5 Wire Diagrams

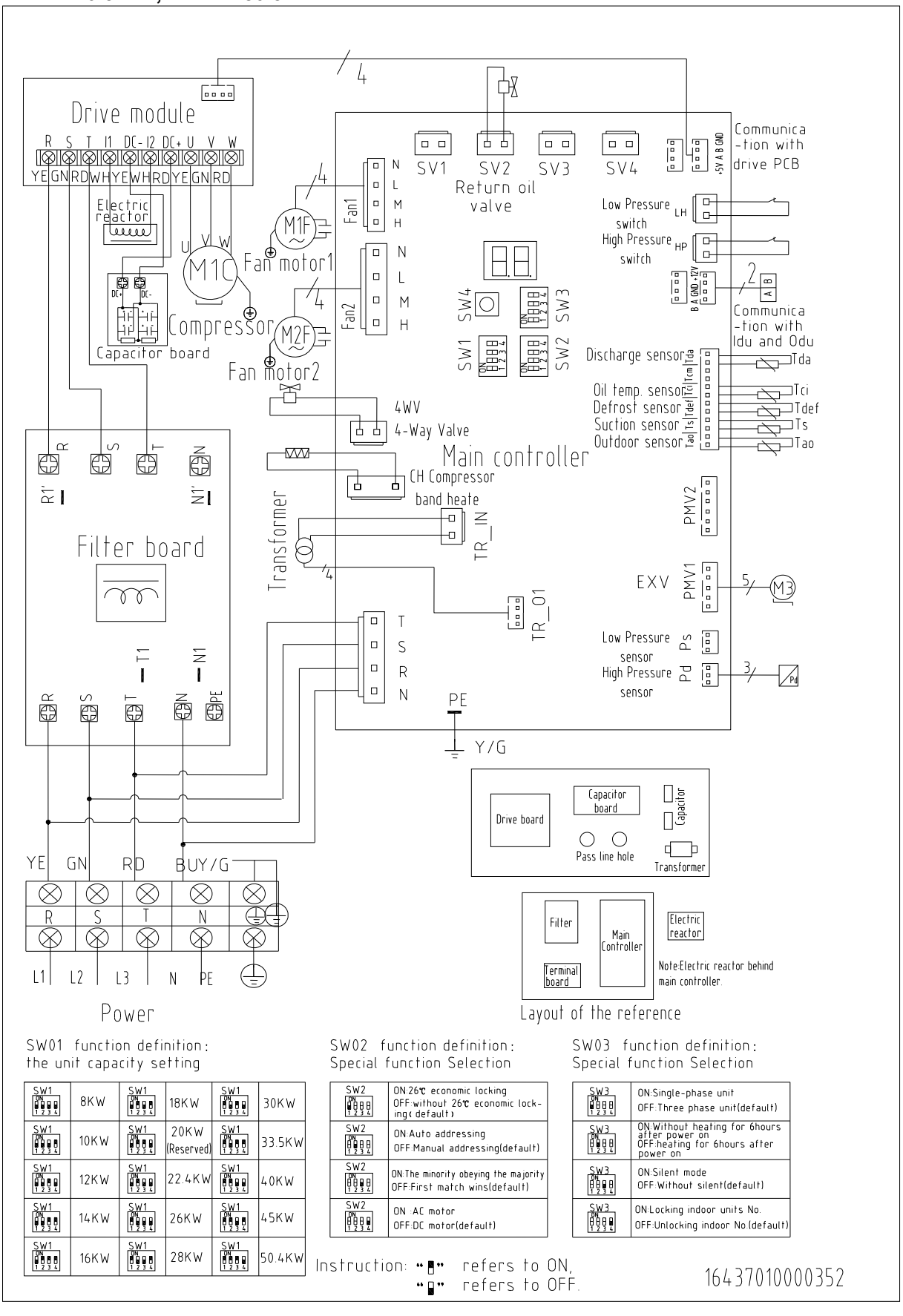
ARV-H080/4R1A, ARV-H100/4R1A



ARV-H120/4R1A, ARV-H140/4R1A, ARV-H160/4R1A



ARV-H220/5R1A, ARV-H280/5R1A



SW01 function definition:
the unit capacity setting

SW1	8KW	SW1	18KW	SW1	30KW
SW1	10KW	SW1	20KW (Reserved)	SW1	33.5KW
SW1	12KW	SW1	22.4KW	SW1	40KW
SW1	14KW	SW1	26KW	SW1	45KW
SW1	16KW	SW1	28KW	SW1	50.4KW

SW02 function definition:
Special function Selection

SW2	ON:26℃ economic locking OFF:without 26℃ economic locking(default)
SW2	ON:Auto addressing OFF:Manual addressing(default)
SW2	ON:The minority obeying the majority OFF:First match wins(default)
SW2	ON :AC motor OFF:DC motor(default)

SW03 function definition:
Special function Selection

SW3	ON:Single-phase unit OFF:Three phase unit(default)
SW3	ON:Without heating for 6hours after power on OFF:heating for 6hours after power on
SW3	ON:Silent mode OFF:Without silent(default)
SW3	ON:Locking indoor units No. OFF:Unlocking indoor No.(default)

Instruction: "■" refers to ON,
"□" refers to OFF.

16437010000352

6 Capacity Tables

6.1 Operation condition

Power supply		380-415V 3N ~ /50Hz
Voltage range		342 ~ 420V
Ambient temperature range	Cooling mode	-5 ~ 52℃
	Heating mode	-15 ~ 24℃

6.2 Capacity index table

Allowable combinations are indicated in indoor unit combination total capacity index table.
In general, outdoor unit can be selected as follows though the location of the unit, zoning and usage of the roomsmay be considered.The indoor and outdoor unit combination is determined that the sum of indoor unit capacity index is nearest to andsmaller than the capacity index at 100% combination ratio of each outdoor unit. Up to 8~16 indoor units can beconnected to one outdoor unit. It is recommended to choose a larger outdoor unit if the installation space is largeenough.
If the combination ratio is greater than 100%, the indoor unit selection shall be reviewed by using actual capacity ofeach indoor unit.

INDOOR UNIT COMBINATION TOTAL CAPACITY INDEX TABLE

Outdoor Unit	Indoor Unit Combination Ratio (kW)								
	130%	120%	110%	100%	90%	80%	70%	60%	50%
8KW	10.4	9.6	8.8	8	7.2	6.4	5.6	4.8	4
10KW	13	12	11	10	9	8	7	6	5
12KW	15.6	14.4	13.2	12	10.8	9.6	8.4	7.2	6
14KW	18.2	16.8	15.4	14	12.6	11.2	9.8	8.4	7
16KW	20.8	19.2	17.6	16	14.4	12.8	11.2	9.6	8

6.3 Cooling Capacity table

ARV-H080/4R1A						
Outdoor dry bulb temperature [^{0}C]	**Correction coefficient**	**Indoor dry/wet bulb temperature [0C]**				
		22/15	**24/17**	**27/19**	**29/21**	**32/23**
15	Cooling capacity (kw)	7.12	7.52	8.08	8.48	8.88
	Power	1.80	1.83	1.88	1.90	1.93
20	Cooling capacity (kw)	7.52	7.92	8.48	8.96	9.36
	Power	1.88	1.90	1.95	1.98	2.03
25	Cooling capacity (kw)	7.76	8.24	8.80	9.28	9.76
	Power	1.95	1.98	2.03	2.05	2.10
30	Cooling capacity (kw)	7.36	7.84	8.40	8.88	9.36
	Power	2.20	2.23	2.28	2.30	2.33
35	Cooling capacity (kw)	6.96	7.52	8.00	8.48	9.04
	Power	2.40	2.43	2.50	2.53	2.58
40	Cooling capacity (kw)	7.68	7.12	7.60	8.16	8.64
	Power	2.63	2.68	2.70	2.73	2.78
45	Cooling capacity (kw)	6.16	6.72	7.20	7.68	8.16
	Power	2.90	2.95	2.98	3.00	3.08
50	Cooling capacity (kw)	6.00	6.40	6.88	7.28	7.84
	Power	3.10	3.18	3.20	3.25	3.30

ARV-H100/4R1A						
Outdoor dry bulb temperature [^{0}C]	**Correction coefficient**	**Indoor dry/wet bulb temperature [0C]**				
		22/15	**24/17**	**27/19**	**29/21**	**32/23**
15	Cooling capacity (kw)	8.90	9.40	10.10	10.60	11.10
	Power	2.30	2.34	2.40	2.43	2.46
20	Cooling capacity (kw)	9.40	9.90	10.60	11.20	11.70
	Power	2.40	2.43	2.50	2.53	2.59
25	Cooling capacity (kw)	9.70	10.30	11.00	11.60	12.20
	Power	2.50	2.53	2.59	2.62	2.69
30	Cooling capacity (kw)	9.20	9.80	10.50	11.10	11.70
	Power	2.82	2.85	2.91	2.94	2.98
35	Cooling capacity (kw)	8.70	9.40	10.00	10.60	11.30
	Power	3.07	3.10	3.20	3.23	3.30
40	Cooling capacity (kw)	9.60	8.90	9.50	10.20	10.80
	Power	3.36	3.42	3.46	3.49	3.55
45	Cooling capacity (kw)	7.70	8.40	9.00	9.60	10.20
	Power	3.71	3.78	3.81	3.84	3.94
50	Cooling capacity (kw)	7.50	8.00	8.60	9.10	9.80
	Power	3.97	4.06	4.10	4.16	4.22

ARV-H120/4R1A						
Outdoor dry bulb temperature [^{0}C]	**Correction coefficient**	**Indoor dry/wet bulb temperature [0C]**				
		22/15	**24/17**	**27/19**	**29/21**	**32/23**
15	Cooling capacity (kw)	10.68	11.28	12.12	12.72	13.32
	Power	2.70	2.74	2.81	2.85	2.89
20	Cooling capacity (kw)	11.28	11.88	12.72	13.44	14.04
	Power	2.81	2.85	2.93	2.96	3.04
25	Cooling capacity (kw)	11.64	12.36	13.20	13.92	14.64
	Power	2.93	2.96	3.04	3.08	3.15
30	Cooling capacity (kw)	11.04	11.76	12.60	13.32	14.04
	Power	3.30	3.34	3.41	3.45	3.49
35	Cooling capacity (kw)	10.44	11.28	12.00	12.72	13.56
	Power	3.60	3.64	3.75	3.79	3.86
40	Cooling capacity (kw)	11.52	10.68	11.40	12.24	12.96
	Power	3.94	4.01	4.05	4.09	4.16
45	Cooling capacity (kw)	9.24	10.08	10.80	11.52	12.24
	Power	4.35	4.43	4.46	4.50	4.61
50	Cooling capacity (kw)	9.00	9.60	10.32	10.92	11.76
	Power	4.65	4.76	4.80	4.88	4.95

ARV-H140/4R1A						
Outdoor dry bulb temperature [^{0}C]	**Correction coefficient**	**Indoor dry/wet bulb temperature [0C]**				
		22/15	**24/17**	**27/19**	**29/21**	**32/23**
15	Cooling capacity (kw)	12.46	13.16	14.14	14.84	15.54
	Power	3.15	3.20	3.29	3.33	3.37
20	Cooling capacity (kw)	13.16	13.86	14.84	15.68	16.38
	Power	3.29	3.33	3.42	3.46	3.55
25	Cooling capacity (kw)	13.58	14.42	15.40	16.24	17.08
	Power	3.42	3.46	3.55	3.59	3.68
30	Cooling capacity (kw)	12.88	13.72	14.70	15.54	16.38
	Power	3.85	3.90	3.99	4.03	4.07
35	Cooling capacity (kw)	12.18	13.16	14.00	14.84	15.82
	Power	4.20	4.25	4.38	4.42	4.51
40	Cooling capacity (kw)	13.44	12.46	13.30	14.28	15.12
	Power	4.60	4.69	4.73	4.77	4.86
45	Cooling capacity (kw)	10.78	11.76	12.60	13.44	14.28
	Power	5.08	5.17	5.21	5.26	5.39
50	Cooling capacity (kw)	10.50	11.20	12.04	12.74	13.72
	Power	5.43	5.56	5.61	5.69	5.78

ARV-H160/4R1A						
Outdoor dry bulb temperature [^{0}C]	**Correction coefficient**	**Indoor dry/wet bulb temperature [0C]**				
		22/15	**24/17**	**27/19**	**29/21**	**32/23**
15	Cooling capacity (kw)	14.24	15.04	16.16	16.96	17.76
	Power	3.56	3.61	3.71	3.76	3.81
20	Cooling capacity (kw)	15.52	16.48	17.60	18.56	19.52
	Power	3.86	3.91	4.01	4.06	4.16
25	Cooling capacity (kw)	14.72	15.68	16.80	17.76	18.72
	Power	4.36	4.41	4.50	4.55	4.60
30	Cooling capacity (kw)	13.08	15.04	16.00	16.96	18.08
	Power	4.61	4.80	4.95	5.00	5.10
35	Cooling capacity (kw)	15.36	14.24	15.20	16.32	17.28
	Power	5.20	5.30	5.35	5.40	5.49
40	Cooling capacity (kw)	12.32	13.44	14.40	15.36	16.32
	Power	5.74	5.84	5.89	5.94	6.09
45	Cooling capacity (kw)	12.00	12.80	13.76	14.56	15.68
	Power	6.14	6.29	6.34	6.44	6.53
50	Cooling capacity (kw)	14.24	15.04	16.16	16.96	17.76
	Power	3.56	3.61	3.71	3.76	3.81

ARV-H220/5R1A						
Outdoor dry bulb temperature [^{0}C]	**Correction coefficient**	**Indoor dry/wet bulb temperature [0C]**				
		22/15	**24/17**	**27/19**	**29/21**	**32/23**
15	Cooling capacity (kw)	19.94	21.06	22.62	23.74	24.86
	Power	5.18	5.25	5.40	5.47	5.54
20	Cooling capacity (kw)	21.73	23.07	24.64	25.98	27.33
	Power	5.62	5.69	5.83	5.90	6.05
25	Cooling capacity (kw)	20.61	21.95	23.52	24.86	26.21
	Power	6.34	6.41	6.55	6.62	6.70
30	Cooling capacity (kw)	18.32	21.06	22.40	23.74	25.31
	Power	6.70	6.98	7.20	7.27	7.42
35	Cooling capacity (kw)	21.50	19.94	21.28	22.85	24.19
	Power	7.56	7.70	7.78	7.85	7.99
40	Cooling capacity (kw)	17.25	18.82	20.16	21.50	22.85
	Power	8.35	8.50	8.57	8.64	8.86
45	Cooling capacity (kw)	16.80	17.92	19.26	20.38	21.95
	Power	8.93	9.14	9.22	9.36	9.50
50	Cooling capacity (kw)	19.94	21.06	22.62	23.74	24.86
	Power	5.18	5.25	5.40	5.47	5.54

ARV-H280/5R1A						
Outdoor dry bulb temperature [^{0}C]	**Correction coefficient**	**Indoor dry/wet bulb temperature [0C]**				
		22/15	**24/17**	**27/19**	**29/21**	**32/23**
15	Cooling capacity (kw)	23.14	24.44	26.26	27.56	28.86
	Power	6.04	6.13	6.30	6.38	6.47
20	Cooling capacity (kw)	25.22	26.78	28.60	30.16	31.72

	Power	6.55	6.64	6.80	6.89	7.06
25	Cooling capacity (kw)	23.92	25.48	27.30	28.86	30.42
	Power	7.39	7.48	7.64	7.73	7.81
30	Cooling capacity (kw)	21.26	24.44	26.00	27.56	29.38
	Power	7.82	8.15	8.40	8.48	8.65
35	Cooling capacity (kw)	24.96	23.14	24.70	26.52	28.08
	Power	8.82	8.99	9.07	9.16	9.32
40	Cooling capacity (kw)	20.02	21.84	23.40	24.96	26.52
	Power	9.74	9.91	10.00	10.08	10.33
45	Cooling capacity (kw)	19.50	20.80	22.36	23.66	25.48
	Power	10.42	10.67	10.75	10.92	11.09
50	Cooling capacity (kw)	23.14	24.44	26.26	27.56	28.86
	Power	6.04	6.13	6.30	6.38	6.47

6.4 Heating Capacity table

ARV-H080/4R1A						
Outdoor dry/wet bulb[^{0}C] temperature	**capacity/power correction**	**Indoor dry/wet bulb temperature [0C]**				
		15	**18**	**20**	**23**	**25**
-15/-16	Heating capacity (kw)	5.76	5.54	5.31	5.13	4.95
	Power	1.58	1.66	1.74	1.81	6.48
-10/-12	Heating capacity (kw)	6.39	6.17	5.94	5.76	5.58
	Power	1.89	1.97	2.05	2.13	2.21
-7/-8	Heating capacity (kw)	6.84	6.66	6.48	6.26	6.03
	Power	2.13	2.21	2.29	2.37	2.45
-1/-2	Heating capacity (kw)	7.11	6.89	6.66	6.48	6.30
	Power	2.26	2.34	2.42	2.50	2.58
2/1	Heating capacity (kw)	7.29	7.07	6.84	6.66	6.48
	Power	2.34	2.42	2.50	2.58	2.66
7/6	Heating capacity (kw)	9.36	9.18	9.00	8.82	8.64
	Power	2.47	2.55	2.63	2.71	2.79
10/9	Heating capacity (kw)	9.90	9.72	9.54	9.32	9.09
	Power	2.60	2.68	2.76	2.84	2.92
15/12	Heating capacity (kw)	10.44	10.26	10.08	9.86	9.63
	Power	2.76	2.84	2.92	3.00	3.08
15-24	Heating capacity (kw)	0.85 – 1.05 of nominal				
	Power	0.80 – 1.20 of nominal				

ARV-H100/4R1A						
Outdoor dry/wet bulb[0C] temperature	**capacity/power correction**	**Indoor dry/wet bulb temperature [0C]**				
		15	**18**	**20**	**23**	**25**
-15/-16	Heating capacity (kw)	7.04	6.77	6.49	6.27	6.05
	Power	1.92	2.02	2.11	2.21	2.30
-10/-12	Heating capacity (kw)	7.81	7.54	7.26	7.04	6.82
	Power	2.30	2.40	2.50	2.59	2.69
-7/-8	Heating capacity (kw)	8.36	8.14	7.92	7.65	7.37
	Power	2.59	2.69	2.78	2.88	2.98
-1/-2	Heating capacity (kw)	8.69	8.42	8.14	7.92	7.70
	Power	2.75	2.85	2.94	3.04	3.14
2/1	Heating capacity (kw)	8.91	8.64	8.36	8.14	7.92
	Power	2.85	2.94	3.04	3.14	3.23
7/6	Heating capacity (kw)	11.44	11.22	11.00	10.78	10.56
	Power	3.01	3.10	3.20	3.30	3.39
10/9	Heating capacity (kw)	12.10	11.88	11.66	11.39	11.11
	Power	3.17	3.26	3.36	3.46	3.55
15/12	Heating capacity (kw)	12.76	12.54	12.32	12.05	11.77
	Power	3.36	3.46	3.55	3.65	3.74
15-24	Heating capacity (kw)	0.85 – 1.05 of nominal				
	Power	0.80 – 1.20 of nominal				

ARV-H120/4R1A						
Outdoor dry/wet bulb[0C] temperature	**capacity/power correction**	**Indoor dry/wet bulb temperature [0C]**				
		15	**18**	**20**	**23**	**25**
-15/-16	Heating capacity (kw)	8.45	8.12	7.79	7.52	7.26
	Power	2.28	2.39	2.51	2.62	2.74
-10/-12	Heating capacity (kw)	9.37	9.04	8.71	8.45	8.18
	Power	2.74	2.85	2.96	3.08	3.19
-7/-8	Heating capacity (kw)	10.03	9.77	9.50	9.17	8.84
	Power	3.08	3.19	3.31	3.42	3.53
-1/-2	Heating capacity (kw)	10.43	10.10	9.77	9.50	9.24
	Power	3.27	3.38	3.50	3.61	3.72
2/1	Heating capacity (kw)	10.69	10.36	10.03	9.77	9.50
	Power	3.38	3.50	3.61	3.72	3.84
7/6	Heating capacity (kw)	13.73	13.46	13.20	12.94	12.67
	Power	3.57	3.69	3.80	3.91	4.03
10/9	Heating capacity (kw)	14.52	14.26	13.99	13.66	13.33
	Power	3.76	3.88	3.99	4.10	4.22
15/12	Heating capacity (kw)	15.31	15.05	14.78	14.45	14.12
	Power	3.99	4.10	4.22	4.33	4.45
15-24	Heating capacity (kw)	0.85 – 1.05 of nominal				
	Power	0.80 – 1.20 of nominal				

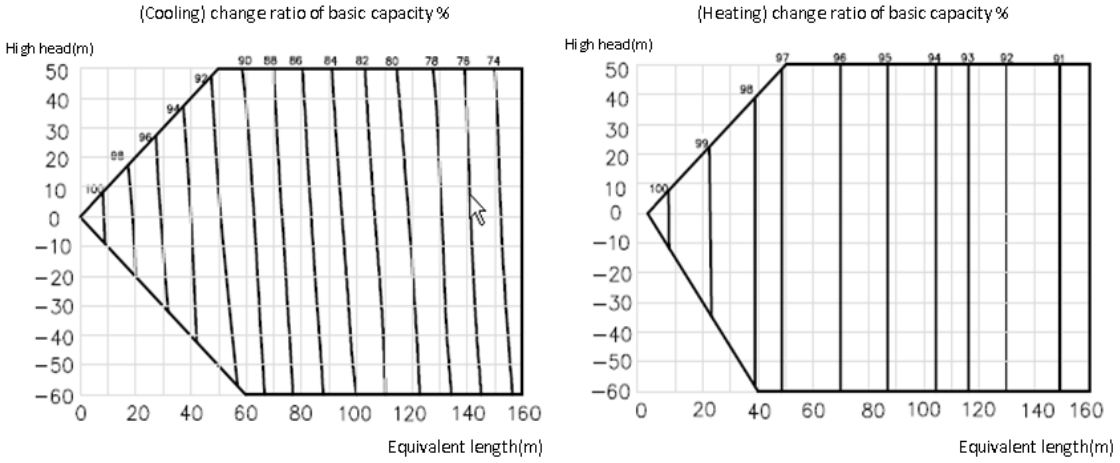
ARV-H140/4R1A						
Outdoor dry/wet bulb[0C] temperature	**capacity/power correction**	**Indoor dry/wet bulb temperature [0C]**				
		15	**18**	**20**	**23**	**25**
-15/-16	Heating capacity (kw)	9.86	9.47	9.09	8.78	8.47
	Power	2.72	2.85	2.99	3.13	3.26
-10/-12	Heating capacity (kw)	10.93	10.55	10.16	9.86	9.55
	Power	3.26	3.40	3.53	3.67	3.81
-7/-8	Heating capacity (kw)	11.70	11.40	11.09	10.70	10.32
	Power	3.67	3.81	3.94	4.08	4.21
-1/-2	Heating capacity (kw)	12.17	11.78	11.40	11.09	10.78
	Power	3.90	4.03	4.17	4.30	4.44
2/1	Heating capacity (kw)	12.47	12.09	11.70	11.40	11.09
	Power	4.03	4.17	4.30	4.44	4.58
7/6	Heating capacity (kw)	16.02	15.71	15.40	15.09	14.78
	Power	4.26	4.39	4.53	4.67	4.80
10/9	Heating capacity (kw)	16.94	16.63	16.32	15.94	15.55
	Power	4.48	4.62	4.76	4.89	5.03
15/12	Heating capacity (kw)	17.86	17.56	17.25	16.86	16.48
	Power	4.76	4.89	5.03	5.16	5.30
15-24	Heating capacity (kw)	0.85 – 1.05 of nominal				
	Power	0.80 – 1.20 of nominal				

ARV-H160/4R1A						
Outdoor dry/wet bulb[0C] temperature	**capacity/power correction**	**Indoor dry/wet bulb temperature [0C]**				
		15	**18**	**20**	**23**	**25**
-15/-16	Heating capacity (kw)	10.88	10.46	10.03	9.69	9.35
	Power	3.00	3.15	3.30	3.45	3.60
-10/-12	Heating capacity (kw)	12.07	11.65	11.22	10.88	10.54
	Power	3.60	3.75	3.90	4.05	4.20
-7/-8	Heating capacity (kw)	12.92	12.58	12.24	11.82	11.39
	Power	4.05	4.20	4.35	4.50	4.65
-1/-2	Heating capacity (kw)	13.43	13.01	12.58	12.24	11.90
	Power	4.30	4.45	4.60	4.75	4.90
2/1	Heating capacity (kw)	13.77	13.35	12.92	12.58	12.24
	Power	4.45	4.60	4.75	4.90	5.05
7/6	Heating capacity (kw)	17.68	17.34	17.00	16.66	16.32
	Power	4.70	4.85	5.00	5.15	5.30
10/9	Heating capacity (kw)	18.70	18.36	18.02	17.60	17.17
	Power	4.95	5.10	5.25	5.40	5.55
15/12	Heating capacity (kw)	19.72	19.38	19.04	18.62	18.19
	Power	5.25	5.40	5.55	5.70	5.85
15-24	Heating capacity (kw)	0.85 – 1.05 of nominal				
	Power	0.80 – 1.20 of nominal				

ARV-H220/5R1A						
Outdoor dry/wet bulb[0C] temperature	**capacity/power correction**	**Indoor dry/wet bulb temperature [0C]**				
		15	**18**	**20**	**23**	**25**
-15/-16	Heating capacity (kw)	15.68	15.07	14.46	13.97	13.48
	Power	4.02	4.22	4.42	4.62	4.82
-10/-12	Heating capacity (kw)	17.40	16.79	16.17	15.68	15.19
	Power	4.82	5.03	5.23	5.43	5.63
-7/-8	Heating capacity (kw)	18.62	18.13	17.64	17.03	16.42
	Power	5.43	5.63	5.83	6.03	6.23
-1/-2	Heating capacity (kw)	19.36	18.75	18.13	17.64	17.15
	Power	5.76	5.96	6.16	6.37	6.57
2/1	Heating capacity (kw)	19.85	19.24	18.62	18.13	17.64
	Power	5.96	6.16	6.37	6.57	6.77
7/6	Heating capacity (kw)	25.48	24.99	24.50	24.01	23.52
	Power	6.30	6.50	6.70	6.90	7.10
10/9	Heating capacity (kw)	26.95	26.46	25.97	25.36	24.75
	Power	6.63	6.83	7.04	7.24	7.44
15/12	Heating capacity (kw)	15.68	15.07	14.46	13.97	13.48
	Power	4.02	4.22	4.42	4.62	4.82
15-24	Heating capacity (kw)	0.85 – 1.05 of nominal				
	Power	0.80 – 1.20 of nominal				

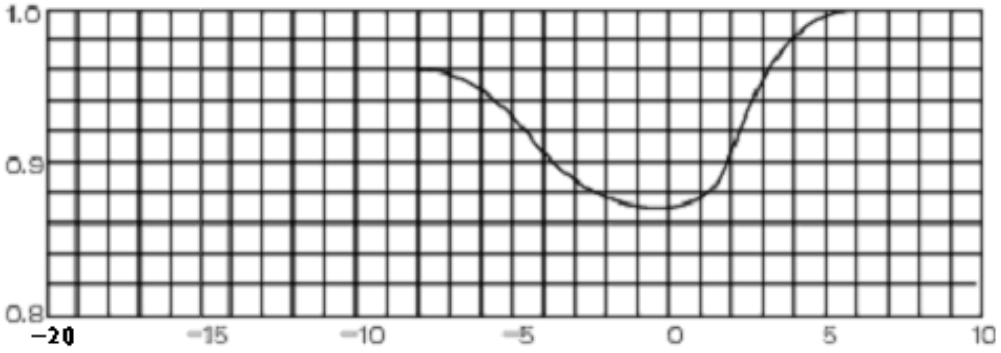
ARV-H280/5R1A						
Outdoor dry/wet bulb[0C] temperature	capacity/power correction	Indoor dry/wet bulb temperature [0C]				
		15	18	20	23	25
-15/-16	Heating capacity (kw)	18.24	17.54	16.82	16.25	15.68
	Power	4.74	4.98	5.21	5.45	5.69
-10/-12	Heating capacity (kw)	20.24	19.53	18.81	18.24	17.67
	Power	5.69	5.93	6.16	6.40	6.64
-7/-8	Heating capacity (kw)	21.66	21.09	20.52	19.82	19.10
	Power	6.40	6.64	6.87	7.11	7.35
-1/-2	Heating capacity (kw)	22.52	21.81	21.09	20.52	19.95
	Power	6.79	7.03	7.27	7.51	7.74
2/1	Heating capacity (kw)	23.09	22.38	21.66	21.09	20.52
	Power	7.03	7.27	7.51	7.74	7.98
7/6	Heating capacity (kw)	29.64	29.07	28.50	27.93	27.36
	Power	7.43	7.66	7.90	8.14	8.37
10/9	Heating capacity (kw)	31.35	30.78	30.21	29.51	28.79
	Power	7.82	8.06	8.30	8.53	8.77
15/12	Heating capacity (kw)	33.06	32.49	31.92	31.22	30.50
	Power	8.30	8.53	8.77	9.01	9.24
15-24	Heating capacity (kw)	0.85 – 1.05 of nominal				
	Power	0.80 – 1.20 of nominal				

6.5 Length Correction Coefficient “K3” of Indoor/Outdoor Unit Connecting Tube.



Positive side of high head means installation height of outdoor unit should be higher than indoor unit; negative side of high head means installation height of outdoor unit should be lower than indoor unit; (change ratio of basic capacity)

6.6 Heating Capacity Correction Coefficient “K4” under Frosting of Outdoor Heat Exchanger



Outdoor Ambient Temperature [℃]

6.7 Capacity Correction

Under cooling mode: actual cooling capacity = nominal cooling capacity×K3;

Under heating mode: actual Heating capacity = nominal cooling capacity×K3×K4。

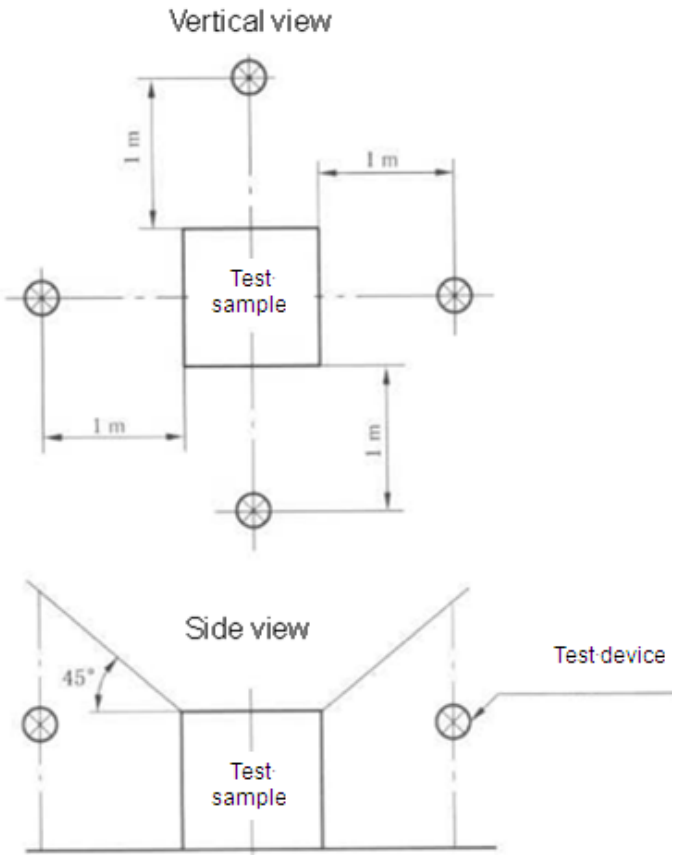
7 Electric Characteristic

Unit			Power		OFM	
Model	**Hz**	**Voltage**	MCA	**Breaker (A)**	**Output power (W)**	**FLA**
ARV-H080/4R1A	50	220-240	5	30	120	4
ARV-H100/4R1A	50	220-240	5	30	120	4
ARV-H120/4R1A	50	220-240	8.75	40	90×2	3.5×2
ARV-H140/4R1A	50	220-240	8.75	40	90×2	3.5×2
ARV-H160/4R1A	50	220-240	8.75	40	90×2	3.5×2
ARV-H220/5R1A	50	380-415	10.26	30	160×2	4.1×2
ARV-H280/5R1A	50	380-415	10.26	30	160×2	4.1×2

Symbols:
MCA: Min. Circuit Amps (A)
OFM: Outdoor fan motor
FLA: Full load AMPS (A)

Notice:
1 Voltage range
Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limit.
2 Maximum allowable voltage unbalance between phase is 2%
MCA = 1.25* FLA
3 Select wire size base on the MCA

8 Sound level



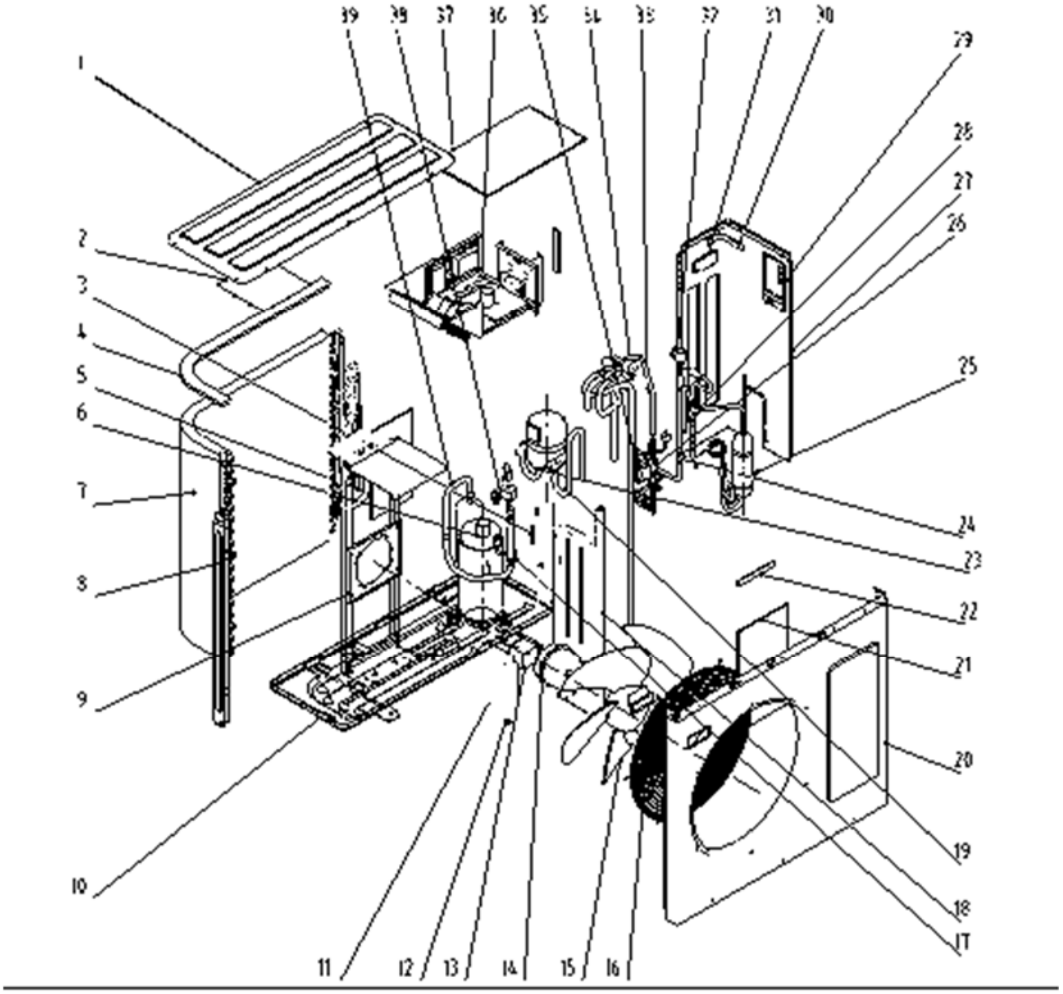
Model	Sound (dB)
ARV-H080/4R1A,	60
ARV-H100/4R1A	60
ARV-H120/4R1A,	60
ARV-H140/4R1A,	60
ARV-H160/4R1A,	63
ARV-H220/5R1A,	60
ARV-H280/5R1A,	60

Note:

1. The operating condition are assumed to be standard(JIS Condition).
2. These operating values were obtained in a dead room (conversion values).
   Sound level will vary depending on a range of factors such as the construction (acoustic absorption coetficient) of the particular room in which the equipments installed.
3. The result is the biggest one of four testing device.
4. Test height (Unit height +1)/2m, horizontal distance: 1m.

9. Explode View

ARV-H080/4R1A, ARV-H100/4R1A

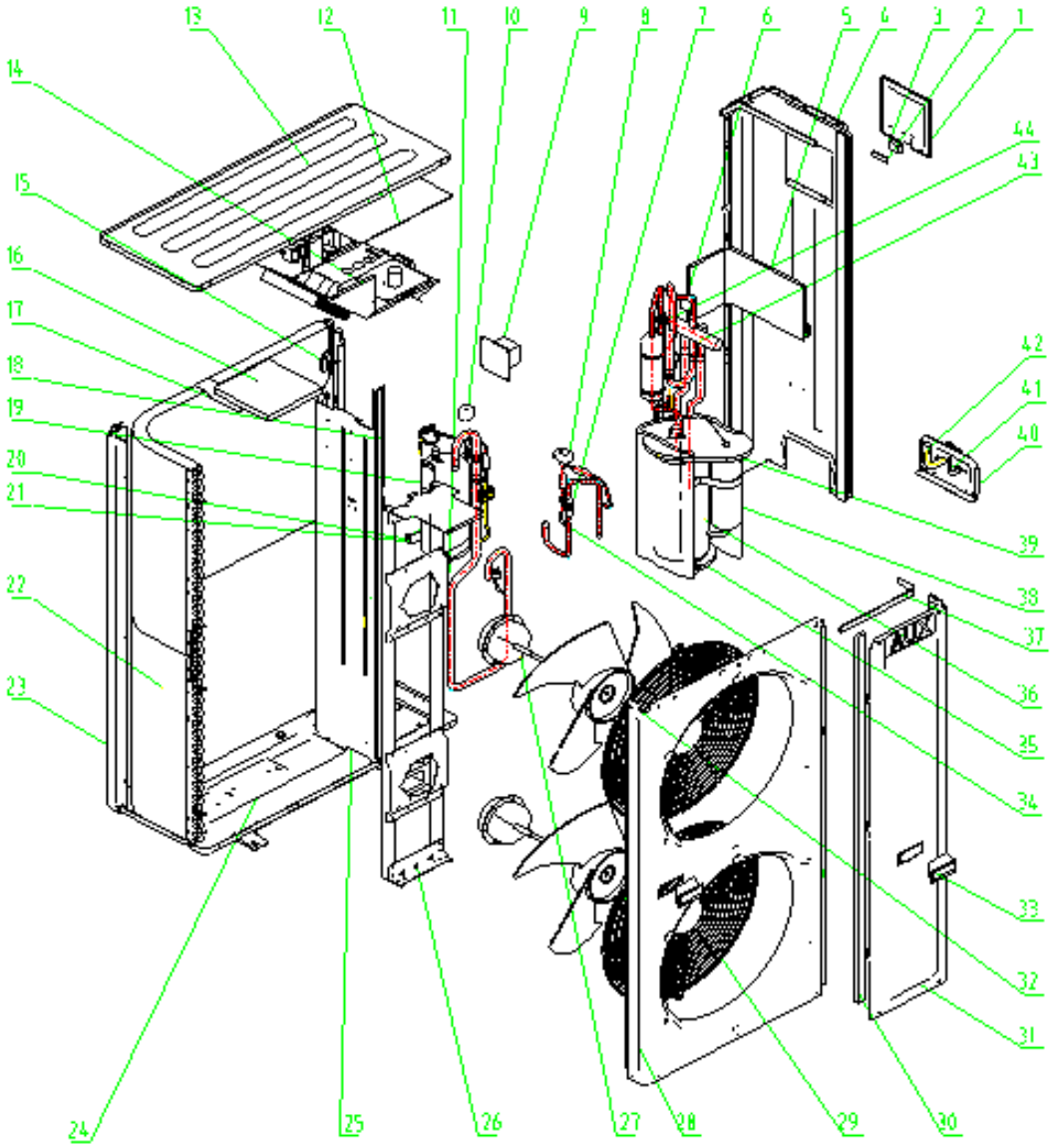


Material List of ARV-H080/4R1A, ARV-H100/4R1A

No.	Part Name (Chinese)	Part Name (English)	Quantity	Unit
1	AS-H30A2/SA-5 顶盖板(ROHS)	Top cover board	1	Pc
2	PE-X 保温绵板 200×200×5	Thermal insulation	1	Pc
3	过线胶圈 Φ39 (阻燃型)	Cable protection rubber gasket	1	Pc
4	(ROHS)聚胺脂消音绵 920×40×10	Noise-absorption polyurethane sponge	1	Pc
5	(ROHS)聚氨酯消音绵板 320×170×5	Noise-absorption polyurethane sponge	1	set
6	压缩机及附件(美芝 DA250S2C-30MT)	Compressor	1	set
7	DLR-80W/DCZ2 冷凝器总成	Condenser assembly	1	Pc
7.1	DLR-80W/DCZ2 冷凝器集气管组件	Condenser gas input pipe assembly	1	Pc
7.2	DLR-80W/DCZ2 分流毛细管组件	Condenser liquid output pipe assembly	1	Pc
7.3	DLR-120W/DCZ 加液工艺管组件	Service pipe	1	Pc
8	AS-H30A2/SA-5 左侧支撑板(ROHS)	Left side support plate	1	Pc
9	DLR-80W/DCZ2 电机架组件	Motor bracket assembly	1	Pc
10	DLR-80W/DCZ2 底盘组件	Chassis part	1	Pc
11	AL-H48A5/R1DC(T)电抗器盖	Reactor cover	1	Pc

12	过线胶圈 Φ12 (阻燃型)	Cable protection rubber gasket	1	Pc
13	R 电抗器 DK25-5-50	Reactor	1	Pc
14	室外电机(三速)YKD120-6	Outdoor Motor	1	Pc
15	轴流风叶 Φ482×151	Axial-flow wind leaves	1	Pc
16	AS-H30A2/SA-5 面板网罩(ROHS)	Net for big panel	1	Pc
17	橡胶固定块 Φ16×Φ8-35	rubber cushion	5	Pc
18	DLR-80W/DCZ2 隔风立板	Compartment air board	1	Pc
19	DLR-80W/DCZ2 气分组件	Gas-liquid separator part	1	Pc
20	ASW-H30A2/SA-5 面板(0.8)	Panel	1	Pc
21	(ROHS)聚氨酯消音绵板 370×206×5	Noise-absorption polyurethane sponge	1	Pc
22	(ROHS)PE 保温绵板 155×20 t=3mm	Thermal insulation	2	Pc
23	DLR-80W/DCZ2 气分抱攀	Gas-liquid separator clamp	1	Pc
24	DLR-80W/DCZ2 电子膨胀阀组件	Electronic expansion valves assembly	1	set
24.1	电子膨胀阀阀体 CAM-BD24FKS-1	Electronic expansion valves		Pc
25	DLR-80W/DCZ2 油分抱攀	Oil separator clamp	1	set
26	GR-70W 阀板组件	Stop valve part	1	Pc
27	AS-H30A2/SA-5 右侧板(0.8)	Right side panel	1	Pc
28	DLR-80W/DCZ2 排气管组件	Discharge pipe assembly	1	Pc
29	R32W 电器盖板(耐候 PP)	Cover for electric components	1	Pc
30	(ROHS)PE 保温绵板 155×20 t=3mm	Thermal insulation	1	Pc
31	R45W/X 小挖手	Hand digging	2	Pc
32	电子膨胀阀线圈 CAM-MD12FKS-5 L=1500	EXV coil	1	Pc
33	DLR-80W/DCZ2 四通阀组件	Four-way valve assembly	1	set
33.1	高压开关 H2OPS D 4.2/3.3(弯管)	High Pressure Switch	1	Pc
33.2	DLR-80W/DCZ2 冷凝器进管	Condenser inlet pipe	1	Pc
33.3	DLR-80W/DCZ2 排气管 B	High Pressure pipe	1	Pc
33.4	DLR-80W/DCZ2 截止阀接管	Stop valve pipe	1	Pc
33.5	四通换向阀阀体 DHF-11(R410A)	Four-way valve	1	Pc
34.5	变径管 6 外×3.0 内-50(墩台)	Reducing pipe	1	Pc
34.6	(ROHS)气液分离器 QFQ-1.2L(16)(倒挂)	Gas-liquid separator	1	Pc
34.7	温度传感器固定座(6*0.75*20)	Sensor holder	1	Pc
34.8	DLR-80W/DCZ2 气分出气管	Gas-liquid separator inlet pipe	1	Pc
34.9	DLR-80W/DCZ2 气分进气管	Gas-liquid separator outlet pipe	1	Pc
34.1	(ROHS)四通换向阀线圈 DHF 系列 L=750	Wiring of four-way coil	1	Pc
35	(ROHS)聚氨酯消音绵板 700×15×10	Noise-absorption polyurethane sponge	1	Pc
36	DLR-80W/DCZ2 控制器总成	Electric assembly	1	Pc
37	(ROHS)聚氨酯消音绵板 415×240×5	Noise-absorption polyurethane sponge	1	Pc
38	电磁阀线圈 Soilenoid Coil L=1050	Electronic expansion valves	1	Pc
39	DLR-80W/DCZ2 吸气管组件	Low Pressurepipe part	1	Pc

ARV-H120/4R1A,ARV-H140/4R1A,ARV-H160/4R1A

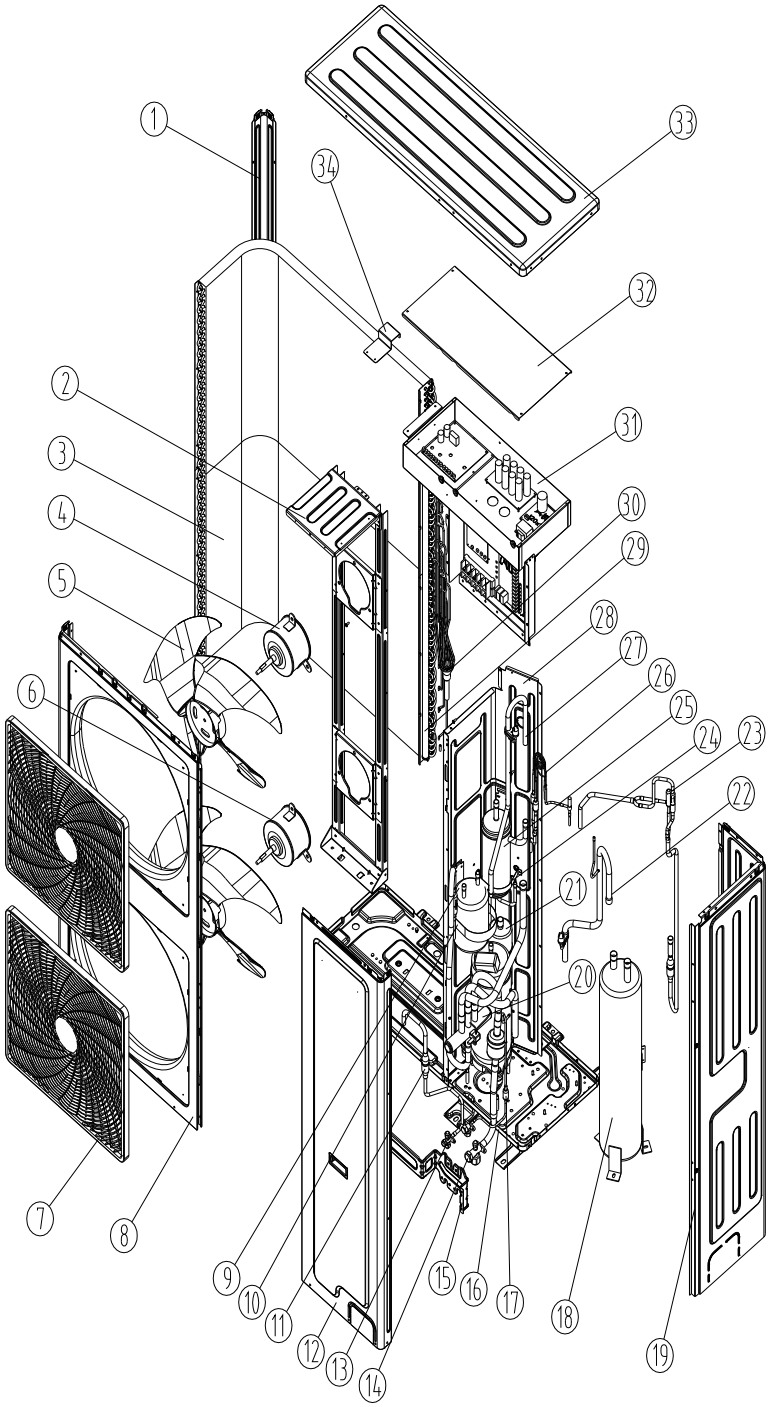


No.	Part Name (Chinese)	Part Name (English)	Quantity	Unit
1	R70W/T1 电器盖板	E-parts cover	1	Pc
2	绝缘垫片 PTFE	Insulating spacer	1	Pc
3	(ROHS)KFR-120W/Q 电器盖板防水海绵	Waterproof sponge	2	Pc
4	KR-120W/D 右侧板	Right side panel	1	Pc
5	(ROHS)聚氨酯消音绵板 412×190×10	Noise-absorption polyurethane sponge	1	Pc
6	(ROHS)四通换向阀线圈 DHF 系列 L=750	Wiring of four-way coil	1	Pc
7	橡胶 φ16×φ8-35	Rubber	2	Pc
8	电子膨胀阀线圈 CAM-MD12FKS-5 L=1500	Electronic expansion coil	1	Pc
9	电抗器 RJ-5mH-30A	Reactor	1	Pc
10	电磁阀线圈 Soilenoid Coil L=1050	Electronic expansion valves	1	Pc
11	DLR-120W/DCZ2 回气管部件	Suction pipe assembly	1	Pc

12	(ROHS)PE 保温绵板 340×340 t=3mm	Thermal insulation	1	Pc
13	KR-120W/D 顶盖板	Top cover board	1	Pc
14	DLR-120W/DCZ2 控制器总成	Electric assembly	1	Pc
14.1	R 风机电容 3.0μF/450VAC/70/2000h/P2	Fan motor capacitor	2	Pc
14.2	(ROHS)电抗器 DK-5mH-30A(L=400)	Reactor	1	Pc
14.3	温度传感器 15K3950 XH2 白 0.9m 塑封 1(组件)	Temperature sensor	1	Pc
14.4	温度传感器 50K3950 XH2 红 0.9m 铜壳 2(组件)	Temperature sensor	1	Pc
14.5	温度传感器 20K3950 XH2 黑 1.5m 铜壳 3(组件)	Temperature sensor	1	Pc
14.6	温度传感器 20K3950 XH2 绿 1.2m 铜壳 4(组件)	Temperature sensor	1	Pc
14.7	温度传感器 20K3950 XH2 黄 0.7m 铜壳 5(组件)	Temperature sensor	1	Pc
15	过线胶圈 φ42(阻燃型)	Cable protection rubber gasket	1	Pc
16	(ROHS)PE 保温绵板 200×200 t=20mm	Thermal insulation	1	Pc
17	KR-120W/D 冷凝器固定板(双排)	Condenser cushion	1	Pc
18	(ROHS)聚氨酯消音绵板 1300×20×3	Noise-absorption polyurethane sponge	1	Pc
19	气液分离器 QFQ-3.3L(A-07)	Gas-liquid separator	1	Pc
20	DLR-120W/DCZ 气分抱攀	Gas-liquid separator clamp	1	Pc
21	(ROHS)聚氨酯消音绵板 320×15×3	Noise-absorption polyurethane sponge	1	Pc
22	DLR-120W/DCZ2 冷凝器总成	Condenser assembly	1	Set
22.1	DLR-120W/DCZ2 冷凝器组件	Condenser part	2	Pc
22.2	DLR-120W/DCZ2 分流毛细管组件	Condenser liquid output pipe assembly	1	Pc
22.3	DLR-120W/DCZ2 集气管组件	Condenser gas input pipe assembly	1	Pc
22.4	AL-36A5(T)加液工艺管组件	Service pipe	1	Pc
23	KR-120W/D 立柱	Column	1	Pc
24	DLR-120W/DCZ2 底盘总成	Chassis assembly	1	Pc
25	DLR-120W/DCZ2 隔风立板	Compartment air board	1	Pc
26	KR-120W/D 电机架组件	Motor bracket assembly	1	Pc
27	电机 WC55-6	Outdoor Motor	2	Pc
28	KR-120W/D 大面板	Large-sized Panel	1	Pc
29	KR-120W/D 塑料网罩	Plastic grille	1	Pc
30	(ROHS)聚氨酯消音绵板 1290×30×10	Noise-absorption polyurethane sponge	2	Pc
31	KR-120W/D 小面板	Small-size Panel	1	Pc
32	轴流风叶 KR-120W/D φ525×135	Axial-flow wind leaves	2	Pc
33	R45W/X 小挖手	Hand digging	3	Pc
34	DLR-120W/DCZ2 膨胀阀管组件	Expansion valves assembly	1	Set
35	消音棉 DLR-120W/DCZ2 压缩机底部	Noise-absorption sponge	1	Pc
36	压缩机 ATQ420D1UMU(附件)	Compressor	1	Pc
37	(ROHS)PE 保温绵板 340×20 t=3mm	Thermal insulation	2	Pc
38	消音棉 DLR-120W/DCZ2 压缩机机围	Noise-absorption sponge	1	Pc
39	消音棉 DLR-120W/DCZ2 压缩机顶盖	Noise-absorption sponge	1	Pc
40	KR-120W/D 阀板	Stop valve part	1	Pc
41	(ROHS)截止阀 3/8in AL-H36A5/R1(T)	Stop valve pipe	1	Pc
42	截止阀 3/4in(L 管)(R410a)	Stop valve pipe	1	Pc
43	DLR-120W/DCZ2 四通阀管路组件	Four-way valve assembly	1	Set
43.1	(ROHS)四通换向阀阀体 DHF-20(R410a)	Four-way valve	1	Pc
43.2	温度传感器固定座(6*0.75*20)	Sensor holder	1	Pc

43.3	DLR-120W/DCZ2 排气管组件	High Pressure pipe part	1	Pc
43.4	DLR-120W/DCZ2 气分进气管	Gas-liquid separator outlet pipe	1	Pc
43.5	DLR-120W/DCZ2 冷凝器进气管	Condenser inlet pipe	1	Pc
44	橡胶 φ19×φ8-35	Rubber	7	Pc

ARV-H220/5R1A,ARV-H280/5R1A



No.	Part Name (Chinese)	Part Name (English)
1	RF28W/E 立柱(喷涂)	Column
2	RF28W/E 电机架组件	Motor bracket assembly
3	RF28W/E 冷凝器组件(&7 宽片)	condenser part
4	电机(三速) CW160A(白)	Outdoor Motor
5	轴流风叶 \U+03c6560×169	Axial-flow wind leaves
6	电机(三速) CW160B(红)	Outdoor Motor
7	RF28W/E 塑料网罩	Net for big panel
8	RF28W/E 大面板(喷涂)	Big panel
9	储液器 2.6L	accumulator
10	DLR-260W5/DCZ2 储液器抱攀	Accumulator embrace climb
11	DLR-260W5/DCZ2 液管截止阀组件	Fluid pipe cut-off valve components
12	DLR-260W5/DCZ2 小面板(喷涂)	Little panel
13	截止阀 3/8in(直管)	Stop valve 3/8in
14	(ROHS)截止阀角型 7/8in 针阀(L 管)(R410a)	Stop valve 7/8in
15	DLR-260W5/DCZ2 截止阀固定板	Stop valve fixed plate
16	DLR-260W5/DCZ2 底盘组件(喷涂)	Chassis assembly
17	DLR-260W5/DCZ2 检修阀组件	Valve repair
18	气液分离器 QFQ-12.5L	Gas-liquid separator
19	DLR-260W5/DCZ2 右侧板(喷涂)	Rigjt panel
20	DLR-260W5/DCZ2 四通阀组件	Four-way valve assembly
21	压缩机 LNB53FCAMC	Compressor
22	DLR-260W5/DCZ2 回气管组件	Low Pressure pipe assembly
23	DLR-260W5/DCZ2 节流部件	The throttling part
24	DLR-260W5/DCZ2 油分抱攀	Oil-gas separator cover
25	油分离器 QFQ-AKS102-S002-00 (R410a)	Oil-gas separator
26	DLR-260W5/DCZ2 回油组件	Oil components
27	DLR-260W5/DCZ2 排气管组件	High Pressure pipe assembly
28	RF28W/E 隔风立板	Compartment air board
29	DLR-260W5/DCZ2 集气管组件	condenser gas input pipe assembly
30	DLR-260W5/DCZ2 分流组件	condenser liquid output pipe assembly
31	DLR-260W5/DCZ2 电控总成	Electric control box assembly
32	DLR-260W5/DCZ2 电控箱盖板	Electric cabinet cover plate
33	RF28W/E 顶盖板(喷涂)	Top cover board
34	RF28W/E 冷凝器固定板	Condenser fixed plate

Part 4 Installation

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2. Installation Unit..... 206

3. Installation of refrigerant auxiliary pipe..... 208

4.Additional refrigerant and lubrication oil 218

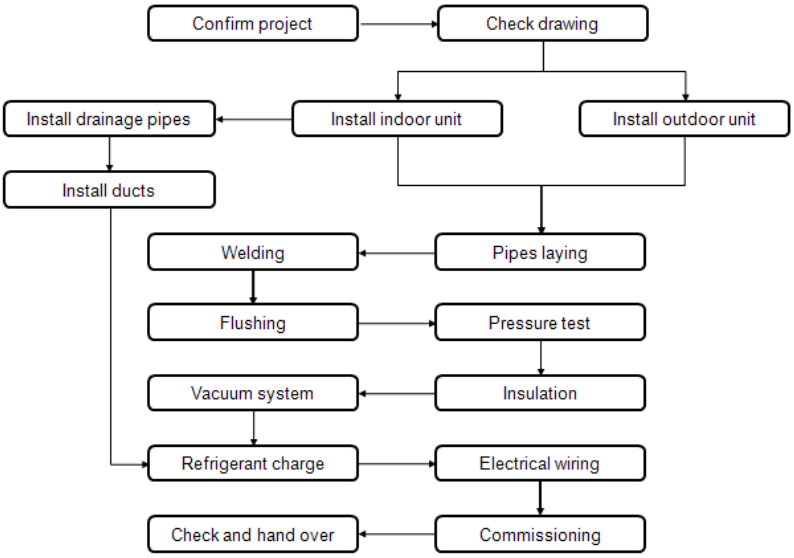
5. Insulation..... 219

6. Electrical connection..... 220

7.Commissioning..... 224

1.Preparation on installation

1.1 Installation procedure



1.2 Preparation and Tools before Installation

◇Please buy the following parts from the market before installation

Hanging bolt（4 per unit）
PVC drain pipe
Some cable ties
Connecting copper tube
Branch manifold (choose according to actual installation situation)
Thermal insulation materials for connecting copper tube (PEF foaming materials with thickness above 8mm)
Power cord and power connection line (it's required to wire according to requirement for line diameter in wiring diagram)

Note:

Due to the difference between the characteristics of R410A and R22 refrigerant, it's necessary to use dedicated tools of R410A for some tools during installation.

◇ The selected position hanging indoor unit should be able to support the weight of unit without noise and additional vibration. It's necessary to reinforce before installation if reinforcement is required;

◇ The space of selected ceiling should be enough for holding indoor unit;

◇ The installation location should be easy for drainage;

◇ It shouldn't be installed in places (such as kitchen, laundry and mechanical workshop, etc.) of heat source, vapor source and more oil mist to prevent degradation of heat exchanger, electric shock and unit damage caused by plastic parts corrosion;

◇ Install in the place at least one meter away from TV and radio to prevent interfering TV and radio.

◇ There is no barrier blocking ventilation nearby and cold air should be able to evenly distribute to each indoor corner;

◇ There should be certain spacing between the surrounding and barrier of indoor unit to easy maintenance;

◇ The unit uses R410A environment-friendly refrigerant that is a kind of nonflammable and nontoxic gas. Since the refrigerant has larger specific gravity than air, it will suffuse on the ground in case of leakage. Therefore, the unit must be well ventilated if installed in closed room to prevent

suffocation. In case of refrigerant leakage, immediately stop unit operation, timely contact maintenance personnel and avoid any open fire on site because refrigerant will decompose hazardous gas when exposed to open fire.

Tool	Application	R410A	Reasons
Flaring *tool*	cutting tube	○	——
Tube bender	flaring tube and flaring opening when welding	▲	It's required to increase extension allowance of copper tube when using R410A.
Tube bender	bending tube	○	——
Torque wrench	tightening flare nut	▲	The torque of 1/2 and 5/8 is increased and torque reference is changed
welding torch, 2B silver solder	welding Auxiliary tube	○	——
Oxygen, acetylene		○	——
Nitrogen		○	——
vacuum pump with return flow stop valve	vacuumizing	▲	Don't use original vacuum pump. It must be ensured that the oil in vacuum pump can't flow into A/C system.
Refrigerant holder	dosing of refrigerant charge	▲	R410A should be charged in gas state.
Electronic scale		○	——
Pressure gauge	running vacuumizing, charging refrigerant and inspection equipment	▲	The old pressure gauge can't be used due to the need of different pressure. MAX: HP5.3Mpa LP3.5Mpa
Connecting hose		▲	
Leak detector	Checking the leakage of system	▲	Don't use Freon leak detector of CFCs or HCFCs, because there is no chlorine in new refrigerant. It's necessary to use hydrogen leak *detector or* R134a leak *detector.*

Note: ○universal ▲special for R410A

2. Installation of Outdoor Unit

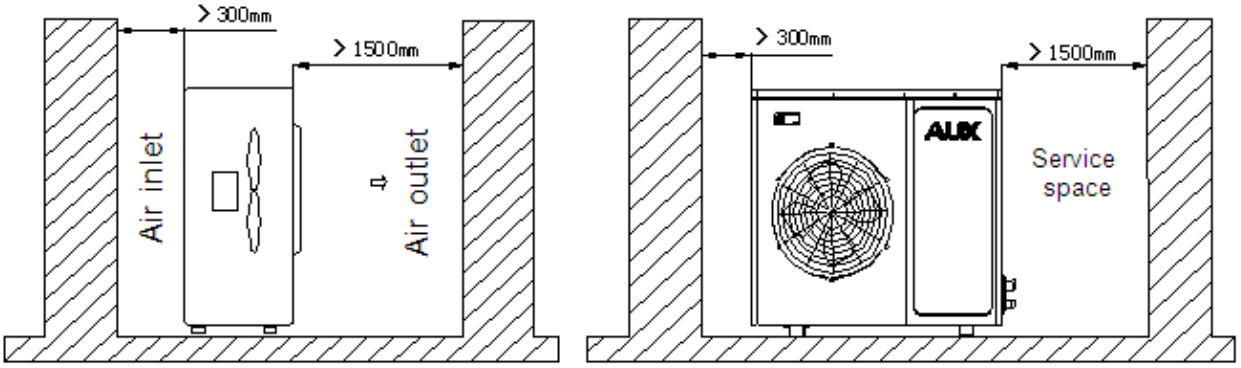
2.1 Installation Location and Foundation

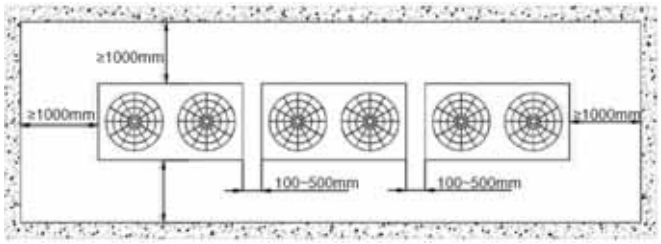
The installation location should efficiently stand the weight of outdoor unit, isolate noise and vibration;
The installation location should keep away from direct sunlight. It's preferable to erect a sunshade is necessary;
The installation location must be able to drain rainwater and water formed by frost;
The installation location must be able to ensure A/C system can't be buried by snow;
The installation location must be able to ensure *air* outlet can't face to strong wind;
The installation location must be able to ensure air discharge and operation noise of unit can't disturb neighbors;
The installation location must be free from waste and oil mist.

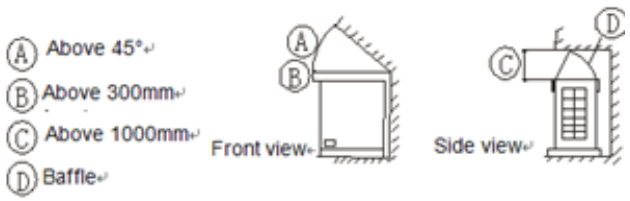
Warning:
Outdoor unit may subject to failure if it runs in the air environment containing oil source (including motor oil), salt (coastal area) and sulfide gas (nearby hot spring and refinery).

1.2 Maintenance and Ventilation Space of modular outdoor unit

◇In case of installation, after reserving maintenance space as shown below, install outdoor unit and install power supply device at side of outdoor unit by referring to installation instruction of power supply device manual.
◇Ensure necessary installation and maintenance space, and modules of the same system must be placed at the same height (see the following diagram).







◇If two rows of outdoor units, we suggest face to face, because easy to maintenance; no air short circuit.
◇If there is barrier above outdoor unit, install according to the following diagram:

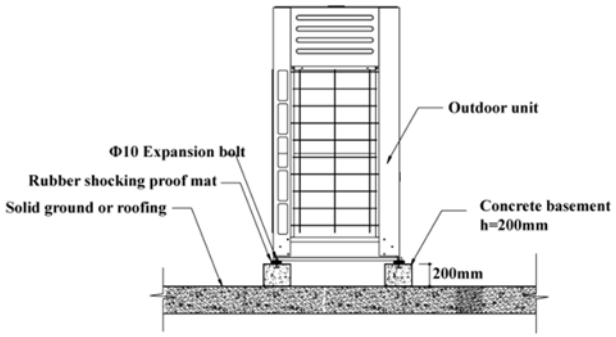
Note:
If there is stacking objects around outdoor unit, it should be at least 1000mm higher than the top of outdoor unit. If it is lower than the above height, it's required to add mechanical discharge device.

2.3 Installation of Outdoor Unit

◇Tighten outdoor unit on mounting support with M10 bolt and nut,and keep it horizontal. The bolt should have a proper length of 20mm more than base surface.

◇In case of installing on wall or roof, it ’ s necessary to firmly secure A/C system to prevent the attack of earthquake or strong wind;

◇The foundation can be made of channel steel or concrete. Reserve the space for discharging the condensate water from outdoor units.



◇Install drainage channels to ensure condensed water flow out smoothly;

◇Try not to use four-square base to support outdoor unit; rubber anti-vibration pads are necessary to avoid vibration.

2.4 Installation of indoor unit (refer to the part of indoor unit)

3. Installation ofrefrigerant auxiliary pipe

3.1 Installation notice

◇Please use seamless phosphorus-killed copper auxiliary pipe.

◇Ensure to fill nitrogen for protection when welding.

It's mandatory to purge nitrogen to prevent oxidation layer (Cu_2O) formed in copper Auxiliary pipe when welding, otherwise substantial oxidation layers will cause fatal failure of A/C system;

Foreign matters (oxides) will cause blockage of capillary tube or expansion valve, abnormal discharge temperature, no cooling (no heating), and blocking cylinder of compressor. Mostly, foreign matters cause blocking cylinder of compressor by blocking the oil return hole of gas/liquid separator;

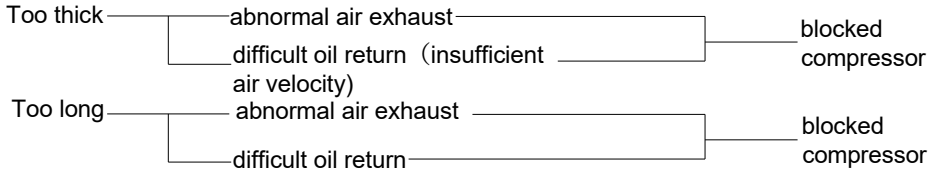
◇When welding auxiliary pipe of the same diameter, you are required to expand the inside diameter at connection area with flaring tool, then butt and weld two Auxiliary pipes. It's absolutely prohibited butting and welding with flaring opening;

◇Please purge with nitrogen or air before connection to remove dust and moisture inside auxiliary pipe; Don't install refrigerant Auxiliary pipe when it rains to prevent water ingression; Suspend and fix outdoor Auxiliary pipe to prevent water ingression;

Impact of water on system: blocking capillary or expansion valve, generating acid I ron/copper erosion due to refrigerant hydrolysis**,** generating foreign matter crystal (cage compounds) due to reaction of refrigeration oil;

Don't let dust or foreign matter such as concrete fragment, sand and copper slag ingress into the system;

◇Specification of refrigerant Auxiliary pipe should be selected according to unit requirement



◇Refrigerant auxiliary pipe should be fixed.

When running, refrigerant Auxiliary pipe will sway, expand or shrink, if unfixed, load will concentrate oncertain part, resulting fracture of refrigerant Auxiliary pipe that should be fixed every 2~3m.

◇Please lay out the Auxiliary pipe according to its orientation. Don't repeat bending and unbending operation over three times on the same position of Auxiliary pipe (because Auxiliary pipe will be hardened in this way);

◇Auxiliary pipe bender must be used for auxiliary pipe bending. The curvature can't be too small, otherwise the auxiliary pipe may be bent and shrunken, affecting refrigerant flow;

3.2 Combination Ratio of Capacity

For VRF system, combination ratio of indoor unit and outdoor unit should meet the following requirement:

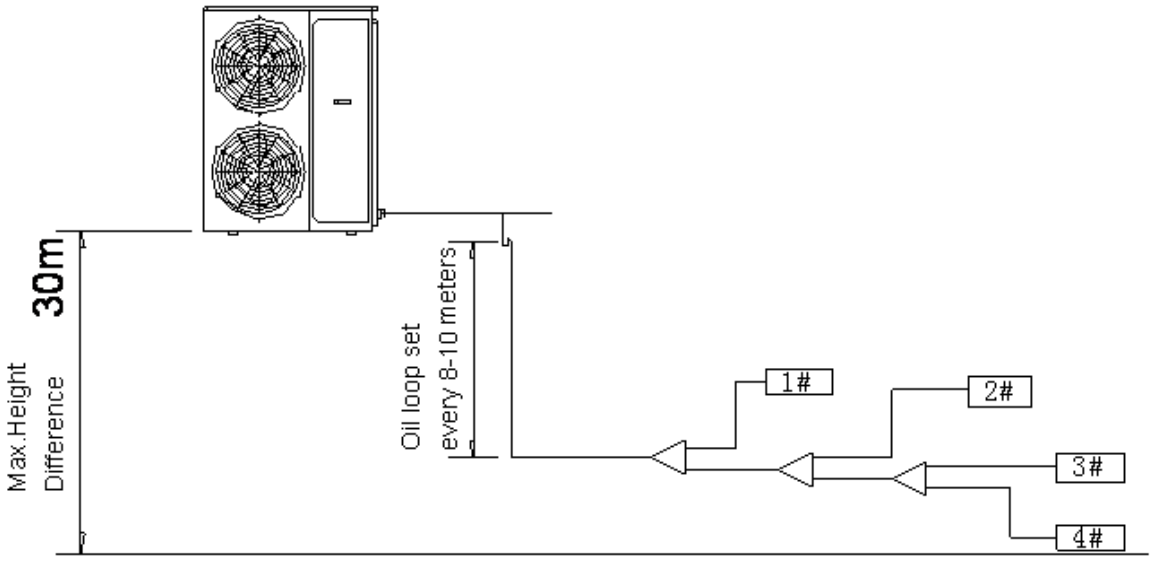
$$N\% = \frac{\sum \text{rated cooling capacity of indoor unit}}{\sum \text{rated cooling capcacity of outdoor unit}}$$

Note:

1. Value of N% is 100%. If indoor units not fully opened very often, value of N% can be 130%;
2. Maximum cooling capacity of unit equals to rated cooling capacity of outdoor unit;
3. If permitted, it's recommended to use less indoor units and shorter pipeline

3.3 Connection schematic diagram of auxiliarypipe

Connection Schematic Diagram of system



Note:
Equivalent length refers to conversion length of parts such as elbow after considering pressure loss.
Equivalent length: actual length of pipe + quantity of elbow ×equivalent length of each elbow + quantity ofoil trap ×equivalent length of each oil trap

Elbow and oil trap recommenddimension list

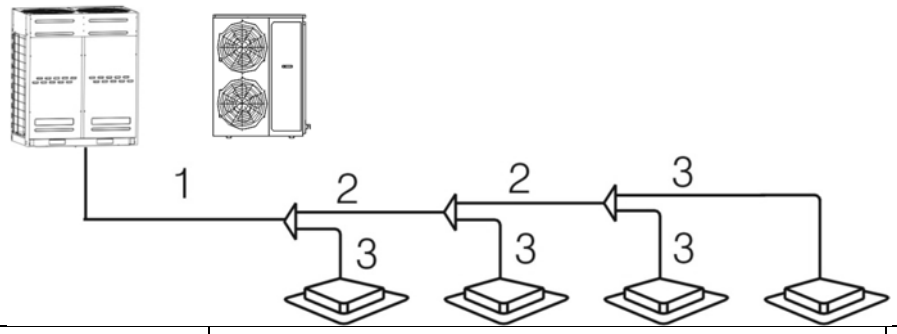
Type / Diameter of pipe(mm)	90° elbow(mm)	Oil trap(mm)
9.52	0.18	1.3
12.7	0.20	1.5
15.88	0.25	2.0
19.05	0.35	2.4
22.2	0.40	3.0
25.4	0.45	3.4
28.6	0.50	3.7
31.8	0.55	4.0
34.93	0.58	4.2
41.3	0.63	4.6
44.5	0.66	5.0

Example:
When actual length of 10HP outdoor unit is 80m, diameter of pipe is 25.40mm and 12 elbows & 2 oil traps are used, the equivalent length should be calculated:
80+0.45×12+3.4×2=92.2(m)
Note:

If there is relatively big high head of indoor and outdoor unit, “S”-shaped oil trap must be installed every 8~10m for vertical pipe.

3.4 Determination method of auxiliary pipe and branch pipe

◇Selecting type of Refrigerant auxiliary pipe



Type of Auxiliary pipe	Connecting parts	No.
Main Auxiliary pipe	between outdoor unit and the 1st. branch pipe	1
	between branch pipe and branch pipe	2
Branch Auxiliary pipe	between branch pipe and indoor unit	3

◇Diameter of auxiliary pipe 1depends on auxiliary pipe specification of outdoor unit.

Model	Gas side(mm)	liquid side(mm)	The 1st Branch pipe
ARV-H080/4R1A	φ15.88(flared)	φ9.52(flared)	AFG-00A
ARV-H100/4R1A	φ15.88(flared)	φ9.52(flared)	
ARV-H120/4R1A	φ19.05(flared)	φ9.52(flared)	
ARV-H140/4R1A	φ19.05(flared)	φ9.52(flared)	
ARV-H160/4R1A	φ22.2(flared)	φ9.52(flared)	
ARV-H220/5R1A, ARV-H280/5R1	φ22.2(flared)	φ9.52(flared)	

◇Diameter of auxiliary pipe “2” depends on the total capacity of indoor unit connected to the Branch pipe.

Total capacity of indoor unit (kW)	Gas side(mm)	liquid side(mm)	selection of Branch pipe
0 <B≤5.6	φ12.7	φ6.35	AFG-00A
5.6<B≤16	φ15.88	φ9.52	AFG-00A
16<B<22.4	φ19.05	φ9.52	AFG-12A
22.4≤B≤26	φ22.2	φ9.52	AFG-24A

Note:

The 1st. Branch pipe should be based on total capacity of outdoor unit and other Branch pipes Shouldn’tlarger than the 1st Branch pipe.

◇Diameter of auxiliary pipe “3” depends on indoor unit.

Cooling capacityof indoor unit(kW)	Gas pipe(mm)	Liquid pipe(mm)	Remark
2.2	φ9.52	φ6.35	
2.8	φ9.52	φ6.35	Cassette and Ceiling & Floor unit: the pipe diameter is φ12.7φ6.35
3.6	φ12.7	φ6.35	
4.5	φ12.7	φ6.35	
5.6	φ12.7	φ6.35	
7.1	φ15.88	φ9.52	

8.0	φ15.88	φ9.52	
9.0	φ15.88	φ9.52	
10.0	φ15.88	φ9.52	
11.2	φ19.05	φ9.52	
12.5	φ19.05	φ9.52	
14.0	φ19.05	φ9.52	
15.0	φ19.05	φ9.52	

◇Minimum wall thickness of auxiliary pipe should meet data of the following table.

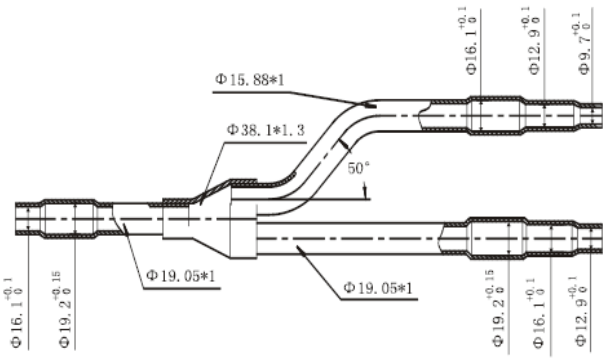
Diameter of Auxiliary pipe (mm)	φ6.35	φ9.52	φ12.7	φ15.88	φ19.05
Minimum wall thickness (mm)	0.8	0.8	1.0	1.0	1.0

3.5 Type and physical dimension of branch pipe

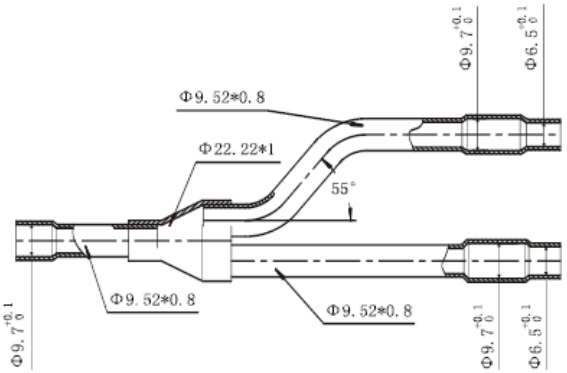
Notice:
In addition to ensuring compliance with joint of main auxiliary pipe, it's allowable to select Branch pipe with similar specification as long as it meets pressure-proof requirement. It's required that no leaking at gas pressure of 4.5Mpa and no distortion and leaking at hydraulic pressure of 6.3MPa.

AFG-00A Physical Dimension

Gas side joint

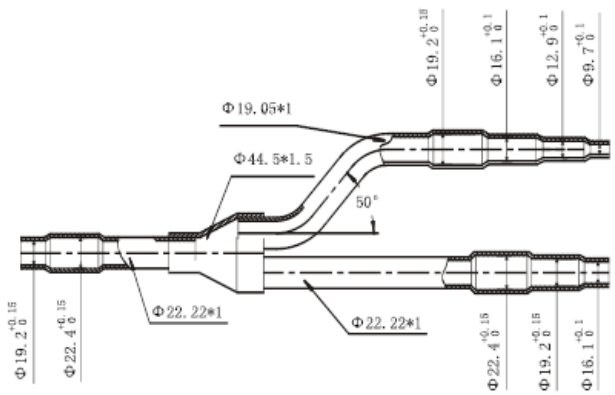


Liquid side joint

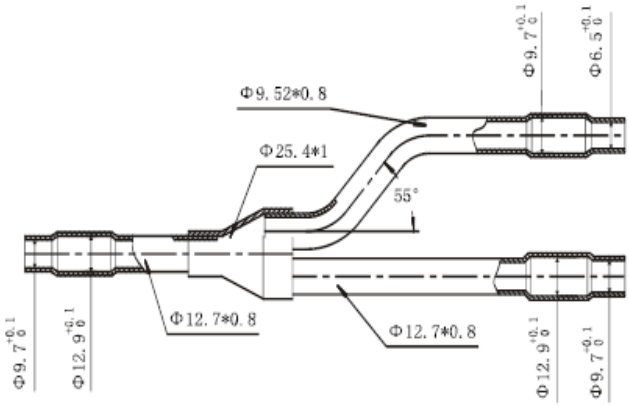


AFG-12A Physical Dimension

Gas side joint



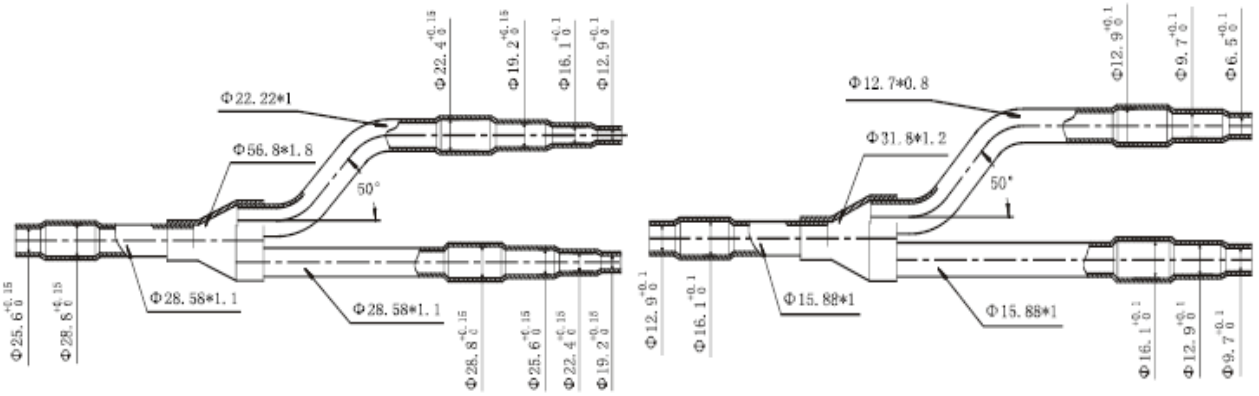
Liquid side joint



AFG-24A Physical Dimension

Gas side joint

Liquid side joint



3.6 Connection and Welding of auxiliary pipe

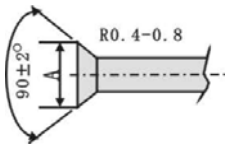
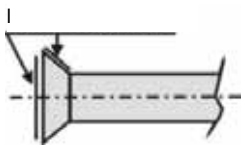
Requirement for flaring opening connection:

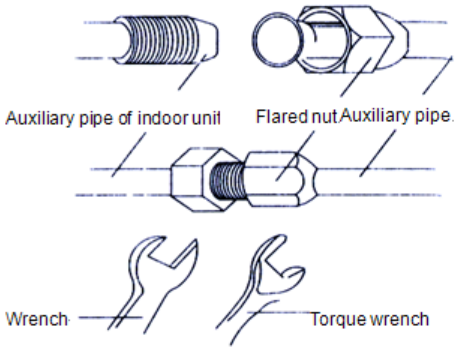
◇Deburr the auxiliary pipe before flaring, then flare auxiliary pipe with flaring tool as per the dimensions of flaring opening in the following table:

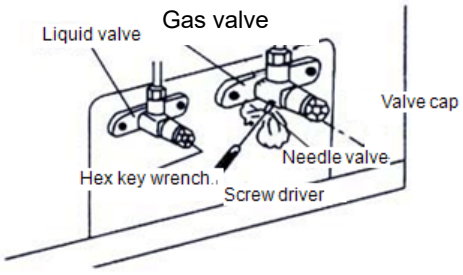
◇Apply a thin layer of refrigeration oil on both inside and outside at the flaring part;

◇Align flaring opening with threaded joint of indoor unit, manually and tightly screw flared nut, then screw with torque wrench as per the tightening torque in the following table.

◇Remove valve cap on liquid valve and air valve of shutoff valve of outdoor unit, align flaring opening with shutoff valve of outdoor unit, sufficiently screw fared nut with hand, and then screw with torque wrench as per the tightening torque in the following table.

Diameter of Auxiliary pipe	Tightening torque	Machining dimension of flared section (A)	Shape of flaring opening	Apply oil
1/4in(φ6.35mm)	15-19(N·m)	8.8-9.1mm		
3/8in(φ9.52mm)	35-40(N·m)	12.8-13.2mm		
1/2in(φ12.7mm)	50-60(N·m)	16.2-16.6mm		
5/8in(φ15.88mm)	68-80(N·m)	19.2-19.6mm		
3/4in(φ19.05mm)	100-120(N·m)	23.6-24mm		



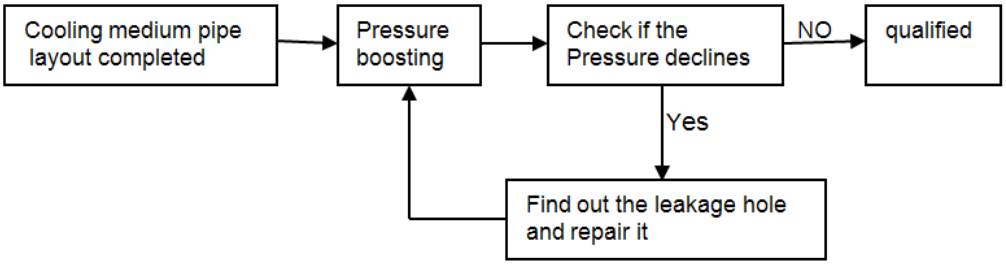


Requirement of welding connection:

◇ If welding connection method is used to connect auxiliary pipe and Branch pipe, you are required to weld before system connection and purge with nitrogen to prevent oxidation layer formed inside copper auxiliary pipe when welding.

3.7 Air Tightness Test

It aims to confirm if there is leakage in auxiliary pipe by using nitrogen and the steps are as follows:



Gradual pressurization test

According to each refrigerant system, do gradual pressurization test (nitrogen is required) on gas pipe and liquid pipe.

Phase 1: 3.0 kg / cm^2; Pressurize at least 3 minutes; → Large hole may be found.

Phase 2: 15.0 kg / cm^2; Pressurize at least 3 minutes; → Large hole may be found.

Phase 3: 43.0 kg / cm^2: Retain the pressure for about 24 hours. → Small hole may be found.

Even if pressurize up to 43.0kg / cm^2 , it's impossible to find small hole in very short time. Therefore, in phase 3, it's required to place for 24 hours to observe after pressurization.

Observe pressure drops.

It's necessary to correct if pressurized temperature is different from observed ambient temperature with difference of

0.1 kg / cm^2 per 1℃. Correction value =(pressurized temperature - observed temperature)x0.1

Example:

pressure is 43.0 kg/$cm^2$and temperature is 25℃ in case of pressurization.

After 24 hours, if pressure is 42.5kg/cm^2 and temperature is 20℃, it is deemed qualified.

Check leaking hole.

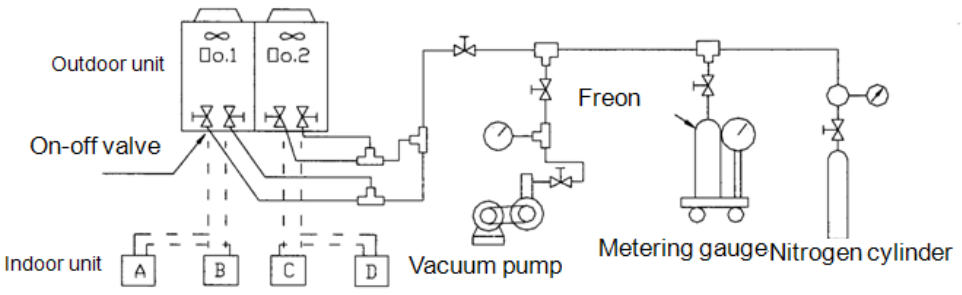
Listening check: larger leaking hole can be found by listening.

Touch check: feel if there is leaking by putting hand at pipe joint.

Soapsuds check: bubble can be found at leaking part.

In order to find small leaking hole or pressure drop is found but leaking hole can't be found in pressurization test

1) Discharge nitrogen to the position of 3.0 kg/cm^2.
2) Charge fluorine (R410a) up to the position of 5.0 kg/cm2 (namely the mixed state of nitrogen and fluorine)
3) Check with halogen lamp, butane *gas*(petroleum gas) detector and electric detector.
4) If leaking hole can't be found, recheck by continuously pressurize up to 28 kg/cm2. (maximum pressure is 43 kg/cm2)

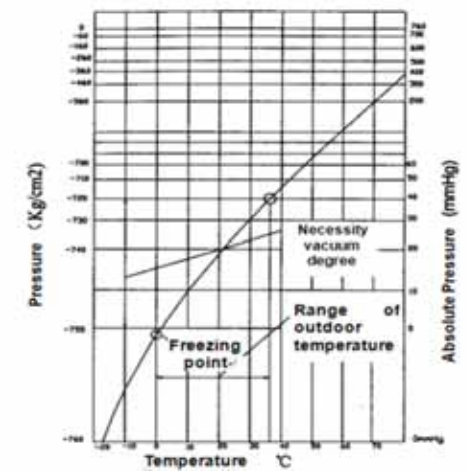


Note:

Super-long pipeline should be checked section by section.
1. From each indoor unit to each Auxiliary pipe well;
2. Standpipe inside each Auxiliary pipe well;
3. From each auxiliary pipe well to outdoor unit;
4. From indoor unit to outdoor unit as a whole.
5. After sir tightness test of the system is completed, it's preferable to reduce nitrogen pressure to 5~10 Kgf/cm2.

3.8 Vacuum Drying

Note:
1. The vacuum break shall use nitrogen to carry out. If use other gas mistakenly, it may cause explosion.
2. The vacuum drying adopts the vacuum pump to turn the water (liquid) in pipe to steam (gas) and discharge it to the outside pipe, and dry the pipe. Under the normal air pressure, the boiling point of water (steam temperature) is 100□, but the pressure in vacuum pump pipe is near vacuum, this makes the boiling point lower to below the outside air temperature, and the water in the pipe is evaporated.



Water's boiling point(℃)	Pressure (mmHg)	Vacuum degree(mmHg)
40	55	-705
30	36	-724
26.7	25	-735
24.4	23	-737
22.2	20	-740
20.6	18	-742
17.8	15	-745
15.0	13	-747
11.7	10	-750
7.2	8	-752
0	5	-755

Example:
when the air temperature is at 7.2℃, the vacuum drying can be carried out under -752mmHg.

Selection of the vacuum pump
The following 2 points shall be noted in selection of the vacuum pump:
① Select the vacuum pump with prospected vacuum requirement (vacuum reaches -755mmHg)
② require the pumps with large exhaust capacity (around 40L / min or above)。
Moreover, before operation, the vacuum meter shall be checked to ensure its measuring range can reach -755mmHg below.Lube oil rotating vacuum pump needs to change the lube oil every one or two month, and check the vacuum state.

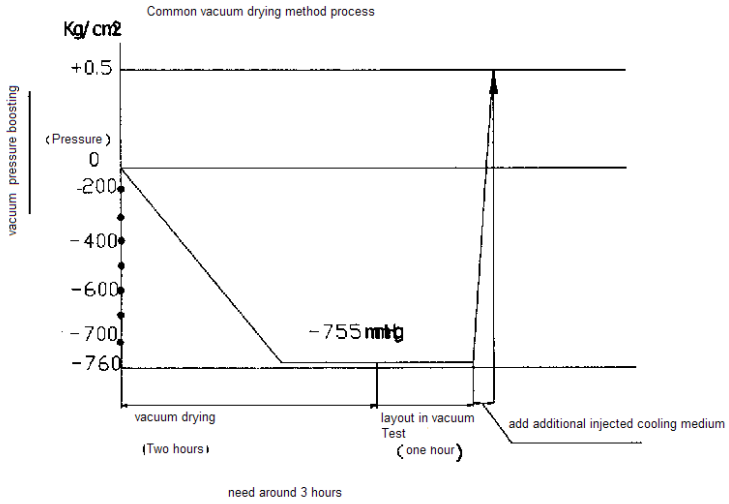
(Reference) The types and vacuum state of vacuum pump

Type	Exhaust volume in maximum vacuum state	Function	
		Vacuum drying	Exhaust
Oil lubrication pump shaft (with oil)	0.02mmHg 100L/min	Suited	Suited
Oil free pump shaft (without oil)	10mmHg 50L/min	Unsuited	Suited
	0.02mmHg 40L/min	Suited	Suited

Vacuum drying

For the methods of the vacuum drying, according to different environments, there are two methods can be selected.

1 common method operation



① Vacuum drying (at the first time)
Connect the multimeter to the inlets of liquid pipe and air pipe, and operate the vacuum pump for 2 hours or more.(The vacuum state shall be below -755mmHg)
If the extraction lasts for 2 hours, but the vacuum state cannot reach -755mmHg below, then there exists water or leakage in the system, at this time, extraction will continue for 1 hour.
If the extraction lasts for 3 hours, and the vacuum state cannot reach -755mmHg, then check whether there exists leakage hole.

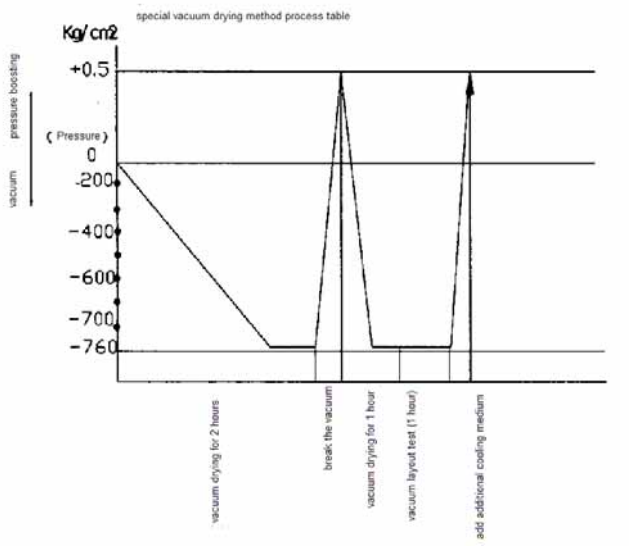
② Vacuum layout test
When the vacuum state reaches -755mmHg, lay out the vacuum dryer, if the vacuum meter value is stable, it means qualified; if the value rises then it means there is water or leakage hole.

③ Add additional refrigerant
Connect the refrigerant tank to the maintenance pipe of the liquid pipe to facilitate adding of the system need refrigerant.

④ Open all the open-close valves of the liquid pipes and air pipes
(Notes) vacuum extraction operation carries out in liquid pipe direction and air pipe direction (because there are all kinds of parts equipped in indoor unit, the process may interrupted).

2 Special vacuum drying methods

This kind of vacuum drying method is used in the condition that there is water mixed in the pipe. Such as When flushing refrigerant pipe, water is found.
When the project carried out in raining weather, there may be condensate in the pipe.
If the project last for a long time, there may be water enter the pipe.
In project, the rainwater may enter the pipe.



Method is that insert break the nitrogen vacuum work procedure for more than one time during common vacuum drying process.
Operation procedures:

① Vacuum drying (at the first time)……extraction for 2 hours

② Break vacuum (at the second time)……add nitrogen to0.5kg/cm2
Since the nitrogen is a kind of drying gas, when breaking the vacuum, it can accomplish drying effect, but if there is lot of water, the drying effect is not complete. Therefore, in refrigerant project, water penetration and condensate in the pipe shall be specially noted.

③ Vacuum drying (at the second time)……extraction for more than 1 hour
Judgment: when reaches -755mmHg or below, it is qualified. If it cannot reach this value within 2 hours, then vacuum break ② and ③ shall be carried out repeatedly.

④ Vacuum layout test……1 hour.

⑤ Additional refrigerant injection

⑥ Open the open-close valve

4. Additional refrigerant and lubrication oil

4.1 Add refrigerant

Please add refrigerant as the following chart tell us on the basis of total length of connection pipe, the methods of adding refrigerant are as follows:

Diameter of liquid duct(mm)	L1(φ19.05)	L2(φ15.88)	L3(φ12.7)	L4(φ9.52)	L5(φ6.35)
Additional amount of refrigerant (kg/m)	0.25	0.17	0.11	0.054	0.022

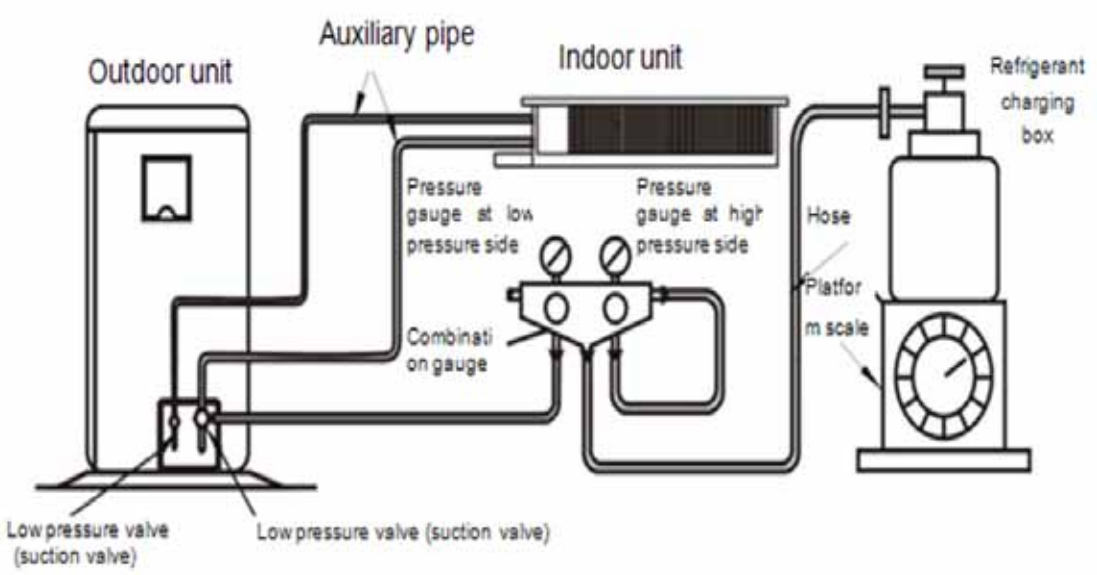
Additional amount of refrigerant = length of liquid pipe in refrigerant auxiliary pipe × corresponding additional amount of refrigerant for each meter of liquid pipe.

Additional amount of refrigerant= (L1×0.25) + (L2×0.17) + (L3×0.11) + (L4×0.054) + (L5×0.022)

Note:

1. It must record the calculation result(better make a table);
2. To pour the liquid refrigerant into liquid duct from shut-off valve on side of liquid duct when it is completely dried;
3. It may pour the gas refrigerant into liquid duct from air duct through the operation of compressor on trial run, when refrigerant is not completely poured into;
4. It must measure the injection of refrigerant with electronic scale

Adding refrigerant method



5. Insulation

Thermal insulation wrapping of auxiliary pipe

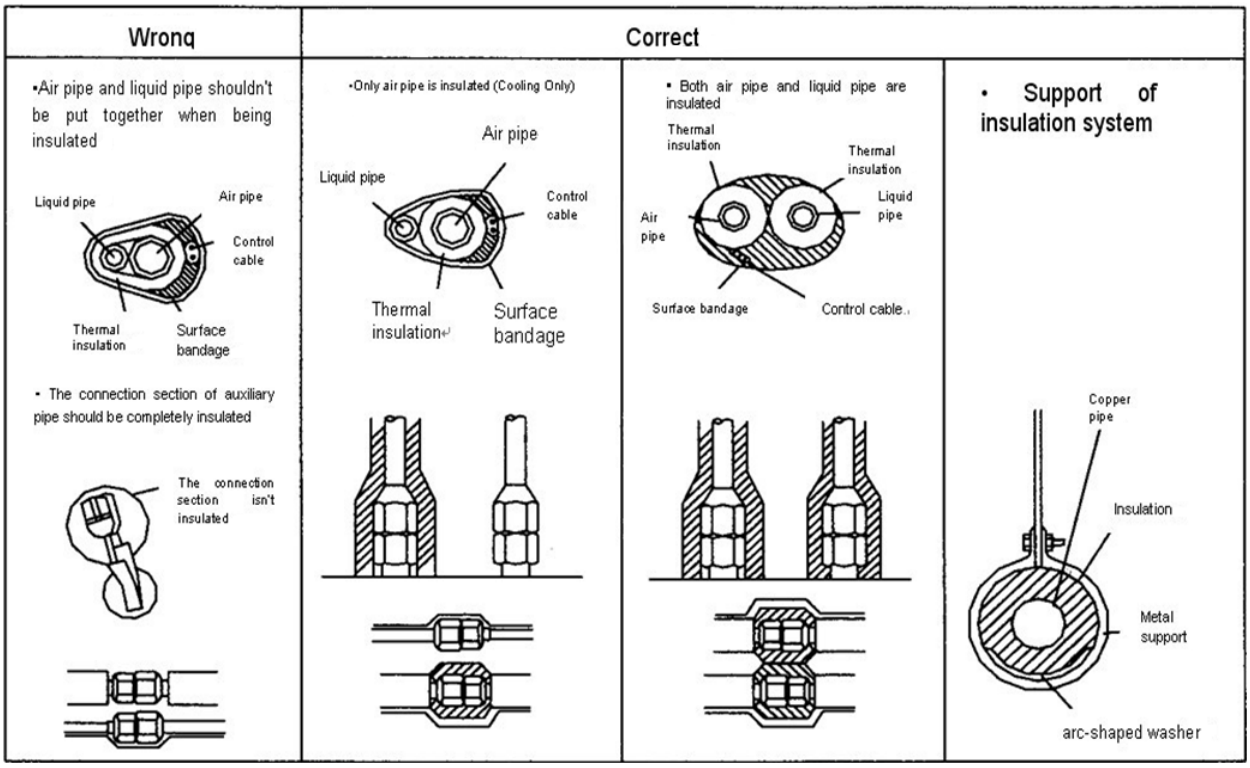
Thermal insulation materials should be used for drain pipe and auxiliary pipe to prevent condensation or water leakage.

Note:

◇ Wrap auxiliary pipe with thermal insulation materials of good insulation performance (> 120℃).

◇ Notice for high-humidity environment: the A/C system is verified by condensation conditions test. However, it may subject to dripping if working in high-humidity (condensation temperature > 23℃) environment for a long time. In this case, please add the following thermal insulation materials:

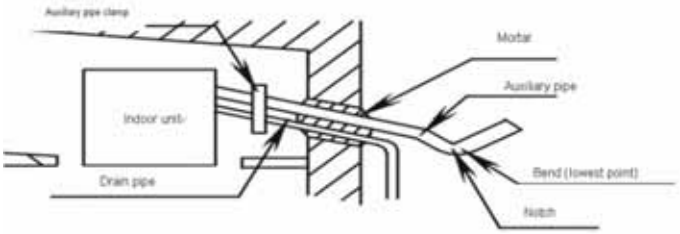
◇ The thermal insulation materials should be glass fiber thermal insulation materials with 10~20mm thickness.



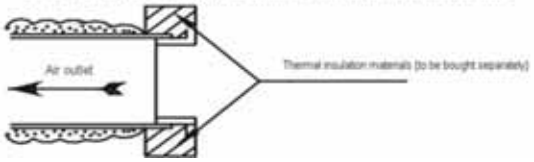
Sealing of Wall Opening

After installing auxiliary pipe and drain pipe, it's necessary to seal the gap among wall opening, Auxiliary pipe, drain pipe and electric wire with mortar or putty to prevent capacity degradation or water leakage caused by rainwater or foreign matter from ingressing into room and A/C system.

If outdoor unit is higher than indoor unit, it's necessary to bend auxiliary pipe to ensure the lowest point of auxiliary pipe is lower than wall opening and prevent rainwater flowing into room or A/C system along the tubing.



Cut a notch (for draining) on thermal insulation materials of bend

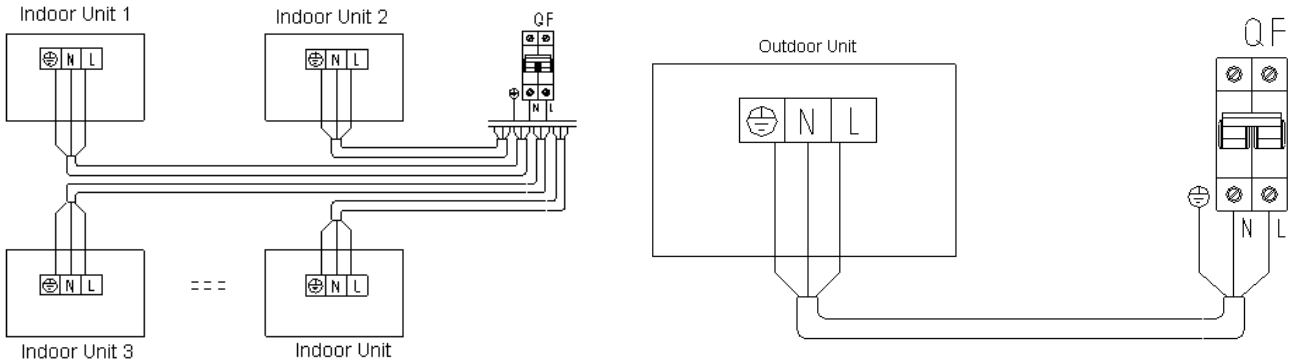


6. Electrical connection

Caution	All field wiring and components must be installed by a licensed electrician.
	Please separately design the special power of indoor units and outdoor units.
	Be sure to use a dedicated power circuit, Never use a power supply shared by another appliance. The connection fixing circuit installs all polar disconnecting device with contact gap above 3mm.
	The indoor units' power, creepage protector and manual switch connecting to the same outdoor unit must be general. All indoor units must be the same circuit, and must simultaneously on or off; otherwise, system life will seriously effect, and appear the situation not to solve.
	The communication line between indoor units and outdoor units please use 2 core shielded wiring, while don't use the multi core wiring without shielded affect, for the interference is reduced each other.
	Purchased wiring, parts and materials should be in compliance must comply with relevant local and national regulations.
	Air conditioning equipment should be grounded according to the relevant local and national electrical regulations.
	Don't switch on power supply before electrical operation. Maintenance operation should be conducted after switching off power supply.
	This is machine includes an inverter device. Connect earth and leave charge to eliminate the impact on other devices by reducing noise generated from the inverter device and to prevent leaked current from being charged in the outer hull of the product.
	Don't connect the ground wire to gas pipe, water pipe, telephone ground wires or lightning rod and other ground wires.
	Leakage protector, power switch and breaker must be installed on power supply to prevent electric shock accident.
	The specification of single-phase control board fuse is F3.15AL 250V,
	The specification of outdoor unit control board fuse is F6.3AL 250V;
	The specification of three-phase outdoor unit control board fuse is F3.15AL 250V,
	The specification of fan unit control board fuse is F10AL 250V.
	Reliable grounding is required, because electric shock will be caused by improper grounding.
	Never install a phase advancing capacitor.As this unit is equipped with an inverter ,installing a phase advancing capacitor will not only deteriorate power factor improvement effect,but also may cause capacitor abnormal heating accident due to high-frequency waves.
Notice	Electrical wiring must be done in accordance with the wiring diagrams and the description herein.
	Signal wire and power wire must be separated, and can't share the same wire. It's strictly prohibited connecting signal wire to heavy current.
	When connecting wiring and wire holder, use cable clamp to fix and make sure no exposure.
	Refrigerant piping system and wiring system of indoor and outdoor unit belongs to the different system.
	When power wire is parallel with signal wire, put wires to their own wire tube and remain proper gap
	Voltage discrepancy of power wire terminal (side of power transformer) and end voltage (side of unit) should be less than 2%. If its length could not be shortened, thicken the power wire. Voltage discrepancy between phases shall not pass 2% rated value and Current discrepancy between highest and lowest phase should be less than 3% rated value.
	Never connect the power supply in reversed phase. The unit can not operate normally in reversed phase. If you connect in inversed phase, replace two of the three phases.

6.2Electrical Wiring of indoor unit and outdoor unit (refer to the part of indoor unit and outdoor unit)

6.3 Wiring Diagram of Indoor Unit and Outdoor Unit



Note:
Power line must be properly fixed;
Each outdoor unit must be grounded;
Each indoor unit must be grounded;
Power line must be thickened when it is overlong.

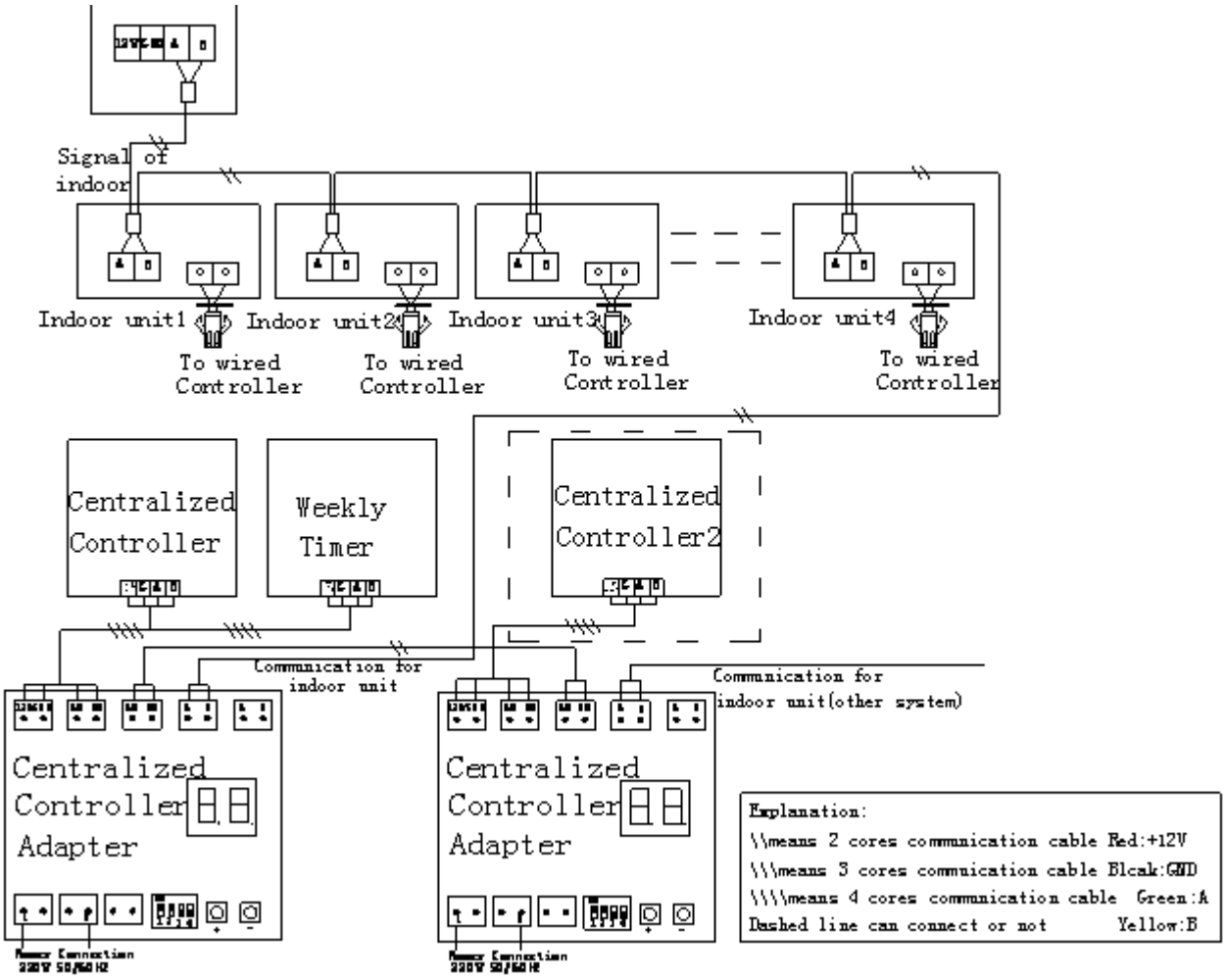
Recommended Specification for Power Line of Outdoor Unit (Separate power)

Unit Type \ Item		Power supply	Sectional area of power line (mm^2)	Length of Auxiliary line (m)	Rated current of overcurrent breaker (A)	Rated current of creepage breaker (A) Leakage current (MA) Operate time (Sec.)	Containing an area of ground wire(mm^2)
Separate power	ARV-H080/4R1A	Single-phase 220V-240V ~ 50Hz	6	20	30	30 A,30mA, < 0.1 sec.	2
	ARV-H100/4R1A		6	20	30	30 A,30mA, < 0.1 sec.	2
	ARV-H120/4R1A		10	20	40	40 A,30mA, < 0.1 sec.	2
	ARV-H140/4R1A		10	20	40	40 A,30mA, < 0.1 sec.	2
	ARV-H160/4R1A		10	20	50	50 A,30mA, < 0.1 sec.	2
Separate power	ARV-H220/5R1	3 Phase 380V-415V 50Hz	6	20	30	30A,30mA, < 0.1 sec.	2
	ARV-H280/5R1		6	20	30	30A,30mA, < 0.1 sec.	2

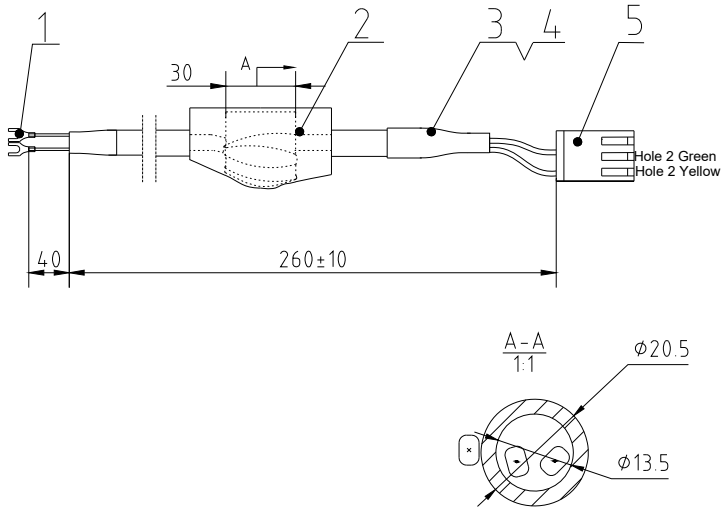
Recommended Specification for Power Line of Indoor Unit (separate power supply from outdoorunit)

Unit Type \ Item		Power supply	Sectional area of power line (mm^2)	Length of Auxiliary line (m)	Rated current of over current breaker (A)	Rated current of creepage breaker Leakage current Operate time
Separate power	<10 A	Single-phase 220-240V/ 50Hz	1.5	20	20	20 A,30mA, < 0.1 sec.
	≥10 A and <15 A		2.5	20	30	30 A,30mA, < 0.1 sec.
	≥15 A		4	20	40	40 A,30mA, < 0.1 sec.

6.4 Communication Line Connection



6.5 Specification forCommunication Line



Note:

◇ Currently, there are two length specifications as shown in the following table for indoor and outdoor communication line: L=10m and L=20m.

◇ Communication Line Specification of Indoor Unit and Wired Controller

◇ Sectional area of power cord is the minimum value, which should be enlarged to higher specification to prevent voltage drop in case of long power supply connecting line. If single double-layer wire is used, please choose Grade 1 cross-section specification and wrap with dedicated sheaths for electricians;

6.6 Wiring

1) Open electric controlled box cover of indoor unit, wire according to electrical schematic diagram on electric controlled box cover, firmly press connecting line on connecting terminal without loosening, ground wire must be connected at designated position.

2) Open cover plate of electric appliance on right of outdoor unit and wire according to electrical schematic diagram on backside of electric appliance cover plate.

3) Be noted to thread connecting line through tension disc and press firmly, wire end must be firmly pressed on connecting terminal without loosening and ground wire must be connected at designated position.

4) After wiring, properly bind connecting auxiliary pipe, connecting line and drain pipe with bandage as shown below:

Note:

1. Be noted that unit connecting line can’t be put together with thermal insulation material and should be at least 20cm away from unit connecting pipe.
2. Don’t flatten drainpipe when binding

6.7 Parameter setting (refer to the part of control system)

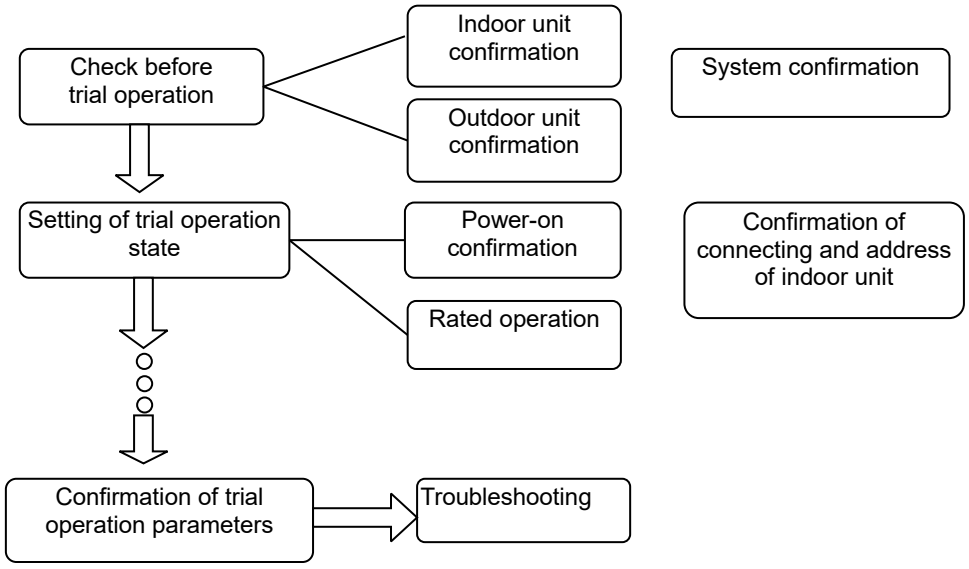
7.Commissioning

Note:

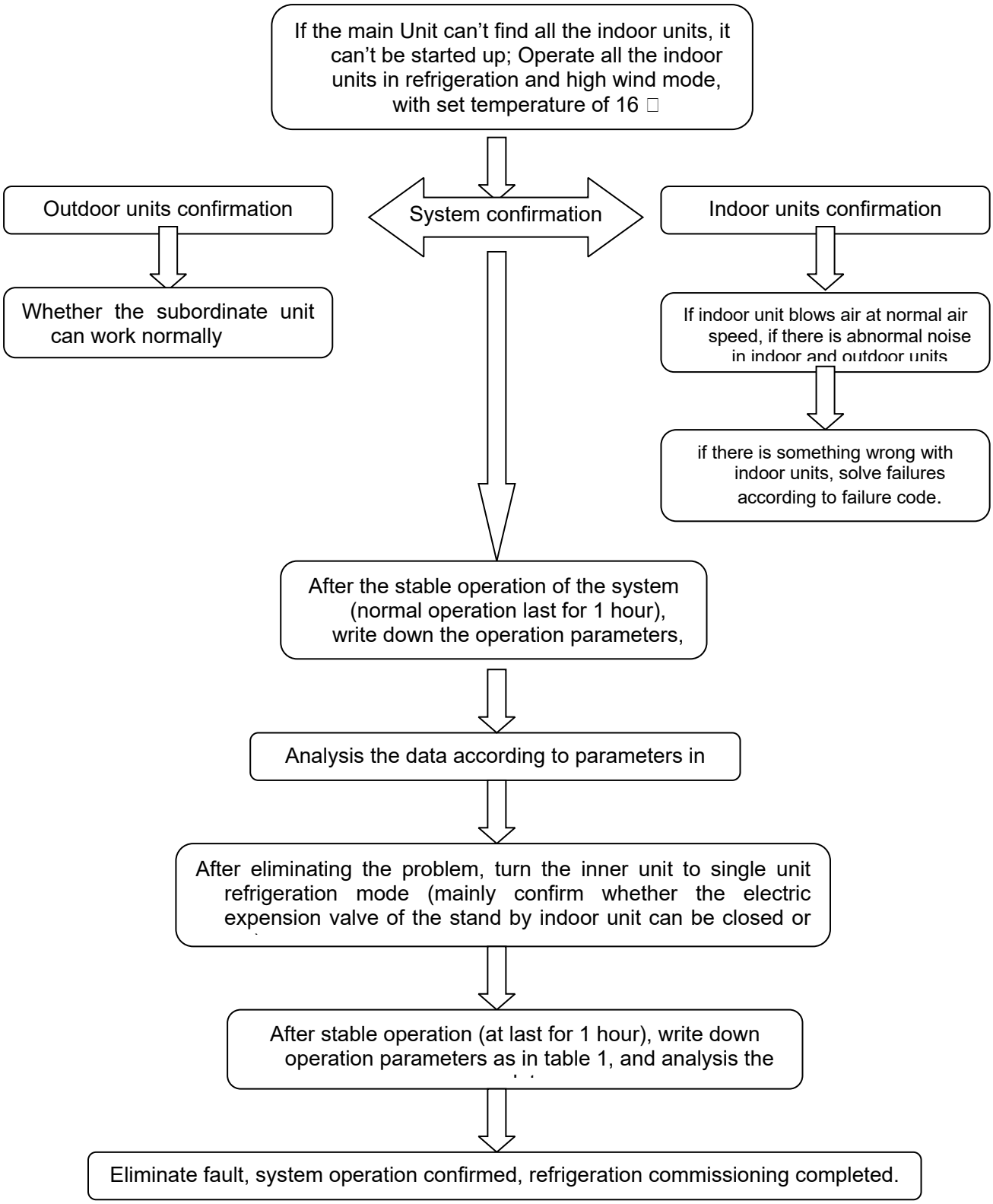
In winter, supply power 8 hours in advance for initial operation so that crankshaft case can be preheated in advance.

In winter, after main power supply is interrupted for 8 hours, conduct trial operation again only after 2.5 hours of power-on.

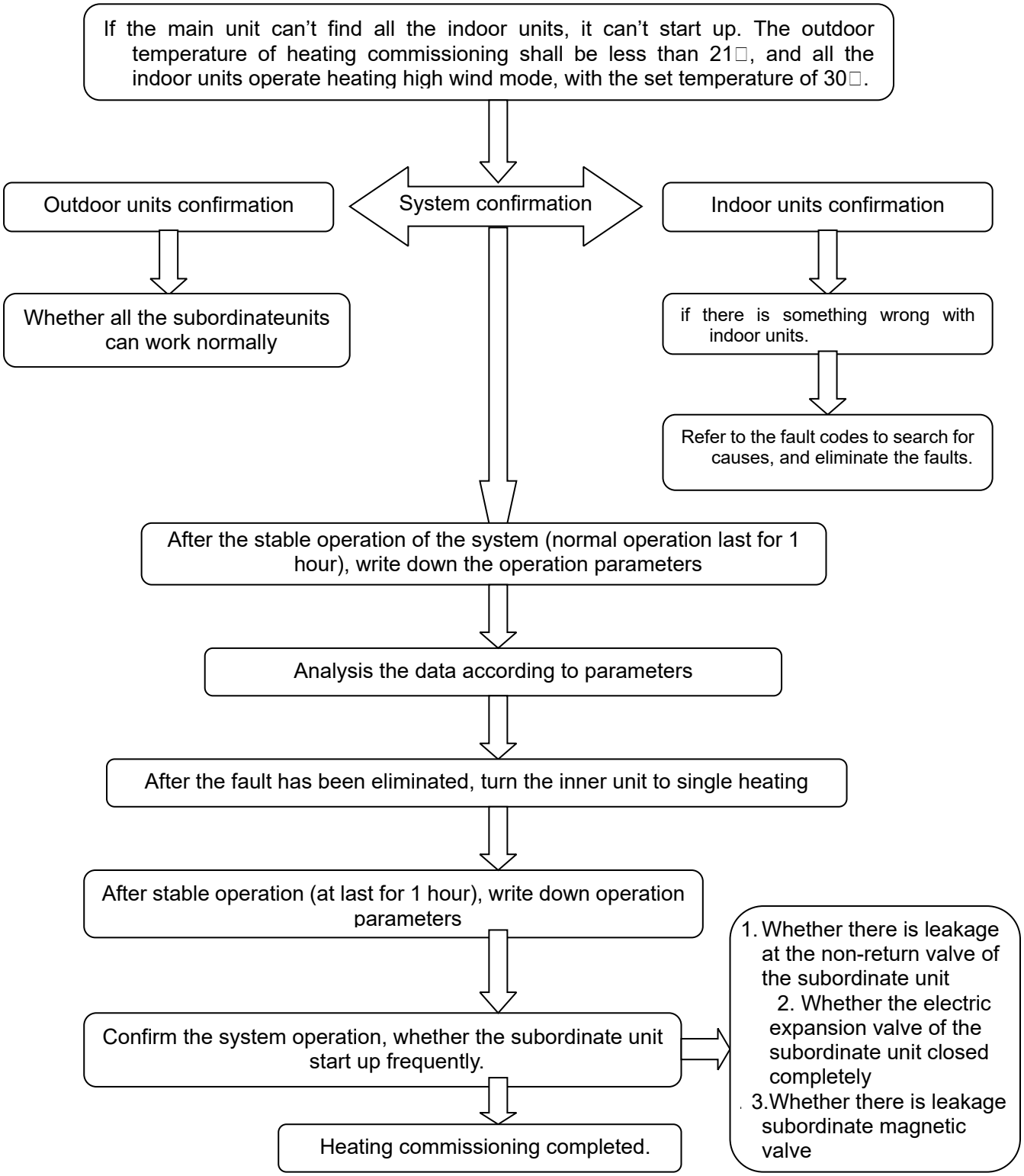
Commissioning procedure



Cooling Commissioning procedure



Heating Commissioning procedure



7.2 Check before Commissioning

It's required to confirm the state of indoor and outdoor unit before trial operation to prevent failure of trial operation caused by improper installation.

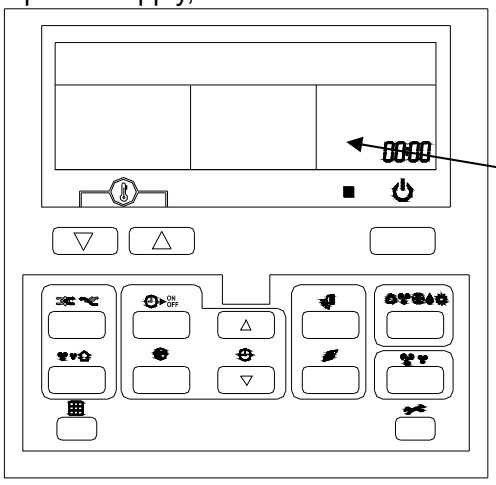
No.	Items
Indoor unit	If indoor unit is integrated, if the position of electric appliance closure complies with factory inspection and if it is firmly fixed.
	Before switching on power supply, test resistance among live wire, naught wire and ground point of power supply terminal block with 500V megohm meter. The resistance must be above 1 megohm.
	Check if ventilation duct, air return duct and air port is smooth and clean.
Outdoor unit	If dial switch of outdoor unit electric controlled panel is correctly set and if capacity dial of outdoor unit is correct.
	Before switching on power supply, test resistance among live wire, naught wire and ground point of power supply terminal block with 500V megohm meter. The resistance must be above 1 megohm.
	If panel of indoor unit is restored.
Wiring	If all power lines of outdoor unit are installed in place and meet the specification required by technical documents.
	If all power lines of indoor unit are installed in place and meet the specification required by technical documents.
	Check power lines of indoor unit to prevent the following case: partial indoor units have experienced power failure, but power supply of other indoor units and outdoor units work normally and outdoor units are still in operation in the same system. Ensure using the same power supply for indoor units of the same system where possible.
	Spacing between heavy current and weak current of power line and communication line must be over 50mm to prevent bad communication.
EXV	if shut off valve of outdoor unit has been completely opened

7.3 Example of Commissioning Based on Wired Controller

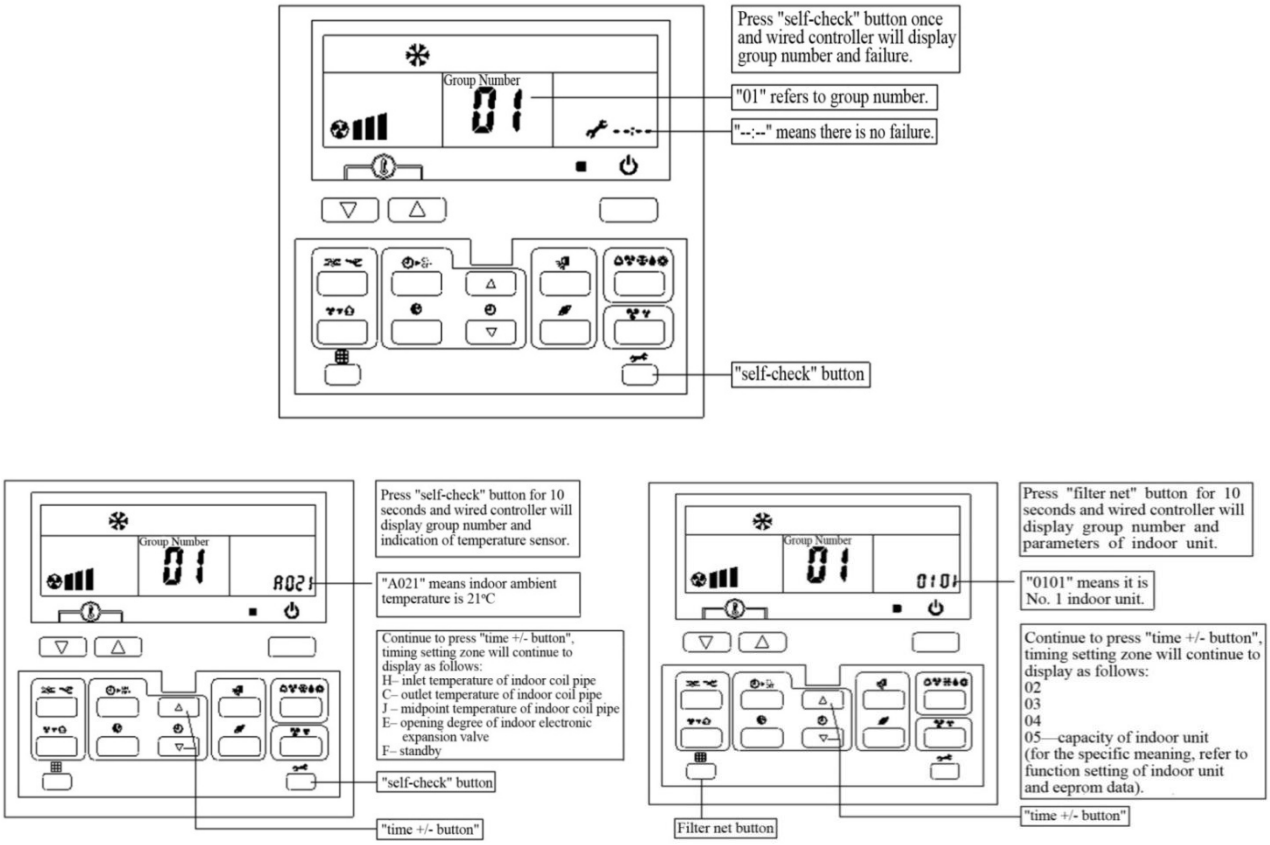
Connect one outdoor unit to four indoor units

(1) After finishing wiring of indoor and outdoor units, connect communication line of wired controller and indoor units;

(2) Switch on the power supply, check if communication of wired controller of No. 1 indoor unit is normal;



(3) Open “cooling” mode for No. 1 indoor unit; after the unit is started, check if there is something wrong with No. 1 indoor unit by using wired controller, if temperature of indoor unit sensors is normal and if parameters of indoor unit are correct;

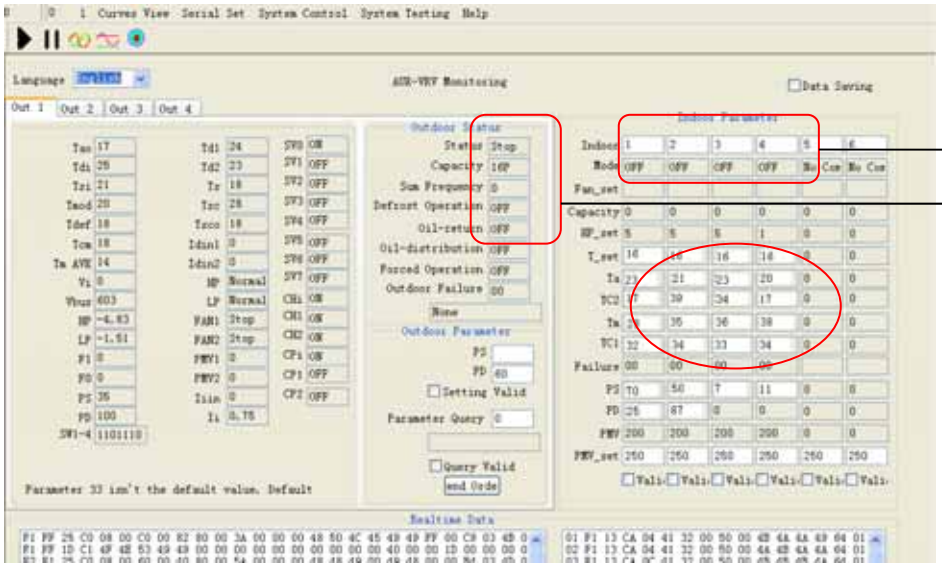


(4) Switch to “heating” mode and observe in the same way as in step (3) if parameters are normal;
(5) Set mode as “ventilation” (High fan speed) mode and observe if there is strong wind blown from indoors.
(6) Open “Swing” button with remote controller and check if air guiding strip of No. 1 indoor unit swings normally;
(7) Conduct trial operation for the other three indoor units one by one according to the above steps;
(8) Switch to “cooling” mode and operate for 1h, observe if drainage is normal;
(9) After confirming unit can operate normally, select “OFF” function to stop trial operation.

7.4 Example of Commissioning Based on MonitoringSoftware

Connect one outdoor unit to four indoor units

(1) After finishing wiring of indoor and outdoor units, connect communication line of monitoring tool and outdoor units;
(2) Switch on the power supply, open monitoring software, confirm if communication of all outdoor units and indoor units as well as address of indoor units are correct;

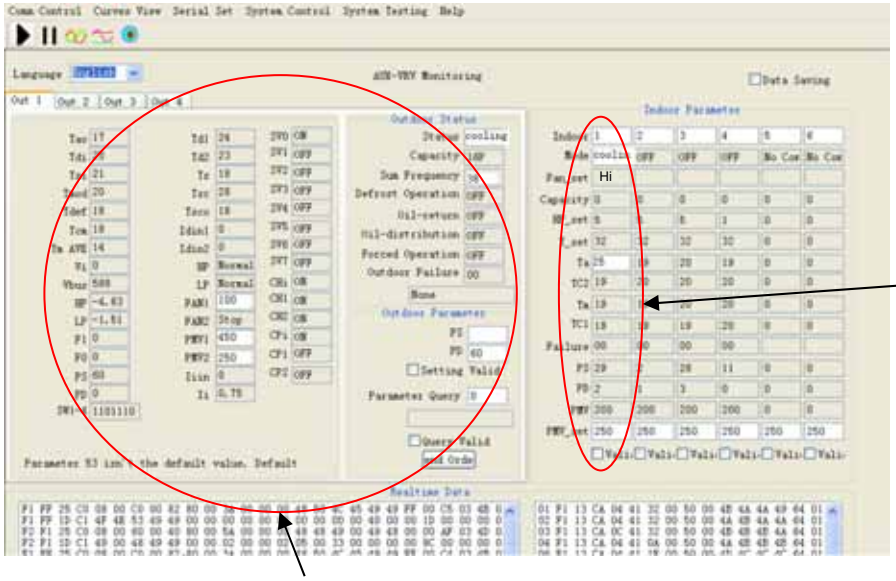


1.Indoor and outdoor units communication is normal;
2. Addresses of four

Confirmindoor unit temperature sensor：ifambient temperature is 16℃，temperature of indoor unit coil pipesensor should be

(3) Start cooling mode of indoor unit one by one. After units are started, observe indoor units according to monitoring software and actual situation.

No.	observe parameters of indoor and outdoor units	NormalState
1	if there is something wrong with indoor units	None
2	If indoor unit blows air at normal air speed.	It blows out cool air at set air speed.
3	if there is abnormal noise in indoor and outdoor units	no abnormal noise
4	if ambient temperature, inlet temperature of coil pipe, midpoint temperature of coil pipe and outlet temperature of coil pipe of indoor units are normal	Within the range of allowable error
5	if electronic expansion valve of indoor units is normal	Opening degree is available in case of startup. Expansion valve is normal and can be closed when the unit is closed.
6	if there is something wrong with outdoor units	None
7	if frequency and fan of outdoor unit are normal	it operates at automatic frequency and fan blows air.
8	if temperature sensor of outdoor unit is normal	Within the range of allowable error
9	if electronic expansion valve of outdoor units is opened	Opened, with opening degree



Open cooling mode of No. 1 indoor unit and observe th e state:

①There are cooling mode, hi gh fan speed, available ca pacity demand, correct HP matching of indoor unit;

②Ambient temperature is 25℃, so temperature of coil pipe sensor sho uld be less than 25℃;

③ there is nothing wrong with indoor unit;

④ electronic expansion valve

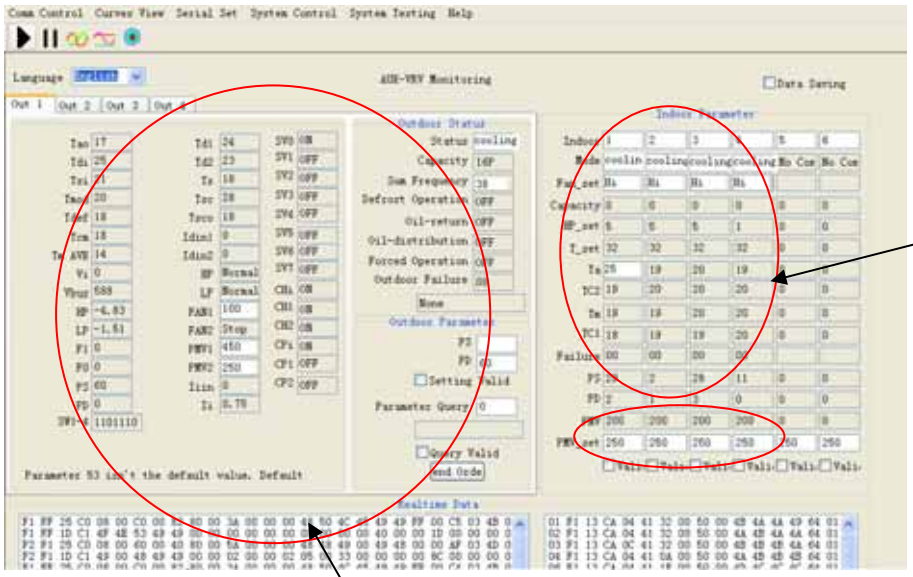
State of outdoor unit

①There are cooling state, available capacity demand, correct HP matching of outdoor unit and automatic frequency operation;

②Outdoor fan blows air and fan speed is available;

③ Temperature of outdoor sensors is within the allowable range;

④ there is nothing wrong with outdoor unit;



Open cooling mode of the other three indoor units and observe the state:

① There are cooling mode, high fan speed, available capacity demand, correct HP matching of indoor unit;

② Ambient temperature, inlet temperature, midpoint temperature and outlet temperature of coil pipe are within the allowable range;

③ there is nothing wrong with indoor unit;

④ electronic expansion valve

State of outdoor unit

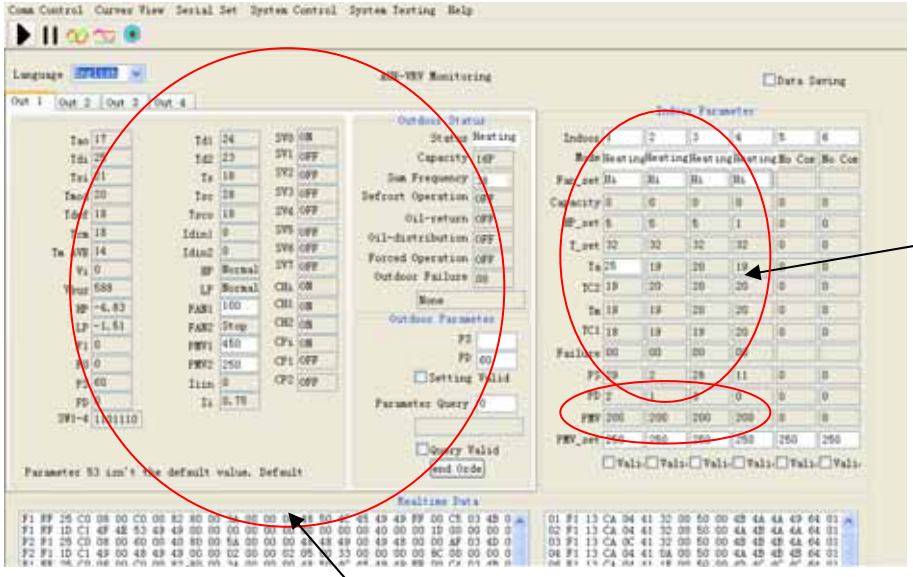
①There are cooling state, available capacity demand, correct HP matching of outdoor unit and automatic frequency operation;

②Outdoor fan blows air and fan speed is available;

③ Temperature of outdoor sensors is within the allowable range;

④ there is nothing wrong with outdoor unit;

(4) Switch to “heating” mode and observe if parameters in table 1 are normal;



State of indoor unit

①There are heating state, high fan speed, available capacity demand, correct HP matching of indoor unit;

② Ambient temperature, inlet temperature, midpoint temperature and outlet temperature of coil pipe are higher than ambient temperature and within the allowable range;

③ there is nothing wrong with indoor unit;

④electronic expansion valve of indoor unit is opened with

State of outdoor unit

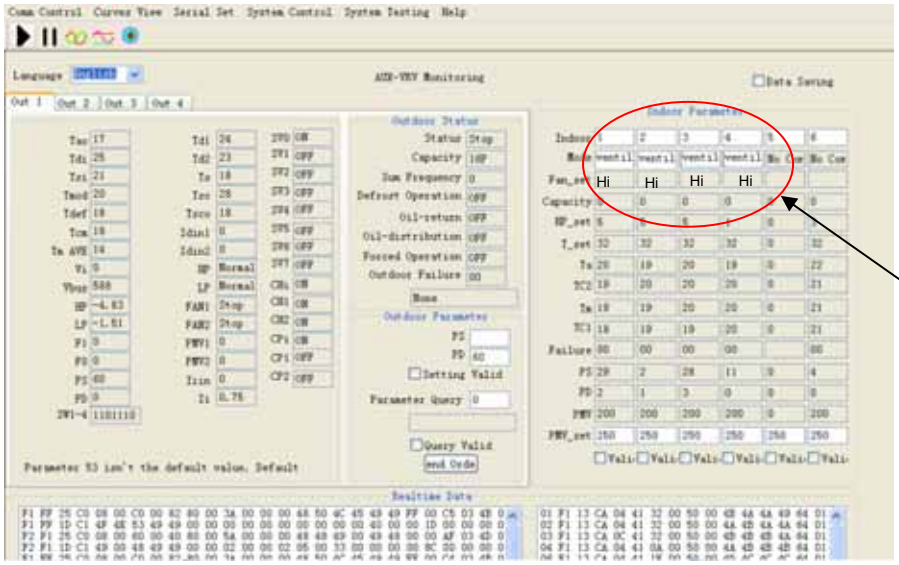
①There are heating state, available capacity demand, correct HP of outdoor unit and automatic frequency operation;

②Outdoor fan blows air;

③ Temperature of outdoor sensors is within the allowable range;

④ there is nothing wrong with outdoor unit;

(5) Set mode as “ventilation” (High fan speed) mode and observe if there is strong wind blown from indoors.



State of four indoor units:
Set the four indoor units at ventilation mode and high fan speed;

(6) Open “Swing” button with remote controller and check if air guiding strip of No. 1 indoor unit swings normally;

(7) Switch to “cooling” mode and operate for 1h, observe if drainage is normal;

(8) After confirming unit can operate normally, select “OFF” function to stop trial operation.

Part 5 Controller System

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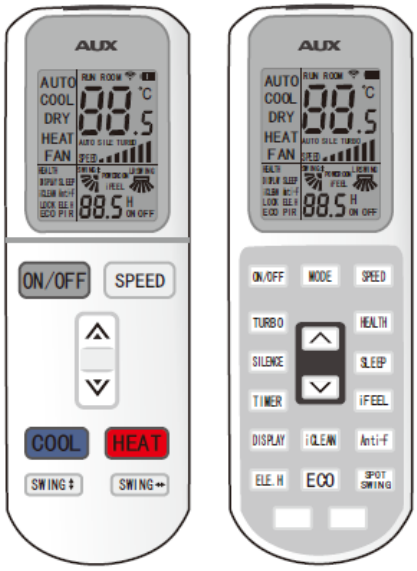
1 Controller introduction

Remote Controller			Wired Controller		Centralized Controller	Centralized Controller adapter plate
YK-H YKR-H/009E	YKR-L /300E	YKR-K /001E	XK-05A XK03-DCZ-SYE1	XK-02A (DCZ-XK-RKC1)	DCZCC-XK-SYE1	232-485 converter Gateway Computer

Control component list

Type	Model	Function description
Remote controller	YK-K (YKR-K/001E)	General wireless remote controller, none address setting function, with 2 swing, clock function, and etc.
	YK-H (YKR-H/009E)	General wireless remote controller, none address setting function, with back light display, clock function, and etc.
	YK-L (YKR-L/300E))	General wireless remote controller, big screen and LCD display, none address setting function, with back light display, clock function, and etc.
Wired controller	XK-02A (DCZ-XK-RKC1)	With a directly connecting 10m display board wire,add setting address function. For the display board of indoor unit with wiredcontrol port.Control Max. 16 indoor units.
	XK-05A (XK03-DCZ-SYE1)	With a directly connecting 10m display board wire,add setting address function. For the display board of indoor unit with wiredcontrol port.Control Max. 16 indoor units.
Centralized controller	DCZCC-XK-SYE1	With weekly timer.Control Max. 64 indoor units.Can control multiple refrigeration systems,but each refrigeration system must connect centralized controller adaptor and SMPS.
Centralized controller adaptor	Adaptor DCZ-ZJB-HCE1 SMPS HF10W-S-12	Centralized controller adaptor and switch-mode power supply.Accessories equipment of centralized controller.
Centralized Control Software		Control Max. 256 outdoor units and 4096 indoor units. Can control 64 refrigeration systems.but each refrigeration system must connect gateway.Whole control system must connect a 232-485 converter and a special computer.
Centralized Control Software Adaptor	232-485 converter Gateway Computer	Accessories equipment of centralized controller software.
Monitoring Software	AUX-ARV-monitoring	The central control monitor of outdoor unit. Can only control a refrigeration system.Monitor Max. 4 outdoor unit.Must connect USB-485 communication
Selection Software	AUX Project Express (AuxSelectionV1.08_)	Without password.Select branch pipe and copper pipe faster and more accurate.
Charge-by-household	To be continued	/
BMS system	To be continued	/

2 Remote controller



YK-L

1 “ON/OFF” button

*Press this button, the unit will start or stop, which can clear the timer or sleeping function of last time.

2 “SPEED” button

* Press this button, speed will change as below:

Low → Mid → High → Auto

3 “ ⩓ / ⩔ ” button

* When press ⩓ button, the setting temperature will be increased by 0.5℃.When press ⩔ button, the setting temperature will be decreased by 0.5℃.
* The temperature will be changed quickly by pressing the button continuously and setting temperature range is 16℃ to 32℃.

4 “COOL” button

* Press the **COOL** button, you can directly enter cooling mode.

5 “HEAT” button

* Press the **HEAT** button, you can directly enter cooling mode.
* **Note: cooling only unit has no heating function.**

6 “SWING” button (SWING ←→ and SWING ↑↓)

Press this button to start up/down (left/right) swing function, press it again, fix louver position.

* Up/down (left/right) setting is only valid in this mode; it will not affect louver position in other modes.
* Up/down (left/right) swing has memory function, it can keep primary setting when turn off then turn on or switch from other modes to primary mode.

7. “HEALTH” button

* Press this button; you can turn on or off the health function.

8. “SLEEP” button

* Press **SLEEP** button, the sleeping indicator light of indoor unit flashes on.
* The air-conditioner runs in sleeping mode for 10 hours and quit sleep mode, recover back to former mode.
* The unit will turn off automatically if the timing mode is running out of time.

* **Note: press the MODE or ON/OFF button, the remote controller clears sleeping mode away.**

9. “iFEEL” button

* Press this button to set “ **iFEEL** ” function. The LCD shows the actual room temperature when the function set and it shows the setting temperature when the function cancelled.
* This function is invalid at Fan mode.

10. “DISPLAY” button

* In display mode, press button once, switch off**“DISPLAY”**, Press**“DISPLAY”**again, LCD will show ambient & setting temperature after flashing 5s. It's convenient for users to check ambient or setting temperature at any time in darkness.

11. “iCLEAN” button

* When remote controller is at the off state, press“iCLEAN” button, the unit runs“iCLEAN”function .
* The purpose of this function is to clean dust on evaporator and dry the inside water of evaporator and to prevent the evaporator going moldy due to water deposition and boasting strange smell.
* After setting “iCLEAN” function, press “ iCLEAN ” button or “ ON/OFF “button to quit .
* The clean function will stop working after about 30 minutes running without any operation.

12. “ELE.H” button (for auxiliary electric heating IDU)

In heating mode, press this button, auxiliary electric heating will work.

13. “Anti-FUNGUS” button

* The purpose of this function is to dry the inside of the evaporator and to prevent the evaporator from going mouldy due to water deposition and thus dispersing strange smell.
* To operate the function: under“off”status of the A/C and the remote controller, press “ **Anti-UNGUS** ” button for one time, the buzzer keep beeping five times again after five times beep, indicating that this function is ready.
* To cancel the function: 1. under “OFF “status of the A/C and the remote controller, press “ **Anti-FUNGUS** ” button again.

14. “SPOT SWING” button

* Press this button, the horizontal wind direction vanes can swing automatically, when you have the desired vertical wind direction.
* Press “ **SPOT SWING** ” again, the horizontal wind direction vanes will be stopped depend on you.

15. “ECO” button

* In cooling mode, press this button, the unit will run “**ECO**” economic operation mode which takes the least power consumption.
* After running for 8h, it will automatically quit. You can press “ **ECO** ” button once again to quit .
* Note: The unit will turn off automatically if the timing mode is running out of time.

16. Two white button: Addressing set

* With the controller off, pressing the two white button simultaneously more than 10 seconds or more to enter address settting. This status displays only temperature and time parameters, temperature display area shows “Serial number" parameters, the range is 0-99. Time display area shows "Set value", the range is 0-255. The initial value is 1.
* By pressing “ ∧ / ∨ ” to set serial number + and -.Parameters within the serial number displays from 0 to 99 in circulation.

By pressing “**ECO**” and “ **iCLEAN** ” to set value number + and -.Parameters within the value number displays from 0 to 255 in circulation. After setting the two numbers, press the MODE button to confirm sending to ODU.

3 Wired Controller

3.1 XK-02A

ON/OFF button:Switch the unit ON/off.

Mode button:Select mode , push the button one time, then the operation modes will change in turn as below: Auto-Cooling-Dehumidify-Heating

Temp +/- button: Press the button can adjust temperature. Temperature adjustment range: 16~32℃
Fan button: Change the fan speed will change in turn as :Auto-Low-Medium-High-Auto

Swing button: Press this button for the first time when operation,it will start the swing function. Push the button for the second time, cancel the swing function. (The function is available matched with the concerned unit)

Health button: Press this button change to switch mode: Health mode.

Sleep button: Press the button to display sleep symbol and initiate sleep function; press the button again or press button of【Power】to cancel sleep function and sleep symbol will disappear.

Timer button:Press the button to set Timer ON/OFF, press the button then “ON” will flicker on the display screen. then press【Clock +/- button】and to adjust hour that uses 12-hour clock including“A.M.” and “P.M.” time;press the button again to complete the setting. The “OFF” setting is the same methods.

Remark: When setting functions such as mode, temperature, swing and fan speed, display screen displays all presetting parameters and remains constant; after reaching presetting time, air conditioner will automatically start as per presetting state.
After setting timing ON and OFF function, pressing button of【Timer】can cancel timing setting.

Notes:
1. Time sequence of timing ON and OFF determines the order of “ Timing ON-Timer OFF ” and “ Timer OFF- Timing ON ”. If the both are the same or either one is the same as time of current clock, it is invalid to press “ Timer ” button to confirm presetting time; after it reaches the presetting time, it will implement corresponding timing operation.
2. After setting time of timing ON and OFF, pressing “Timer” button can cancel timing.

3. Enter into time setting state of timing function; if there is no input related to time within consecutive 10 seconds, cancel the operation, return to previous state and go on with current time.
4. Default time of timer ON is 08:00 and default time of timer OFF is 18:00.

Clock +/- button: Normally display the clock set currently (display 12:00 for the first electrifying or resetting). When press the【Timer button】 button for 5 seconds, the time display zone will flicker, then press 【Clock +/- button】and to adjust hour that uses 12-hour clock including“A.M.” and “P.M.” time, press the【Timer button】again to complete the setting.

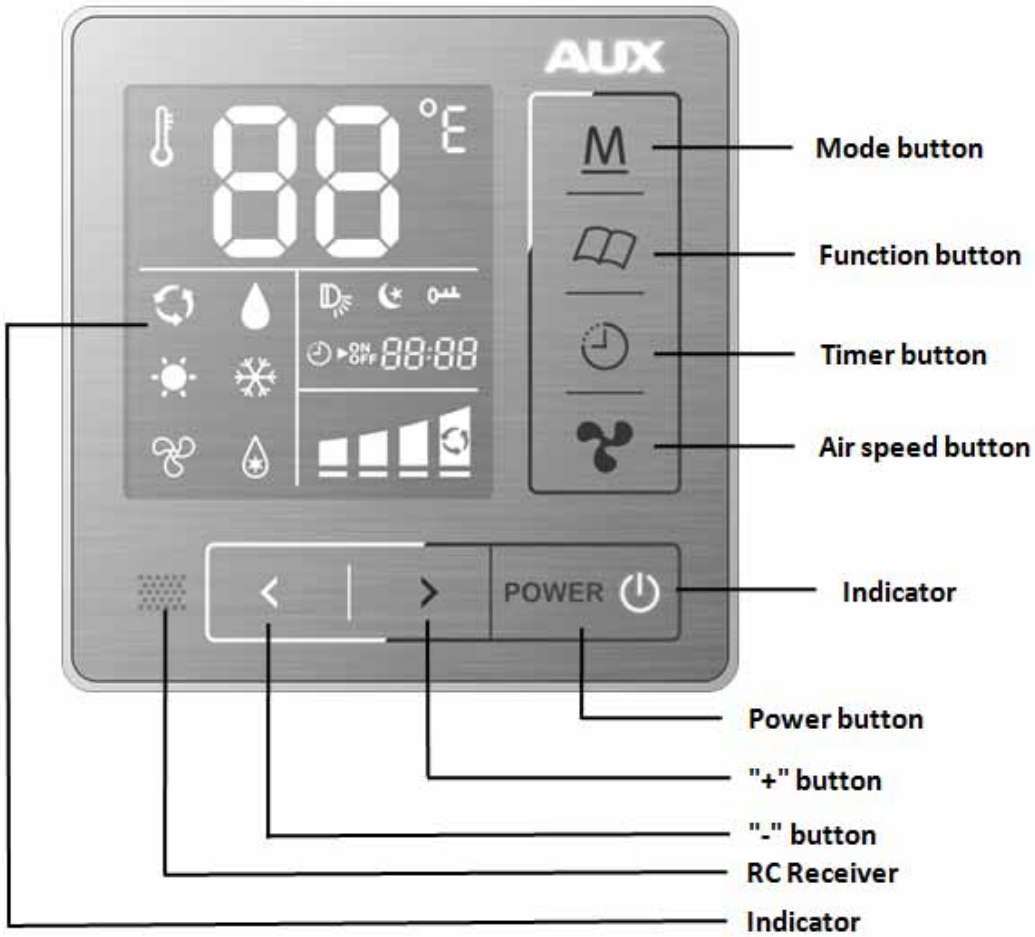
Filter Net button: When symbol of [Filter Net button] displays after wired controller receives “Filter” cleaning signal sent by indoor unit, press “Filter Net” button, “Filter Net” will go out and send filter cleaning reset signal to indoor unit; if [Filer] didn’t display, it will be ineffective in case of short pressing of filter button.

Self-check button: Press the button to display group number and failure code of this wired controller. (Failure code of wired controller for each unit displays for 3 seconds, then automatically exit after displaying failure state of the whole unit); Continuously press the button for 5 seconds, failure code will be cleared in the normal state.

Parameter setting

Parameter Query and Setting of Indoor Unit of Wired Controller please refer to “6 Parameter setting of indoor unit” of “Part 5Controller”

4 Touch screen panel wired controller XK-05A



Note: As these are touch buttons, please touch the center of each button to ensure it work effectively.

For example the "POWER" button shall be pressed on the letter "W".

◆ **Intorduction of Function and Operation**

1. "POWER" butoon- On/Off button

Press "POWER" button after connecting the power, this will turn on the operation indicator and set the air conditioner to operation mode.

Pressing "POWER" button again will turn off the operation indicator and set the air conditioner to standby mode.

2. " > " button and " < " button- plus and minus buttons

● Denpending on functions in different pages, pressing " > " or " < " buttons may be required for setting temperature, time and other parameters.

● When setting time, you may want to speed up the process by pressing and holding " > " or " < " for 2 seconds.

● If the “ > ” and “ < ” buttons are pressed simultaneously for 5 seconds or more, the control will be locked,displaying “ ”. No button operation (the receiver for remote control is still working) is possible when the control is locked.

● To unlock the control: Press “ > ” and “ < ” buttons simultaneously for 5 seconds or more, or turn on the power after turning it off (“ ” will be canceled).

Note: Each press of the “ > ” button adds the value by 1; Ezch press of the “ < ” button minus the value by 1.

3. “ ” button- Mode button

By pressing “ ”, you can switch the operation modes in the following sequence: [Auto] → [Cool]→[Dry]→[Fan]→[Heat]→[Auto]. The intial temperature of each mode is set at 24℃. There is no set temperature under VENT mode and no automatic air flow under FAN mode.

Note: For units with which some of the above modes are not available, the sequence of the remaining modes is the same as those with all modes.

4. “ ” – Functional button

● Sleep function setting

After the unit is turned on, each press of the “ ” button will activate the asleep function (the display of “ ” indicates the sleep function is activated).

5. “ ”- Timer button

● Press “ ” button once:

If the unit is turned on, the wire control will be switched to OFF time setting mode and display “ ”.

If the unit is turned off, the wire control will be switched to ON time setting mode and display “ ”.

When in time setting mode, the time column will display default time setting button (4 hours after current time). Then, readjust the set time by prssing “ > ” or “ < ” button (holding those buttons can accelerate the adjustment).

Press the “ ” button again to confirm the setting, which will stop the flicker of the time column.

Note :If no button is pressed for 10 continuous seconds, the time setting will be canceled and the timer will return to where there is no time setting.

Pressing “ ” again or “POWER” after the setting is finished will quit the time setting. The corresponding timer icon will go out and the time column will display the system time.

● By pressing and holding “ ” button for 5 seconds, you can adjust the clock according to current time (“ ”). Press the “ > ” or “ < ” to add or minus the hour with hour auto-increment(holding those buttons can accelerate the adjustment).

6. “ ” Button- Air Speed Button

By pressing “ ”, you can switch the air speeds in the following sequence: [Auto]→[Low]→[Med]→[High]→[Auto];

During forced operation, the air speed will be displayed as [Auto].

7. Indicator

It is used for indicating operation conditions.

When the unit is turned on: When the unit is in operation, the indicator will remain light; or it will start to “breathe” (become bright and dim alternatively) if there is no operation for 10 seconds.

When the unit is turned off: The indicator will go out.

8. Remote control receiver

It is used for receiving remote control signals.

When operating, aim the emitter of remote controller toward the receiver within 8m away and send operation orders.

9. Other Functions

● Swing function

Start or stop the swing function after the remote control order is received. The corresponding swing icon “ ” glows or goes out.

● Sleep function

This function can be set with “ ” (see the operation instruction of “ ” button for details) or remote controller after the unit is turned on.

● Lock function

See the operation instruction of “ > ” and “ < ” buttons.

● Defrosting or oil return

When the “ ” symbol glows, the unit is in the process of automatic defrosting or oil return. This is not a failure of the unit.

● Trouble code display

When the screen displays the interface as shown in figure 1, the unit is reporting a trouble, with the temperature column displaying directly the trouble code, based on which the user may report the trouble to the local service department for repair.

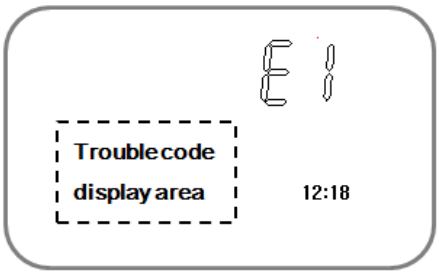


Figure 1) Trouble code display

★ Installation Instruction

1. Installation Diagram

Step 1: Disconnect the power.

Step 2: Open the upper cover by turning the slot at the lower end of the wire control using a flat head screwdriver. If there are two control panels, pull off the wires between them.

Step 3: Connect the wires. Fasten the lower cover into the internal box inside the wall according to the direction shown (with the arrow pointing up) using the screws provided in the package box.

2. Specifications:

Press buttons: touch buttons;

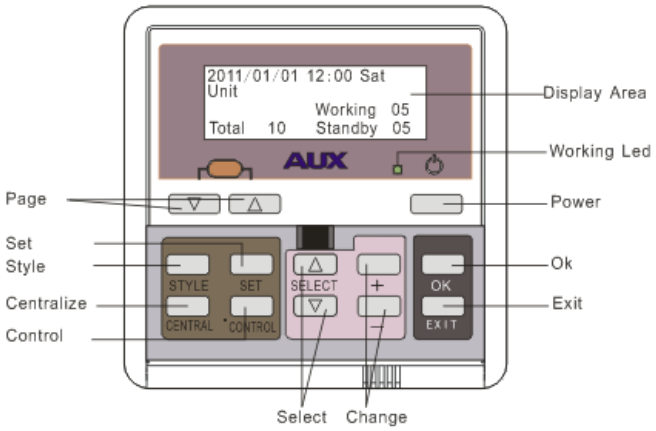
Installation hole spacing: 58~61mm;

Temperature setting: 16~32℃;

Work temperature: 0~50℃;

Overall dimension: 86*86*18mm(L×W×T)

5 Centralized Controller



(DCZCC-XK-SYE1)

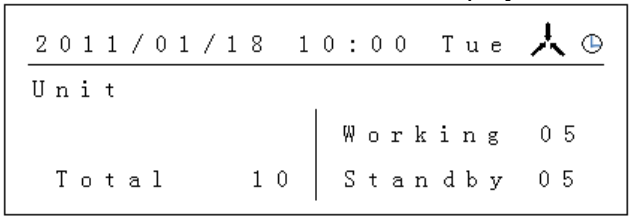
1. Centralized Controller function

1).Operation status of as many as 63 indoor units can be monitored, including wind speed, set temperature, etc.
2). Mode, air speed and temperature setting are possible for individual/zoned/all indoor units.
3). 3 operation modes are available: Last-in Preferred, Centralized Control and Lock;
4). The malfunctions of the indoor units can be monitored and saved for inquiry;
5). Timed on/off is possible by specifying the exact time or by weekly schedule.
6). Any number of centralized units can be zoned with as many as 63 indoor units set as one zone, so that units in the same zone will carry out the same operation. (As the factory default, a centralized group is considered as a zone)

2.Operating Instructions

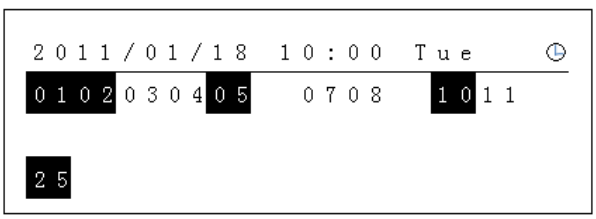
Enter main screen

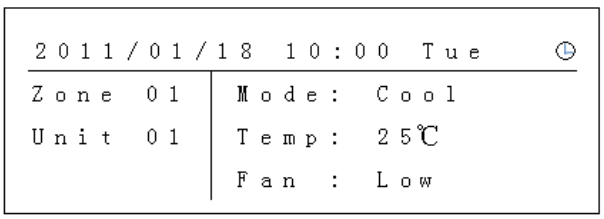
During the initialization, no key inputs are processed until the end of the preliminary communication.
After the end of the initialization, the centralized controller will display main screen a:



Main screen a Note ①

Switching between the main screen a, b and c is possible by pressing the “Style” key. The main screen a,b and c are collectively called the “the main screens”.
Main screen a: displays the statistic data for the operation of the networked units.
Main screen b: displays list of the networked units.
Main screen c: displays the function information of individual units.





Main screen b Note ①② Main screen c Note②

Note

①When among all units, one or more are turned on, the operation indicator will light, otherwise, it will remain off.

②Reverse displayed numbers indicate the units that are currently on and normally displayed ones indicate those that are off. Numbers that are not displayed indicate the units that are either not exist or communicatively failed. Press “Page” key to view the next page.

③Displays the information of the individual unit whose operation status is indicated by the operation indicator. Press “Page” key to view the information of the next unit.

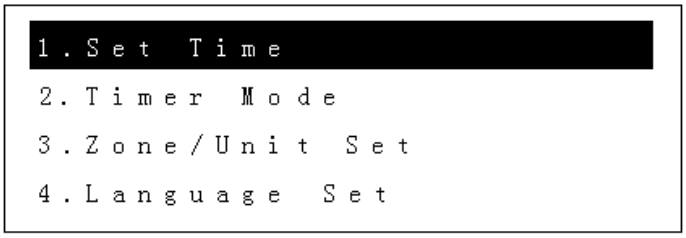
Quick on/off

◇ When the operation indicator is on under main screen a and b, pressing “Power” key will turn off all units. When the operation indicator is off, pressing “Power” key will turn on all units .

◇ Under main screen c, pressing “Power” key will only switch the operation status of the unit that is currently selected.

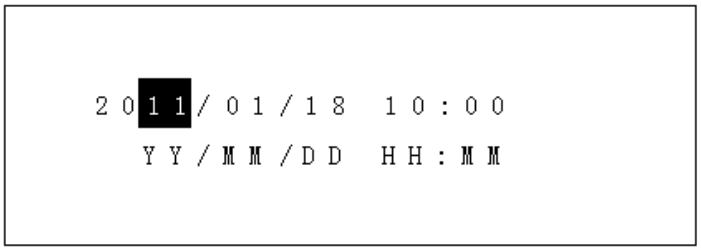
Set /change time

Under the main screens, press “Set” key to enter the page “ Set Manu”:



Page “Set Manu”

Select “Set Time” with the “Select” key , then press “Ok” to enter the page “ Time Setting ”.



Page “Time setting”

◇ Under “Time Setting” screen**,** switch between the items using the “Select” key. The reversely displayed item is the selected one . Change it using the “Change” key.

◇ Then, press “Ok” key to make the change effective and return to page “ Set Manu” .

◇ If the “Exit” key is pressed during making the change, you will return to the main screen without the change being effective.

◇ Pressing and holding the “Change” key for 2 seconds enables fast changing.

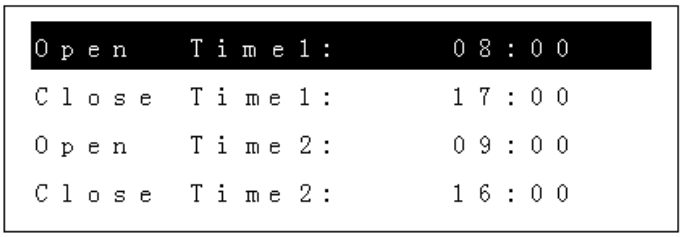
Timer Mode

◇ Under the main screen, press “Set” key to enter the page “Set Manu”.Then, select “Timer Mode” using the “Select” key. The timer mode that is currently selected will display on the right of the line. Using the “Change” key to select the desired timer mode. Then press “Ok” key to enter the corresponding page of timer mode.

◇ Under the page “Set Manu”, select “Timer Mode”, then select “No Timer” using the “Change” key to deactivate the timer function.

◇ The centralized controller support 3 timer modes: “Current”, “Daily” and “Weekly”. Only one timer mode can be activated at the same time.

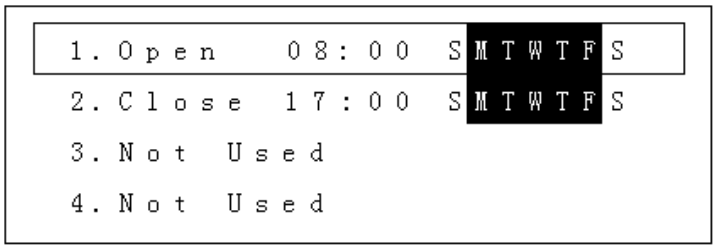
a.Current/Daily Timing



Current/Daily Timing

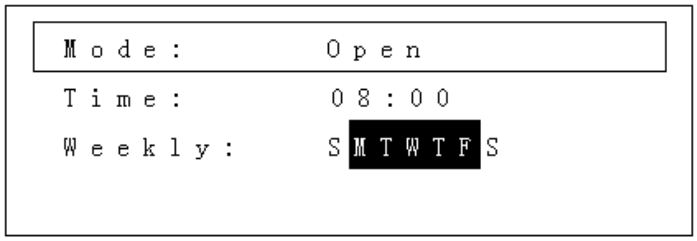
◇ Current and daily timer mode each has 4 timers with 2 designated for open and the other 2 for close.
◇ Switch between the timers using the “Select” key. The reversely displayed item is the currently selected one.
◇ Change the time of it using “Change” key. Pressing and holding the “Change” key for 2 seconds enables fast changing.
◇ All timers work at same time.
◇ Current timer works only for the current day , with the timer mode automatically switched to “No Timer”. The Daily timer always works.
◇ If two timers are of the same time but different types , the one that is set to close will be executed.
◇ If it is set to open and close the system at the same time, the close order will be executed.
◇ The timers are executed by time order. If the current status of the current unit is the same as the target status set by the timer, the timer will be automatically ignored.
◇ As exemplified in the above figure, the system is set to open at 8:00AM and close at 16:00 PM.

b.Weekly Timer



The list of weekly timers

◇ There are 8 weekly timers and the one with the frame shown is currently selected.
◇ “Open” and “Close” indicate the related timer is an open and close timer, respectively.“Not Used” indicates that the timer is invalid.“SMTWTFS” indicate the day selection with each letter representing Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, respectively. The reversely displayed letter(s) indicates when the timer will work while the normally displayed one(s) indicates when it won’t work.
◇ As exemplified timer 1 is currently selected, timer 1 and timer 2 are activated, other timers are invalid. Thus the timing is as follows: The system is set to open at 8:00 AM and close at 17:00 PM from Monday to Friday each week. No operation on Saturday and Sunday.
◇ Switch between timer 1-8 using “select” key , with the selected one shown with frame. Now press “Ok” key to enter the change page of the corresponding timer and make desired settings.

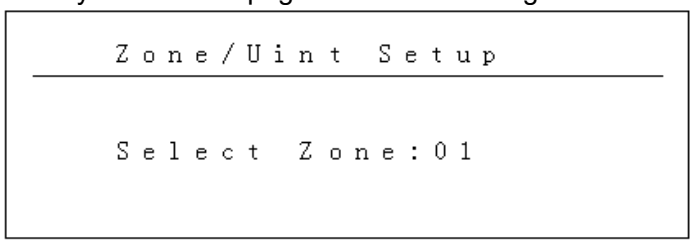


Change weekly timing

◇ The 3 lines are “Mode”, “Time” and “Weekly” respectively.
◇ The line with the frame shown is currently selected.
◇ The “Mode” line is to set whether the timer is activated or not and whether it is set to open or close the unit.
◇ The “Time” line is to set the work time of the timer.
◇ The “Weekly” line is to set the days on which the timer is activated with those days indicated reversely.
◇ Switch between the selected item using “Select” key , with the selected one shown with frame.
◇ Press “Change” key to make desired changes.
◇ After making all the changes, press “Exit” key to return to the previous screen. The setting is now finished.
◇ The operation of the other weekly timers are the same as the above. After making the changes, press “Exit” key to return to the main screen.

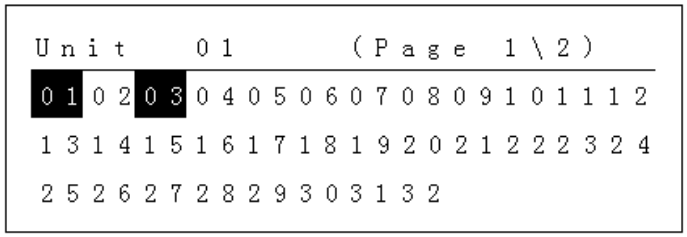
Zone/Unit Set

Under the main screen, press “Set” key to enter the page “Set Manu”. Then, select “Zone/Unit Set” using the “Select” key. Press “Ok” key to enter the page “Zone/Unit setting”.



Page “Zone/Unit setting”

Select the number of the zone to set using the “Select” key. Press the “Ok” key to distribute the members.



Page “Member Distribution”

◇ Under the page “Member Distribution”, select among the different unit numbers. The selected one will flash and the corresponding unit number will be displayed in the first line. Using the “Change” key to decide whether to join the current zone. The reversely displayed numbers belong to the current zone while the normally displayed ones do not belong to the current zone.
◇ Press “Page” keys to display other pages.
◇ After all members are set , press “Ok” key to finish the setting of the current zone.
◇ To set other zones, select the corresponding numbers and repeat the above operation.

Language Set

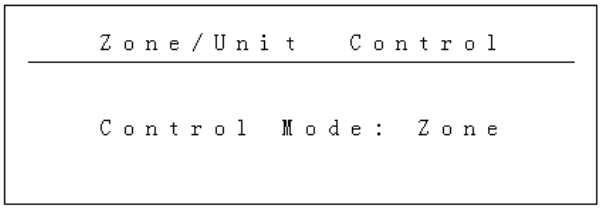
Under the main screen, press “Set” key to enter the page “Set Manu”**.** Then, select “Language Set” using the “Select” key. Press “Ok” key to enter the page “Language Setting”.

Page “Language Setting”

Under page “Language Setting”, press “Change” key to select the desired language : Chinese or English. After selecting the desired language, press “Ok” key to activate that language.

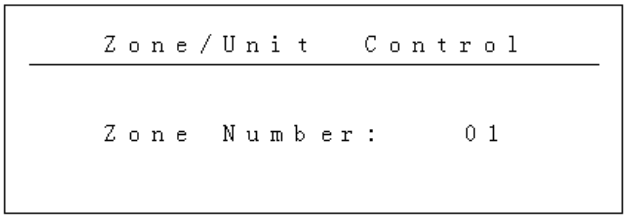
Zoned Control

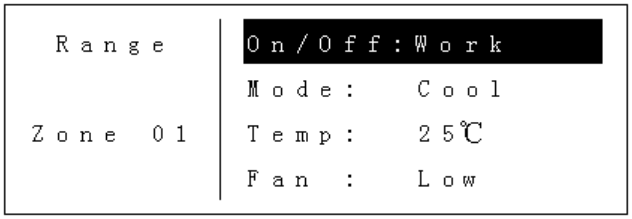
Under the main screens, press “Control” key to enter the page “ Set Manu a”:



Set Manu a

Under the page “Set Manu a”, press “Change” key to select among the 3 control modes: “All”, “Zone” and “Unit”. After selecting the desired mode, press “Ok” key to enter the submenu.
Pressing “All” mode will directly open the page “Control Setting” and others will open the page “Set Manu b”. Select the target code and press “Ok” to enter the page “Control Setting”.





In the page “Control Setting”, the items displayed on the left are the control targets and those displayed on the right are the specific controls. Press “Select” key to switch between the different items and change the controls using “Change” key. After changing the setting, press “Ok” key to make the change effective.

Centralized Control and Lock Functions

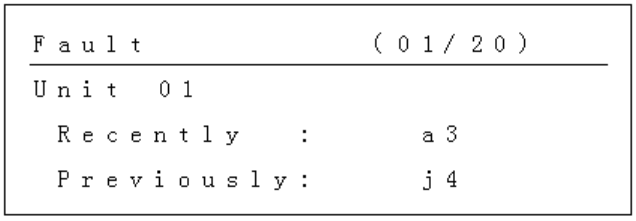
Under the main screen, press “Centralize” key to switch between the regular, centralized and lock modes. The upper right icon on the main screen indicates centralize status.
The icon is not displayed in the regular mode and the indoor unit is controlled in “Last-in Preferred” mode.

In the centralized mode, a icon will display with the indoor unit run under the settings of the centralized controller, but the remote control and line control work for the open and close of the indoor unit.

In the lock mode, a icon will display with the operation status of the centralized controller remain unchanged. The remote control and the line control do not work for the open and close of the indoor unit.

Failure Inquiry Function

Under the main screens, press and hold the “Style” key to enter the “Historical Failures Inquiry” screen.



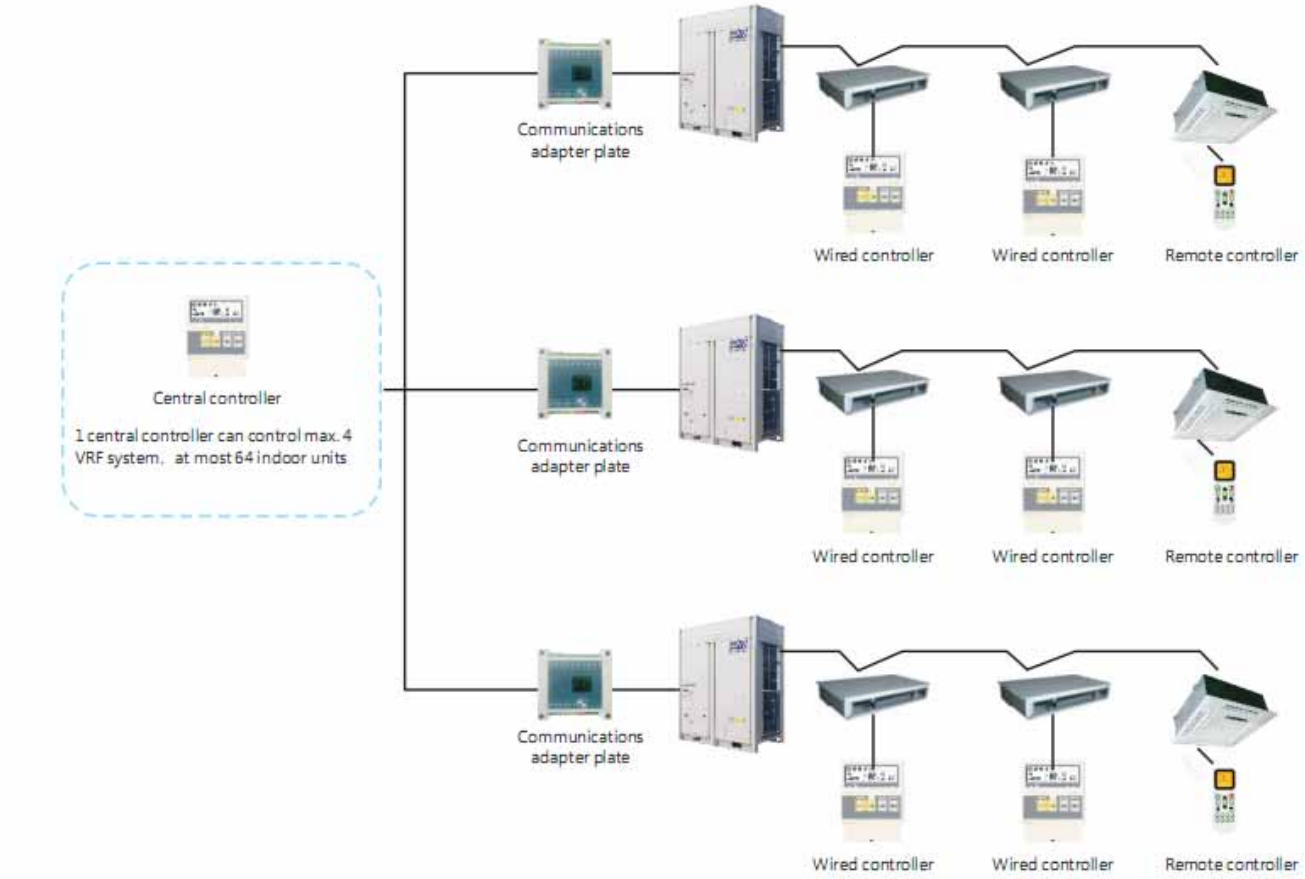
Historical Failure Inquiries

Under the page “Historical Failure Inquiry”, press “Select” key to switch between the historical failures of each unit, with units that have no historical failures
For the meaning of the specific trouble code, refer to the technical manual of the unit.

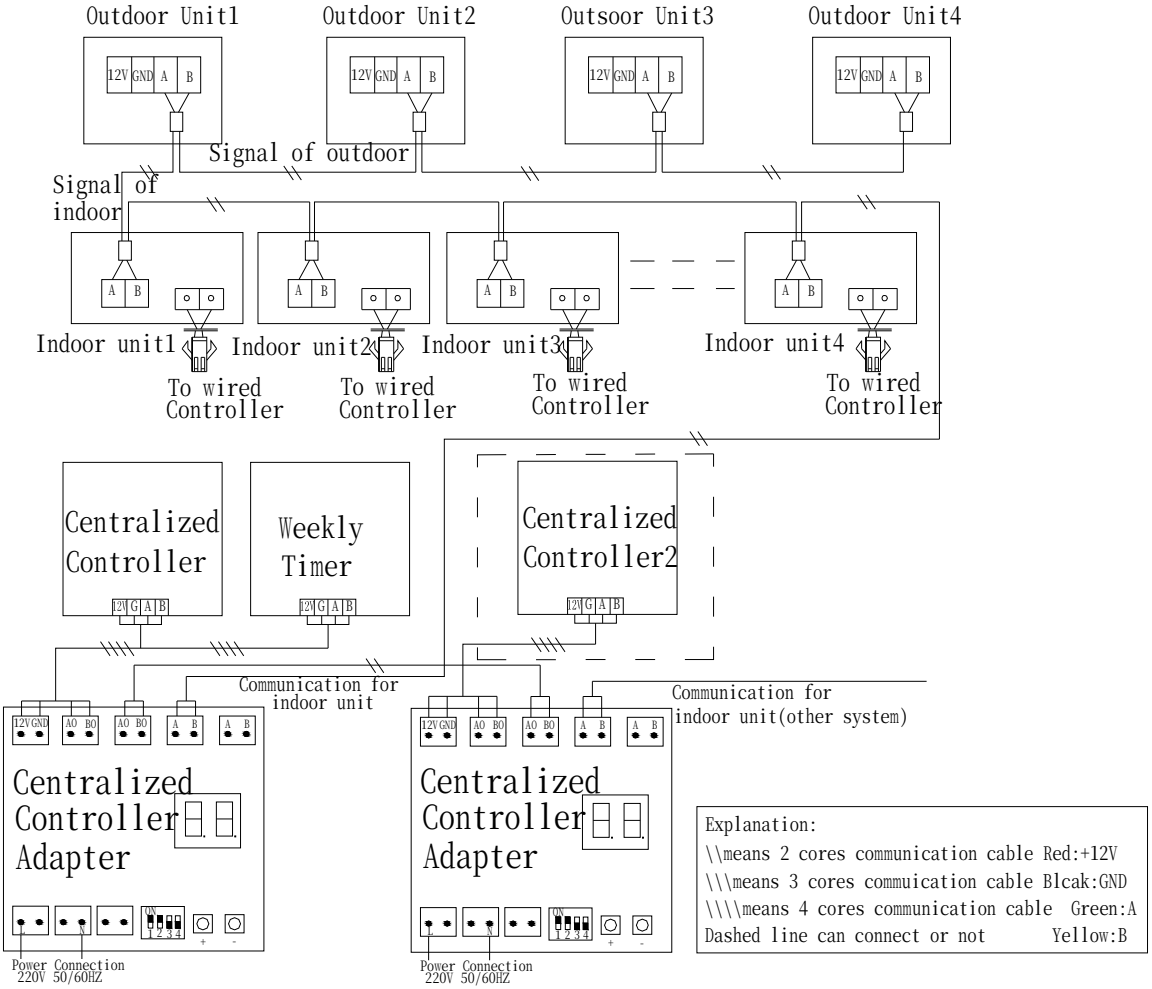
Accessory : Centralized Controller Function

Function : Centralized controller adaptor is used with centralized controller together.

Wiring Diagram



Wiring Diagram among Adapter Plate, Centralized Controller, Weekly Timer and Monitor



(1) Connect to power supply of 220V.

(2) Connect B and A with communication line of indoor unit;

(3) Connect 12V, GND, BO and AO with communication line of centralized controller;

(4) Connect BO and AO with communication line of the others adapters.

(5) Set dip switch of adapter as ON,ON,ON OFF.

6 Centralized Controller Software

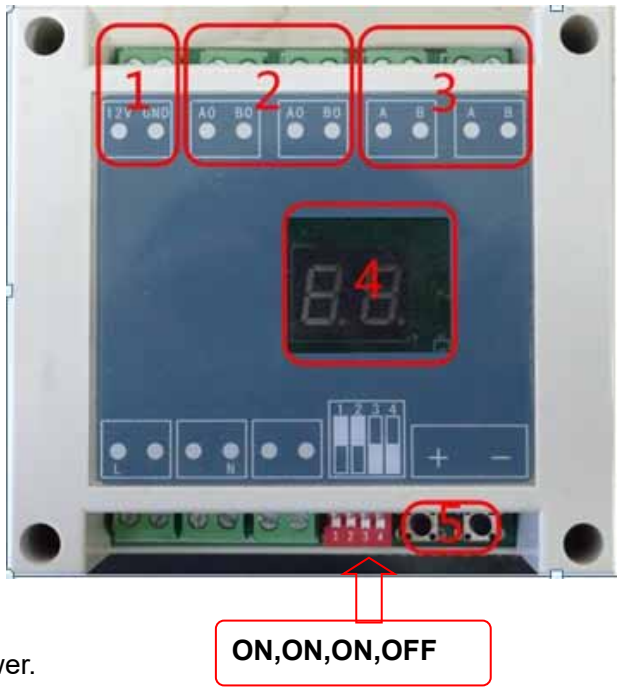
6 Centralized Controller

6.1 Centralized Controller Function

- 1024 indoor units maximum ;
- individual control、zone control、allover control, lock function;
- weekly schedule setting, 3 periods of time could be set.

6.2 Centralized controller adaptor and configuration instruction

6.2.1 Centralized controller adaptor



1) 12V DC input

Input 12V DC power.

2) RS485 interface

Connect ARV IDU and OUD 485 bus.

3) RS485 interface on the touch screen side

Each centralized controller adaptor connected hand in hand and linked into touch screen side's 485 interface.

4) Nixie tube display

Displays address of each centralized controller adaptor.

5) Address Setting Button

Set centralized controller adaptor's address.

6) L-N interface

When weak electric interface do not exist, it could be supplied with strong electricity which specification is 220V, 50/60HZ.

7) Dial switch

Choose centralized controller adaptor. Different functions with different dial-codes. Dial switch is used to match centralized controller system software here with the option of 1-OFF, 2-OFF, 3-ON, 4-ON.

6.2.2 Centralized controller adaptor configuration

Centralized controller adaptor configuration is achieved by “Address Setting Button”. Number of centralized controller adaptors is corresponding with the ARV systems. For example, 10 ARV systems are installed in a project, then 10 centralized controller adaptors must be set with the address number from 1~10;

Operating steps of centralized controller adaptor address setting:

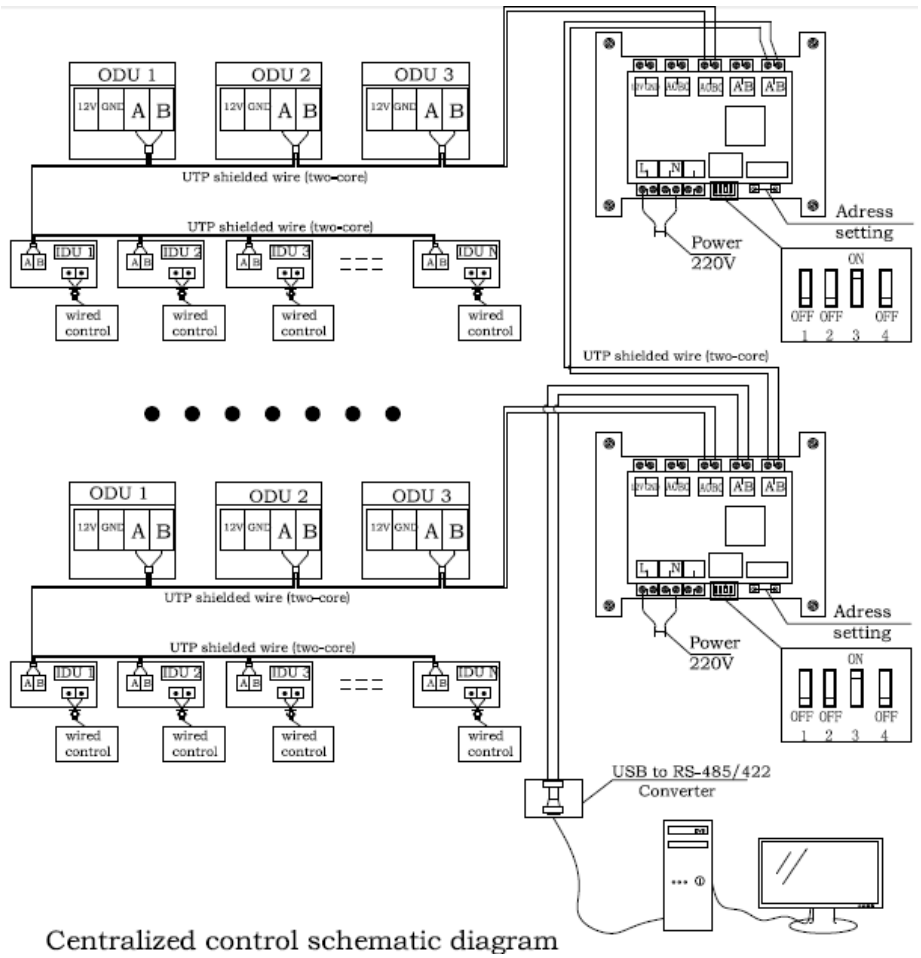
Step 1: Press “+” or “-” button, lightening digital tube;

Step 2: Press “+” and “-” buttons at the same time and holding for 5 seconds, digital tube flashes, enter into address setting;

Step 3: Press “+” button, address valve adds by 1; Press “-” button, address valve minus by 1;

Step 4: When the appropriate address is set, release two buttons, holding for 5 seconds, digital tube displays normally and the address is set successfully.

6.3 Centralized controller software Wiring Diagram



Centralized control schematic diagram

6.4 **Centralized controller software configuration**

Before the usage of centralized controller software, it must be assured that all wiring working are done and hardware equipments are installed, and configurations below are done:

1) PC configuration requirement;

2) Centralized controller software's installed and registered;

3) Log in centralized controller software and configures administrator's message;

4) Configure self-definition zone message of centralized controller software;

5) Configure IDU and ODU message of centralized controller software.

When all above message are configured, the software could be used.

6.4.1 PC configuration requirement of centralized controller software

Processor: Intel I3 32 bites or 64 bites

CPU: 2Ghz;

Hardware: 500GB;

Operating system: Windows 7

Besides, USB 485 transformer must be confirmed to be installed at last. If the transformer is not installed, software could not display IDU and ODU message normally.

Notice:

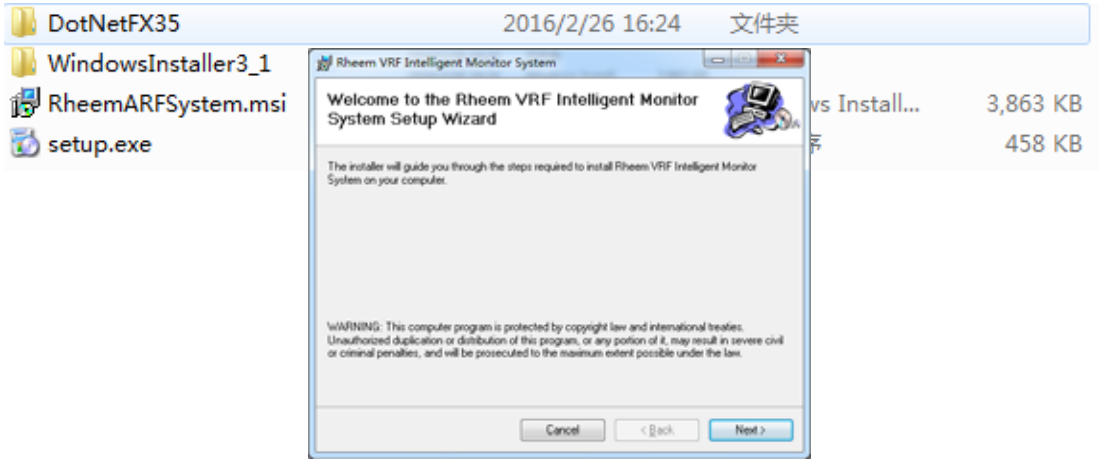
To ensure the software can maintain working, PC could not enter into dormancy or standby mode. Thus operating system should be set into the mode that can't enter into dormancy.

6.4.2 Installation and register of centralized controller software

- **Checking of centralized controller software document:**

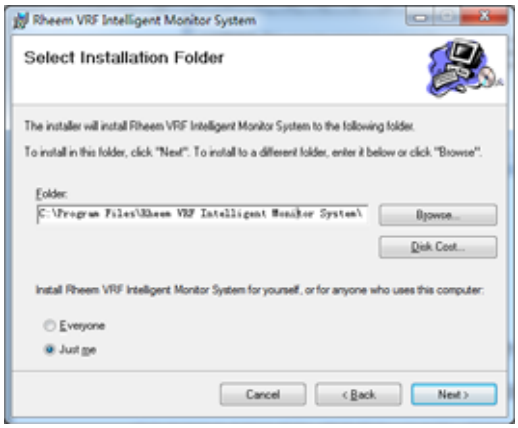
  Before installation of centralized controller software, please confirm the installation documents are complete and correct. Centralized controller software installation documents are shown as below:

- **Installation of centralized controller software**

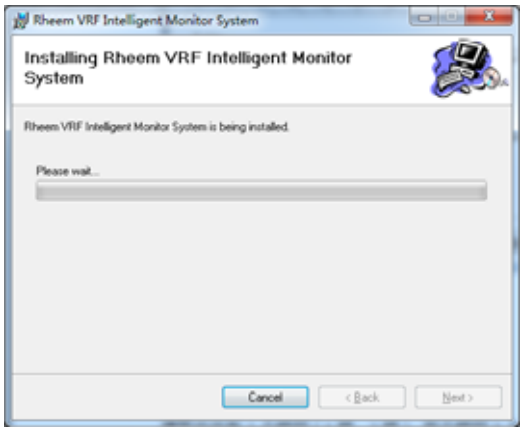


1) Click “setup.exe”, enter into installation interface;

2) Click “Next”, choose installation path;



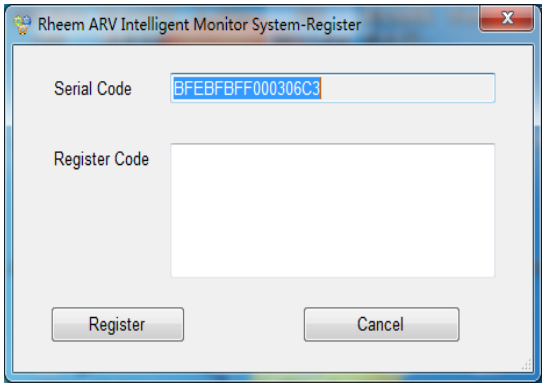
3) Click “Next”, enter into installation;



4) Rheem icon will be shown on desk after installation

- **Register of centralized controller software**

A software register interface will pop-up at the first time of using, shown as below:



Customer needs to contact and provide Serial Code message to the manufacture. A Register Code would be generated according to the Serial Code message. Then the customer only needs to copy the message into Register Code column and click “Register” to finish the register.

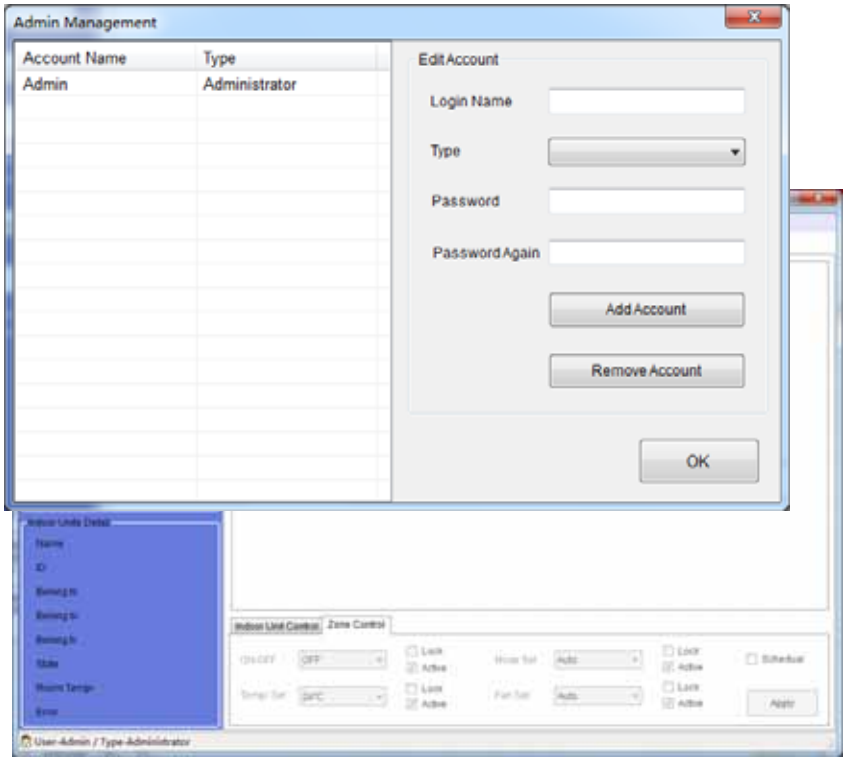
The customer could use the software normally after finishing register.

6.4.3 Login and administrator configuration of centralized controller software

Login interface of centralized controller software is shown as below, initial password is “Admin”, notice case-sensitivity.

After login, a main interface would be shown as below:

If customer wants to change the login configurations, clicking “Management-User-Mange” in the menu column, entering into admin configuration interface which is shown as below:



If the customer wants to add a new account, message such as Login Name, Type, Password, Password Again etc. should be filled out, and then click “Add Account” to finish the new admin register.

If the customer wants to delete an account, selects the account and clicks “Remove Account” to finish deleting operating.

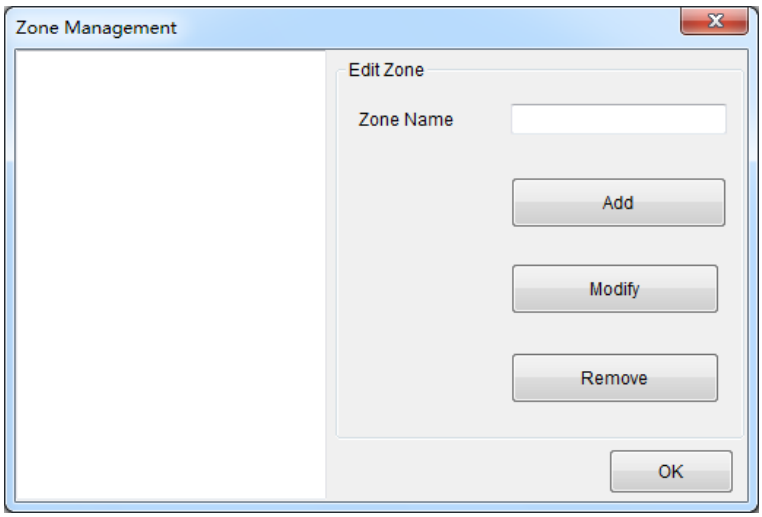
6.4.4 Self definition zone configuration of centralized controller software

Self definition zone is used to manage IDUs in groups, and realize each IDU zone’s centralized control and weekly timer control functions.

Self definition zone is usually divided by room unit. For example, family rooms can be divided into living room, bed room, study room and bath room etc. which could be added into Self definition zone.

- **Enter into Zone Manage interface**

Select “Management-Zone Manage” in main interface’s menu column and enter into manage interface:



- **Add Zone message**

  Input “Zone Name” message and click “Add” button.

- **Modify Zone message**

  Select the zone standing in modification and input the modified name, then click “Modify” button to finish the modification.

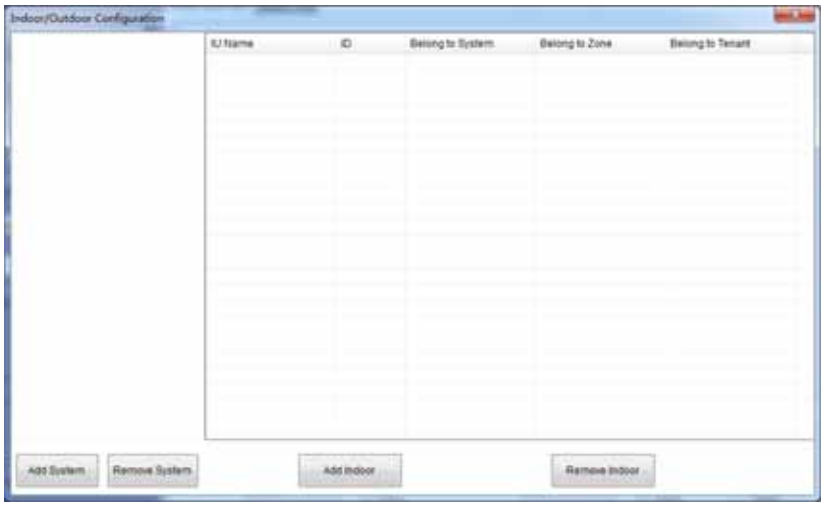
- **Delete Zone message**

  Select the zone standing in deleting and click “Remove” button.

6.4.5 IDU and ODU messages configuration of centralized controller software

Click “Management-ARV Manage” in the main interface’s menu column, enter into IDU and ODU message configuration interface.

IDU and ODU configuration interface is shown as below:



- **Add/Delete system**

  Click “Add System” button to operate. Interface is shown as below:

System 01~04 is corresponding with the set address in ARV adaptor.

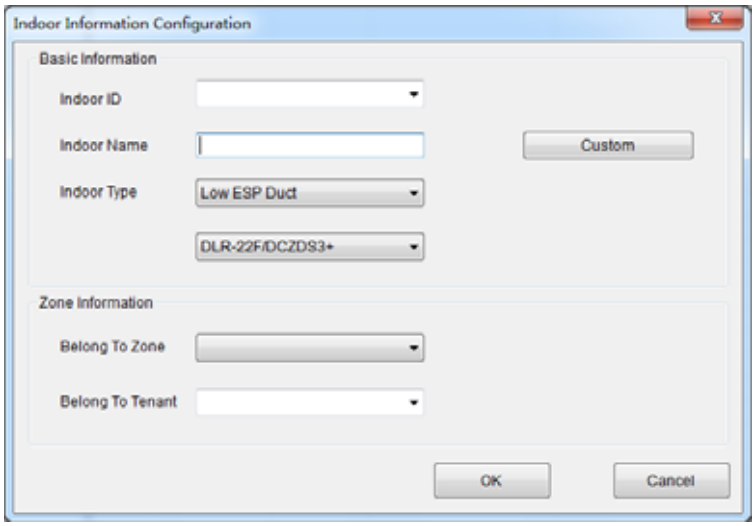
Select the system message standing in deleting and click “Remove System” to finish delete operating.

Notice:

When delete ODU, all including IDU would be deleted. So be carefully when processing this operating.

- **Add/Modify/Delete system**

Select IDU system standing in adding and click “Add Indoor” button. The IDU message configuration interface is shown as below:



In this interface,

Indoor ID corresponds to IDU address, ranges from 1 to 64. The selected address must be corresponded to the actual IDU address.

A indoor name would be generated automatically after selecting an Indoor ID. It also could be definite by customer.

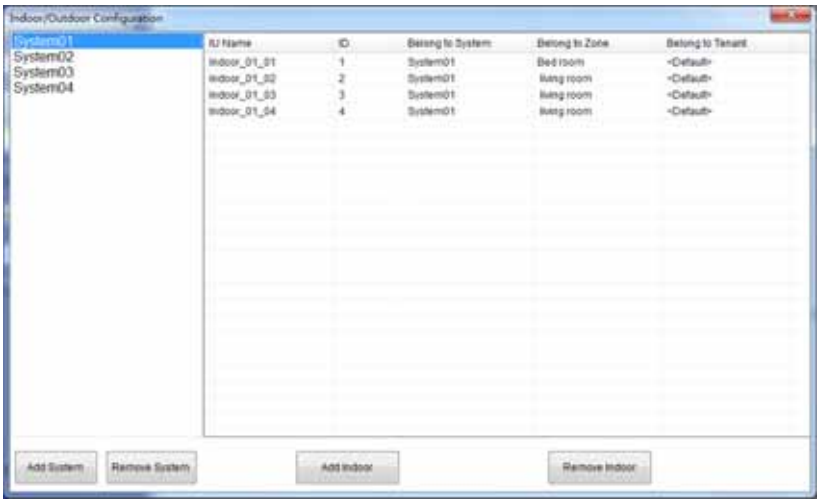
“Indoor Type” is used to select IDU mode which is not too much useful in centralized control. Customer could choose any one.

“Belong To Zone” is used to select the zone message that the selected IDU belongs to. Customer needs to create Zone message in Zone manage.

"Belong To Tenant" is used to select the Tenant message that the selected IDU belongs to. Customer only needs to select <default> message in centralized control system.

When the above message are fulfilled, click "OK" button to finish adding IDU.

The IDU message will be shown as below:



If IDU message need to be modified, select the IDU (shown as below) and double click to open IDU message editing interface:

In editing interface, customer could modify any information except the selected IDU information.

If IDU information needs to be deleted, then click "Remove Indoor" button.

6.5 Use of centralized control software

Use of centralized control software includes below contents:

1) Introductions of each module in main interface;

2) Selection of Port;

3) Inquiring function of IDU divide by system;

4) Inquiring function of IDU Zone;

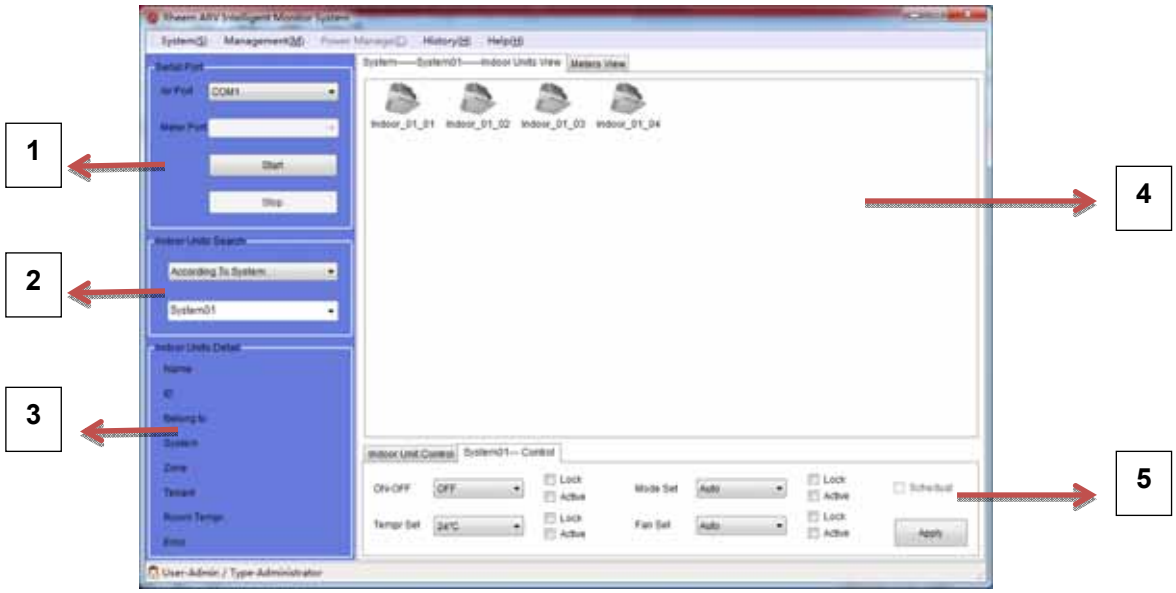
5) Individual control、System control of IDU;

6) Individual control、Zone control、Weekly timer control of IDU.

The above functions include all utilization function of the centralized control software.

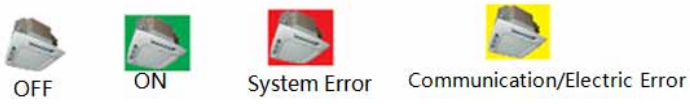
6.5.1 Introductions of each module in main interface

The main interface is shown as below after configuration is done:



The main interface is divided into five regions:

1. Serial port select region. Serial port is chosen and communication function is turned on/off;
2. IDU inquiring mode select region. IDU states could be inquired according to “System” and “Zone” in two different classifications and control of IDU in each region is realized.
3. IDU detail information display region. Detail information of selected IDU such as IDU address、zone information、system information、indoor temperature、error information etc., could be inquired.
4. Displays IDU included in selected Zone or System. All IDU information include in selected Zone or

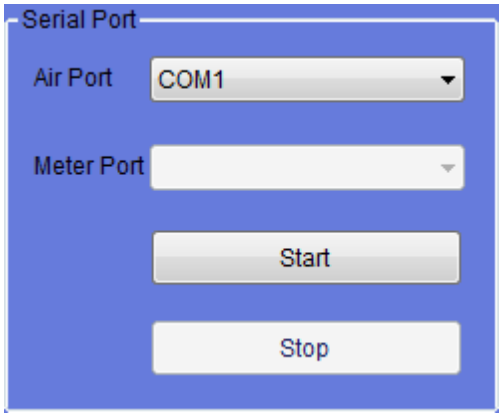


System could be shown in this region and displayed in four IDU states.

5. IDU control information region. Single IDU control、 System overall unit control、Zone control and Weekly timer control could be realized in this region.

6.5.2Port selection and communication of centralized controller software

Centralized controller software port selection interface is shown as below:

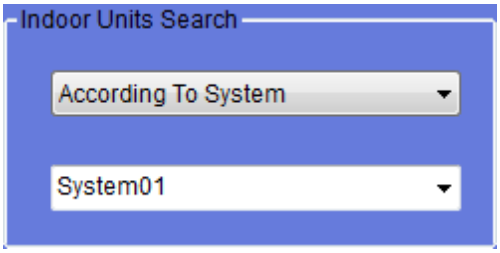


In the interface, Air Port is the communication port with ARV system. If there is more than one port selection in the drop down box, then customer must choose the port generated from USB-485 transformer.

When the port is chosen, click “Start” button to communicate. Software will check operating information of each ARV system automatically. In communication state, click “Stop” button to exit and software stop inquiring work.

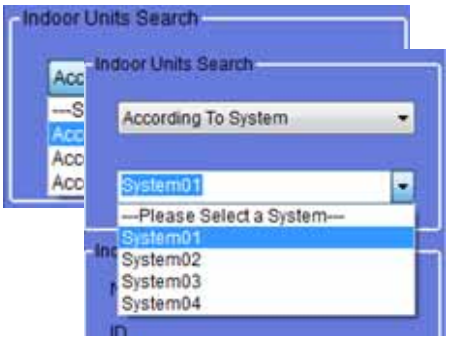
6.5.3 Function use of inquiring IDU according to System

Function interface of inquiring IDU according to System is shown as below:



In the interface, steps entering into System Search are:

1. In the first drop down box, select “According To System”;

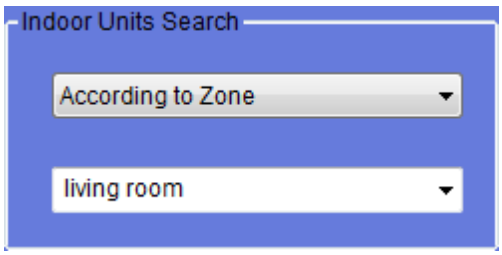


2. In the second drop down box, select the system standing to be controlled, such as “System 01”;

After the above two steps, all information included in System 01 will display in IDU list.

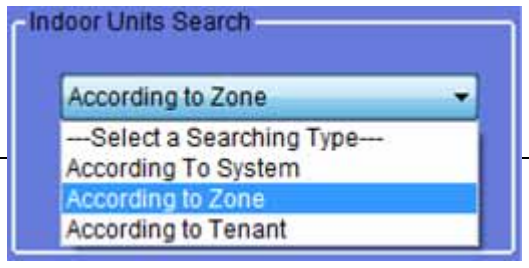
6.5.4 Function use of inquiring IDU according to Zone

Function interface of inquiring IDU according to Zone is shown as below:



In the interface, steps entering into System Search are:

1. In the first drop down box, select “According To Zone”;

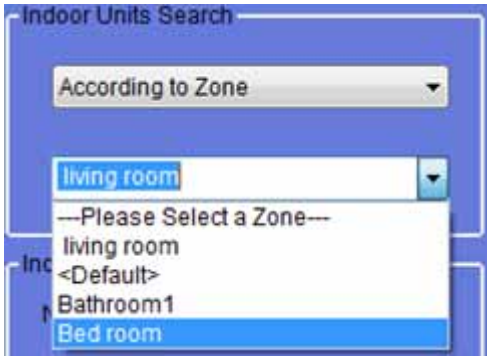


2. In the second drop down box, select the Zone standing to be controlled, such as “Bedroom”;

After the above two steps, all information included in Bedroom will display in IDU list.

6.5.5 Single IDU control and system zone control in system inquiring mode

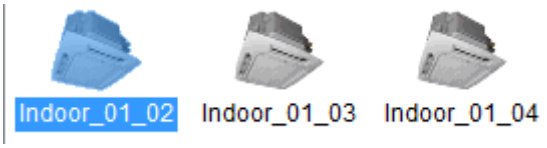
System inquiring can realize single IDU control and system control. Single IDU control can realize single IDU’s turning on/off、mode selection、temperature control、wind speed selection etc.; System zone control can realize all IDUs’ on/off、mode selection、temperature control、wind speed selection



etc..

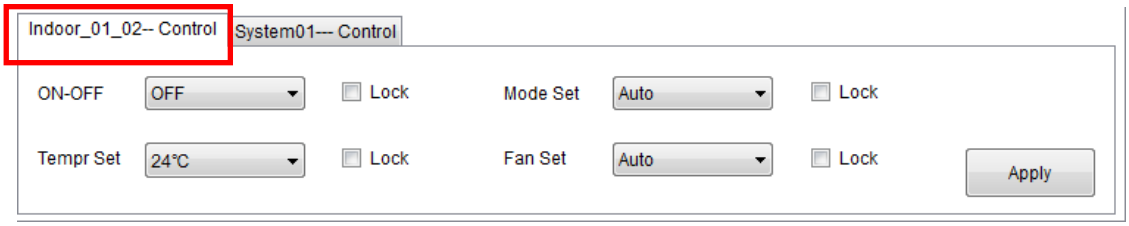
- **Single IDU control**

1) In the selected system inquiring mode, choose IDU standing to be controlled, as below:



(Indoor_01_02 is selected)

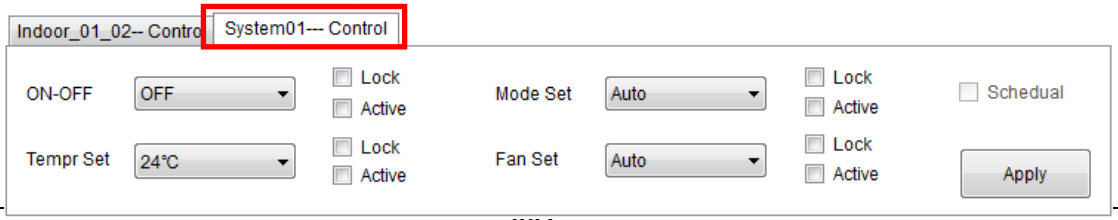
Information of indoor_01_02 is displayed in single IDU control interface:



2) Control ports in IDU interface can realize functions such as on/off、mode selection、temperature control、wind speed selection etc.. Besides, Lock function can realize locking of the above four functions. Remote-controller and wired controller can’t control IDUs after locking. Click “Apply” button to send command after finishing the above operations.

- **System control**

Control interface should switch to system control side:



In system control mode, besides ON/OFF、mode switching、temperature setting、wind speed setting and lock functions, Active function also can be realized. This function could only realize the selected Active state, other states stay the same. For example, all IDUs' set temperature are different, customer doesn't want to change setting temperature during control processing but want to turn off units simultaneously, then customer only need to select ON-OFF's Active and click "Apply" button. Then all IDUs are turned off and each set temperature stay the same.

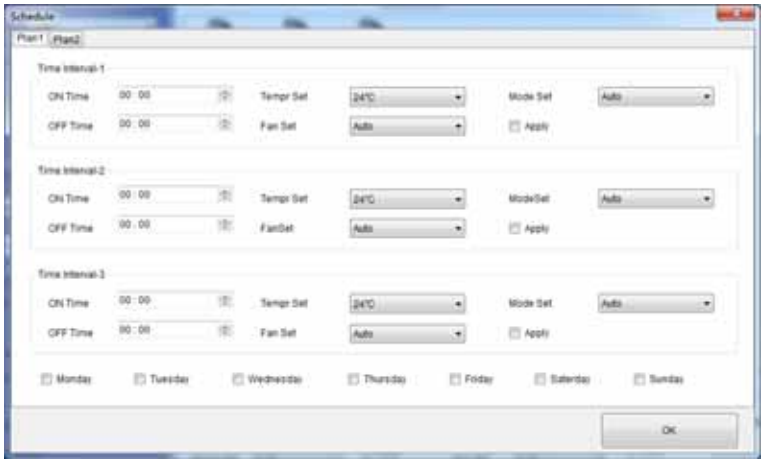
6.5.6 Single IDU control、Zone control and Weekly timer control in zone inquiring mode

Besides single IDU control and zone control, weekly timer control also could be realized in zone inquiring mode. Operations of single IDU control and zone control are the same within system inquiring mode's operations. Introduction here is focused on weekly timer control.

- **Weekly timer**

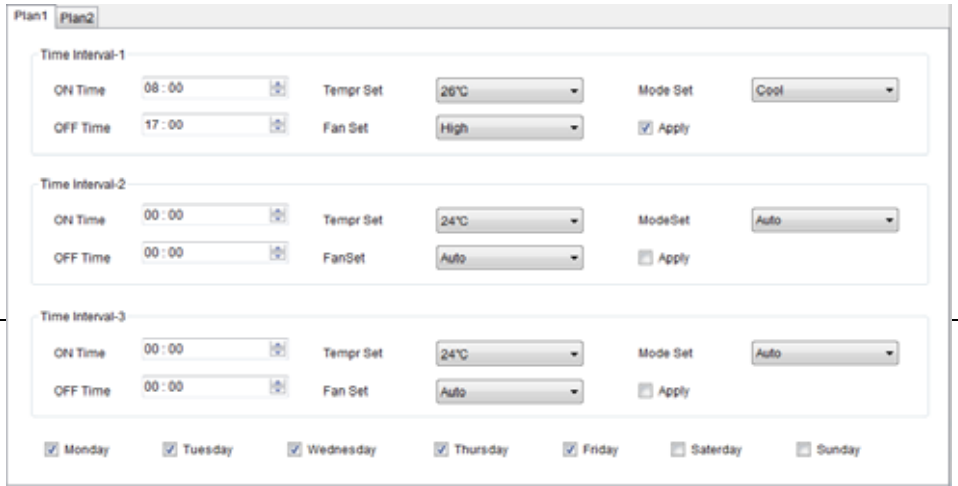
In Zone inquiring mode, weekly timer control is in optional state:

Select "Schedual", enter into weekly timer set interface:



There are Plan 1 and Plan 2 in the above weekly timer set, and 3 time periods in each plan that are used from Monday to Sunday.

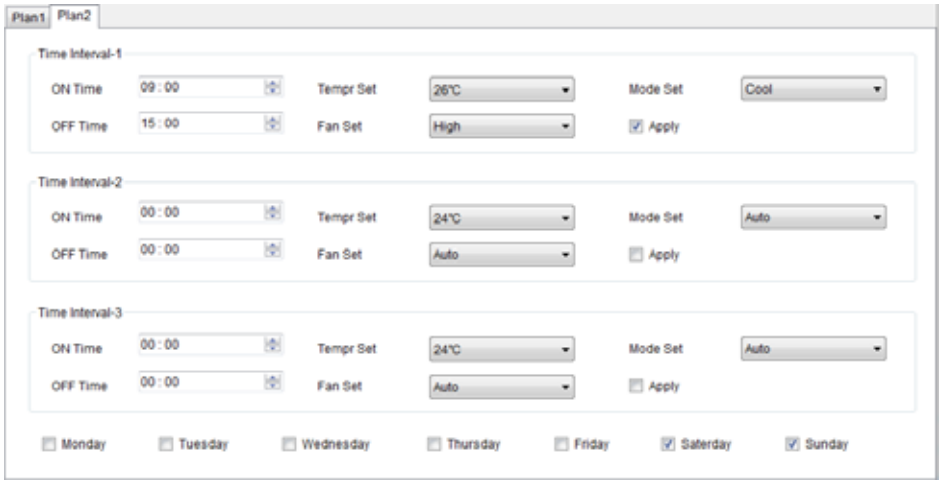
For example, if customer choose to turn on units at 8:00 a.m. in cooling mode with a setting



temperature as 26℃ and turn off units at 17:00 p.m. from Monday to Friday, and turn on units at 9:00 a.m. in cooling mode with a setting temperature as 26℃ and turn off units at 15:00 p.m. on Saturday and Sunday, then the pan is set as below:

In Plan 1, ON-Time 8:00 is selected and OFF-Time 17:00 is selected in Time Interval-1, click “Apply” button and choose Monday、Tuesday、Wednesday、Thursday、Friday.

Plan 2 is set as below;



In Plan 2, ON-Time 9:00 is selected and OFF-Time 15:00 is selected in Time Interval-1, click “Apply” button and choose Saturday、Sunday.

After finishing the above setting, click “OK” button, done.

6.6 Common trouble shooting

Phenomenon	Possible reasons	Trouble shooting
communication error warning, part of or all units are in “can’t find IDU” error	**wiring on network port of ARV gateway computer or unit is loosen or fallen off**	tighten communication wire
	Communication wire is cut off	Weld of change communication wire
	Communication wire is short—circuited or connected in wrong position	Fix short-circuited part or switch A、B port
	Communication wire and power wire are too close (< 15cm)	Communication wire should be separated with power wire for 15cm at least. If this command can’t be fulfilled, shielding must be added.
wiring checking is normal, but part of or all units still in “can’t find IDU” or “address conflict” error	Communication wire port on computer side is different from the port selected in software	Switch port or change port setting in software
	gateway address is changed without power up again, new set address is ineffective	gateway power up again
	unit (OUD or IDU) is not on power	power up the unit
	unit’s address is wrong or repeat	Recheck and modify unit’s address
wiring checking is normal, but only some device	ARV gateway is down or hardware is broken	change ARV gateway

layer still in “can’t find IDU” error	a repeater IS need peater’s wiring is wrong	install repeater correctly

6.7 Notice

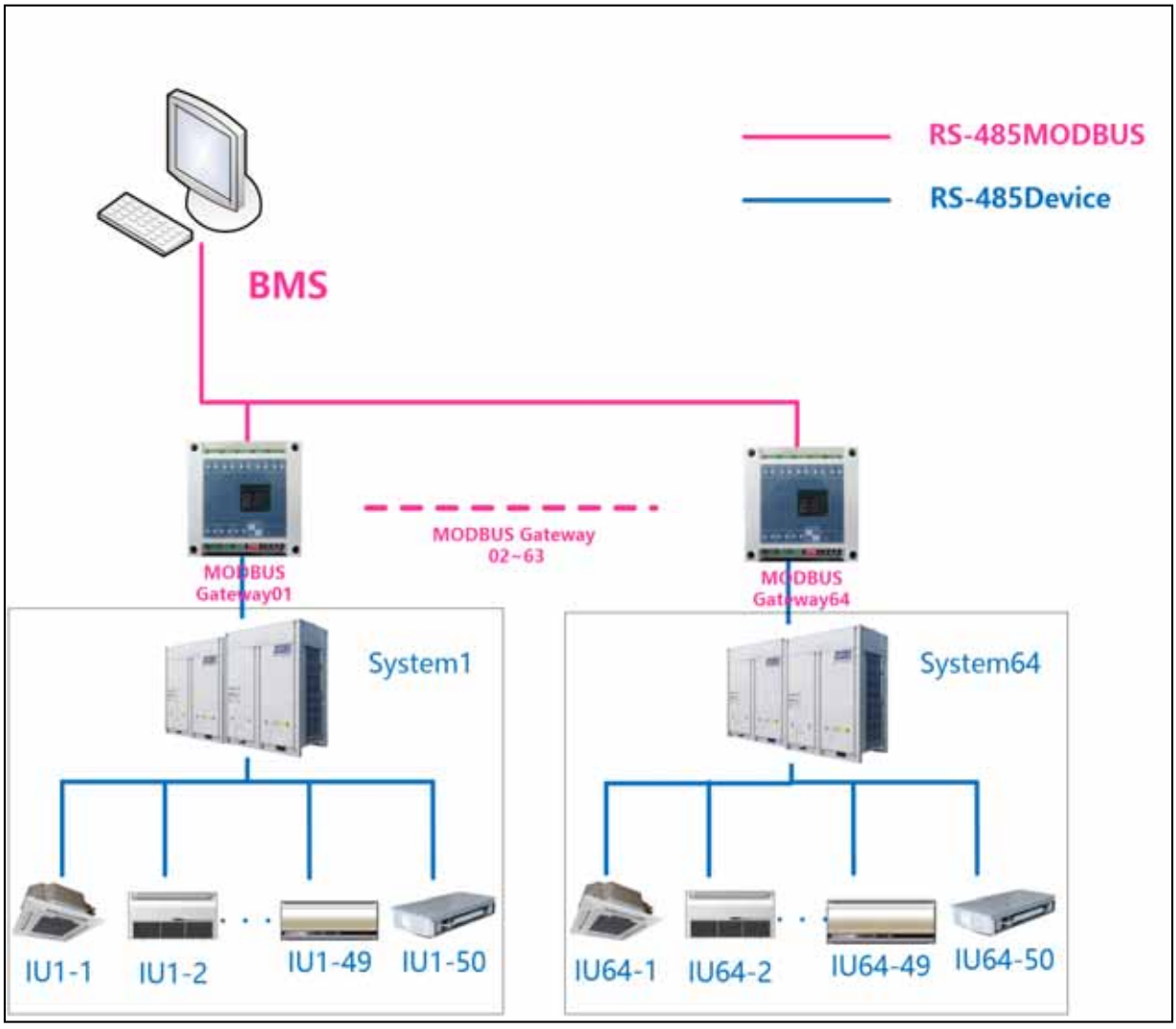
- Only calculating cost、checking history record need to stop the monitoring system, otherwise the system must in operation state. If monitoring software needs to be closed, please open the software immediately after normally closed. Assure the computer in energy saving mode and sleeping mode is shut down to make sure the computer is always in working state.
- To ensure the system's operation is normal for all year, the system should be checked and maintained regularly. The computer should be restarted at a fixed time weekly (usually at 8:00 a.m.) to make sure a good operation circumstance and system reliability、release computer resource. Specific operations are: Stop billing system communication first and quit billing system, then restart computer. Open software after restart and click "Start" to keep operation.
- Computer should be set according to this clause and equipped with UPS. UPS specification must confirm 2 hours keep operation after a sudden power off to prevent from system trouble or data missing caused by sudden power off, and managers should deal with the computer correctly (quit software normally) in the 2 hours. If accident or data missing happens because of the computer's sudden power off, the user of billing system should be responsible.

7.AUX ARV Modbus Protocol

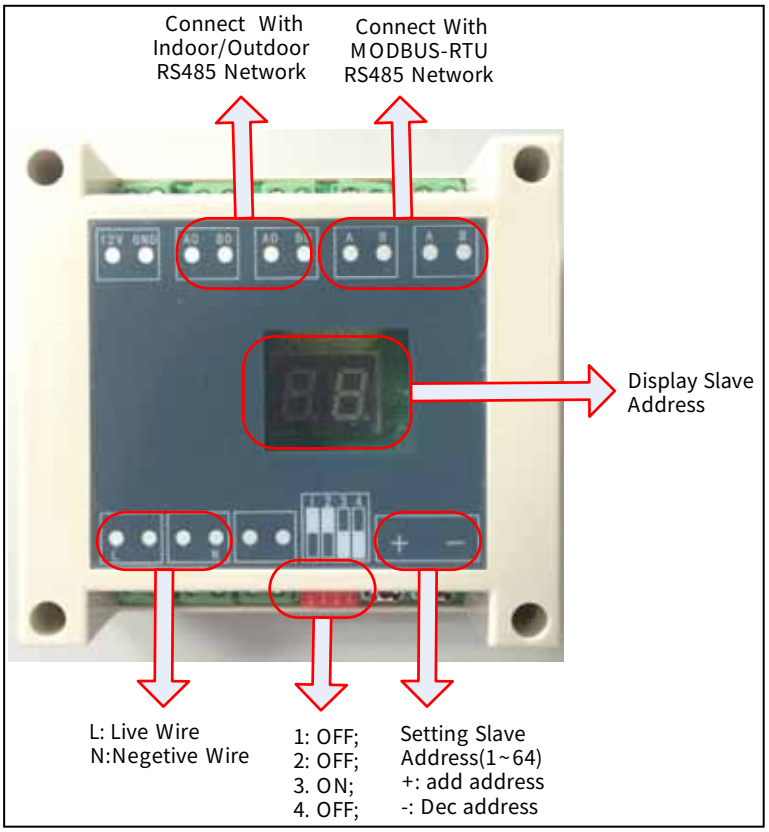
7.1 Configuration

MODBUS STYTLE	MODBUS-RTU
Baudrate	9600
Data-Bit	8
Stop-Bit	1
Check	even
Slave-ID range	1~64
MODBUS CODE	01,02,03,04,05,06
SUPPORT Broadcast	NO

7.2 AUX-ARVIIITopologicalGraph



7.3 Wiring and Setting



7.4 Setting Modbus-RTU Slave Address

1. Press “+” or “-“ to activate the slave address setting functions;
2. Press the “+” and “-“ at the same time for 5 seconds, then the Digital Display will be Flashing every seconds;
3. Press :+”to add the Slave Address, Press “-“ to dec. the Slave address;
4. After Setting Address finish, wait 5 senconds, then the Digital Display will stop Flashing and display the Slave Address.

8 Wifi module instructions

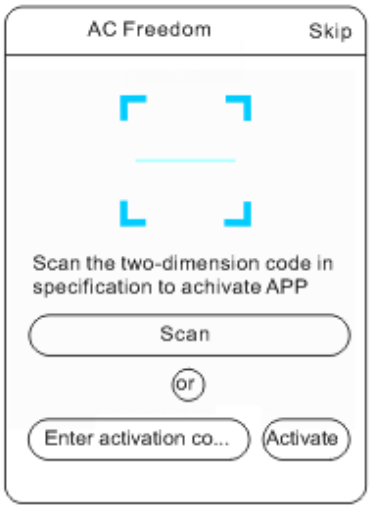
One WIFI Communication Module (WiFi-DCZ-SYE1) connect to one ARV system.

8.1 ARV WIFI Module Configuration

8.1.1 APP Download

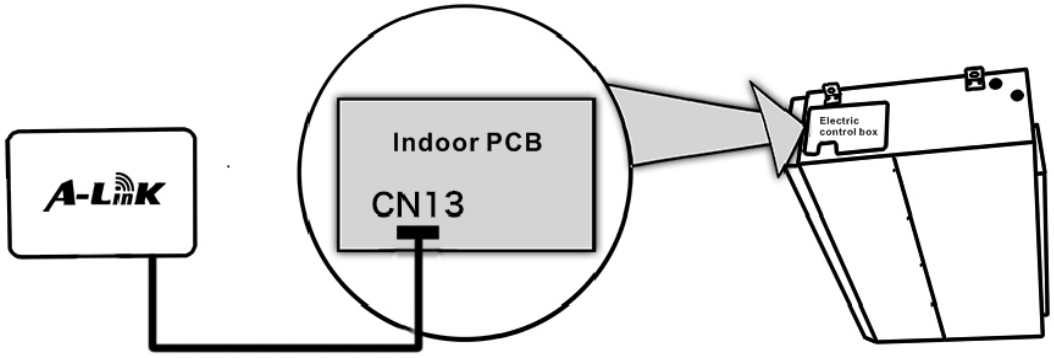
Mobile terminal (both Android 4.1 and IOS 6.0 above only) scan the following dimensional code to download APP, or search “AC Freedom” in APPSTORE and Google store.

Once the control software is installed, enter the “Scanning Interface”(for downloading the Welcome Page).There are two types of log-ons contained in the Scanning Interface



8.1.2 ARV WIFI Module Installation

a) Connect the end of communication wire to indoor PCB CN13 interface, as shown below:



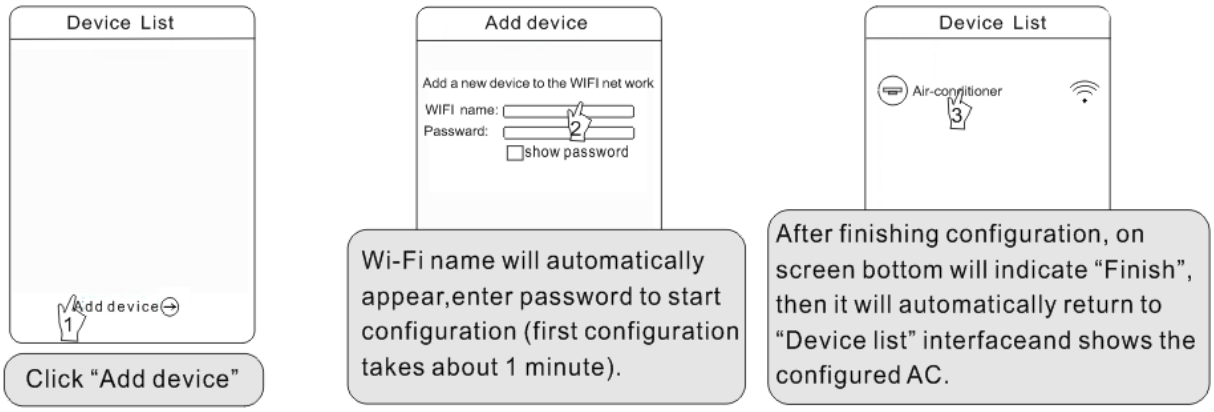
b) The WIFI

module should be placed in the return air or some other place in WIFI area (customers buy the wireless router).

8.1.3 APP Configuration

a) Turn on the wireless router and set WIFI.

b) Connect mobile terminals to WIFI, open APP “AC Freedom”, and then operate following the steps below:



Note:

If the configuration fails or you change the password of wireless router, you need to reset the WIFI module to reconnect: Open the top cover of WIFI module, turn on the power of the module, then press the reset button of WIFI module for more than 5 seconds until the WIFI module light flashes four times in one second, and then repeat the steps above for APP configuration.

8.2 AC Management

8.2.1 Modify AC name and locking function

On the AC list screen, click the icon before AC to open the interface.Touchn “Photo” to change the icon. Touch“Name”to change a new name in thename column: bed room, living name, etc. Change the AC name can easily identify different air-conditioning equipment. Touch“Temperature unit”to choose temperature unit.

Touch the icon changes to lock AC equipment, so other people can't search this AC, avoid the AC equipment controlled by others.

Note:
If you had locked AC equipment, you need to unlock before connecting other mobile terminal.If the mobile terminal locked AC was accidentally lost, you need to reset WIFI module first, and then use the new mobile terminal to connect (Reset step is same with 1.3 APP configuration).

For other instructions, please refer to "HEIP" in APP.

8.3 Trouble shooting

a) Turn on the power and all the lamp on WIFI module is not lighting.Please check whether communication cable is connected normal.

b) WIFI communication indicator (LED3) flashing per 0.1s. It means WIFI Module is not configured successfully, please reset following the instructions.

c) PCB communication indicator (LED1) flashing per 1s.Please check whether communication cable is connected normal.

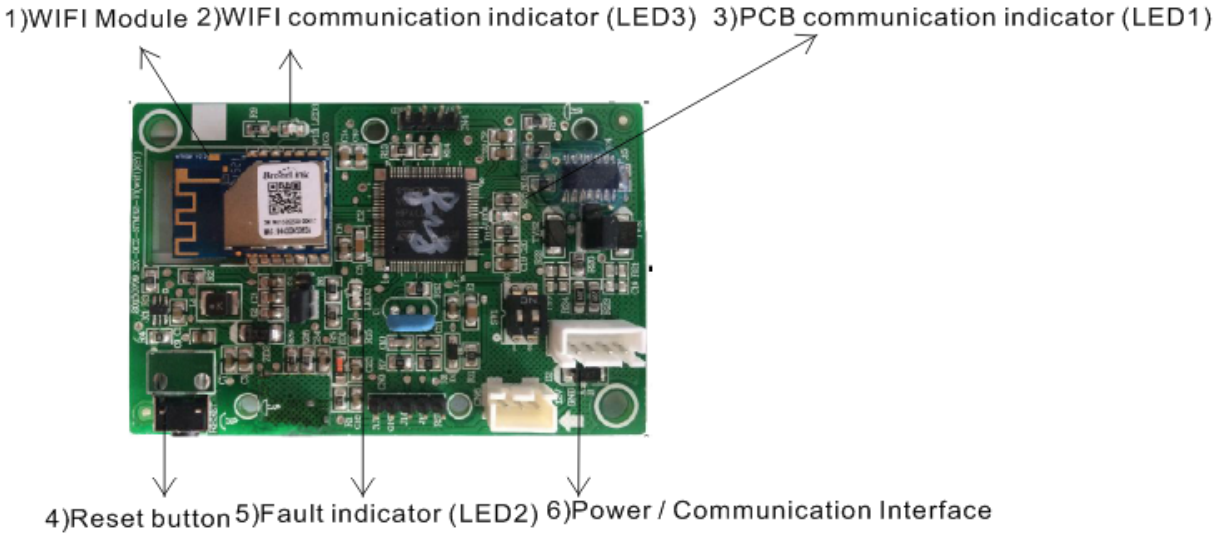
d) Failure indicator (LED2) flashing per 1s Reset the WIFI module and then repeat configuration. If the problem can't be solved, please contact aftersales person.

8.4 Technical Parameters

Working temperature: 0 ~ 50℃

Working environment humidity: 20-90%RH

Dimensions: 95*65*25mm



2) WIFI communication indicator (LED3):

The light will flash when the WIFI module is communicating with Mobile terminal. When this light is off,

indicates the WIFI module had connected to the cloud platform; when the indicator light is on, means the WIFI module is working normally.

6) Power / Communication Interface:

The interface should connect to the CN13 of indoor PCB.

9Parameter setting of indoor unit

9.1 prameter Setting instruction

No.	Parameter Setting Items	Default value	Min. value	Max. value	Remarks
1	communication address of indoor unit	1	1	64	
2	centralized address of indoor unit	1	1	64	
3	address of wired controller of indoor unit	1	1	16	
4	model of indoor unit	1	0	7	0--1HP cassette-type unit (swing angle of mode “C”), 4--1HP Auxiliary electric heating of cassette-type unit, 1--5HP cassette-type unit (swing angle of mode “D”), 5--5HP Auxiliary electric heating of cassette-type unit, 2--duct-type unit, 6-- Auxiliary electric heating of duct-type unit, 3--ceiling & floor unit (swing angle of mode “C”), 7-- Auxiliary electric heating of ceiling & floor unit.
5	capacity of indoor unit	8	1	100	250W/unit
6	priority of indoor unit	0	0	3	0--No priority 1--priority 1 2--priority 2 3--priority 3
7	heating temperature compensation of indoor unit	0	0	10	Unit:°C
8	auto restart function of indoor unit	1	0	1	0--Available 1--not available
9	room card selection	0	0	1	0--invalid room card 1--valid room card
10	clearing time of filter net	5	1	5	500h/unit
11	operating mode displayed by wired controller	1	0	2	0--[auto][heating] [dehumidification] [cooling][ventilation] 1--[heating] [dehumidification] [cooling][ventilation] 2--[dehumidification][cooling][ventilation]
12	installation height of indoor unit	0	0	1	0-- installation height is lower than 2.7m 1--installation height is higher than 2.7m
13	switching between Celsius degree and Fahrenheit	0	0	1	0--Celsius degree 1--Fahrenheit
14	display of room temperature	0	0	1	0-- room temperature not to be displayed 1-- room temperature to be displayed
15	selection of room temperature	0	0	1	0-- temperature sensor of return air 1--temperature sensor of wired controller

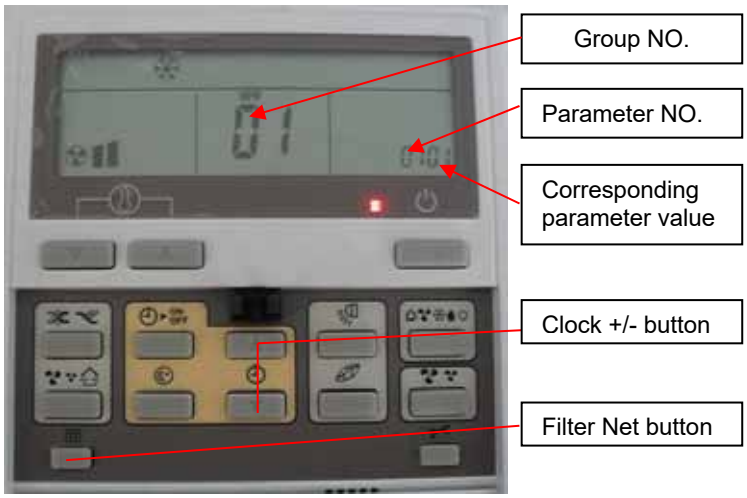
Notice:

◇The above-mentioned data can be inquired through wired controller, centralized controller and monitoring software;

◇Function setting of the above-mentioned data can be changed through wired controller and centralized controller.

9.2 parametersetting method of wired controller

Parameter Inquiry



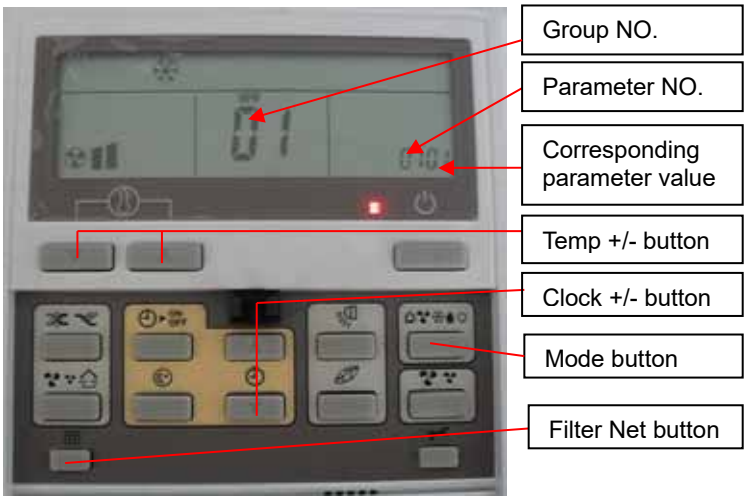
Example:

○,1Press [Filter Net Button] for 5 seconds, group number “01” of wired controller will be displayed in temperature zone of LCD screen and “0101 ” will be displayed in timing setting zone of LCD screen.

② “01” means that group number of wired controller is 1; “0101” means this indoor unit is No. 1 indoor unit.

③ Press [+/- Button of Time], “0201”, “0301”, “0401” “0510” will be displayed successively. See “function setting parameters and eeprom data” for number of parameters and corresponding meaning.

Parameter Setting



Example:

Go on with previous interface and change No. 1 indoor unit into No. 5 indoor unit:

○,1Press [Filter Net Button] for 5 seconds, group number “01” of wired controller will be displayed in temperature zone of LCD screen and “0101” will be displayed in timing setting zone of LCD screen as shown in previous interface.

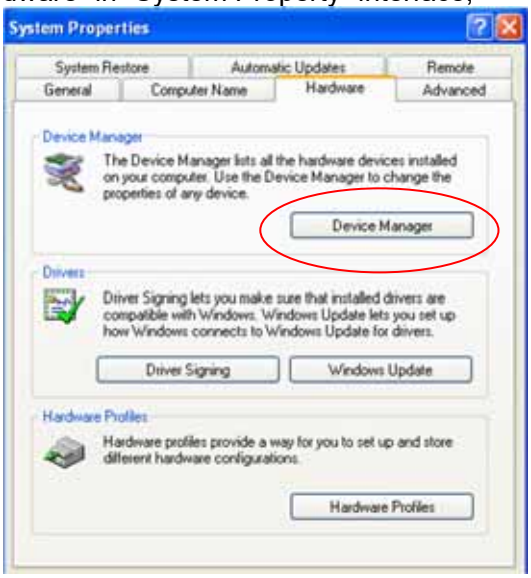
②Then press [Mode Button] once, “corresponding parameter value 01” will flicker; press [+/-button of time] again to change the value into “05”, press [Mode Button] to confirm. This indoor unit is changed as No. 5 indoor unit.

9 Monitoring software

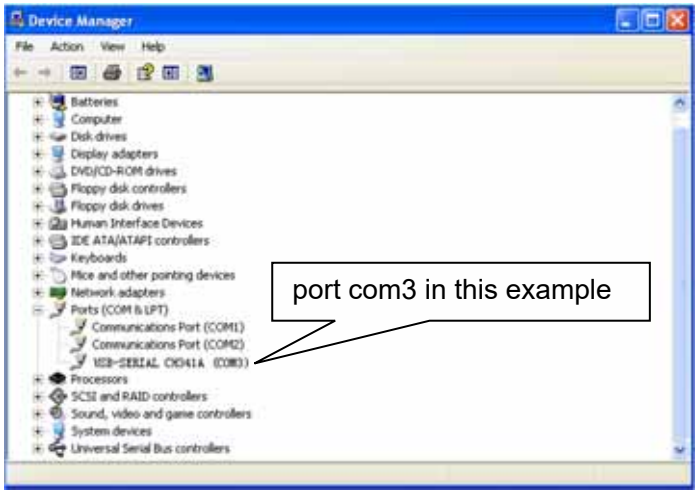
Monitoring software is very helpful for system commission,
Steps:
A. Install USB driver CH341SER in your PC;
B. Connect “485 to USB adapter” and “IDO&ODO ”; Connect “485 to USB adapter” with PC;
C. Check the com port which is connected with PC;

1 Install USB driver CH341SER in your PC;

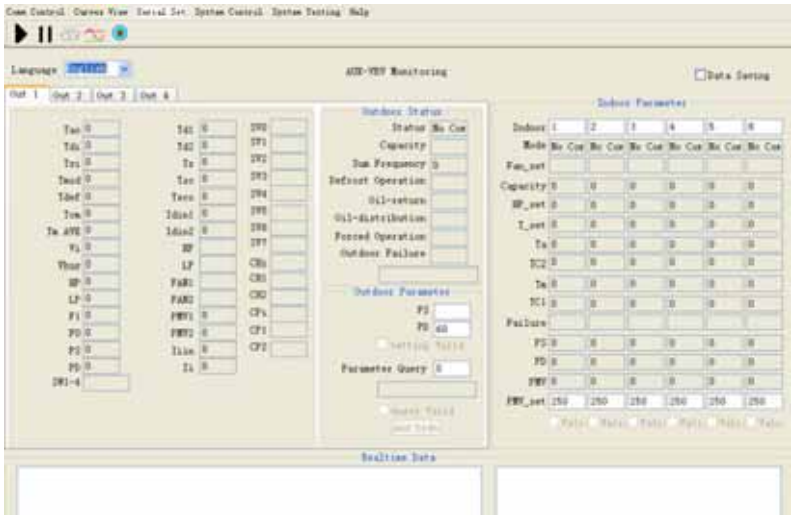
a) Right click “My Computer” on desktop;
b) Click “Property” and choose “Hardware” in “System Property” interface;



c) Single click “Device Manager” and find the port which is connected with the driver we installed; e.g. the below picture is “com3”.



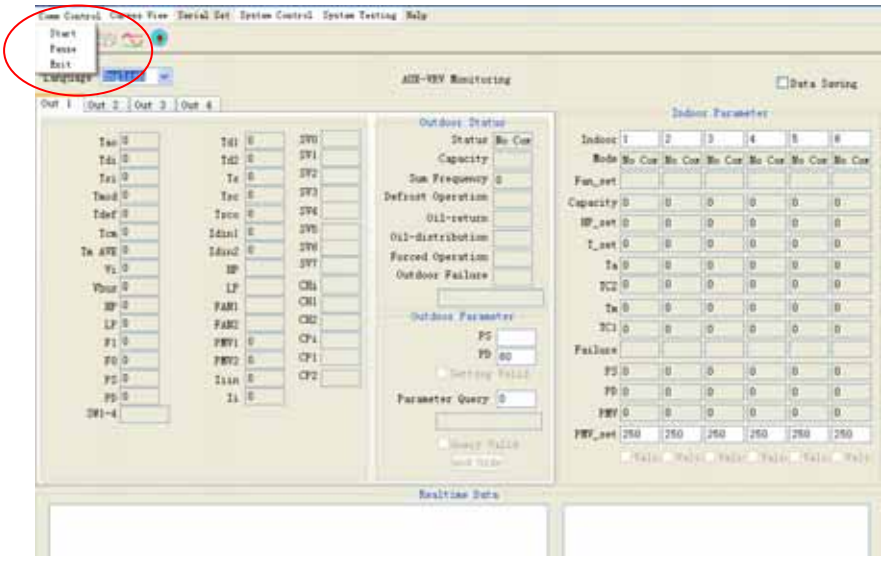
d) Open “Monitor software” and choose “serial port setup” in the menu;



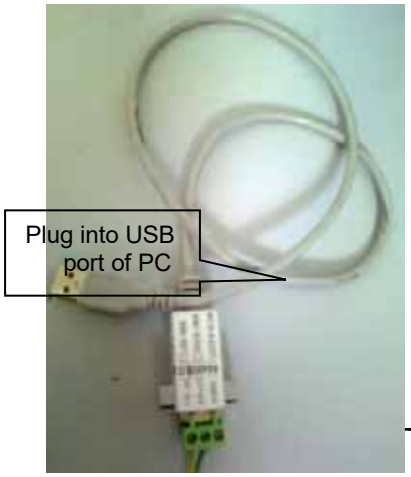
e)Setup com port as the below picture:

Note:

The communication port we are going to choose correspondence with the “com3” in “device manager”; we choose “com3” and click “OK”, and then click “start” in monitor software, the communication will be normally started as below.



2 Connection between computer and adapter tool

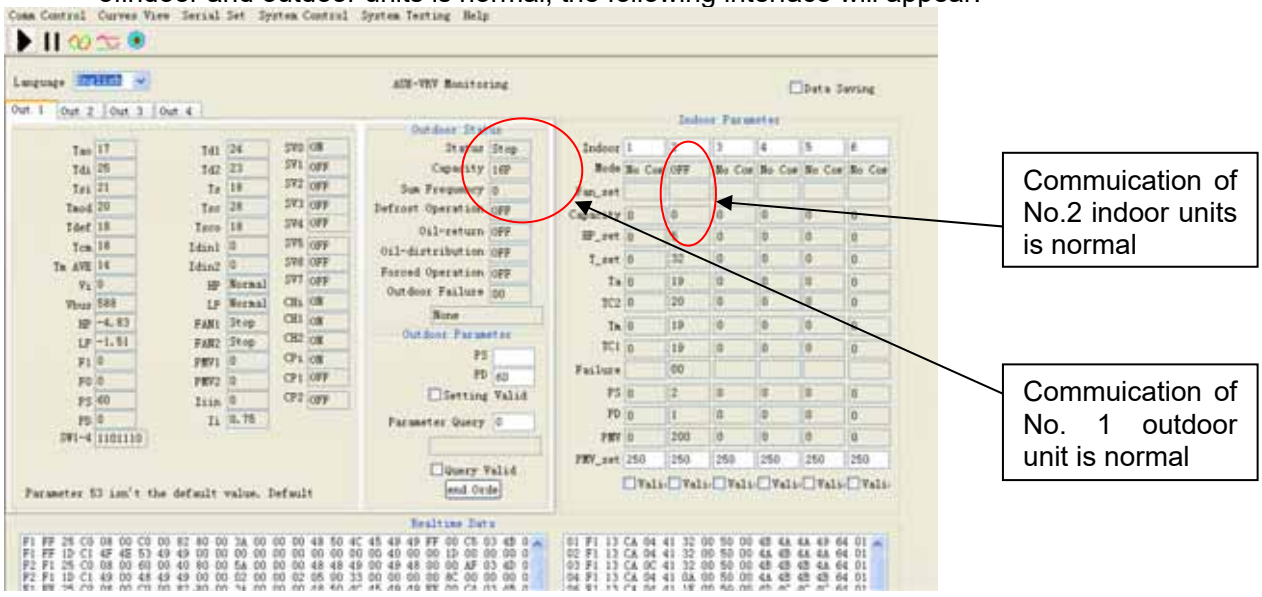


3 Operation instruction of monitoring software

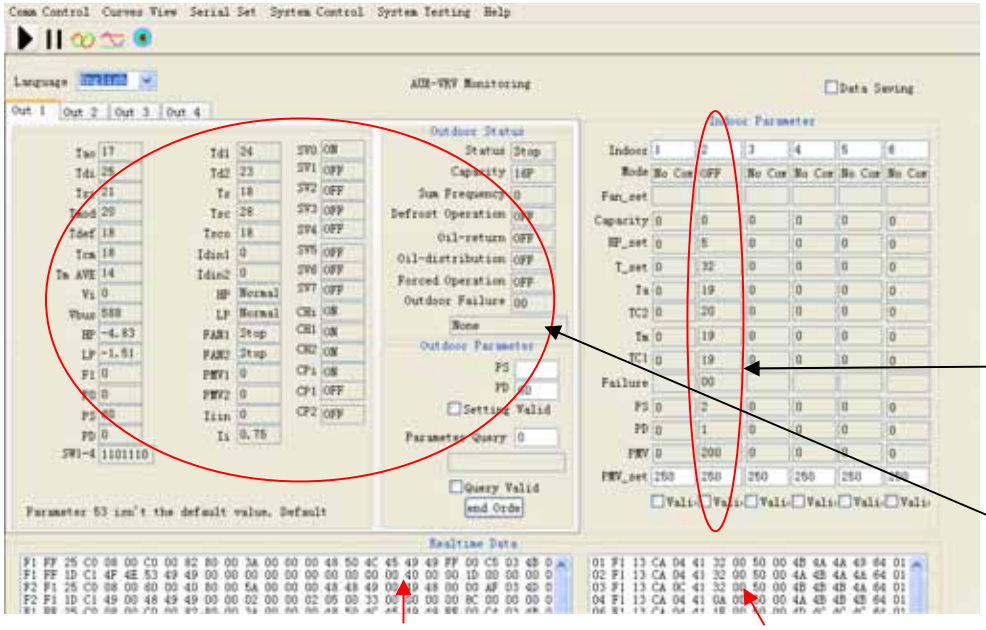
User Level: monitor parameters

Step 1: click “AUXCK.exe” to initiate monitoring software and main interface of monitoring is as follows:

Step 2: click main menu “System”→“Start” or black arrow under “System” to start. If communication ofindoor and outdoor units is normal, the following interface will appear:



If communication is normal, interface will display parameters of the whole unit of one outdoor unit and No.2 indoor units as shown below:



Displaying state and parameters of No.2 indoor units

Displaying parameters of No 1 outdoor unit.

Displaying data of outdoor unit incase of normal communication of outdoor unit

Displaying communication data of indoor unit in case of normal communicationbetween outdoor unit and

Step 3: input “√” in “□” of “□ Data Saving” on right top, dialog box of “Data File Save As” will appear. Input name of items to be tested and save in corresponding document. Among others, data file naming rule “time+ experiment working condition + number of opened indoor unit” can be referred. For example, “20090424 rated cooling-totally opened indoor unit” or “20090424 Max. load cooling-185V-separately opened one 1HP indoor unit”.

Step4: after finishing the above four steps, it’s possible to enter into monitoring software for operation.

Step5: whenever finishing a working condition experiment, tick “√” after cancelling “√” input in “□” of ““□ data saving” on right top to save experiment data of next working condition experiment,. If data of software overflows, restart monitoring software.

Part 6 Trouble shooting

1 Poor effect of cooling and heating 279

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3 Indoor unit error code explanation 282

4.Outdoor unit error code explanation 283

5.Centralized controller software trouble shooting 290

Appendix 291

1 Poor effect of cooling and heating

Some phenomenon in using process is similar to failures, which are not failures in fact. Therefore, when cooling performance isn't satisfactory, eliminate the following factors first:

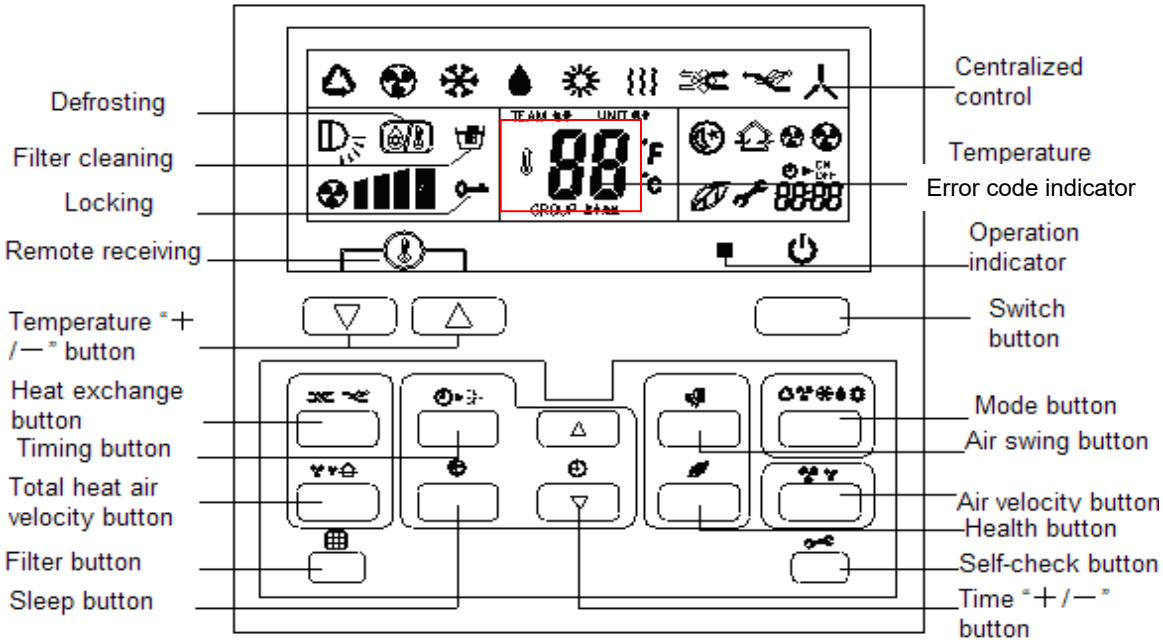
Phenomenon	Cause Description
If there is high ambient temperature outside and more people in room, air conditioner works in full load and cool air is blown from outlet, but room temperature can't be lowered.	In case of high ambient temperature, infiltration heat from outside increases, which increases cooling load of air conditioner; if there are more people (e.g.10 people) in room, each people discharges 120W heat, 10 people discharge 1200W heat altogether, which consume half cooling capacity of air conditioner, therefore, cooling capacity of air conditioner seems not enough and room temperature can't be lowered. It's normal and not the fault of air conditioner.
Air conditioner is hard to start, stops after starting or fuse is blown due to under voltage of power supply.	It is not failure. It's necessary to check the cause of power supply. If it is caused by under voltage of power grid, user should install additional voltage stabilizer for power supply to enable voltage to reach 220V or 380V and use air conditioner normally.
When it operates under high air velocity, room temperature can't cool down and there is no much air flow volume at outlet.	Filth blockage of air filter makes cooling capacity can't be taken out by flowing air timely, causing insufficient cooling capacity that can be solved by removing and cleaning filtering net.
When it operates under high air velocity, unit vibrates and makes loud noise	It is normal that the unit vibrates and makes loud noise when it operates in maximum speed.
Temperature controller isn't properly adjusted and doesn't bring maximum function of cooling, so room temperature can't cool down.	Adjust temperature controller to solve the problem
Heat pump-type air conditioner has unsatisfactory heating effect in cold winter, which is reasonable.	Minimum ambient temperature for starting heating function of air conditioner is －15℃.So air conditioner can't effectively heat below this temperature.
Improper installation position of air conditioner can also result in uneven indoor temperature or poor cooling effect.	Readjust the installation position of air conditioner.
mist blown out from indoor unit	It is caused when cool airflow in air conditioner cools down the air in indoor unit.
noise	Air conditioner will make noise when stopping operation, because refrigerant in the unit flows to opposite direction;
	Air conditioner will expand or shrink due to air temperature change, causing harsh sound; sound of water flow is caused by refrigerant flowing in the unit.
odor in room sometimes	Air conditioner won't bring odor by itself, so it must be caused by odor accumulated in environment.
	Solution: clean air filtering net.
In case of heating, air isn't blown out immediately after starting the unit and "Operation" indicator flickers when wired controller is used.	The heating state is used to prevent blowing out cool air. Please wait for a moment.
	The unit has restart function upon power-on after power failure. Air conditioner will automatically start in case of power-on after power failure and operate according to the mode set before power failure.

2. Error code indication

Indoor unit error code display

After indoor and outdoor units shut down due to failure, failure code will display on wired controller or remote receiving board. In case of normal protection, no failure code will display on wired controller or remote receiving board of indoor unit. Among others, wired controller doesn't automatically send warning, which requires pressing CHECK button to display corresponding failure codes. Remote receiving board directly displays failure codes. After failures are removed, display will automatically disappear.

Wired controller uses failure code of two digits, the first digit of which indicates characters in column "B" and the second digit of which indicates "0~F" characters corresponding to each row.



Remote receiving panel uses three indicators. Power light and timing light have three states respectively corresponding to row "9" and column "B". Flickering times of running light correspond to "0~F" characters of each row. The details are shown below:

Power Light (red light)	Timing Light (yellow light)	Running Light (green light)	Indoor unit Failure code
○	○	★(1 time)	A1
○	○	★(2 ~9 times)	A2~A9
○	○	★ (10 times)	AA
○	○	★ (11 times)	AB
○	○	★ (12 times)	AC
○	○	★ (13 times)	AD
○	○	★ (14 times)	AE

Remarks:

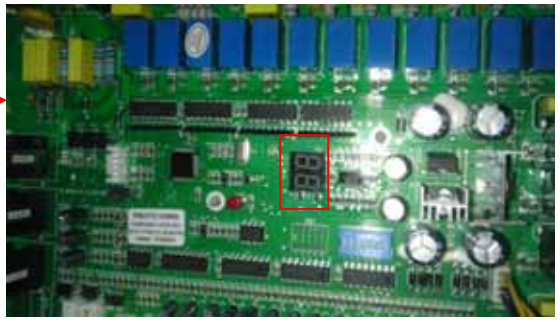
○(dim), ●(on) ★(flashing)

When power light or timing light flickers, it only flickers one time for each warning. After flickering, running light indicates according to specific failure.

For new four way cassette panel add the digital light display error code

Outdoor unit error code display

Outdoor unit control box



Outdoor unit main PCB

3 Indoor unit error code explanation

Error code	Error code definition	Recovery or not	Problem possible reasons
A1	Indoor ambient temperature sensor failure	Yes	Indoor PCB is broken
			The fuse of indoor PCB is broken
			temperature sensor broken , or exceed test limit
A2	Temperature sensor about middle position of evaporator failure	Yes	Indoor PCB is broken
			The fuse of indoor PCB is broken
			temperature sensor broken , or exceed test limit
A3	Indoor coil pipe inlet temperature sensor failure	Yes	Indoor PCB is broken
			The fuse of indoor PCB is broken
			temperature sensor broken , or exceed test limit
A4	Indoor coil pipe outlet temperature sensor failure	Yes	Indoor PCB is broken
			The fuse of indoor PCB is broken
			temperature sensor is broken , or exceed test limit
A5	Indoor water pump failure	Yes	Water pump no power
			Water pump switch short-circuit or unconnected
			Water pump is broken
			Drain pipe block or up lean
			Indoor PCB is broken
A6	Failure of indoor PG fan	No	Fan motor failure
			Fan motor block
			The connection between PCB and fan motor failure.
			Indoor fan block
A7	Failure of reversible synchronous motor	No	Step motor failure
			The connection between PCB and step motor failure.
A8	Indoor unit ERRPROM module failure	No	Indoor unit PCB is broken
			Error module is broken.
A9	The communication between indoor unit and outdoor unit failed	No	The communication wire between indoor unit and outdoor unit is broken.
			Indoor unit power close
			Indoor PCB is broken
AA	The communication between indoor unit and wire controller failed	No	The communication wire between indoor unit and outdoor unit is broken.
			Indoor unit power close
			Indoor PCB is broken
			Wire controller is broken
AC	Two or more indoor unit central control system address repeated	Yes	The central control address setting incorrect
AE	Operation mode conflict	Yes	The operation mode setting incorrect
AH	Two or more indoor unit refrigerant system address repeated	Yes	System address setting incorrect
AJ	Indoor unit total capacity exceeded	Yes	Stop some indoor units
AF	The EXV leakage	No	EXV is blocked
			Indoor unit temperature sensor issue.
			Evaporator inlet sensor failure.

4.Outdoor unit error code explanation

Code	Error code definition	Recovery or not	Possible reason
C1	Ambient temperature sensor “Tao”failure	Yes	Temperature sensor failure or test temperature exceed limit.
			Sensor connection is incorrect.
			Outdoor unit PCB failure.
C2	Defrosting temperature sensor “Tdef1” failure	Yes	Temperature sensor failure or test temperature exceed limit.
			Sensor connection is incorrect.
			Outdoor unit PCB failure.
C3	Exhaust pipe temperature of variable frequency compressor "Tdi" failure	Yes	Temperature sensor failure or test temperature exceed limit.
			Sensor connection is incorrect.
			Outdoor unit PCB failure.
C4	Exhaust temperature of fixed frequency compressor No.1 "Td1"failure	Yes	Temperature sensor failure or test temperature exceed limit.
			Sensor connection is incorrect.
			Outdoor unit PCB failure.
C5	Exhaust temperature of fixed frequency compressor No.1 "Td2"failure	Yes	Temperature sensor failure or test temperature exceed limit.
			Sensor connection is incorrect.
			Outdoor unit PCB failure.
C6	Suction pipe temperature of compressor "Ts" failure	Yes	Temperature sensor failure or test temperature exceed limit.
			Sensor connection is incorrect.
			Outdoor unit PCB failure.
C7	Suction pipe temperature of variable frequency compressor "Tsi" failure	Yes	Temperature sensor failure or test temperature exceed limit.
			Sensor connection is incorrect.
			Outdoor unit PCB failure.
C8	Outdoor unit condenser middle position sensor "Tc1" failure	Yes	Temperature sensor failure or test temperature exceed limit.
			Sensor connection is incorrect.
			Outdoor unit PCB failure.
F1	High pressure sensor "Pd" failure	Yes	High pressure sensor failure
			Low pressure sensor connection is incorrect.
			Outdoor unit PCB failure
F2	High pressure sensor "Pd" limit frequency protection	Yes	Exhaust pipe or condenser pipe block
			Condenser dirty
			Outdoor unit fan stop or low speed
			Refrigerant overcharge
F3	High pressure sensor "Pd" protection.	Yes	Exhaust pipe or condenser pipe block
			Condenser dirty
			Outdoor unit fan stop or low speed
			Refrigerant overcharge
F4	Low pressure sensor "Ps" failure.	Yes	Low pressure sensor is broken.
			The connection between sensor and outdoor PCB incorrect
			Outdoor unit PCB failure
F5	Low pressure sensor "Pd" limit frequency protection	Yes	Indoor unit fan stop or low speed
			Evaporator dirty
			Indoor EXV full open in cooling mode (Outdoor EXV full open in heating mode)
			Lack refrigerant
			The pipe between evaporator and suction port block

Code	Error code definition	Recovery or not	Possible reason
F6	Low pressure sensor "Pd" protection.	No	Indoor unit fan stop or low speed
			Evaporator dirty
			Indoor EXV full open in cooling mode (Outdoor EXV full open in heating mode)
			Lack refrigerant
			The pipe between evaporator and suction port block
H1	DC inverter compressor high pressure switch "HPSi" failure	No	System pressure exceed high pressure switch limit.
			High pressure switch failure
			High pressure sensor failure
			Instantaneous power-off
			Stop valve closed
			Outdoor unit fan stop
			Outdoor unit air outlet block
			In heating mode indoor unit fan stop
			In heating mode indoor unit EXV block
H2	Fix speed compressor high pressure switch "HPS1" failure	No	System pressure exceed high pressure switch limit.
			High pressure switch failure
			High pressure sensor failure
			Instantaneous power-off
			Stop valve closed
			Outdoor unit fan stop
			Outdoor unit air outlet block
			In heating mode indoor unit fan stop
			In heating mode indoor unit EXV block
H3	Fix speed compressor high pressure switch "HPS2" failure	No	System pressure exceed high pressure switch limit.
			High pressure switch failure
			High pressure sensor failure
			Instantaneous power-off
			Stop valve closed
			Outdoor unit fan stop
			Outdoor unit air outlet block
			In heating mode indoor unit fan stop
			In heating mode indoor unit EXV block
H4	Low pressure switch "LPS" failure	No	System pressure lower than low pressure switch limit.
			Low pressure switch failure
			Low pressure sensor failure
			Instantaneous power-off
			Stop valve closed
			In cooling mode indoor unit EXV close or block
			In heating mode outdoor unit EXV close or block
			In heating mode outdoor unit fan stop
			In heating mode outdoor unit air outlet block
H5	Lack refrigerant	Yes	System leakage

Code	Error code definition	Recovery or	Possible reason

		not	
H6	DC inverter compressor current overload limit frequency protection	Yes	Power supply incorrect
H7	DC inverter compressor current overload protection	Yes	Power supply incorrect
H8	Fix speed compressor 1 over current protection	Yes	The stop valve closed
			Outdoor unit air outlet block
			System supply power voltage exceed limit (Rated voltage 15%)
			Compressor failure
			Current transformer failure
H9	Fix speed compressor 2 over current protection	Yes	The stop valve closed
			Outdoor unit air outlet block
			System supply power voltage exceed limit (Rated voltage 15%)
			Compressor failure
			Current transformer failure
HA	AC power under voltage protection	Yes	System supply power voltage exceed limit (Rated voltage 15%)
			Instantaneous power-off
			The supply power phase lack
			Frequency driving PCB failure
			Instantaneous power-off
			Electrical wiring incorrect
			Compressor failure
			Outdoor unit fan motor failure
HC	The phase of fix compressor 1 incorrect	No	The power wire of fix speed compressor incorrect
			Outdoor unit PCB failure
HH	The phase of fix compressor 2 incorrect	No	The power wire of fix speed compressor incorrect
			Outdoor unit PCB failure
HJ	Main power failure	No	Supply power phase-reversal
			Supply power phase lack
			Outdoor unit PCB failure
HE	AC power overvoltage protection	Yes	System supply power voltage exceed limit (Rated voltage 15%)
E1	4-way valve failure	No	4-way valve failure
			The connection of 4-way valve and main PCB incorrect
			Mail PCB failure
E2	DC inverter compressor exhaust temperature "Tdi" limit frequency protection	Yes	Compressor operate in a low speed, system will adjust and recovery automatic.
			Compressor issue
			Lack refrigerant
			Suct port block

Code	Error code definition	Recovery or not	Possible reason
E3	DC inverter compressor exhaust temperature "Tdi" over protection	No	System less refrigerant
			DC inverter Compressor failure
			Compressor air return filter block
			EXV open degree is small
			EXV block
			Gas pipe stop valve closed
			Liquid pipe stop valve closed
			System exhaust sensor failure
			Outdoor unit PCB failure
E4	DC inverter compressor exhaust temperature "Td1"over protection	No	System less refrigerant
			Fix speed compressor failure
			Fix speed compressor air return filter block
			EXV open degree is small
			EXV block
			Gas pipe stop valve closed
			Liquid pipe stop valve closed
			System exhaust temperature sensor failure
			Outdoor unit PCB failure
E5	DC inverter compressor exhaust temperature "Td2"over protection	No	System less refrigerant
			Fix speed compressor failure
			Fix speed compressor air return filter block
			EXV open degree is small
			EXV block
			Gas pipe stop valve closed
			Liquid pipe stop valve closed
			System exhaust sensor failure
			Outdoor unit PCB failure
E6	Compressor suction temperature "Ts" limit frequency protection	Yes	Indoor unit fan stop or low speed
			Indoor unit EXV over open
			Evaporator dirty
E7	Temperature sensor about middle position of condenser "Tc1" limit frequency protection	Yes	Compressor operate in a low speed, system will adjust and recovery automatic.
			Condenser dirty
			The pipe from condenser to exhaust port block
			Refrigerant overcharge
E8	Temperature sensor about middle position of condenser "Tc1" protection	No	Condenser dirty
			The pipe from condenser to exhaust port block
			Outdoor unit fan motor stop or low speed
			Refrigerant overcharge

Code	Error code definition	Recovery or not	Possible reason
E9	Compressor casing over heat protection	Yes	System less refrigerant
			Fix speed compressor failure
			Fix speed compressor air return filter block
			EXV open degree is small
			EXV block
			Gas pipe stop valve closed
			Liquid pipe stop valve closed
			System exhaust sensor failure
			Outdoor unit PCB failure
EA	Oil temperature (Toil) over protection	No	Compressor overheat
			Outdoor unit fan motor low speed
EE	Temperature sensor about middle position of condenser "Tc2" limit frequency protection	Yes	The pipe from condenser to exhaust port block
			Condenser dirty
			Outdoor unit fan motor stop or low speed
			Refrigerant overcharge
EF	Temperature sensor about middle position of condenser"Tc2" protection	No	The pipe from condenser to exhaust port block
			Condenser dirty
			Outdoor unit fan motor stop or low speed
			Refrigerant overcharge
J1	The communication between outdoor units failure	Yes	The communication wire between outdoor units disconnect, short circuit or connect incorrect.
			Outdoor unit PCB failure
			Outdoor unit main power failed
J2	The communication between outdoor unit and indoor unit failure	Yes	The communication wire between indoor unit and outdoor unit disconnect, short circuit or connect incorrect.
			Indoor unit main power failed
			Indoor unit PCB failure
J3	The communication between PCB and INV module failure	Yes	The connection between driving module and main PCB failure
			The communication part of outdoor unit control PCB failure
			Frequency driving board failure
			Compressor failure
J5	Outdoor unit parameter setting incorrect	Yes	Outdoor unit dial switch incorrect
			Mail PCB failure
J7	Outdoor unit main control PCB ERROM module failure	Yes	Mail PCB failure
31	Module protection (F0)	Yes	Supply voltage below level let the current excessive
			Supply voltage exceed limit
			Outdoor fan stop or low speed
32	Module hardware protection	Yes	Supply voltage below level let the current excessive
			Supply voltage exceed limit
			Outdoor fan stop or low speed
33	Module software protection	Yes	Supply voltage below level let the current excessive
			Supply voltage exceed limit
			Outdoor fan stop or low speed

Code	Error code definition	Recovery or not	Possible reason
34	Compressor unconnected	Yes	The connect of driving module and DC inverter compressor incorrect
			Driving module failure
			Compressor failure
35	Compressor phase current overload protection	Yes	Compressor overload
			Compressor coil disconnect
			Inverter driving board failure
			Compressor failure
36	Driving module current failure	Yes	Supply voltage below level
			Supply voltage exceed limit
			Driving module failure
37	Driving module temperature alarm	No	Inverter driving board failure
38	Driving module temperature failure	Yes	Driving module failure
			Compressor failure
			Outdoor unit fan stop or low speed

Symbol Description

HPS	High pressure switch
LPS	Low pressure switch
HTSi	temperature of DC inverter compressor top position
HTS2	temperature of fix speed compressor 1 top position
HTS3	temperature of fix speed compressor 2 top position
Tao	Ambient temperature
Tdi	Exhaust pipe temperature of variable frequency compressor(℃)
Td1	Exhaust temperature of fixed frequency compressor No.1(℃)
Td2	Exhaust temperature of fixed frequency compressor No.2(℃)
Ts	Suction pipe temperature of compressor(℃)
Tsi	suction pipe temperature of variable frequency compressor(℃)
Tcm	Middle point temperature of condenser coil pipe(℃)
Te.Tdef	Evaporator temperature, condenser defrosting temperature
Ta	Indoor ambient temperature
TC2	Evaporator inlet temperature(℃)
TC1	Evaporator outlet temperature(℃)
Tm	Middle point temperature of evaporator fan coil(℃)
Tset	Indoor unit setting temperature
Tm AVE	Temperature about middle position of indoor unit
SVO	4-way valve
SV1	Unload electromagnetic valve
SV2	Liquid pipe electromagnetic valve for heating
SV3	Oil return electromagnetic valve of DC inverter compressor
SV4	Oil return electromagnetic valve of fix speed compressor No.1
SV5	Oil return electromagnetic valve of fix speed compressor No.2
SV6	Condenser refrigerant control valve
SV7	Refrigerant injection electromagnetic valve
PMV1	EXV for heating mode

5.Centralized controller software trouble shooting

Troubles	Possible Reasons	Troubleshooting method
Software on the communication failure warning, some or all of the air conditioners cannot indicated or query the status.	Some Communication wires are not Twisted-pairs	Replace them with Twisted-pairs
	The CN2 of the communication adapter plate has loosening or shedding in connection.	Rotating the Communication wire of CN2
	Communication wires have breakages	Welding the Communication wires or replace new ones
	Spring inside the socket cannot bounce or has been pushed to the end result in the Communication wire not connected.	Repair or replace socket
	Communication wire A&B short circuit or connected to wrong places.	Repair the short circuit section or exchange port A&B.
	Communication wire and the power line got too close (< 15cm)	Apart the Communication wire and the power line to at least 15cm, otherwise wrap them with shield steel pipes.
Line inspection is normal, but some or all of the some or all of the air-con cannot indicated or query the status ,or the address got conflict.	Serial port of the computer terminal Communication wire and the software selection one does not match.	Replace the ports or change the serial port setting.
	The communication adapter plate does not supply power after reset the address and result in the new address not effective.	power on communication adapter plate again.
	Unit has no power supply.	Power on unit
	The address of the computer groups got error or repeated.	One more check and modify the address setting.
Line inspection is normal, but one of the air-con cannot indicated or query the status.	Communication adapter plate got system halted or hardware damaged.	Change communication adapter plate
	Maybe the repeater need installing or gets incorrect connection.	Installing the repeater correctly.

Appendix

1. Relation between temperature sensor of compressor and resistance

R25=50KΩ±1%			
B25/50=3950K ±1%			
T [□]	Rmin [KΩ]	Rnom [KΩ]	Rmax [KΩ]
-20	449.9	464.7	479.9
-19	425.7	439.5	453.6
-18	402.9	415.7	428.8
-17	381.5	393.4	405.6
-16	361.3	372.3	383.6
-15	342.2	352.5	363.0
-14	324.3	333.9	343.7
-13	307.5	316.4	325.5
-12	291.5	299.8	308.3
-11	276.6	284.3	292.2
-10	262.4	269.6	276.9
-9	249.0	255.7	262.5
-8	236.5	242.7	249.0
-7	224.5	230.3	236.2
-6	213.3	218.7	224.2
-5	202.7	207.7	212.8
-4	192.7	197.3	202.0
-3	183.2	187.5	191.9
-2	174.3	178.3	182.4
-1	165.8	169.5	173.3
0	157.7	161.2	164.7
1	150.2	153.4	156.7
2	142.9	145.9	148.9
3	136.1	138.9	141.7
4	129.7	132.3	134.93
5	123.6	126.0	128.4
6	117.8	120.0	122.3
7	112.2	114.3	116.4
8	107.1	109.0	111.0
9	102.1	103.9	105.7
10	97.42	99.08	100.8
11	92.97	94.51	96.06
12	88.74	90.17	91.61
13	84.73	86.05	87.38
14	80.92	82.14	83.37
15	77.29	78.42	79.56
16	73.84	74.89	75.95
17	70.57	71.54	72.51
18	67.46	68.35	69.25
19	64.49	65.32	66.15

20	61.68	62.44	63.20
21	59.00	59.70	60.40
22	56.44	57.09	57.74
23	54.02	54.61	55.20
24	51.70	52.25	52.80
25	49.50	50.00	50.50
26	47.37	47.87	48.37
27	45.34	45.84	46.34
28	43.41	43.91	44.41
29	41.59	42.08	42.57
30	39.84	40.33	40.82
31	38.18	38.66	39.15
32	36.59	37.07	37.55
33	35.07	35.55	36.03
34	33.64	34.11	34.58
35	32.27	32.73	33.20
36	30.95	31.41	31.87
37	29.70	30.15	30.61
38	28.50	28.95	29.40
39	27.37	27.81	28.25
40	26.29	26.72	27.16
41	25.24	25.67	26.10
42	24.25	24.67	25.09
43	23.31	23.72	24.14
44	22.41	22.81	23.22
45	21.53	21.93	22.33
46	20.71	21.10	21.50
47	19.92	20.30	20.69
48	19.16	19.54	19.92
49	18.44	18.81	19.18
50	17.75	18.11	18.48
51	17.08	17.44	17.80
52	16.44	16.79	17.14
53	15.84	16.18	16.53
54	15.26	15.59	15.93
55	14.69	15.02	15.35
56	14.16	14.48	14.81
57	13.65	13.96	14.28
58	13.15	13.46	13.77
59	12.69	12.99	13.30
60	12.23	12.53	12.83
61	11.80	12.09	12.39
62	11.39	11.67	11.96
63	10.98	11.26	11.54
64	10.60	10.87	11.15
65	10.23	10.50	10.77
66	9.880	10.14	10.41

67	9.537	9.792	10.05
68	9.211	9.460	9.715
69	8.897	9.141	9.391
70	8.595	8.834	9.078
71	8.306	8.539	8.778
72	8.028	8.256	8.490
73	7.759	7.983	8.212
74	7.501	7.720	7.944
75	7.254	7.468	7.687
76	7.016	7.225	7.440
77	6.786	6.991	7.201
78	6.565	6.765	6.971
79	6.352	6.548	6.749
80	6.147	6.339	6.536
81	5.950	6.138	6.331
82	5.761	5.944	6.133
83	5.578	5.757	5.942
84	5.401	5.577	5.758
85	5.231	5.403	5.580
86	5.069	5.237	5.410
87	4.912	5.076	5.245
88	4.760	4.921	5.087
89	4.615	4.772	4.934
90	4.474	4.628	4.787
91	4.338	4.489	4.645
92	4.207	4.354	4.506
93	4.081	4.225	4.374
94	3.958	4.099	4.245
95	3.840	3.978	4.121
96	3.726	3.861	4.001
97	3.616	3.748	3.885
98	3.509	3.639	3.773
99	3.407	3.534	3.665
100	3.308	3.432	3.560
101	3.212	3.333	3.459
102	3.119	3.238	3.361
103	3.030	3.146	3.267
104	2.942	3.056	3.174
105	2.858	2.970	3.086
106	2.778	2.887	3.000
107	2.699	2.806	2.917
108	2.623	2.728	2.837
109	2.549	2.652	2.758
110	2.479	2.579	2.683
111	2.410	2.508	2.610
112	2.343	2.439	2.539
113	2.279	2.373	2.471

114	2.216	2.308	2.404
115	2.156	2.246	2.340
116	2.097	2.186	2.278
117	2.040	2.127	2.217
118	1.985	2.070	2.158
119	1.932	2.015	2.102
120	1.880	1.962	2.047

2. Relation between Temperature Sensor of Coil Pipe and Resistance

R25=20KΩ±1%							
B25/50=3950K ±1%							
Temp	resistance(KΩ)			(resist.tol)		(temp.tol)□	
(□)	Rmax	R(t) Normal	Rmin	MAX(+)	MIN(-)	MAX(+)	MIN(-)
-30	377.571	347.000	318.338	8.81	8.26	1.36	1.36
-29	354.642	326.228	299.608	8.71	8.16	1.35	1.35
-28	333.353	306.927	282.189	8.61	8.06	1.33	1.33
-27	313.547	288.957	265.927	8.51	7.97	1.32	1.32
-26	295.088	272.196	250.774	8.41	7.87	1.31	1.31
-25	277.860	256.541	236.582	8.31	7.78	1.30	1.30
-24	261.761	241.901	223.323	8.21	7.68	1.29	1.29
-23	246.699	228.193	210.873	8.11	7.59	1.27	1.27
-22	232.598	215.349	199.219	8.01	7.49	1.26	1.26
-21	219.385	203.304	188.260	7.91	7.40	1.25	1.25
-20	206.995	192.000	177.984	7.81	7.30	1.24	1.24
-19	195.360	181.376	168.317	7.71	7.20	1.23	1.23
-18	184.441	171.398	159.212	7.61	7.11	1.21	1.21
-17	174.193	162.025	150.667	7.51	7.01	1.20	1.20
-16	164.568	153.215	142.613	7.41	6.92	1.19	1.19
-15	155.527	144.932	135.048	7.31	6.82	1.17	1.18
-14	147.029	137.141	127.911	7.21	6.73	1.16	1.17
-13	138.912	129.812	121.205	7.01	6.63	1.15	1.15
-12	131.406	122.913	114.874	6.91	6.54	1.14	1.14
-11	124.346	116.418	108.921	6.81	6.44	1.12	1.13
-10	117.701	110.300	103.307	6.71	6.34	1.11	1.12
-9	111.446	104.536	98.003	6.61	6.25	1.10	1.11
-8	105.556	99.104	93.009	6.51	6.15	1.08	1.09
-7	100.007	93.983	88.288	6.41	6.06	1.07	1.08
-6	94.780	89.154	83.840	6.31	5.96	1.06	1.07
-5	89.852	84.598	79.632	6.21	5.87	1.05	1.06
-4	85.124	80.298	75.665	6.01	5.77	1.03	1.05
-3	80.746	76.240	71.910	5.91	5.68	1.02	1.03
-2	76.615	72.408	68.368	5.81	5.58	1.01	1.02
-1	72.717	68.789	65.019	5.71	5.48	1.00	1.01
0	69.037	65.370	61.847	5.61	5.39	0.98	1.00
1	65.563	62.139	58.852	5.51	5.29	0.97	0.99
2	62.280	59.084	56.012	5.41	5.2	0.96	0.97
3	59.180	56.196	53.330	5.31	5.1	0.94	0.96
4	56.248	53.463	50.785	5.21	5.01	0.93	0.95
5	53.428	50.879	48.381	5.01	4.91	0.92	0.94
6	50.810	48.432	46.098	4.91	4.82	0.91	0.93
7	48.335	46.117	43.940	4.81	4.72	0.89	0.91
8	45.993	43.924	41.895	4.71	4.62	0.88	0.90
9	43.776	41.847	39.951	4.61	4.53	0.87	0.89
10	41.678	39.879	38.112	4.51	4.43	0.86	0.88
11	39.691	38.015	36.365	4.41	4.34	0.84	0.87
12	37.809	36.247	34.710	4.31	4.24	0.83	0.85

13	36.026	34.571	33.136	4.21	4.15	0.82	0.84
14	34.338	32.982	31.646	4.11	4.05	0.80	0.83
15	32.736	31.474	30.228	4.01	3.96	0.79	0.82
16	31.218	30.043	28.883	3.91	3.86	0.78	0.81
17	29.778	28.685	27.606	3.81	3.76	0.77	0.79
18	28.411	27.395	26.390	3.71	3.67	0.75	0.78
19	27.115	26.170	25.236	3.61	3.57	0.74	0.77
20	25.885	25.007	24.137	3.51	3.48	0.73	0.76
21	24.717	23.902	23.094	3.41	3.38	0.72	0.75
22	23.607	22.851	22.099	3.31	3.29	0.70	0.73
23	22.554	21.853	21.156	3.21	3.19	0.69	0.72
24	21.553	20.903	20.255	3.11	3.1	0.68	0.71
25	20.600	20.000	19.400	3.00	3.00	0.66	0.70
26	19.734	19.141	18.549	3.10	3.09	0.69	0.72
27	18.909	18.323	17.739	3.20	3.19	0.72	0.75
28	18.123	17.545	16.970	3.30	3.28	0.74	0.78
29	17.374	16.804	16.238	3.40	3.37	0.77	0.80
30	16.660	16.098	15.541	3.49	3.46	0.80	0.83
31	15.979	15.426	14.879	3.59	3.55	0.82	0.85
32	15.329	14.785	14.248	3.68	3.63	0.85	0.88
33	14.709	14.175	13.647	3.77	3.72	0.88	0.91
34	14.117	13.593	13.075	3.86	3.80	0.90	0.93
35	13.553	13.038	12.531	3.95	3.89	0.93	0.96
36	13.013	12.508	12.012	4.04	3.97	0.95	0.98
37	12.499	12.003	11.517	4.13	4.05	0.98	1.01
38	12.007	11.521	11.045	4.21	4.13	1.01	1.04
39	11.537	11.062	10.595	4.30	4.21	1.03	1.06
40	11.088	10.622	10.166	4.38	4.29	1.06	1.09
41	10.659	10.203	9.757	4.46	4.37	1.09	1.11
42	10.248	9.803	9.367	4.55	4.45	1.11	1.14
43	9.856	9.420	8.994	4.63	4.52	1.14	1.17
44	9.480	9.054	8.638	4.71	4.60	1.17	1.19
45	9.121	8.705	8.298	4.79	4.67	1.19	1.22
46	8.778	8.371	7.973	4.86	4.75	1.22	1.24
47	8.449	8.051	7.663	4.94	4.82	1.24	1.27
48	8.134	7.745	7.367	5.02	4.89	1.27	1.30
49	7.832	7.453	7.083	5.09	4.96	1.30	1.32
50	7.543	7.173	6.812	5.16	5.03	1.32	1.35
51	7.267	6.905	6.553	5.24	5.10	1.35	1.37
52	7.002	6.649	6.305	5.31	5.17	1.38	1.40
53	6.747	6.403	6.068	5.38	5.24	1.40	1.43
54	6.504	6.168	5.841	5.45	5.30	1.43	1.45
55	6.270	5.942	5.623	5.52	5.37	1.46	1.48
56	6.046	5.726	5.415	5.59	5.43	1.48	1.50
57	5.831	5.519	5.216	5.66	5.50	1.51	1.53
58	5.625	5.321	5.025	5.72	5.56	1.53	1.56
59	5.428	5.131	4.842	5.79	5.62	1.56	1.58
60	5.238	4.948	4.667	5.86	5.69	1.59	1.61
61	5.055	4.773	4.499	5.92	5.75	1.61	1.63

62	4.880	4.605	4.338	5.98	5.81	1.64	1.66
63	4.712	4.444	4.183	6.05	5.87	1.67	1.68
64	4.551	4.289	4.035	6.11	5.93	1.69	1.71
65	4.396	4.140	3.893	6.17	5.98	1.72	1.74
66	4.247	3.998	3.756	6.23	6.04	1.75	1.76
67	4.103	3.861	3.625	6.29	6.10	1.77	1.79
68	3.966	3.729	3.500	6.35	6.15	1.80	1.81
69	3.833	3.603	3.379	6.41	6.21	1.82	1.84
70	3.706	3.481	3.263	6.46	6.26	1.85	1.87
71	3.583	3.364	3.152	6.52	6.32	1.88	1.89
72	3.466	3.252	3.045	6.58	6.37	1.90	1.92
73	3.352	3.144	2.942	6.63	6.42	1.93	1.94
74	3.243	3.040	2.843	6.68	6.47	1.96	1.97
75	3.138	2.940	2.748	6.74	6.53	1.98	2.00
76	3.037	2.844	2.657	6.79	6.58	2.01	2.02
77	2.940	2.751	2.569	6.84	6.63	2.04	2.05
78	2.846	2.662	2.485	6.89	6.67	2.06	2.07
79	2.756	2.577	2.403	6.95	6.72	2.09	2.10
80	2.669	2.494	2.325	7.00	6.77	2.11	2.13
81	2.585	2.415	2.250	7.04	6.82	2.14	2.15
82	2.504	2.338	2.178	7.09	6.86	2.17	2.18
83	2.426	2.264	2.108	7.14	6.91	2.19	2.20
84	2.351	2.193	2.041	7.19	6.96	2.22	2.23
85	2.279	2.125	1.976	7.24	7.00	2.25	2.26
86	2.209	2.059	1.914	7.28	7.04	2.27	2.28
87	2.142	1.995	1.854	7.33	7.09	2.30	2.31
88	2.077	1.934	1.796	7.37	7.13	2.33	2.33
89	2.014	1.875	1.740	7.42	7.17	2.35	2.36
90	1.954	1.818	1.687	7.46	7.22	2.38	2.39
91	1.895	1.763	1.635	7.50	7.26	2.41	2.41
92	1.839	1.710	1.585	7.55	7.30	2.43	2.44
93	1.785	1.659	1.537	7.59	7.34	2.46	2.46
94	1.732	1.609	1.490	7.63	7.38	2.48	2.49
95	1.681	1.561	1.446	7.68	7.43	2.51	2.52
96	1.632	1.515	1.402	7.72	7.47	2.54	2.54
97	1.585	1.471	1.360	7.76	7.51	2.56	2.57
98	1.539	1.428	1.320	7.80	7.55	2.59	2.59
99	1.495	1.386	1.281	7.85	7.59	2.62	2.62
100	1.452	1.346	1.243	7.89	7.63	2.64	2.64
101	1.411	1.307	1.207	7.93	7.68	2.67	2.67
102	1.371	1.270	1.172	7.98	7.72	2.70	2.70
103	1.332	1.233	1.137	8.02	7.76	2.72	2.72
104	1.295	1.198	1.104	8.07	7.81	2.75	2.75
105	1.258	1.164	1.070	8.11	8.11	2.77	2.77

3. Relation between Ambient Temperature Sensor and Resistance

R25 = 15.0 KΩ ± 3%			
B25/50 = 3950K ± 2%			
T [℃]	R min [KΩ]	R nom [KΩ]	R max [KΩ]
-25	183.4	199.1	216
-24.5	178	193.1	209.4
-24	172.8	187.4	203
-23.5	167.8	181.8	196.9
-23	162.9	176.5	190.9
-22.5	158.2	171.3	185.2
-22	153.7	166.2	179.6
-21.5	149.3	161.4	174.3
-21	145	156.7	169.1
-20.5	140.9	152.1	164.1
-20	136.9	147.7	159.2
-19.5	133	143.4	154.6
-19	129.2	139.3	150
-18.5	125.6	135.3	145.6
-18	122.1	131.4	141.4
-17.5	118.7	127.7	137.3
-17	115.4	124.1	133.3
-16.5	112.2	120.6	129.5
-16	109.1	117.2	125.7
-15.5	106.1	113.9	122.1
-15	103.1	110.7	118.6
-14.5	100.3	107.6	115.3
-14	97.59	104.6	112
-13.5	94.94	101.7	108.8
-13	92.37	98.88	105.8
-12.5	89.87	96.16	102.8
-12	87.45	93.52	99.92
-11.5	85.11	90.96	97.13
-11	82.83	88.48	94.43
-10.5	80.63	86.07	91.81
-10	78.48	83.74	89.27
-9.5	76.41	81.48	86.82
-9	74.39	79.29	84.43
-8.5	72.43	77.16	82.12
-8	70.54	75.1	79.88
-7.5	68.69	73.1	77.71
-7	66.9	71.15	75.61
-6.5	65.17	69.27	73.57
-6	63.48	67.44	71.59
-5.5	61.84	65.67	69.66
-5	60.25	63.95	67.8
-4.5	58.71	62.27	65.99
-4	57.21	60.65	64.24
-3.5	55.75	59.08	62.54
-3	54.34	57.55	60.89

-2.5	52.96	56.06	59.29
-2	51.63	54.62	57.73
-1.5	50.33	53.22	56.22
-1	49.07	51.86	54.76
-0.5	47.84	50.54	53.33
0	46.65	49.25	51.95
0.5	45.49	48	50.61
1	44.37	46.79	49.31
1.5	43.27	45.61	48.04
2	42.21	44.47	46.81
2.5	41.17	43.36	45.62
3	40.17	42.28	44.46
3.5	39.19	41.23	43.33
4	38.24	40.2	42.24
4.5	37.31	39.21	41.17
5	36.41	38.25	40.14
5.5	35.53	37.31	39.13
6	34.68	36.39	38.16
6.5	33.85	35.51	37.21
7	33.05	34.64	36.29
7.5	32.26	33.8	35.39
8	31.5	32.99	34.52
8.5	30.75	32.19	33.67
9	30.03	31.42	32.84
9.5	29.33	30.67	32.04
10	28.64	29.94	31.26
10.5	27.97	29.22	30.5
11	27.32	28.53	29.77
11.5	26.69	27.86	29.05
12	26.07	27.2	28.35
12.5	25.47	26.56	27.67
13	24.89	25.94	27.01
13.5	24.32	25.33	26.37
14	23.76	24.74	25.74
14.5	23.22	24.17	25.13
15	22.69	23.61	24.54
15.5	22.18	23.06	23.96
16	21.68	22.53	23.4
16.5	21.19	22.02	22.85
17	20.72	21.51	22.32
17.5	20.26	21.02	21.8
18	19.8	20.55	21.3
18.5	19.36	20.08	20.8
19	18.94	19.63	20.33
19.5	18.52	19.19	19.86
20	18.11	18.75	19.4
20.5	17.71	18.33	18.96
21	17.33	17.93	18.53
21.5	16.95	17.53	18.11

22	16.58	17.14	17.7
22.5	16.22	16.76	17.3
23	15.87	16.39	16.91
23.5	15.53	16.03	16.53
24	15.19	15.68	16.16
24.5	14.87	15.33	15.8
25	14.55	15	15.45
25.5	14.23	14.67	15.12
26	13.91	14.36	14.8
26.5	13.61	14.05	14.49
27	13.31	13.74	14.18
27.5	13.02	13.45	13.88
28	12.73	13.16	13.59
28.5	12.45	12.88	13.31
29	12.18	12.6	13.03
29.5	11.92	12.34	12.76
30	11.66	12.08	12.49
30.5	11.41	11.82	12.23
31	11.17	11.57	11.98
31.5	10.93	11.33	11.73
32	10.69	11.09	11.49
32.5	10.47	10.86	11.26
33	10.24	10.63	11.03
33.5	10.03	10.41	10.8
34	9.816	10.2	10.59
34.5	9.609	9.987	10.37
35	9.408	9.782	10.16
35.5	9.211	9.581	9.957
36	9.019	9.385	9.758
36.5	8.831	9.194	9.563
37	8.648	9.007	9.372
37.5	8.469	8.824	9.185
38	8.294	8.645	9.003
38.5	8.123	8.471	8.825
39	7.957	8.3	8.651
39.5	7.794	8.134	8.481
40	7.635	7.971	8.315
40.5	7.479	7.812	8.152
41	7.328	7.657	7.993
41.5	7.179	7.505	7.838
42	7.034	7.356	7.686
42.5	6.893	7.211	7.537
43	6.755	7.069	7.391
43.5	6.619	6.93	7.249
44	6.487	6.795	7.11
44.5	6.358	6.662	6.974
45	6.232	6.532	6.841
45.5	6.108	6.405	6.711
46	5.988	6.282	6.584

46.5	5.87	6.16	6.459
47	5.755	6.042	6.337
47.5	5.642	5.926	6.218
48	5.532	5.812	6.101
48.5	5.424	5.701	5.987
49	5.319	5.593	5.875
49.5	5.216	5.486	5.766
50	5.115	5.382	5.659
50.5	5.016	5.28	5.553
51	4.919	5.18	5.45
51.5	4.825	5.083	5.35
52	4.732	4.987	5.251
52.5	4.642	4.894	5.155
53	4.553	4.802	5.06
53.5	4.467	4.713	4.968
54	4.382	4.625	4.877
54.5	4.3	4.54	4.789
55	4.219	4.457	4.703
55.5	4.139	4.374	4.618
56	4.061	4.293	4.534
56.5	3.985	4.214	4.452
57	3.911	4.137	4.373
57.5	3.839	4.062	4.295
58	3.767	3.988	4.218
58.5	3.698	3.916	4.143
59	3.63	3.845	4.07
59.5	3.563	3.776	3.998
60	3.498	3.708	3.927
60.5	3.434	3.642	3.859
61	3.371	3.577	3.791
61.5	3.31	3.513	3.725
62	3.25	3.45	3.66
62.5	3.191	3.389	3.596
63	3.134	3.329	3.534
63.5	3.077	3.271	3.473
64	3.022	3.213	3.413
64.5	2.968	3.157	3.354
65	2.915	3.102	3.297
65.5	2.863	3.048	3.241
66	2.813	2.995	3.185
66.5	2.763	2.943	3.131
67	2.714	2.892	3.078
67.5	2.666	2.842	3.026
68	2.62	2.793	2.975
68.5	2.574	2.745	2.925
69	2.529	2.698	2.876
69.5	2.485	2.652	2.828
70	2.442	2.607	2.781
70.5	2.399	2.563	2.734

71	2.358	2.519	2.689
71.5	2.317	2.477	2.645
72	2.278	2.435	2.601
72.5	2.239	2.394	2.558
73	2.2	2.354	2.516
73.5	2.163	2.315	2.475
74	2.126	2.276	2.435
74.5	2.09	2.238	2.395
75	2.055	2.201	2.356
75.5	2.02	2.165	2.318
76	1.986	2.129	2.28
76.5	1.953	2.094	2.244
77	1.92	2.06	2.208
77.5	1.888	2.026	2.172
78	1.857	1.993	2.138
78.5	1.826	1.961	2.103
79	1.796	1.929	2.07
79.5	1.766	1.898	2.037
80	1.737	1.867	2.005
80.5	1.709	1.837	1.973
81	1.681	1.808	1.942
81.5	1.653	1.779	1.912
82	1.626	1.75	1.882
82.5	1.6	1.722	1.852
83	1.574	1.695	1.824
83.5	1.548	1.668	1.795
84	1.524	1.642	1.767
84.5	1.499	1.616	1.74
85	1.475	1.59	1.713
85.5	1.451	1.565	1.687
86	1.428	1.541	1.661
86.5	1.406	1.517	1.636
87	1.383	1.493	1.611
87.5	1.361	1.47	1.586
88	1.34	1.447	1.562
88.5	1.319	1.425	1.538
89	1.298	1.403	1.515
89.5	1.278	1.381	1.492
90	1.258	1.36	1.47
90.5	1.238	1.34	1.448
91	1.219	1.319	1.426
91.5	1.2	1.299	1.405
92	1.181	1.279	1.384
92.5	1.163	1.26	1.364
93	1.145	1.241	1.343
93.5	1.128	1.222	1.324
94	1.11	1.204	1.304
94.5	1.093	1.186	1.285
95	1.077	1.168	1.266

95.5	1.06	1.151	1.248
96	1.044	1.134	1.229
96.5	1.028	1.117	1.212
97	1.013	1.1	1.194
97.5	0.9976	1.084	1.177
98	0.9826	1.068	1.16
98.5	0.9679	1.052	1.143
99	0.9535	1.037	1.127
99.5	0.9392	1.022	1.11
100	0.9252	1.007	1.095
100.5	0.9115	0.9922	1.079
101	0.8981	0.9778	1.064
101.5	0.8848	0.9636	1.049
102	0.8717	0.9497	1.034
102.5	0.8589	0.936	1.019
103	0.8463	0.9225	1.005
103.5	0.8339	0.9093	0.9906
104	0.8218	0.8963	0.9767
104.5	0.8098	0.8835	0.9631
105	0.7981	0.871	0.9497

Parameter table of testing operation

Testing operation parameter of multi-couple unit																									
	Ref. value		Main unit				Subordinate unit1							Subordinate unit 2						Subordinate unit 3					
Exhaust																									
Suction																									
High pressure																									
Low pressure																									
Ambient temperature																									
TC																									
Ta																									
PMV																									
Compressor current																									
Frequency																									
Operation parameter of indoor unit																									
No.	Indoor unit capacity	PMV	Ta	**Inlet**	middle	Outlet	No.	Indoor unit capacity	PMV	Ta	**Inlet**	middle	Outlet	No.	Indoor unit capacity	PMV	Ta	**Inlet**	middle	Outlet	No.	Indoor unit capacity	PMV	Ta	Inlet	middle	Outlet
Ref. value																											
1							17							33							49						
2							18							34							50						
3							19							35							51						
4							20							36							52						
5							21							37							53						
6							22							38							54						
7							23							39							55						
8							24							40							56						
9							25							41							57						
10							26							42							58						
11							27							43							59						
12							28							44							60						
13							29							45							61						
14							30							46							62						
15							31							47							63						