



Technology leads Intelligent life

Technical & Service Manual

ARV Indoor Unit Series

Version 2022.1

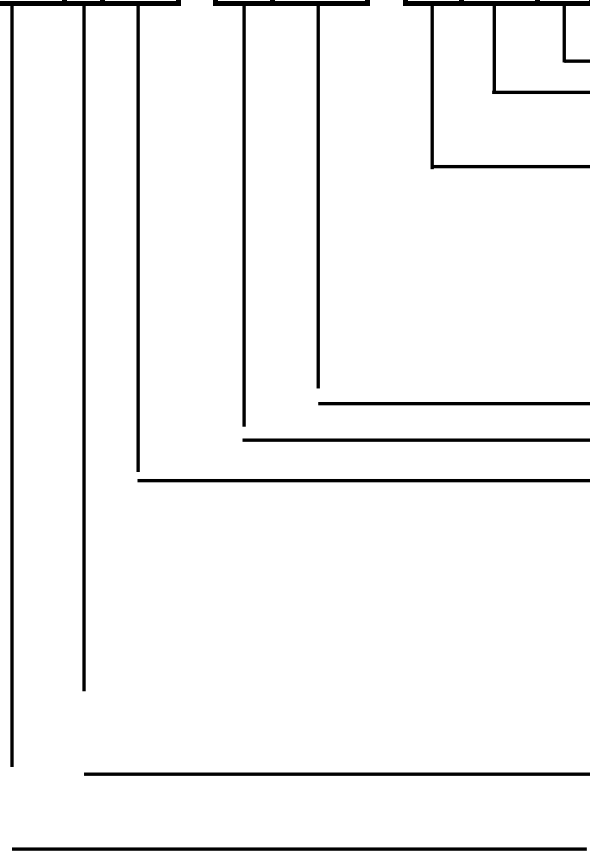
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Part1 General Information

1. Nomenclatures

ARV | T | CA | - | H | 028 | / | 4 | R1 | A



Design Series Code

Refrigerant Type:

R1:R410A R22 Omitted

Power Supply :

2: 220-240V~/1Ph/ 60Hz **4:** 220-240V~/1Ph/50Hz

5: 380-415V~/3Ph/50Hz **6:** 380-415V~/3Ph/60Hz

9:208-230V~/3Ph/60Hz

N:220-240V~/1Ph/50/60Hz

S: 380-415V~/3Ph/50/60Hz

Cooling Capacity (×100W)

H: Cooling & Heating **C:** Cooling Only

Indoor Unit Type :

C1 : One-way Cassette **C2 :** Two-way Cassette

CA : Four-way Cassette **CF :** Ceiling&Floor

SD : Slim Duct **MD :** Mid ESP Duct

HD : High ESP Duct **WM :** Wall Mounted

FA : Fresh Air Processor





Climate Class:

T: T3 Type

AUX Refrigerant Variable AC





2. Matched ODU series

2.1 Top Discharge ARV ODU

Series	Capacity (HP / kW)	Model	Pictures
T1 ARV6 Series	8 / 25.2	ARV-H250/SR1MV	
	10 / 28.0	ARV-H280/SR1MV	
	12 / 33.5	ARV-H330/SR1MV	
	14 / 40.0	ARV-H400/SR1MV	
	16 / 45.0	ARV-H450/SR1MV	
	18 / 50.4	ARV-H500/SR1MV	
	20 / 56.0	ARV-H560/SR1MV	
22 / 61.5	ARV-H610/SR1MV		
T1 ARV6-S Series	8 / 25.2	ARV-H250/SR1MV-S	
	10 / 28.0	ARV-H280/SR1MV-S	
	12 / 33.5	ARV-H330/SR1MV-S	
	14 / 40.0	ARV-H400/SR1MV-S	
	16 / 45.0	ARV-H450/SR1MV-S	
	18 / 50.4	ARV-H500/SR1MV-S	
	20 / 56.0	ARV-H560/SR1MV-S	
22 / 61.5	ARV-H610/SR1MV-S		
T3 ARV6 Series	8 / 25.2	ARVT-H250/SR1MV	
	10 / 28.0	ARVT-H280/SR1MV	
	12 / 33.5	ARVT-H330/SR1MV	
	14 / 40.0	ARVT-H400/SR1MV	
	16 / 45.0	ARVT-H450/SR1MV	
Individual Series	22 / 61.5	ARV-H620/5R1I	
	24 / 67.0	ARV-H670/5R1I	
	26 / 73.0	ARV-H730/5R1I	
	28 / 78.5	ARV-H780/5R1I	
	30 / 85.0	ARV-H850/5R1I	
	32 / 90.0	ARV-H900/5R1I	

Note: All above models can match all IDUs





2.2 Side discharge ARV ODU

Series	Capacity (kW)	Model	Pictures
T1 MINI Series (50&60HZ 1 phase)	8	ARV-H080/NR1	
	10	ARV-H100/NR1	
	12	ARV-H120/NR1	
	14	ARV-H140/NR1	
	16	ARV-H160/NR1	
T1 MINI Series (50&60HZ 3 phase)	12	ARV-H120/SR1DCS7	
	14	ARV-H140/SR1DCS7 ARV-H140/SR1DCSA	
	16	ARV-H160/SR1DCS7 ARV-H160/SR1DCSA	
	22	ARV-H220/SR1DCS7	
	26	ARV-H260/SR1DCS7	
T3 MINI Series	10	ARVT-H100/NR1	
	12	ARVT-H120/NR1	
	14	ARVT-H140/NR1	
	16	ARV-H160/SR1DCS7	
	18	ARVT-H180/SR1DCS7	
T1 MINI Series (50HZ 3 phase)	22	ARV-H220/5R1A	
	28	ARV-H280/5R1A	

Note: All above models can match all IDUs

Part2 Wall Mounted

1. Product Line-up

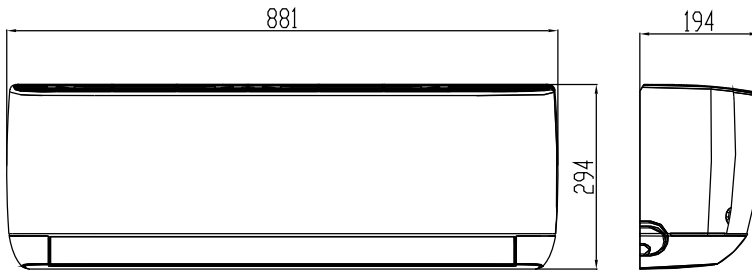
Series	Models	Photos
50&60HZ J Series	ARVWM-H022/NR1DJA	
	ARVWM-H028/NR1DJA	
	ARVWM-H036/NR1DJA	
	ARVWM-H045/NR1DJA	
	ARVWM-H056/NR1DJA	
	ARVWM-H071/NR1DJA	
50&60HZ L Series	ARVWM-H022/R1X(LI)	
	ARVWM-H028/R1X(LI)	
	ARVWM-H036/R1X(LI)	
	ARVWM-H045/R1X(LI)	
	ARVWM-H056/R1X(LI)	
	ARVWM-H071/R1X(LI)	
50HZ L Series	ARVWM-H022/4R1A(LH)	
	ARVWM-H028/4R1A(LH)	
	ARVWM-H036/4R1A(LH)	
	ARVWM-H045/4R1A(LH)	
	ARVWM-H056/4R1A(LH)	
	ARVWM-H071/4R1A(LH)	
60HZ L Series	ARVWM-H022/2R1A(LH)	
	ARVWM-H028/2R1A(LH)	
	ARVWM-H036/2R1A(LH)	
	ARVWM-H045/2R1A(LH)	
	ARVWM-H056/2R1A(LH)	
	ARVWM-H071/2R1A(LH)	

Remark: **Discontinued** (50&60HZ L Series, 50HZ L Series, 60HZ L Series)

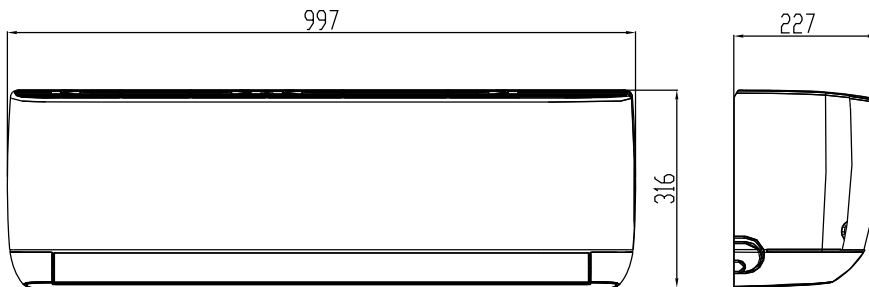
2. Dimensions

Wall Mounted J Series

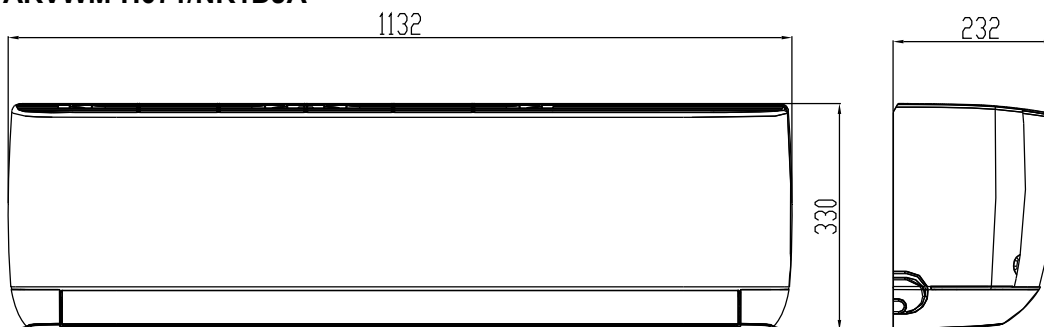
ARVWM-H022/NR1DJA , ARVWM-H028/NR1DJA, ARVWM-H036/NR1DJA

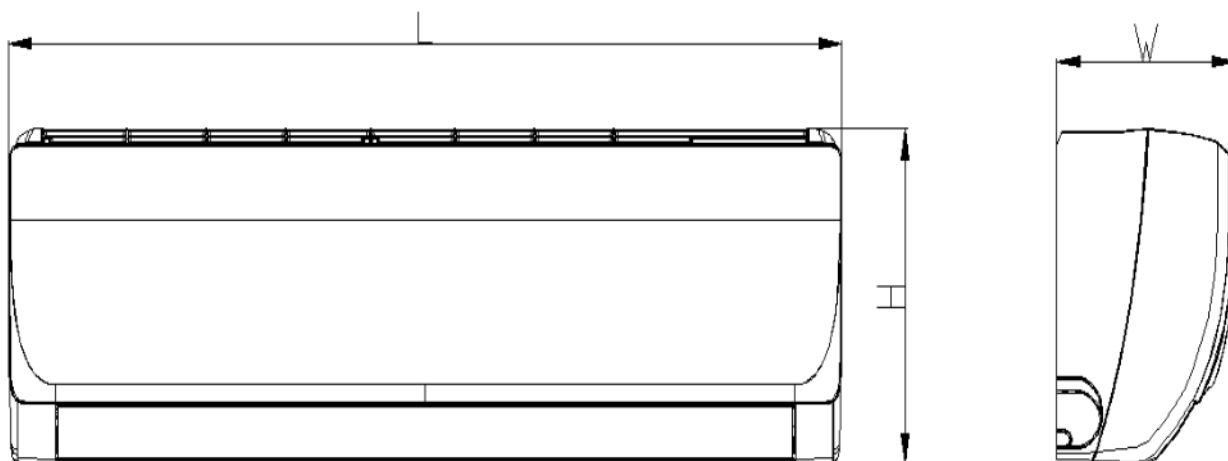


ARVWM-H045/NR1DJA、ARVWM-H056/NR1DJA



ARVWM-H071/NR1DJA








Physical Dimension		ARVWM-H022/R1X(LI)	ARVWM-H028/R1X(LI)	ARVWM-H036/R1X(LI)
		ARVWM-H022/4R1A(LH)	ARVWM-H028/4R1A(LH)	ARVWM-H036/4R1A(LH)
		ARVWM-H022/2R1A(LH)	ARVWM-H028/2R1A(LH)	ARVWM-H036/2R1A(LH)
Length	mm	850	850	850
Height	mm	300	300	300
Width	mm	198	198	198

Physical Dimension		ARVWM-H045/R1X(LI)	ARVWM-H056/R1X(LI)	ARVWM-H071/R1X(LI)
		ARVWM-H045/4R1A(LH)	ARVWM-H056/4R1A(LH)	ARVWM-H071/4R1A(LH)
		ARVWM-H045/2R1A(LH)	ARVWM-H056/2R1A(LH)	ARVWM-H071/2R1A(LH)
Length	mm	970	970	1100
Height	mm	315	315	330
Width	mm	235	235	235

3. Features

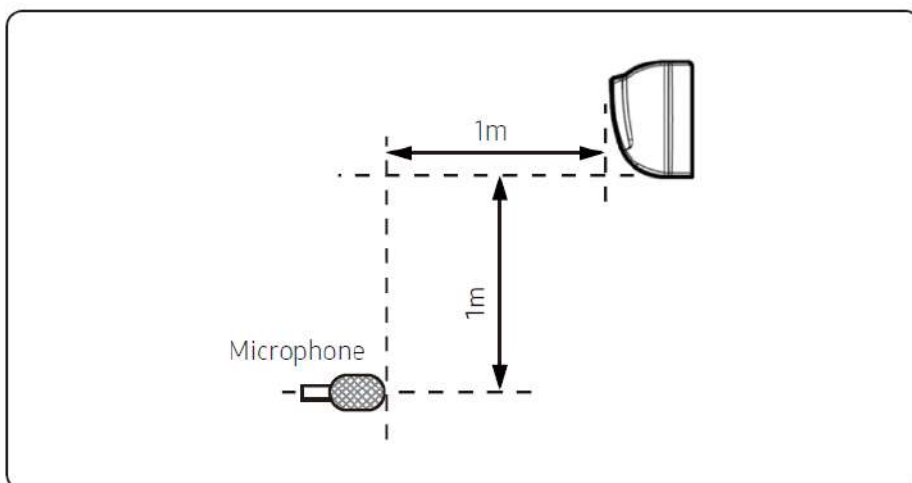
- 1) Superb craftsmanship --**0.3 mm seam**, appearance integration
- 2) Kinds of panels optional -- JA is standard , JC,JD.... Optional
- 3) Wave - shaped left - right limit wind blade -- air flow is more uniform, concentration and longer
- 4) Fin guide design -- Optimize the air duct , improve the air supply distance
- 5) Removable under jaw – Installation time reduced by half
- 6) Two way drainage design -- Suitable for kinds of installation sites, more convenient for drainage
- 7) PCB pluggable and maintenance -- Efficient and quick maintenance, Remove the medium frame & wiring cover, PCB can be repaired (For 2.2/2.8/3.6 Kw no need to remove the medium frame)
- 8) High precise control EXV **2000 pulse** -- Multi-stage gear transmission, lower running sound and no abnormal noise ;There is no sudden change in the refrigerant flow characteristic diagram, and the flow control is stable
- 9) Wired controller optional, Suitable for kinds of customer requirement, Embedded wall installation, simple and beautiful
- 10) Smart WIFI control , Through A-link module able to remote control indoor unit ON/OFF, set temperature, fan speed ...Bring users a comfortable and intelligent control experience
- 11) Room card function, Insert card , Indoor unit can be controlled by remote/wired controller, Remove card ,indoor unit keep off status, not response the signal from controller
- 12) Wired group Control , **Max 16 units** can be controlled by one wired controller, All units can be controlled at the same time (not individual control)
- 13) Centralized control , **Max 256 units** can be controlled by Touch screen centralized controller **CC02** All units can be controlled individual, support weekly schedule control

- Optional Panels

J Series (50&60HZ)		
Standard panel	Optional panel More Panels please contact the sales team	
JA	JC	JD
		

4. Sound level

4.1 Test condition



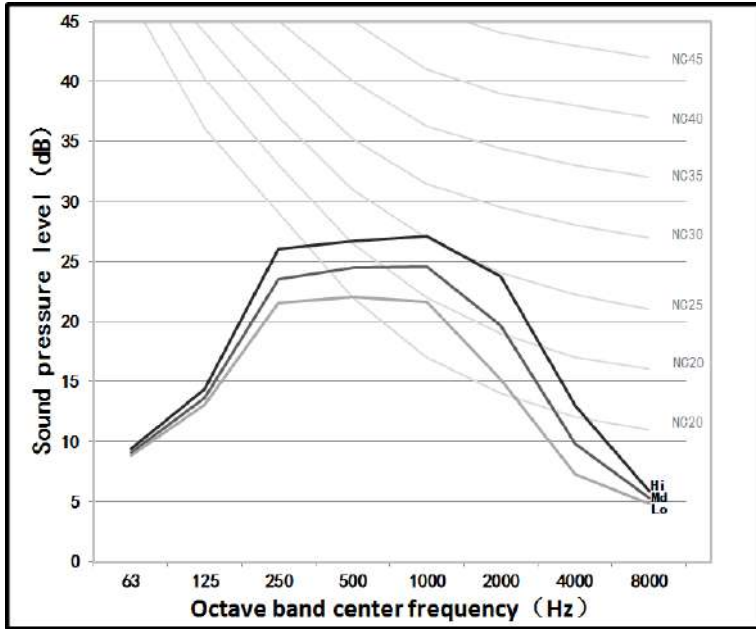
4.2 Test value

Series	Models	Noise level under three speeds of fan (dB(A))		
		H	M	L
50&60HZ J Series	ARVWM-H022/NR1DJA	38	33	27
	ARVWM-H028/NR1DJA	38	33	27
	ARVWM-H036/NR1DJA	38	33	27
	ARVWM-H045/NR1DJA	42	38	34
	ARVWM-H056/NR1DJA	42	38	34
	ARVWM-H071/NR1DJA	44	40	37
50&60HZ L Series	ARVWM-H022/R1X(LI)	38	33	27
	ARVWM-H028/R1X(LI)	38	33	27
	ARVWM-H036/R1X(LI)	38	33	27
	ARVWM-H045/R1X(LI)	45	41	35
	ARVWM-H056/R1X(LI)	45	41	35
	ARVWM-H071/R1X(LI)	48	45	39
50HZ L Series	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
60HZ L Series	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

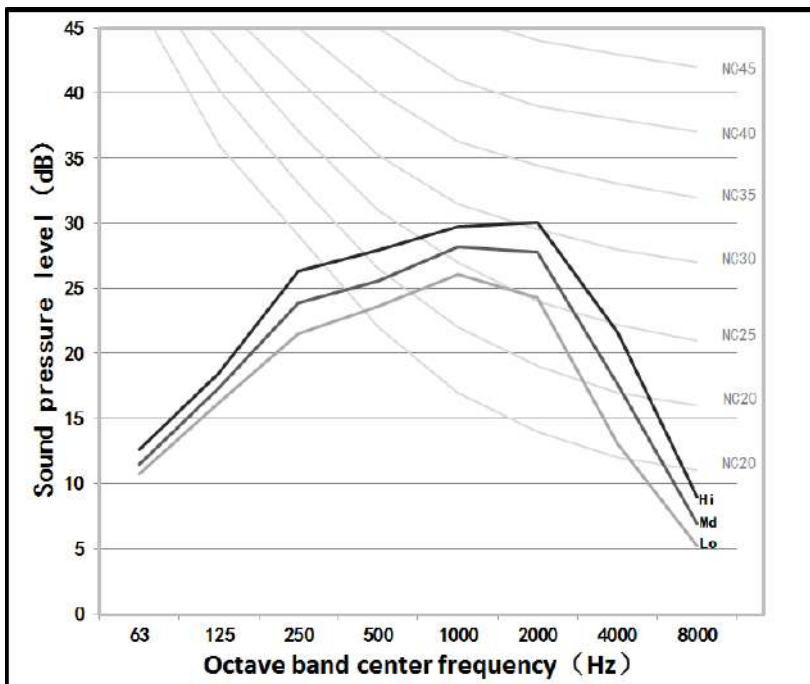
Remark: **Discontinued** (50&60HZ L Series, 50HZ L Series, 60HZ L Series)

4.3 NC curves

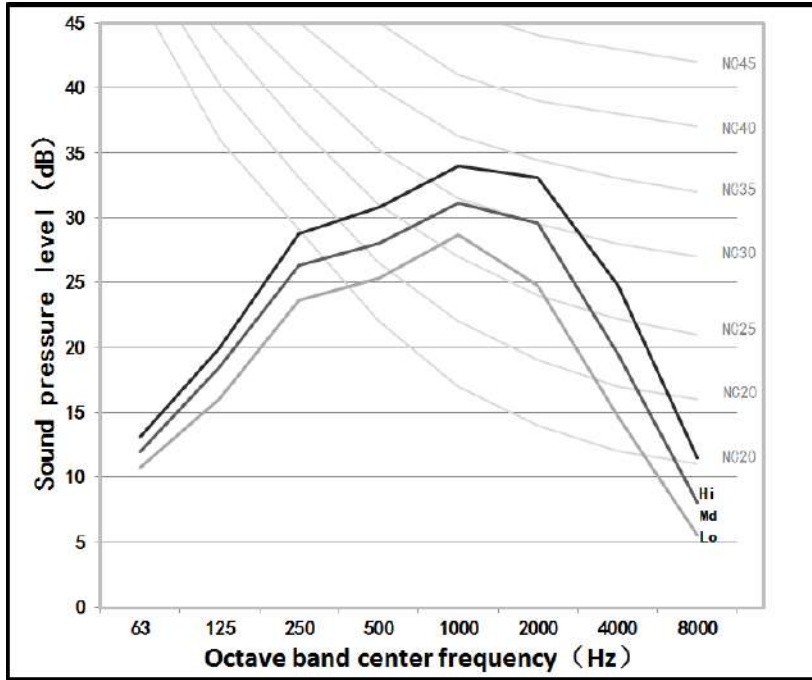
ARVWM-H022/NR1DJ*、ARVWM-H028/NR1DJ*、ARVWM-H036/NR1DJ*



ARVWM-H045/NR1DJ*、ARVWM-H056/NR1DJ*



ARVWM-H071/NR1DJ*



5. Capacity table

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

Outdoor dry bulb temperature [°C]	Correction coefficient	Indoor dry/wet bulb temperature[°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

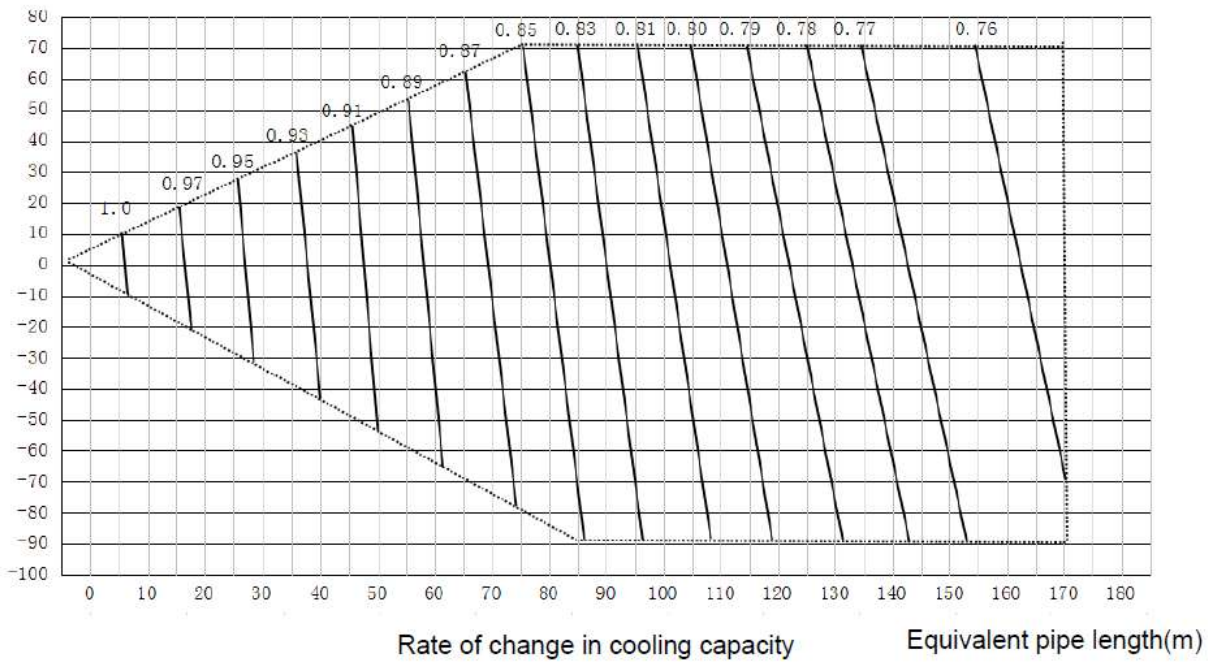
Heating Capacity of Outdoor Dry/Wet Bulb Temperature and Indoor Dry Bulb Temperature or Power Consumption Correction Coefficient

Outdoor ambient temperature of dry/wet bulb[°C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [°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

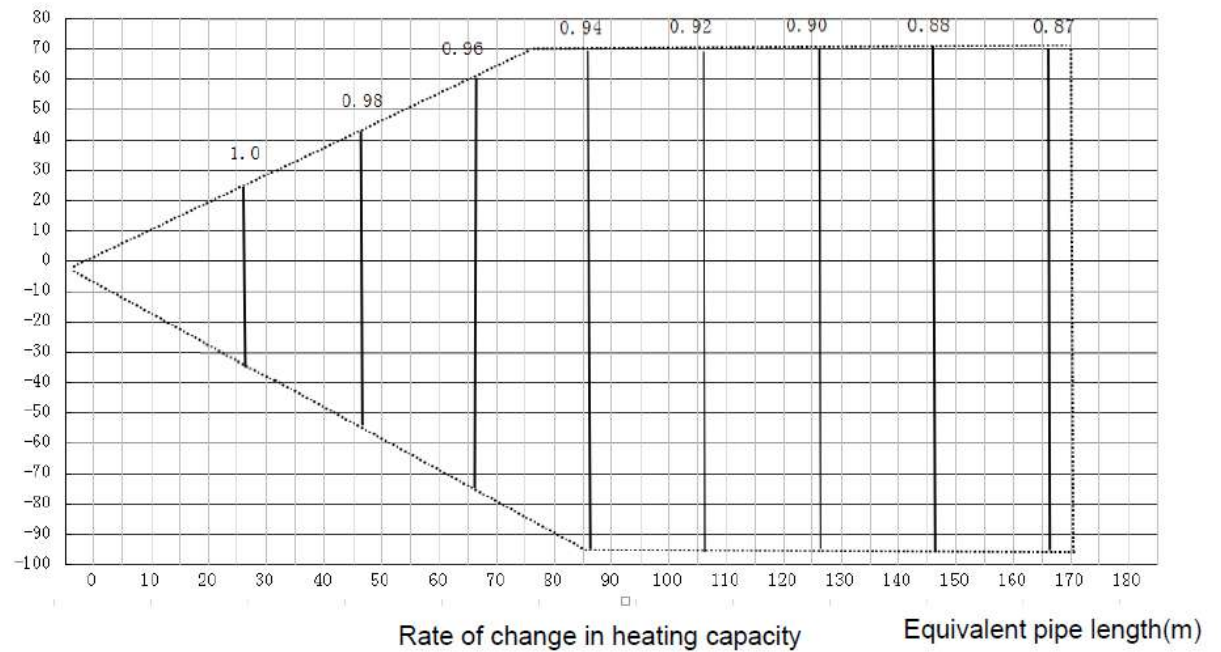
	Power	0.99	1.05	1.11
15/12	Heating capacity	1.16	1.12	1.07
	Power	1.05	1.11	1.17
15-24	Heating capacity	0.85 – 1.05 of nominal		
	Power	0.80 – 1.20 of nominal		

Length Correction Coefficient of Indoor/Outdoor Unit Connecting Tube

High head(m)

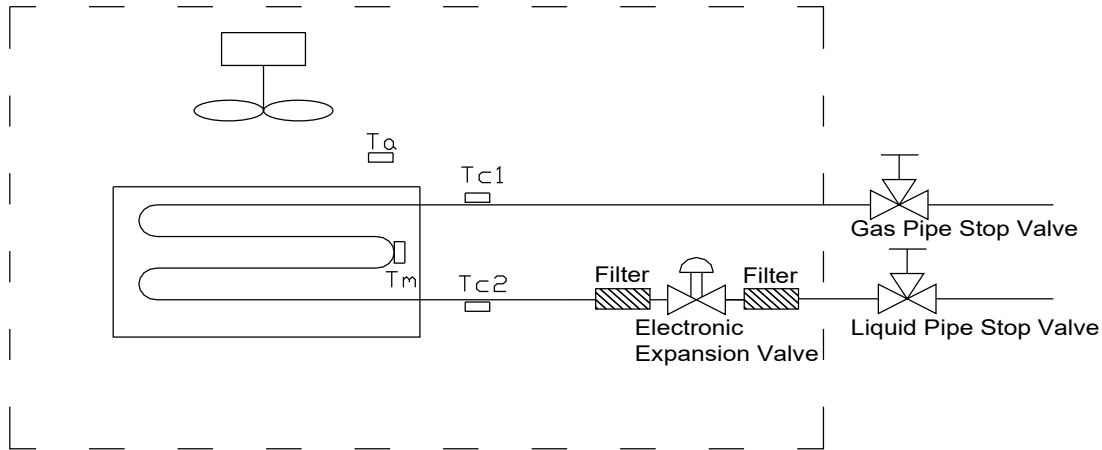


High head(m)



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. Refrigerant piping diagram



Refrigerant pipe connection port diameters

(mm)

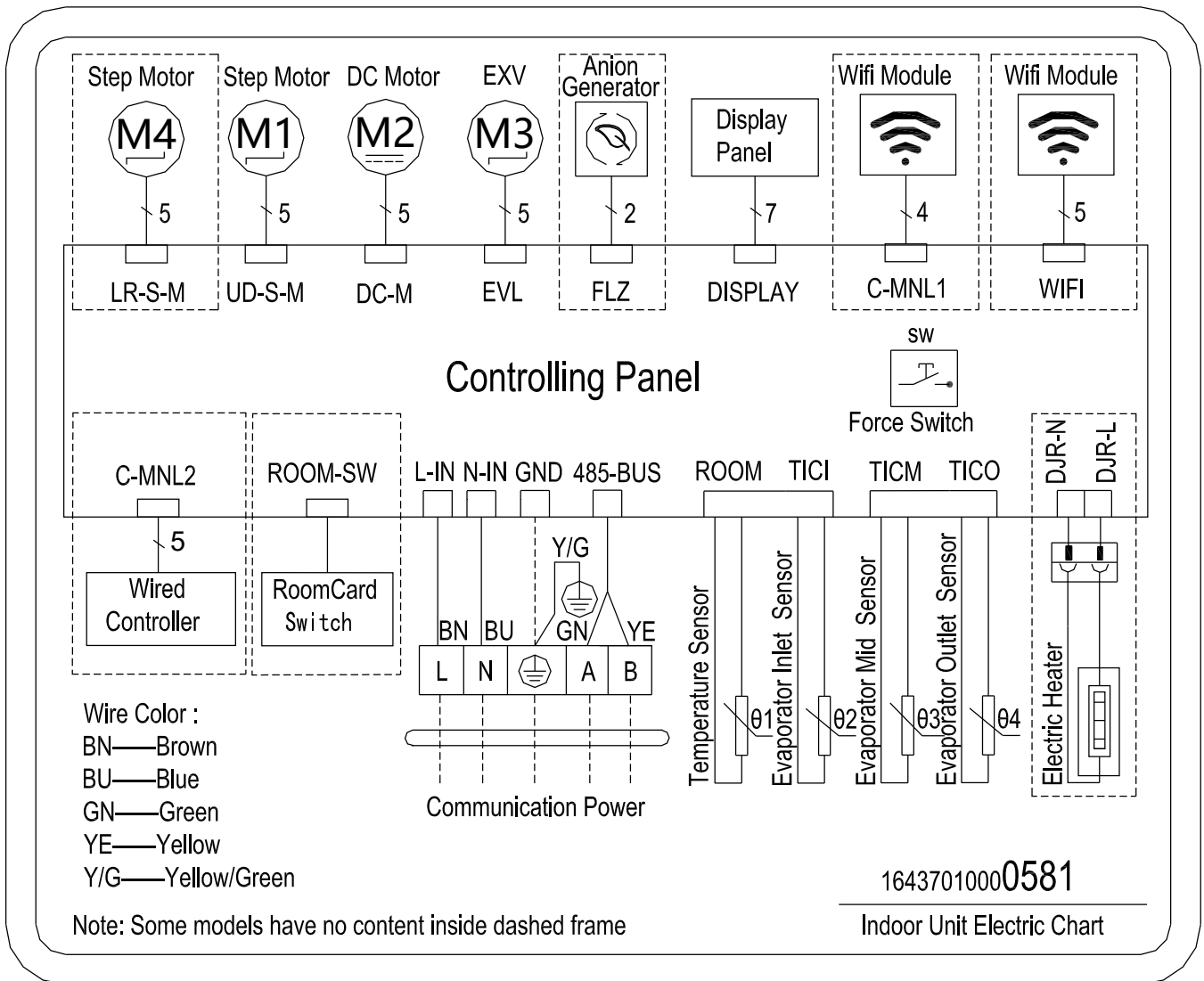
Model	Gas	Liquid
ARVWM-H022/R1X(LI) ARVWM-H022/4R1A(LH) ARVWM-H022/2R1A(LH) ARVWM-H022/NR1DJA	Φ9.52	Φ6.35
ARVWM-H028/R1X(LI) ARVWM-H028/4R1A(LH) ARVWM-H028/2R1A(LH) ARVWM-H028/NR1DJA		
ARVWM-H036/R1X(LI) ARVWM-H036/4R1A(LH) ARVWM-H036/2R1A(LH) ARVWM-H036/NR1DJA		
ARVWM-H045/R1X(LI) ARVWM-H045/4R1A(LH) ARVWM-H045/2R1A(LH) ARVWM-H045/NR1DJA	Φ12.7	Φ6.35
ARVWM-H056/R1X(LI) ARVWM-H056/4R1A(LH) ARVWM-H056/2R1A(LH) ARVWM-H056/NR1DJA		
ARVWM-H071/R1X(LI) ARVWM-H071/4R1A(LH) ARVWM-H071/2R1A(LH)	Φ15.88	Φ6.35

ARVWM-H071/NR1DJA

7. PCB wiring diagram

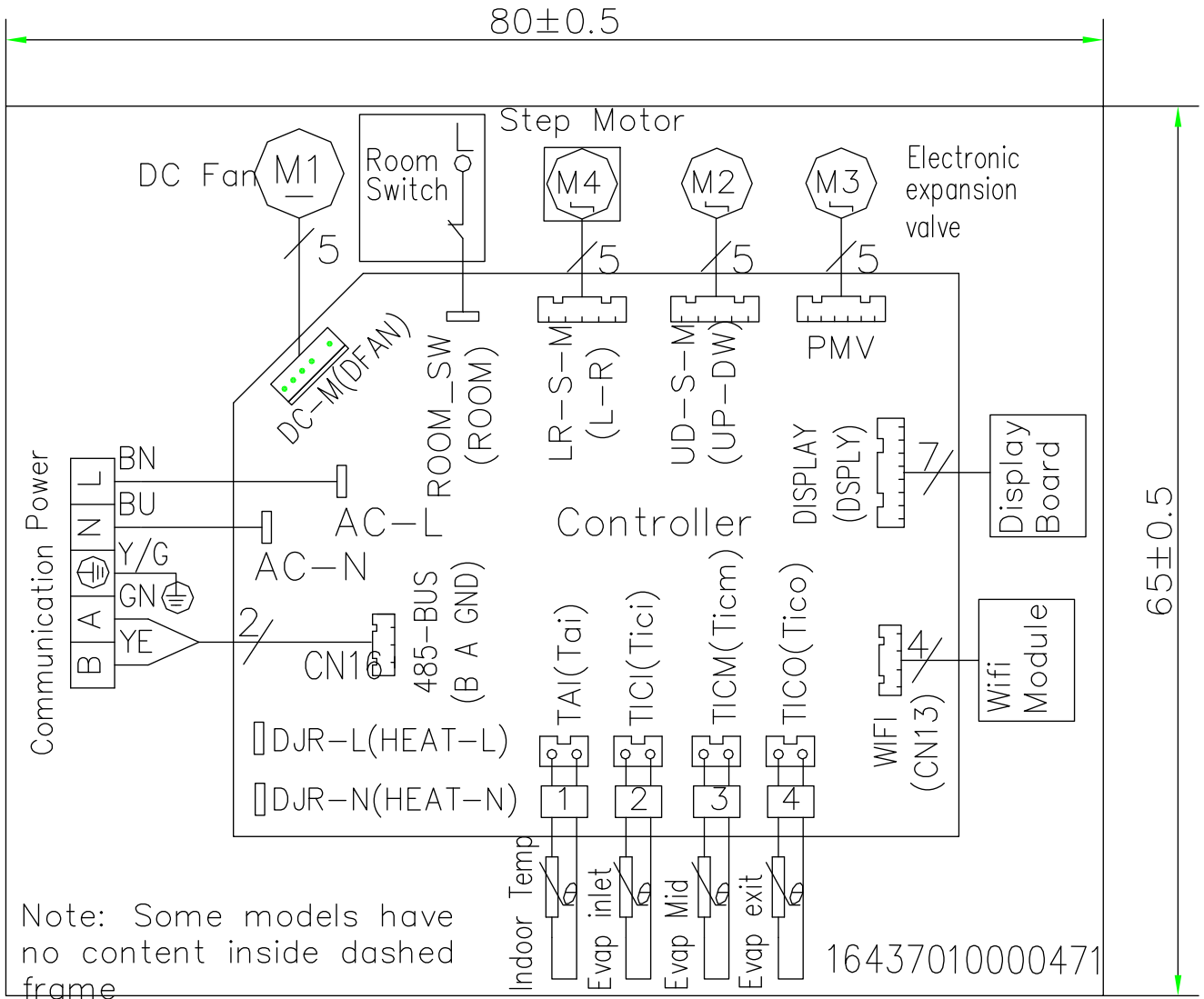
50&60HZ J Series

ARVWM-H022/NR1DJA、ARVWM-H028/NR1DJA、ARVWM-H036/NR1DJA、
ARVWM-H045/NR1DJA、ARVWM-H056/NR1DJA、ARVWM-H071/NR1DJA



50&60HZ L Series

ARVWM-H022/R1X(LI), ARVWM-H028/R1X(LI), ARVWM-H036/R1X(LI)
 ARVWM-H045/R1X(LI), ARVWM-H056/R1X(LI), ARVWM-H071/R1X(LI)

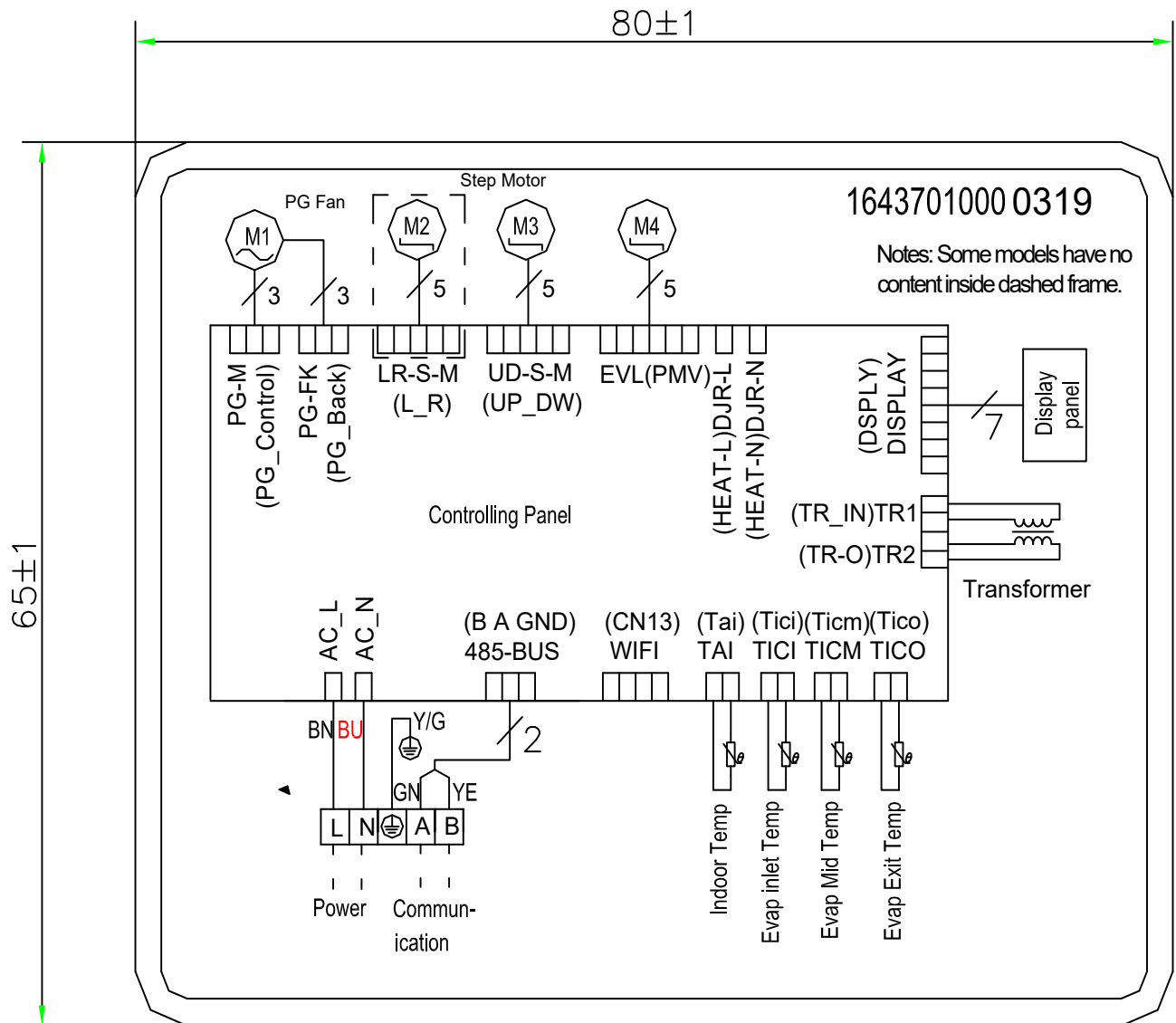


50HZ L Series

ARVWM-H022/4R1A(LH), ARVWM-H028/4R1A(LH), ARVWM-H036/4R1A(LH)
 ARVWM-H045/4R1A(LH), ARVWM-H056/4R1A(LH), ARVWM-H071/4R1A(LH)

60HZ L Series

ARVWM-H022/2R1A(LH), ARVWM-H028/2R1A(LH), ARVWM-H036/2R1A(LH)
 ARVWM-H045/2R1A(LH), ARVWM-H056/2R1A(LH), ARVWM-H071/2R1A(LH)

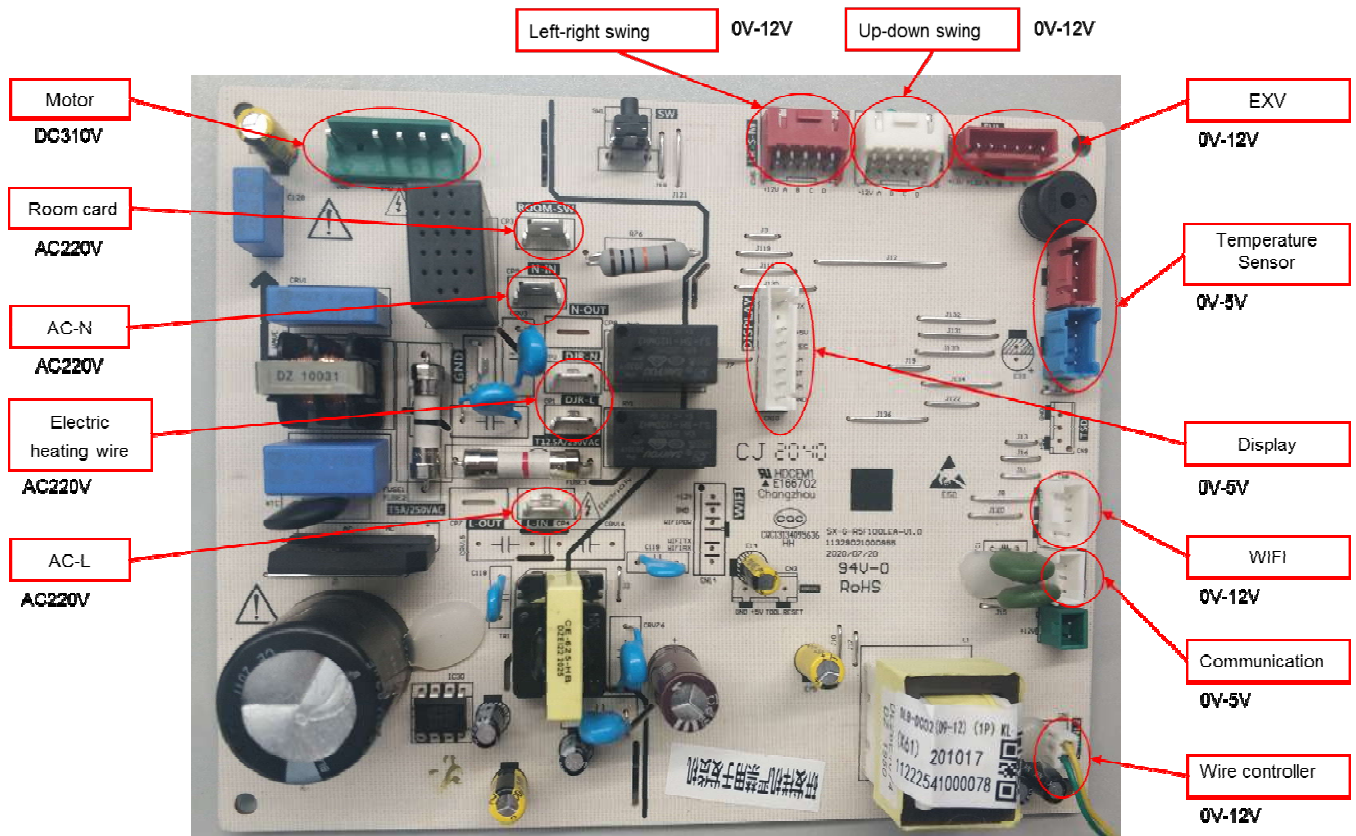


8. PCB Port Introduction

50&60HZ J Series

ARVWM-H022/NR1DJA、ARVWM-H028/NR1DJA、ARVWM-H036/NR1DJA

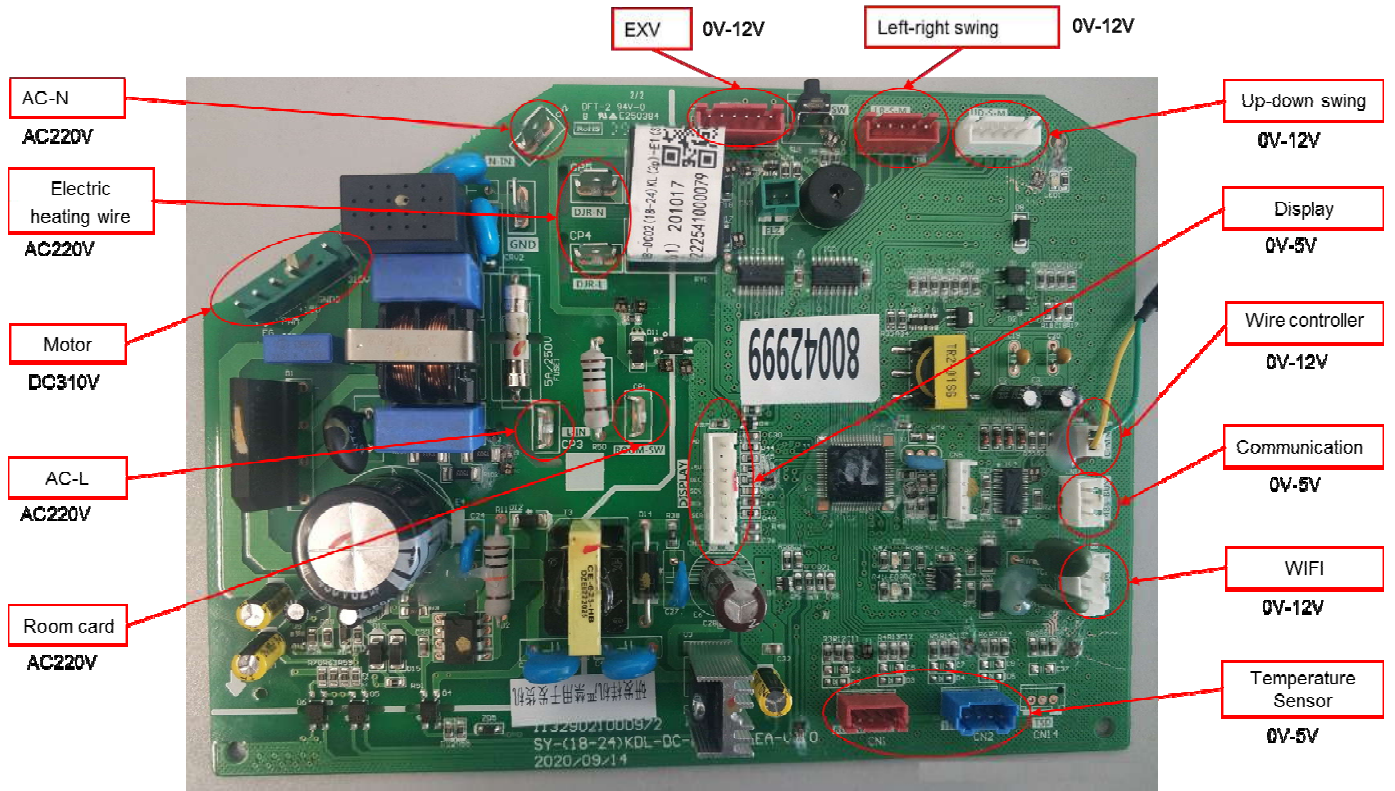
1122254900025 R主控制器DLB-DC02(09-12)KL-E1(SY)



50&60HZ J Series

ARVWM-H045/NR1DJA, ARVWM-H056/NR1DJA, ARVWM-H071/NR1DJA

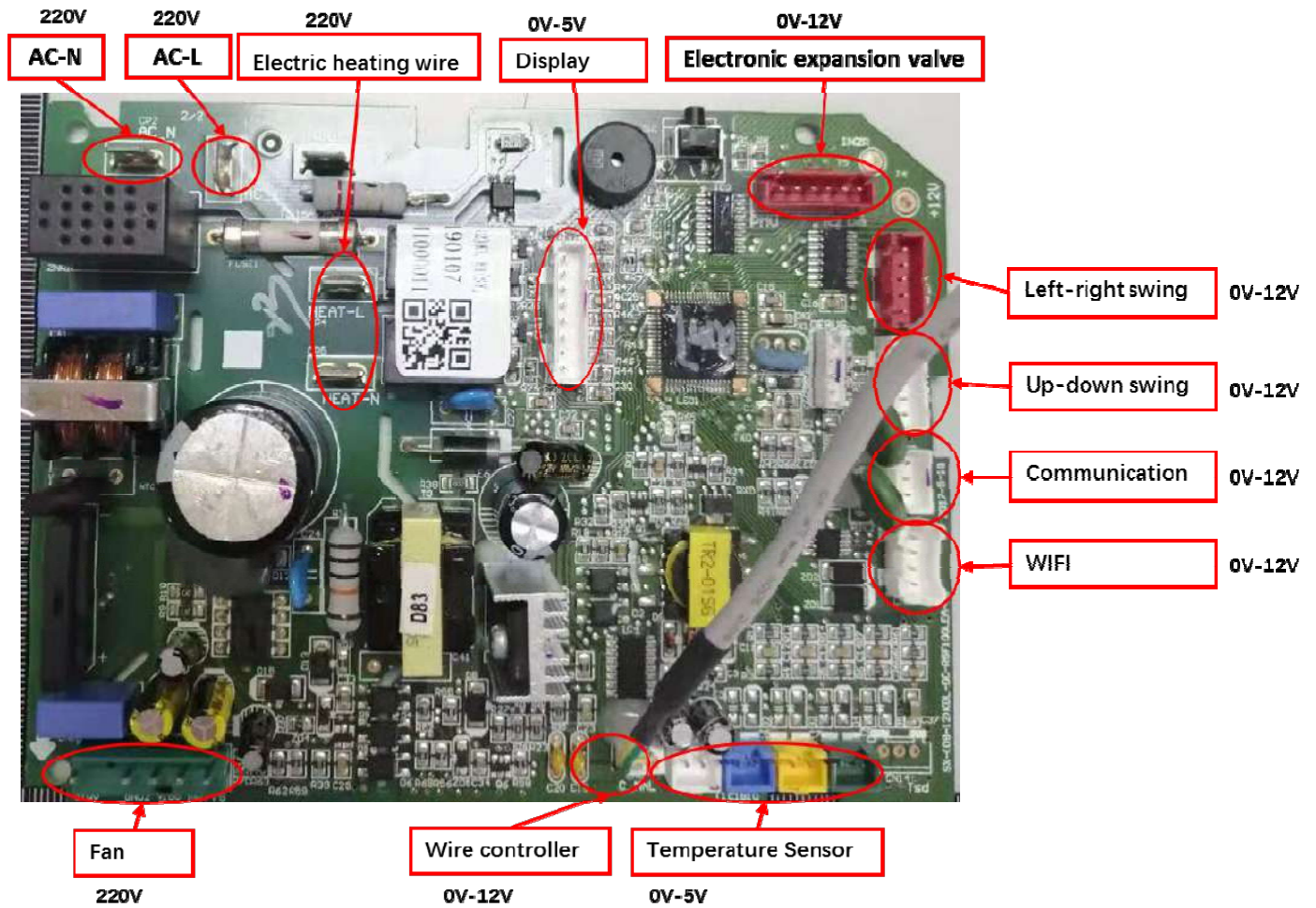
11222549000024 R 主控制器 DLB-DC(18-24)KL(2P)-E1(SY)



50&60HZ L Series

ARVWM-H022/R1X(LI), ARVWM-H028/R1X(LI), ARVWM-H036/R1X(LI)

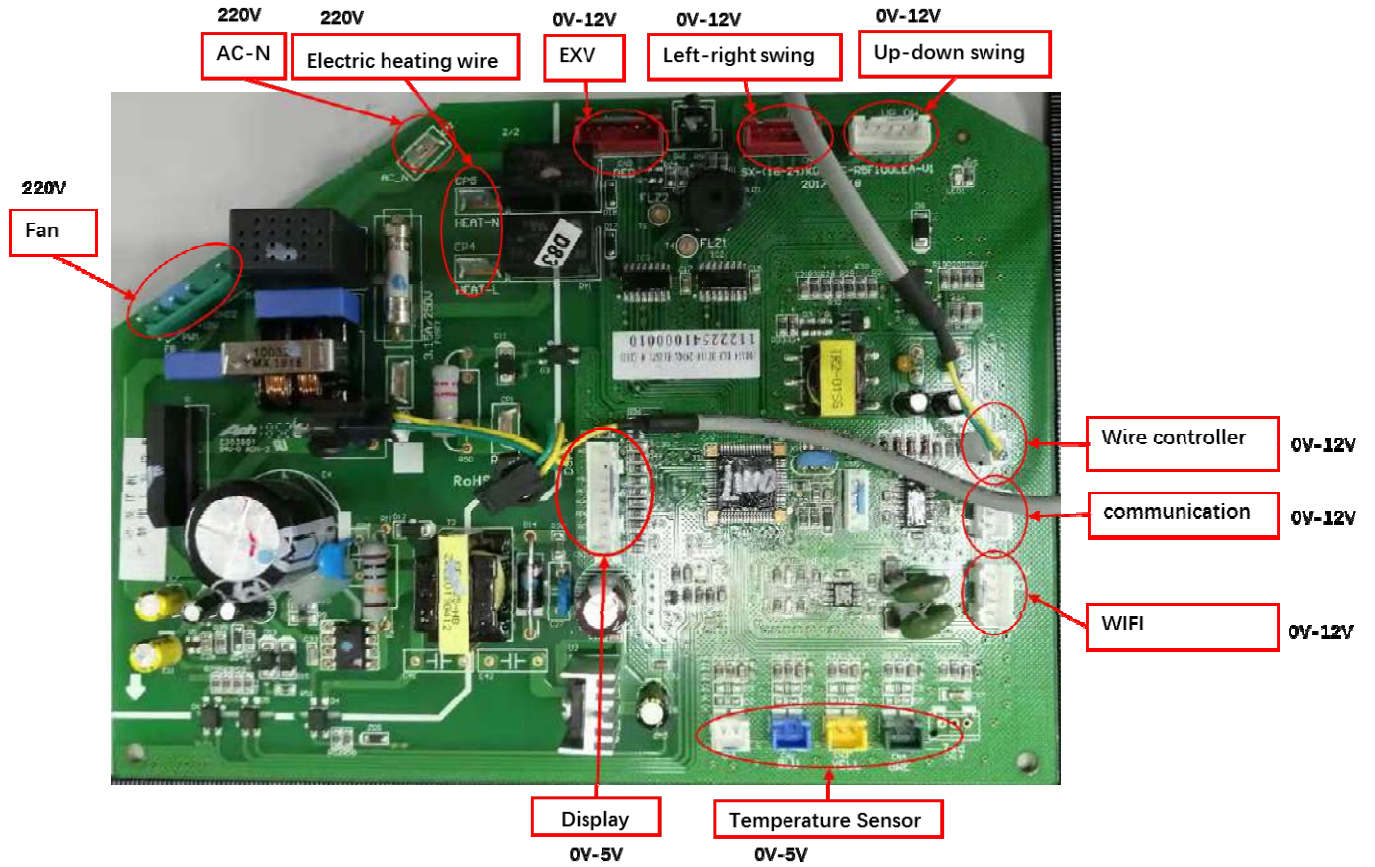
11222549000008 R 主控制器 DLB-DC(09-12)KL-E1(SY)



50&60HZ L Series

ARVWM-H045/R1X(LI), ARVWM-H056/R1X(LI), ARVWM-H071/R1X(LI)

1122254900009 R 主控制器 DLB-DC(18-24)KL-E1(SY)



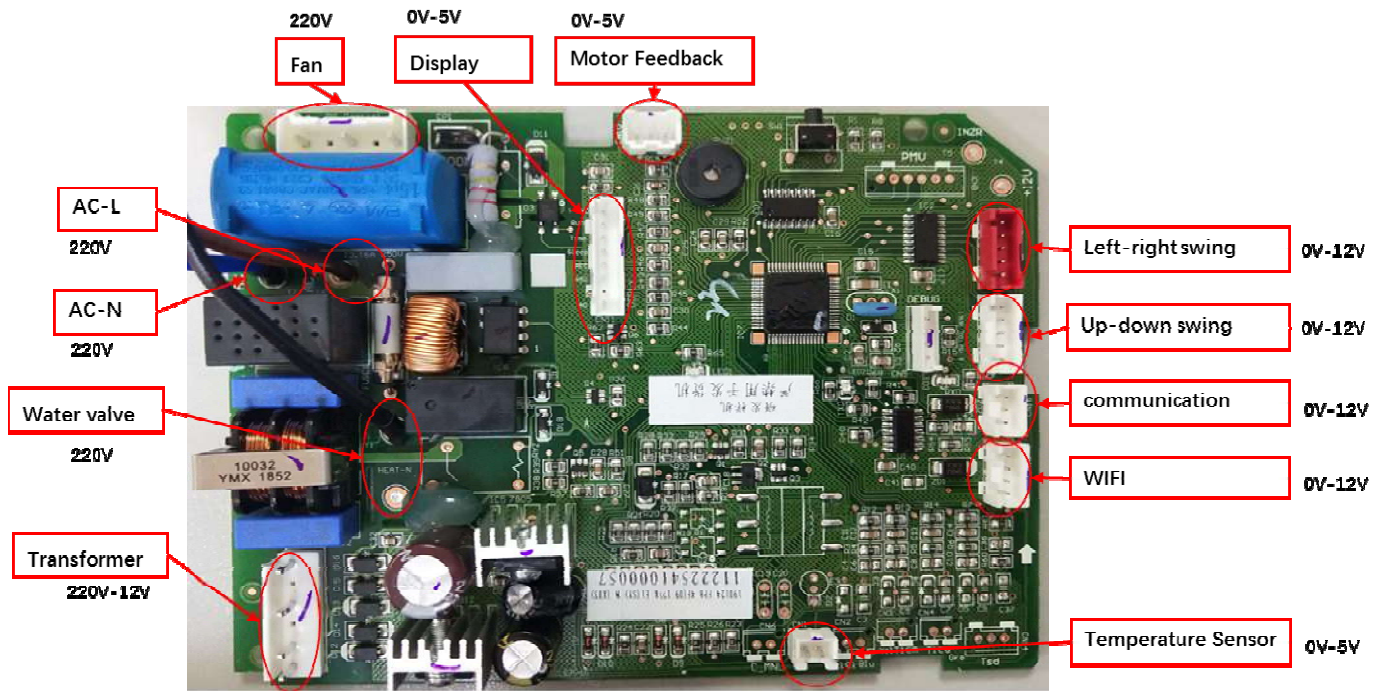
50HZ L Series

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

60HZ L Series

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

11222531000003 R 主控制器 DCZDLI—(09-12)KG-SNPG-SYE1 壁挂多联(SY)



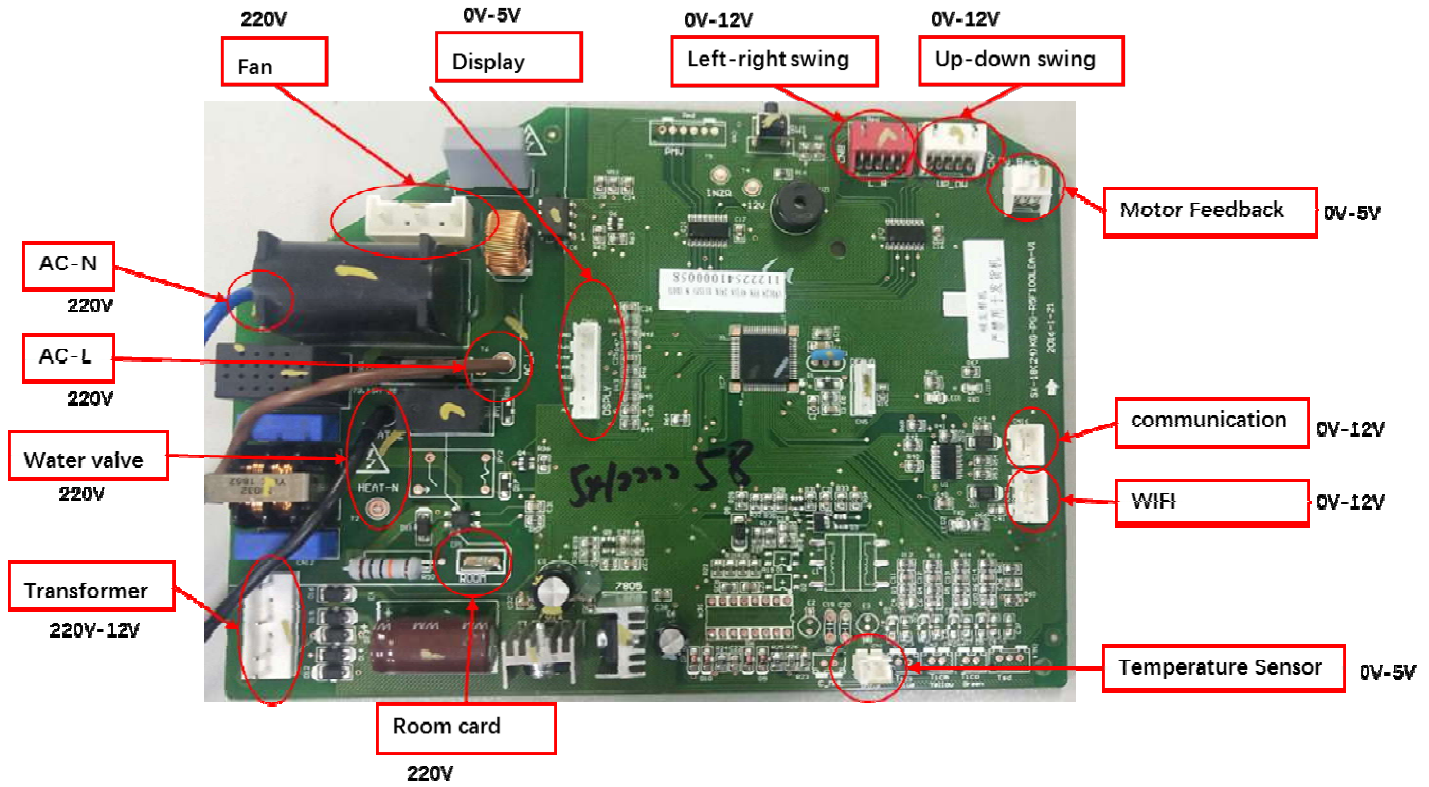
50HZ L Series

ARVWM-H045/4R1A(LH), ARVWM-H056/4R1A(LH), ARVWM-H071/4R1A(LH)

60HZ L Series




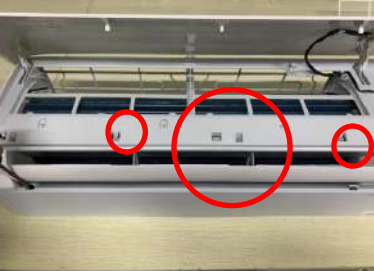
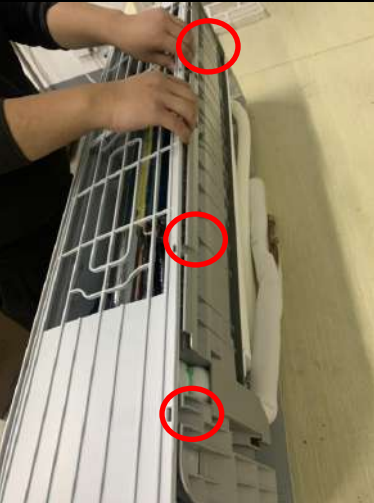
ARVWM-H045/2R1A(LH), ARVWM-H056/2R1A(LH), ARVWM-H071/2R1A(LH)





11222531000004 R 主控制器 DCZDLI-(18-24)KG-SNPG-SYE1 多联壁挂(SY)

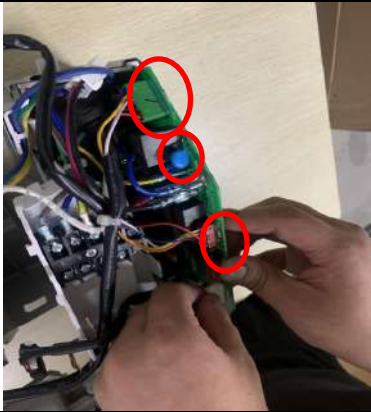


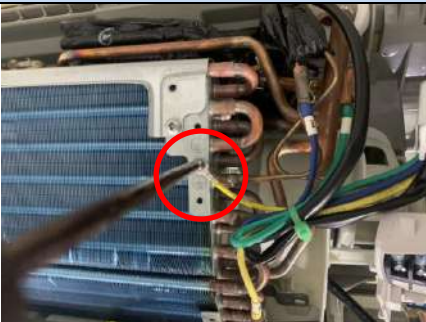
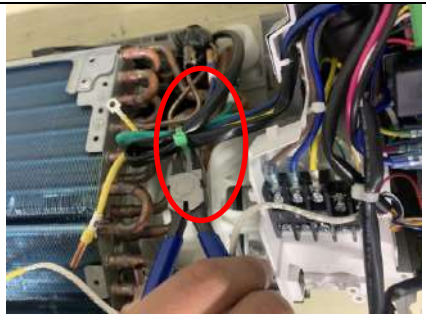


9. Disassembly and reassembly

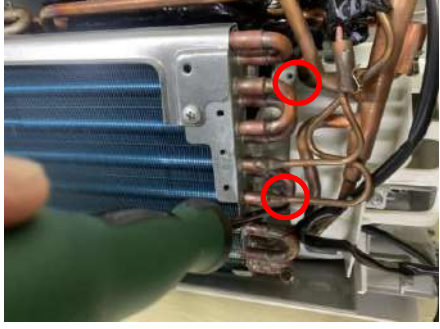
EXAMPLE: 50&60HZ J Series

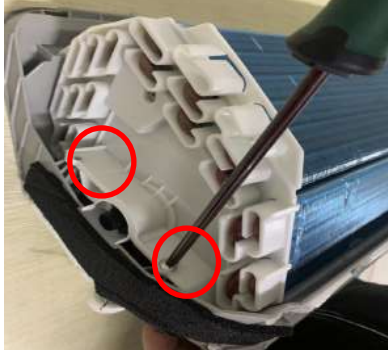

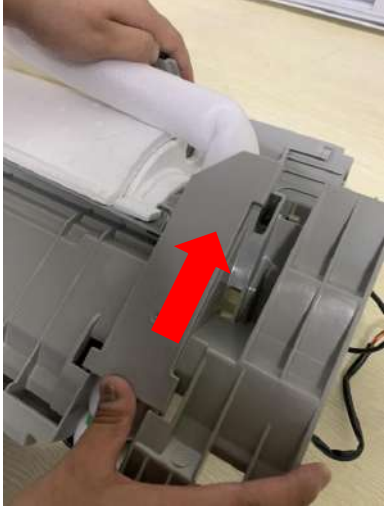
No	Parts	Procedure	Remark Photos
1	Panel	1) Power off	
1	Panel	2) Open the left and right clips and pull the front panel	
1	Panel	3) Loosen one right screw and remove the terminal cover	
1	Panel	4) Disconnect the panel connecting wire and remove the thermistor from the front grille 5) Loosen the 2 fixing bolts of the front grille	
1	Panel	6) Unlock the hooks that secure the front and back of the panel	

No	Parts	Procedure	Remark Photos
1	Panel	7) Lift up the upper cover plate	
			
2	Control box	1) Loosen the fixing screws of the cover plate of the electric control box	
2	Control box		


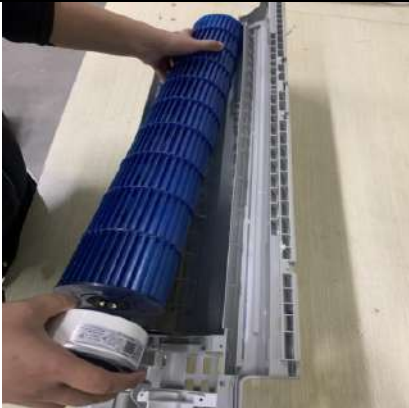
2	Control box	2) Unplug the motor cable.	
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No	Parts	Procedure	Remark Photos
2	Control box	3) Loosen the ground screw of the heat exchanger	
2	Control box	4) Cut the tie straps that secure the harness	
2	Control box	5) Loosen the fixing screws of the electric control box and remove the electric control box	
3	Evaporator	1) Remove right side four screws	




3	Evaporator	2) Remove left side two screws	
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No	Parts	Procedure	Remark Photos
3	Evaporator	3) Loosen the fixing screws of the rear drainage pipe cover plate	
3	Evaporator		
3	Evaporator	4) Remove evaporator	

3	Evaporator		
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No	Parts	Procedure	Remark
4	Fan motor& wheel	1) Remove two screw	
4	Fan motor& wheel	2) Remove fan motor and fan wheel	

10. Split controller

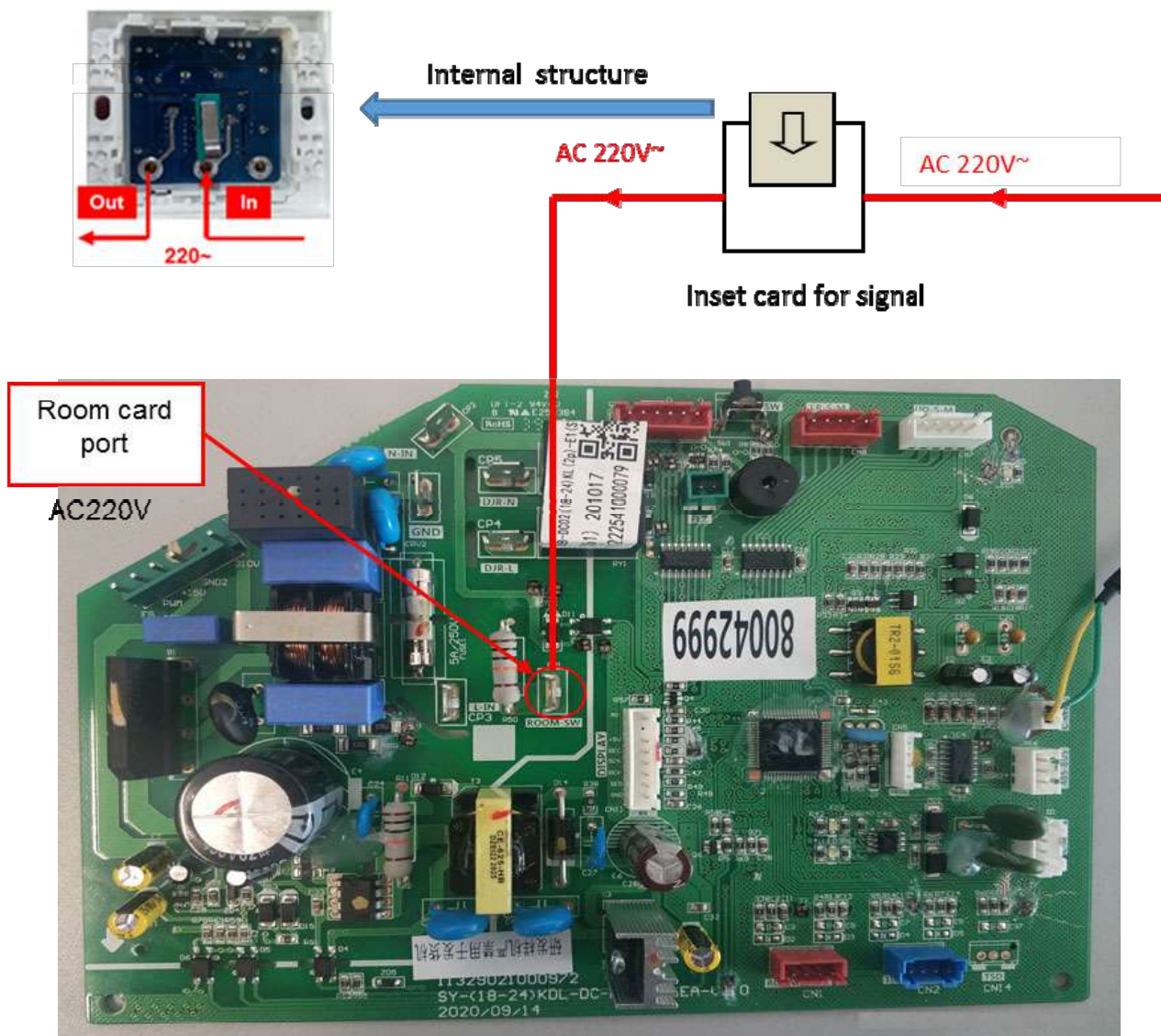
Split Controller			
IDU Type	Standard	Optional	
ARVWM-H022/NR1DJA ARVWM-H028/NR1DJA ARVWM-H036/NR1DJA ARVWM-H045/NR1DJA ARVWM-H056/NR1DJA ARVWM-H071/NR1DJA	K type	L type	XK-02
			



11.Room card function

Parameter	Function	Insert key card	Remove key card
0901	Valid	Standby, IDU can be controlled	Standby, IDU can't be controlled

Wiring diagram



12.Parameter setting

3.1 Parameter setting table

Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVWM-H022/NR1DJA	50	08	00	01
ARVWM-H028/NR1DJA	50	10	00	01

ARVWM-H036/NR1DJA	50	12	00	01
ARVWM-H045/NR1DJA	50	16	00	01
ARVWM-H056/NR1DJA	50	18	00	01
ARVWM-H071/NR1DJA	50	24	00	01
ARVWM-H022/R1X(LI)	32	08	00	01
ARVWM-H028/R1X(LI)	32	10	00	01
ARVWM-H036/R1X(LI)	32	12	00	01
ARVWM-H045/R1X(LI)	32	16	00	01
ARVWM-H056/R1X(LI)	32	18	00	01
ARVWM-H071/R1X(LI)	32	24	00	01
ARVWM-H022/4R1A(LH)	32	08	00	01
ARVWM-H028/4R1A(LH)	32	10	00	01
ARVWM-H036/4R1A(LH)	32	12	00	01
ARVWM-H045/4R1A(LH)	32	16	00	01
ARVWM-H056/4R1A(LH)	32	18	00	01
ARVWM-H071/4R1A(LH)	32	24	00	01
ARVWM-H022/2R1A(LH)	32	08	00	01
ARVWM-H028/2R1A(LH)	32	10	00	01
ARVWM-H036/2R1A(LH)	32	12	00	01
ARVWM-H045/2R1A(LH)	32	16	00	01
ARVWM-H056/2R1A(LH)	32	18	00	01
ARVWM-H071/2R1A(LH)	32	24	00	01

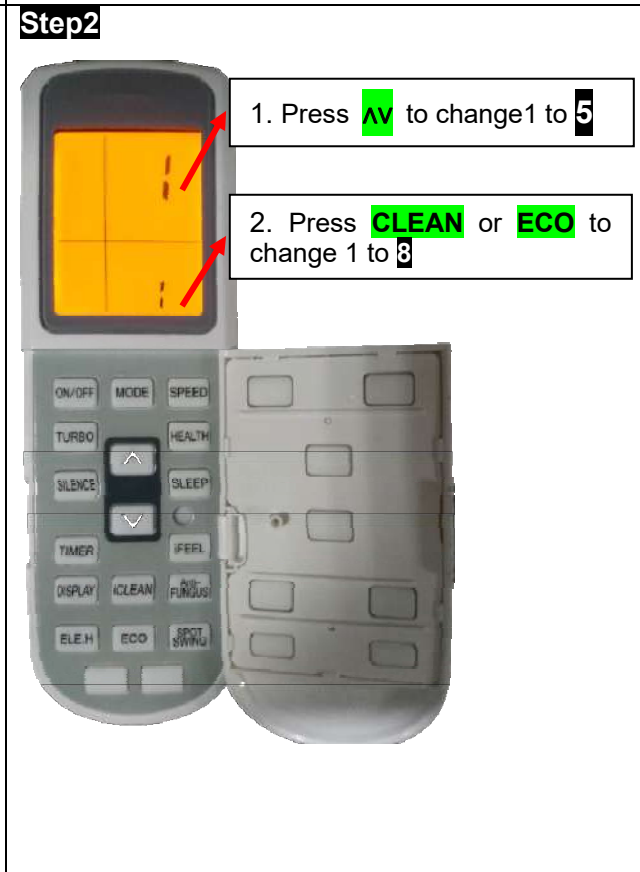
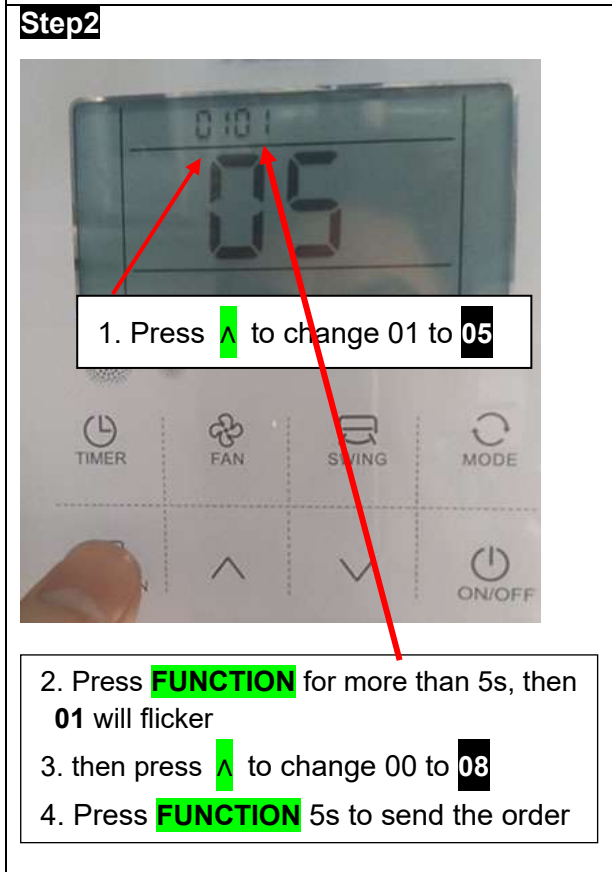
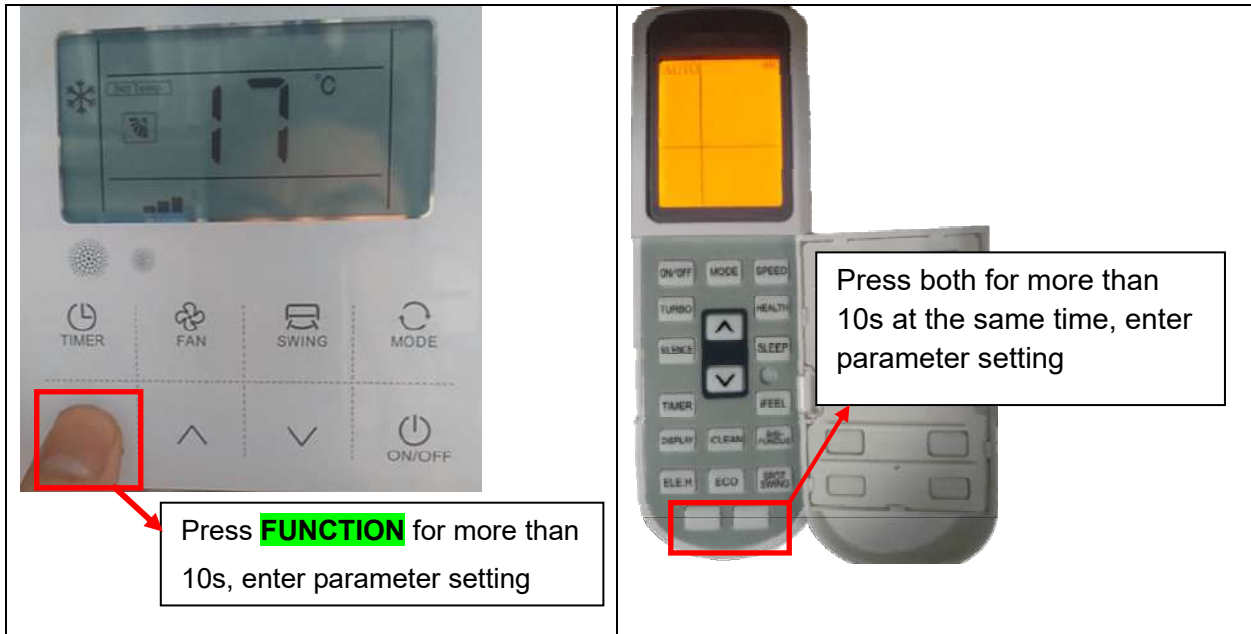
- 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,
- 0900 means room card function invalid, 0901 means valid
- 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value

Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

3.2 Parameter setting method




E.g.: set the parameter for 2.2kw IDU. (Parameter: 0508)

Wired controller	Remote controller
Step1	Step1



13.Group control



Group control

IDU type	Centralized controller	BMS-MODBUS control	Monitoring control
Features	Max.256 IDUs	Quantity no limit	For one refrigerant system
<p>ARVWM-H**/NR1DJA **(022,028,036,045,056,071)</p> <p>ARVWM-H**/R1X(LI) **(022,028,036,045,056,071)</p> <p>ARVWM-H**/4R1A(LH) **(022,028,036,045,056,071)</p> <p>ARVWM-H**/2R1A(LH) **(022,028,036,045,056,071)</p>			

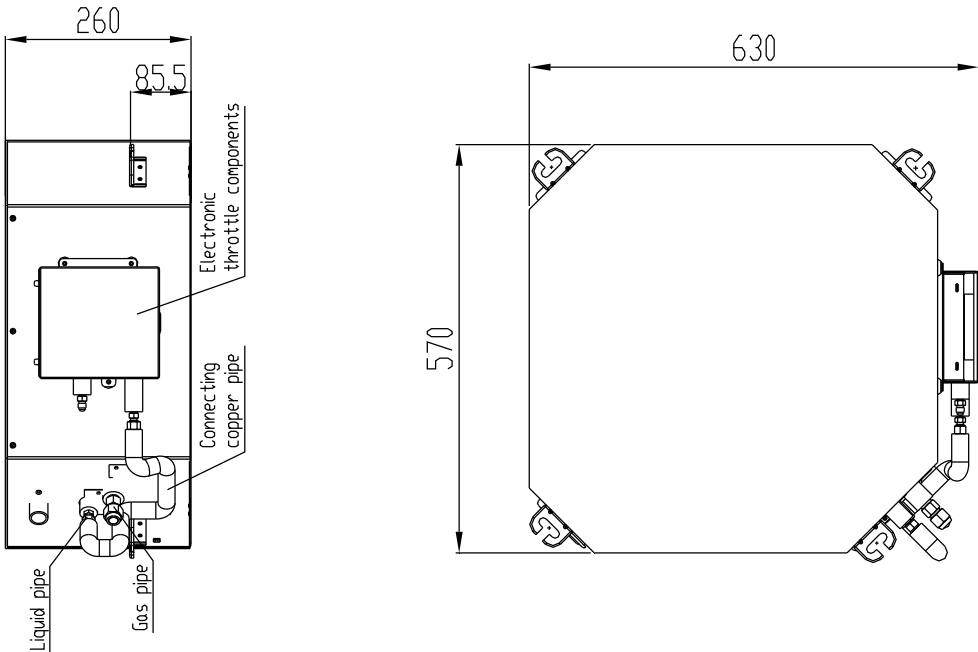
Note: More details about connection wiring , function introduce Please check the <Control system technical manual>

Part3 Compact Four-way Cassette

1. Product Line-up

Series	Models	Photos	
50&60HZ E Series	ARVCA-H028/R1X		
	ARVCA-H036/R1X		
	ARVCA-H045/R1X		
	ARVCA-H056/R1X		
		MB13-I(Four-way panel)	MB08A(Round-way panel)

2. Dimensions

		
Physical Dimension		ARVCA-H028/R1X; ARVCA-H036/R1X; ARVCA-H045/R1X; ARVCA-H056/R1X
Length	mm	630
Height	mm	260
Width	mm	570

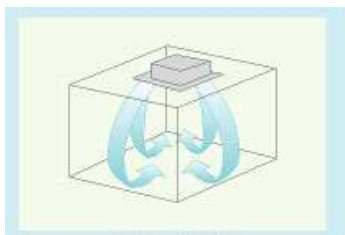
3. Feature

(1) Concealed design

—Ceiling installation, saving room space, 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 **700 mm**, 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) Ingenious hook design

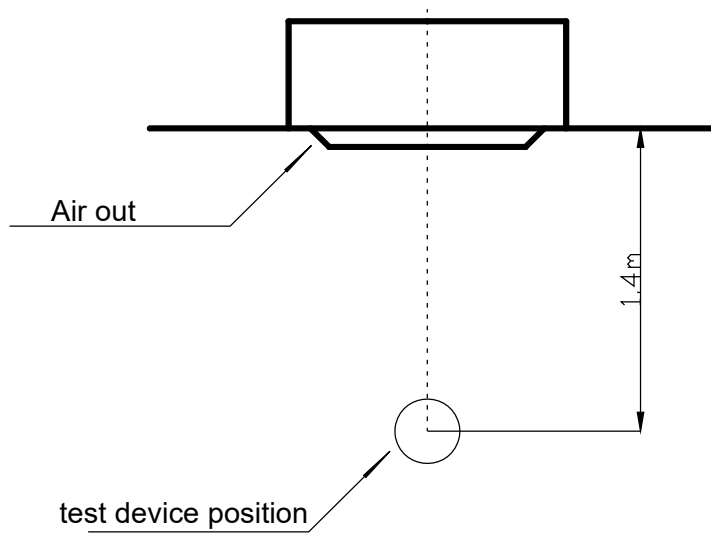
—the panel is convenient to install or remove

(10) 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.



4. Sound level



Model	220~240V 50/60Hz		
	H	M	L
ARVCA-H028/R1X	45	41	35
ARVCA-H036/R1X			
ARVCA-H045/R1X			
ARVCA-H056/R1X			

5. Capacity table

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

Outdoor dry bulb temperature	Correction	Indoor dry/wet bulb temperature[°C]				
[°C]	coefficient	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

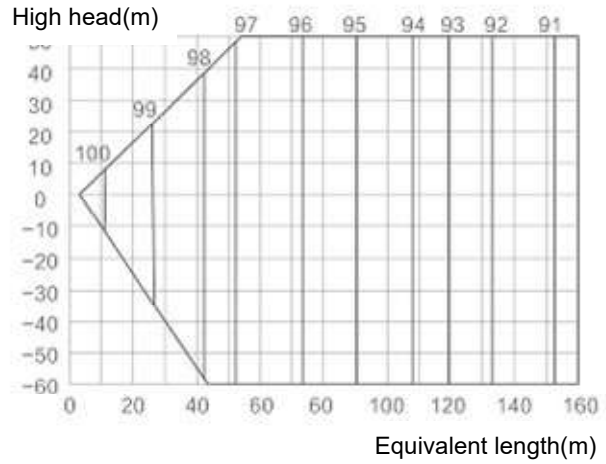
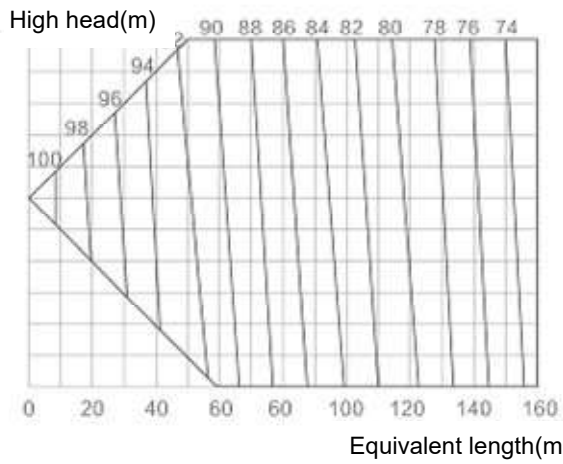
Heating Capacity of Outdoor Dry/Wet Bulb Temperature and Indoor Dry Bulb Temperature or Power Consumption Correction Coefficient

Outdoor ambient temperature of dry/wet bulb[°C]	capacity/power correction	Indoor back temperature of dry bulb [°C]		
	coefficient	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	0.7
	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

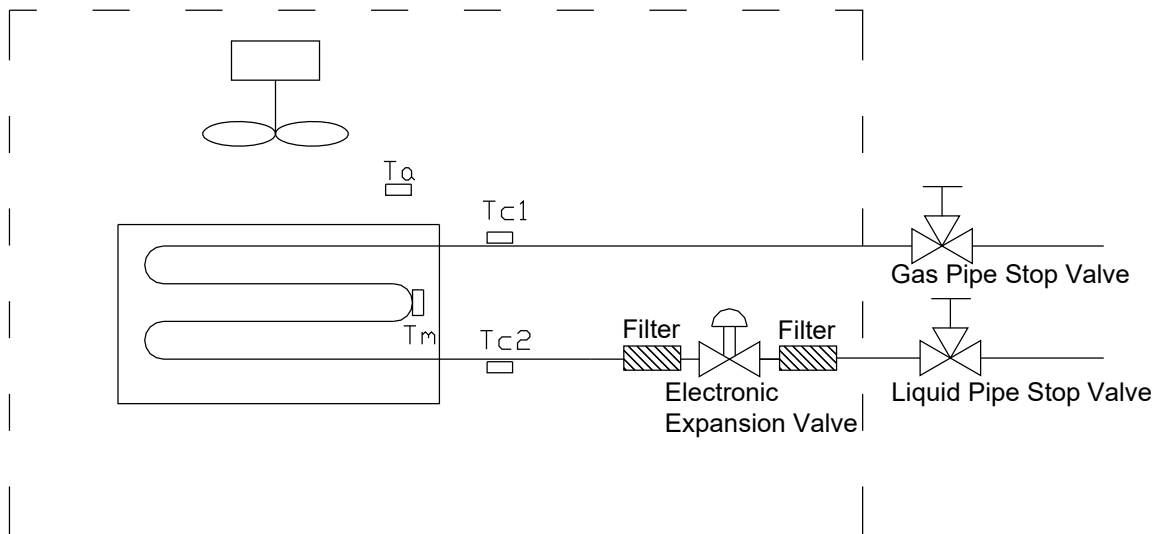
(Cooling) change ratio basic capacity%

(Heating) change ratio 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)

6. Refrigerant piping diagram



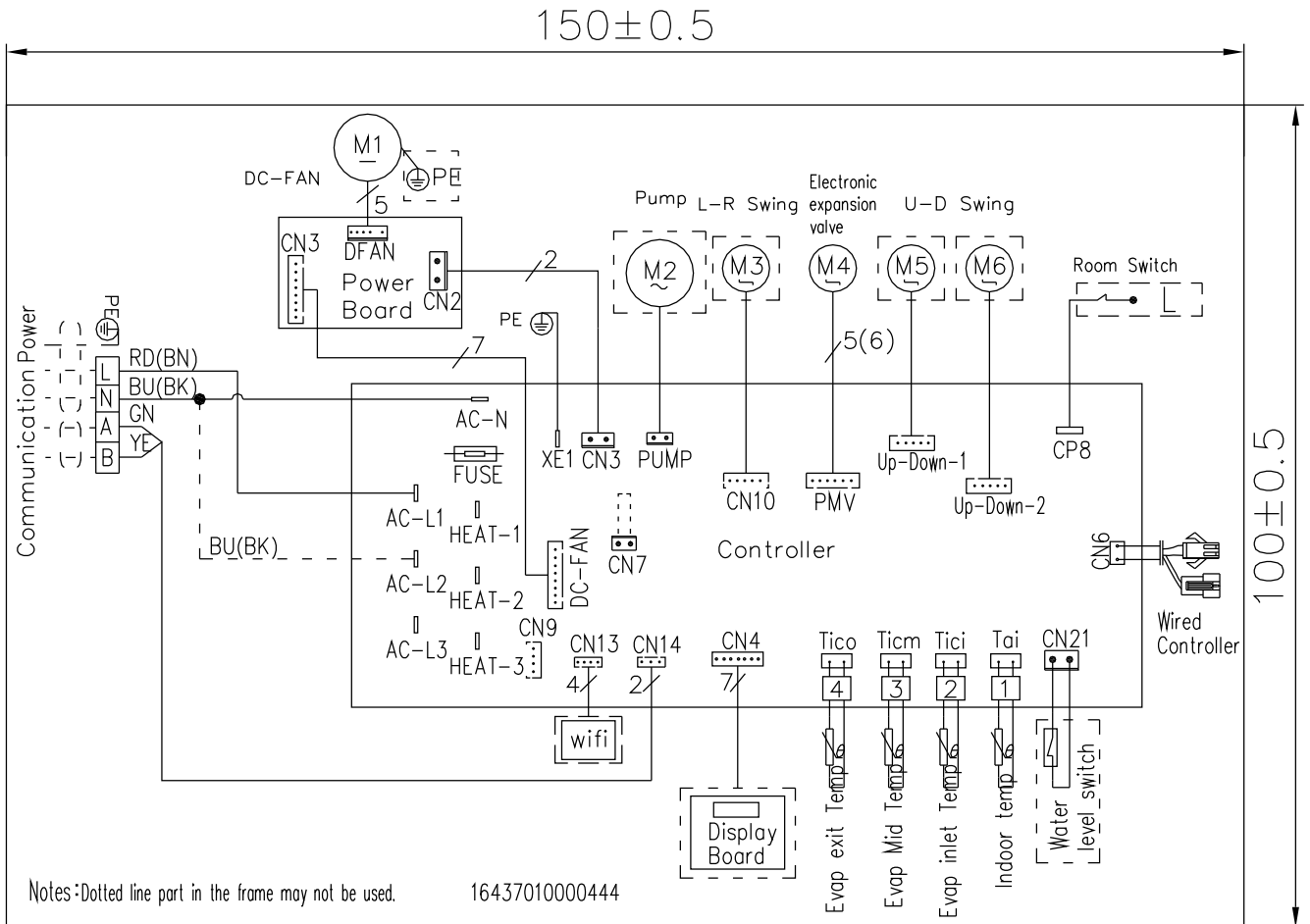
Refrigerant pipe connection port diameters(mm)

Model	Gas	Liquid
ARVCA-H028/R1X	Φ12.7	Φ6.35
ARVCA-H036/R1X		
ARVCA-H045/R1X		
ARVCA-H056/R1X		

7. Wiring diagram

2.1 Four-way Cassette DC Type

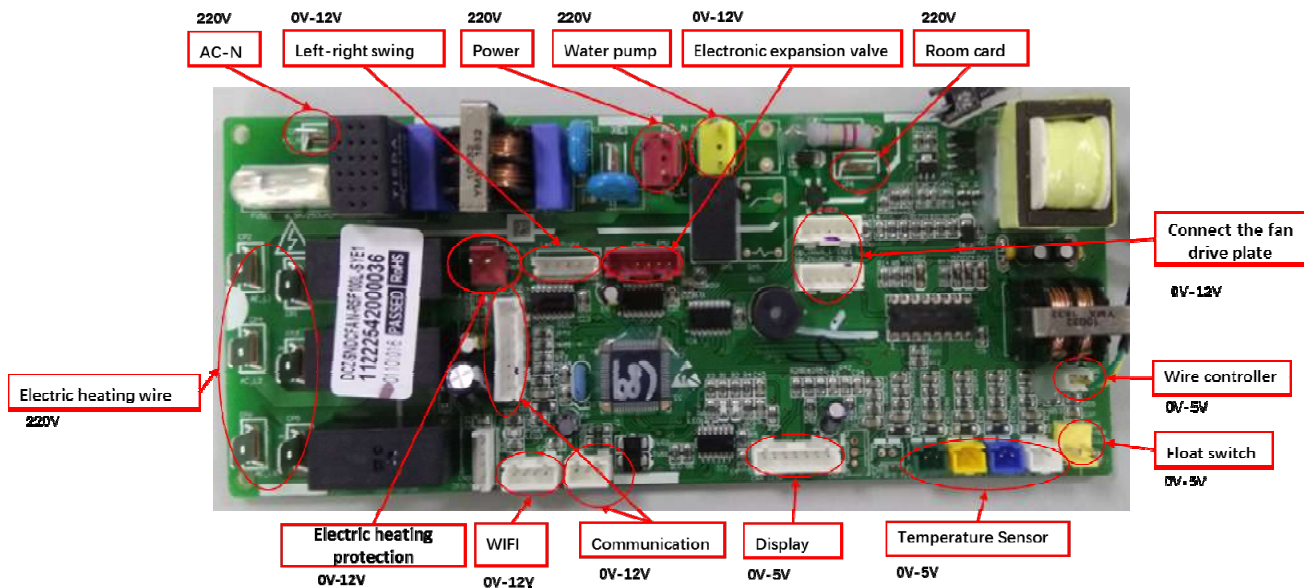
ARVCA-H028/R1X , ARVCA-H036/R1X , ARVCA-H045/R1X , ARVCA-H056/R1X



8. PCB Port Introduction

ARVCA-H028/R1X, ARVCA-H036/R1X ; ARVCA-H045/R1X, ARVCA-H056/R1X




Main board-- 11222542000036 CJ 控制板 DCZ-SNDCFAN-R5F100L-SYE1



Fan board-- 11222541000042 CJ 控制板 DYT-2H-DC021T1-POWER-R32-C1(SY)



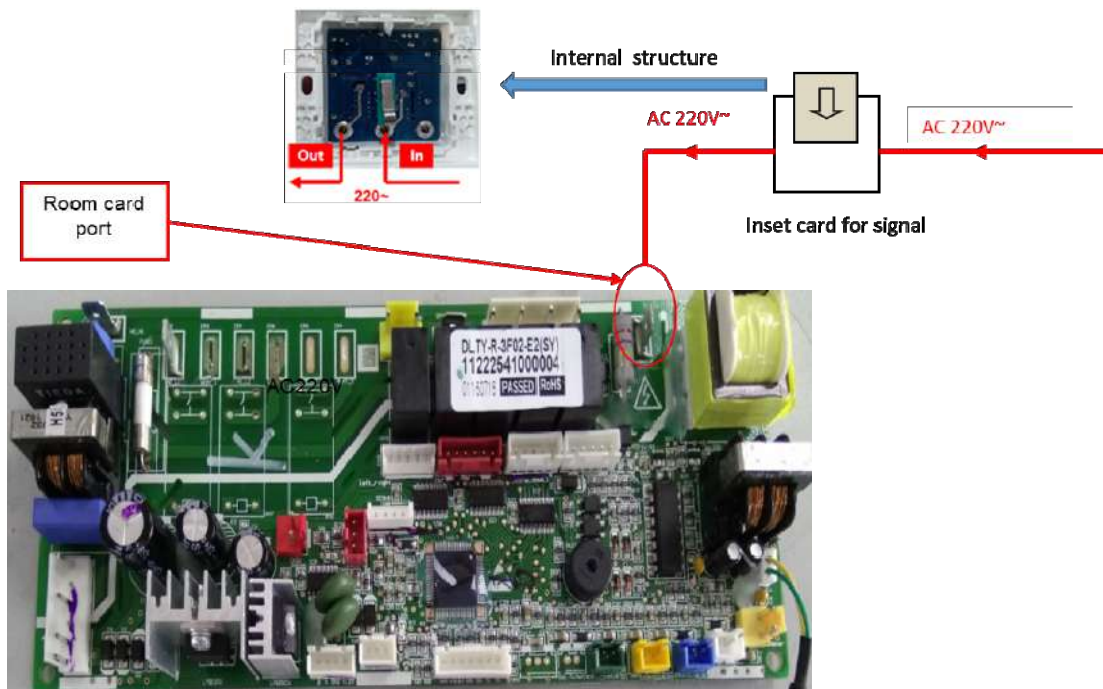
9. Split controller

Split Controller			
IDU Type	Standard	Optional	
ARVCA-H028/R1X ARVCA-H036/R1X ARVCA-H045/R1X ARVCA-H056/R1X	K type	L type	XK-02
			

10.Room card function

Parameter	Function	Insert key card	Remove key card
0901	Valid	Standby, IDU can be controlled	Standby, IDU can't be controlled

Wiring diagram



11.Parameter setting

3.1 Parameter setting table


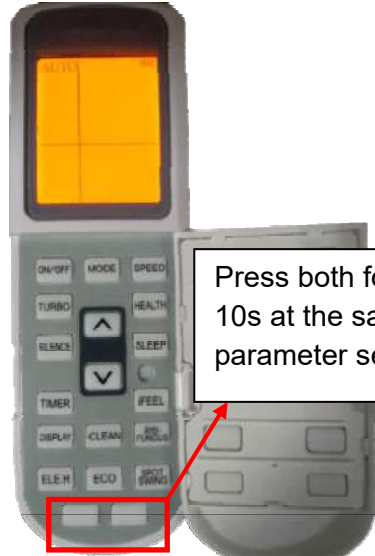
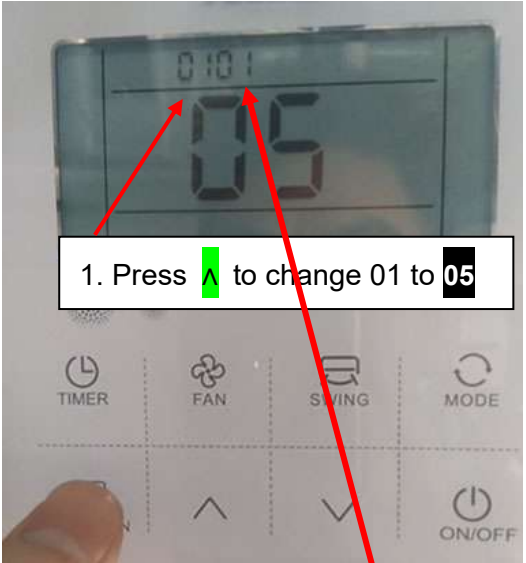
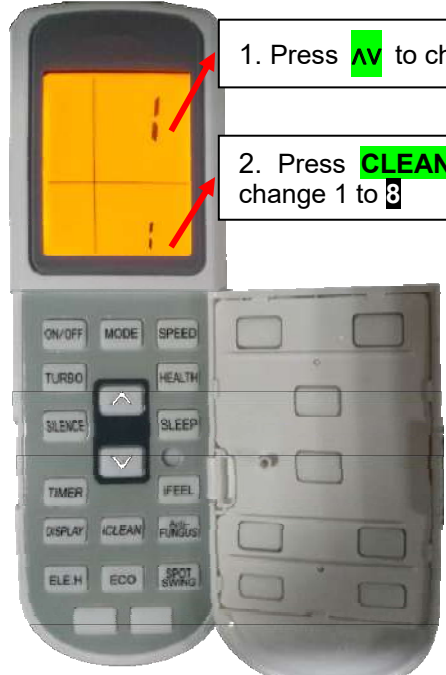
Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVCA-H028/R1X	10	10	00	01
ARVCA-H036/R1X	10	13	00	01
ARVCA-H045/R1X	10	16	00	01
ARVCA-H056/R1X	10	18	00	01

- 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,
- 0900 means room card function invalid, 0901 means valid
- 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value





Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

3.2 Parameter setting method

E.g.: set the parameter for 2.2kw IDU. (Parameter: 0508)

Wired controller	Remote controller
<p>Step1</p>  <p>Press FUNCTION for more than 10s, enter parameter setting</p>	<p>Step1</p>  <p>Press both for more than 10s at the same time, enter parameter setting</p>
<p>Step2</p>  <p>1. Press ▲ to change 01 to 05</p> <p>2. Press FUNCTION for more than 5s, then 01 will flicker</p> <p>3. then press ▲ to change 00 to 08</p> <p>4. Press FUNCTION 5s to send the order</p>	<p>Step2</p>  <p>1. Press ▲ to change 1 to 5</p> <p>2. Press CLEAN or ECO to change 1 to 3</p>







12.Group control



Group control			
IDU type	Centralized controller	BMS-MODBUS control	Monitoring control
Features	Max.256 IDUs	Quantity no limit	For one refrigerant system
ARVCA-H028/R1X			 
ARVCA-H036/R1X			
ARVCA-H045/R1X			
ARVCA-H056/R1X			

Note: More details about connection wiring , function introduce Please check the <Control system technical manual>

Part4 Four-way Cassette

1. Product Line-up

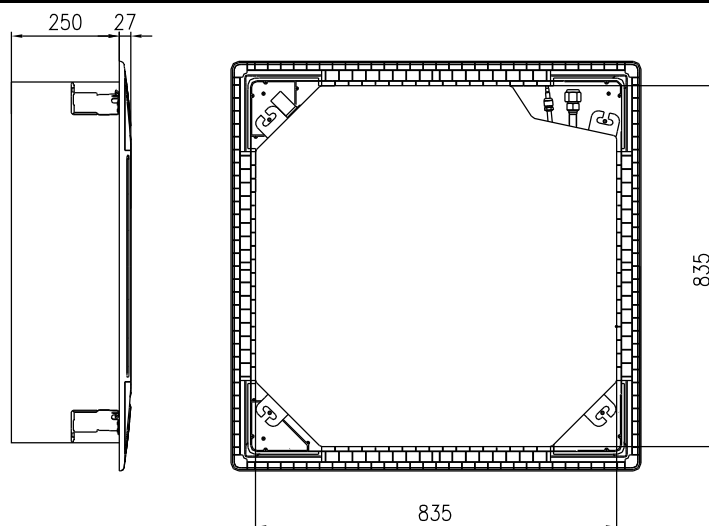
Series	Models	Photos	
50&60HZ E Series	ARVCA-H071/R1X	 MB12(Four-way panel)	 MB09A(Round-way panel)
	ARVCA-H080/R1X		
	ARVCA-H090/R1X		
	ARVCA-H100/R1X		
	ARVCA-H112/R1X		
	ARVCA-H125/R1X		
	ARVCA-H140/R1X		
50HZ E Series	ARVCA-H071/4R1BB	 MB12(Four-way panel)	 MB09A(Round-way panel)
	ARVCA-H080/4R1BB		
	ARVCA-H090/4R1BB		
	ARVCA-H100/4R1BB		
	ARVCA-H112/4R1BB		
	ARVCA-H125/4R1BB		
	ARVCA-H140/4R1BB		
60HZ E Series	ARVCA-H071/2R1BB	 MB12(Four-way panel)	 MB09A(Round-way panel)
	ARVCA-H080/2R1BB		
	ARVCA-H090/2R1BB		
	ARVCA-H100/2R1BB		
	ARVCA-H112/2R1BB		
	ARVCA-H125/2R1BB		
	ARVCA-H140/2R1BB		

Series	Models	Photos
<p>50&60HZ Y Series</p>	ARVCA-H22/NR1DYB	 <p>MB09A(Round-way panel)</p>
	ARVCA-H25/NR1DYB	
	ARVCA-H28/NR1DYB	
	ARVCA-H32/NR1DYB	
	ARVCA-H36/NR1DYB	
	ARVCA-H40/NR1DYB	
	ARVCA-H45/NR1DYB	
	ARVCA-H50/NR1DYB	
	ARVCA-H56/NR1DYB	
	ARVCA-H63/NR1DYB	
	ARVCA-H71/NR1DYB	
	ARVCA-H80/NR1DYB	
	ARVCA-H90/NR1DYB	
	ARVCA-H100/NR1DYB	
	ARVCA-H112/NR1DYB	
	ARVCA-H125/NR1DYB	
	ARVCA-H140/NR1DYAB	
ARVCA-H140/NR1DYB		
<p>50HZ Y Series</p>	ARVCA-H22/4R1YB	 <p>MB09A(Round-way panel)</p>
	ARVCA-H25/4R1YB	
	ARVCA-H28/4R1YB	
	ARVCA-H32/4R1YB	
	ARVCA-H36/4R1YB	
	ARVCA-H40/4R1YB	
	ARVCA-H45/4R1YB	
	ARVCA-H50/4R1YB	
	ARVCA-H56/4R1YB	
	ARVCA-H63/4R1YB	
	ARVCA-H71/4R1YB	
	ARVCA-H80/4R1YB	
	ARVCA-H90/4R1YB	
	ARVCA-H100/4R1YB	
	ARVCA-H112/4R1YB	
	ARVCA-H125/4R1YB	
	ARVCA-H140/4R1YAB	
ARVCA-H140/4R1YB		

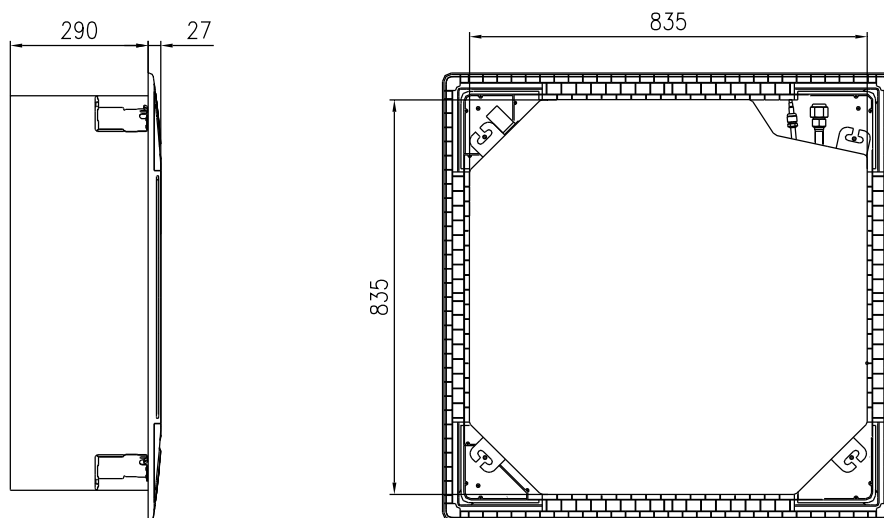
Remark: New product series (50&60HZ Y Series & 50HZ Y Series), Y series be developed and valid in Dec. 2021

2. Dimensions

Physical Dimension		ARVCA-H071/R1X ARVCA-H080/R1X ARVCA-H090/R1X ARVCA-H100/R1X	ARVCA-H071/4R1B ARVCA-H080/4R1B ARVCA-H090/4R1B ARVCA-H100/4R1B	ARVCA-H071/2R1B ARVCA-H080/2R1B ARVCA-H090/2R1B ARVCA-H100/2R1B
Length	mm	835	835	835
Height	mm	250	250	250
Width	mm	835	835	835



Physical Dimension		ARVCA-H112/R1X ARVCA-H125/R1X ARVCA-H140/R1X	ARVCA-H112/4R1B ARVCA-H125/4R1B ARVCA-H140/4R1B	ARVCA-H112/2R1B ARVCA-H125/2R1B ARVCA-H140/2R1B
Length	mm	835	835	835
Height	mm	290	290	290
Width	mm	835	835	835

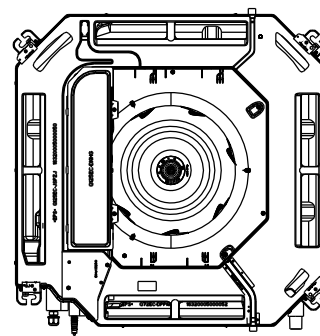
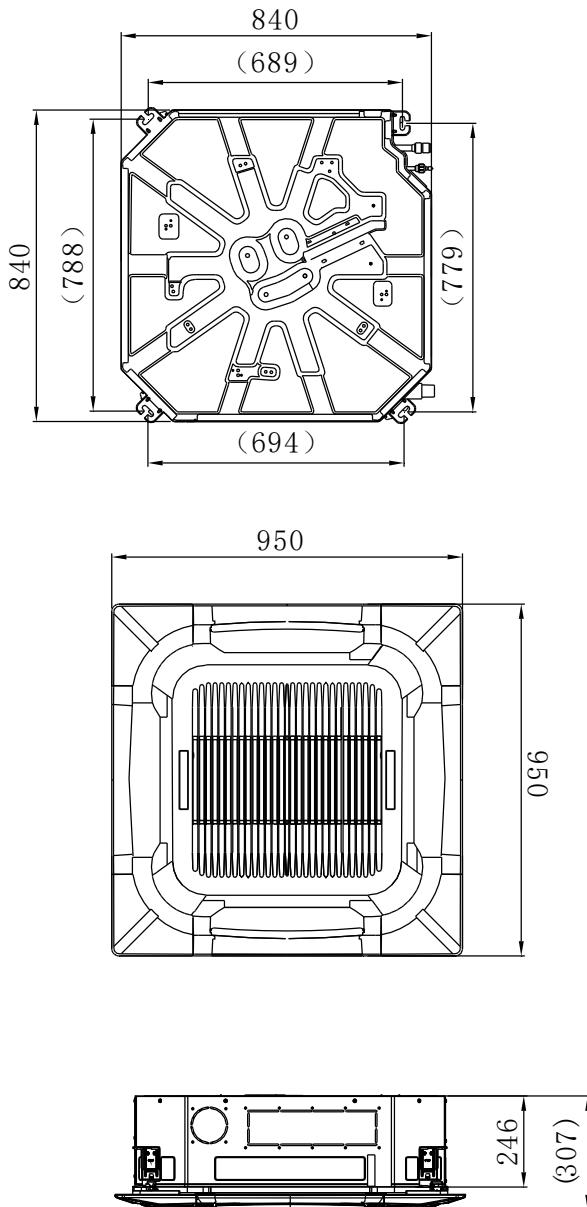


Y Series – 50&60HZ Type

ARVCA-H22/ NR1DYB ; ARVCA-H25/ NR1DYB ; ARVCA-H28/ NR1DYB ; ARVCA-H30/ NR1DYB ;
 ARVCA-H36/ NR1DYB ; ARVCA-H40/ NR1DYB ; ARVCA-H45/ NR1DYB ; ARVCA-H50/ NR1DYB ;
 ARVCA-H56/ NR1DYB ; ARVCA-H63/ NR1DYB ; ARVCA-H71/ NR1DYB ; ARVCA-H80/ NR1DYB ;
 ARVCA-H90/ NR1DYB ;

Y Series – 50HZ Type

ARVCA-H22/4R1YB ; ARVCA-H25/4R1YB ; ARVCA-H28/4R1YB ; ARVCA-H30/4R1YB ;
 ARVCA-H36/4R1YB ; ARVCA-H40/4R1YB ; ARVCA-H45/4R1YB ; ARVCA-H50/4R1YB ;
 ARVCA-H56/4R1YB ; ARVCA-H63/4R1YB ; ARVCA-H71/4R1YB ; ARVCA-H80/4R1YB ;
 ARVCA-H90/4R1YB ;

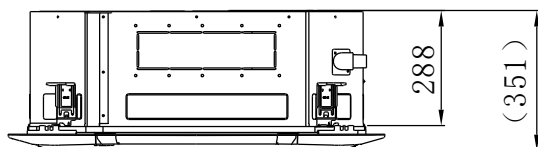
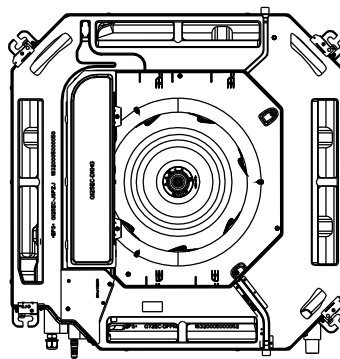
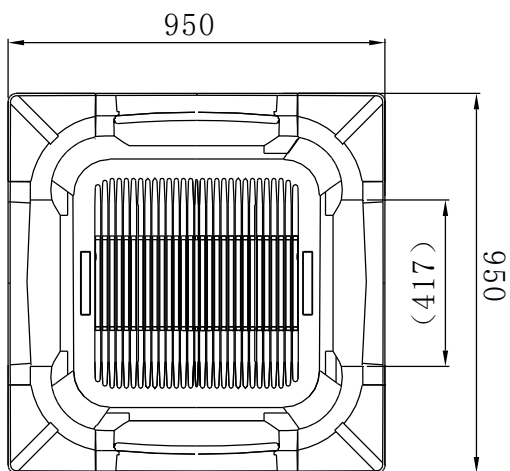
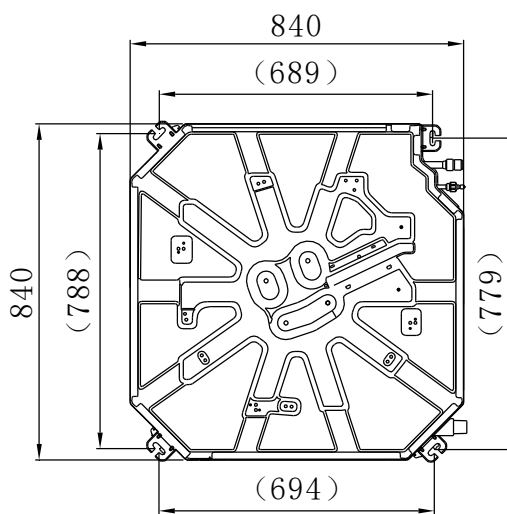


Y Series – 50&60HZ Type

ARVCA-H100/ NR1DYB ; ARVCA-H112/ NR1DYB ; ARVCA-H125/ NR1DYB ; ARVCA-H140/ NR1DYAB ;
 ARVCA-H150/ NR1DYB ;

Y Series – 50HZ Type

ARVCA-H100/4R1YB ; ARVCA-H112/4R1YB ; ARVCA-H125/4R1YB ; ARVCA-H140/4R1YAB ;
 ARVCA-H150/4R1YB ;



3. Feature

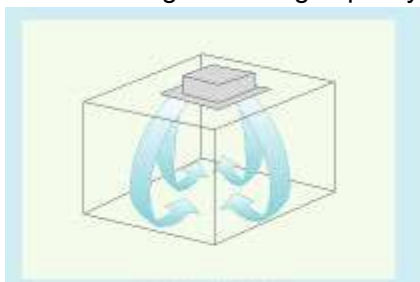
(1) Concealed design

—Ceiling installation, saving room space, 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

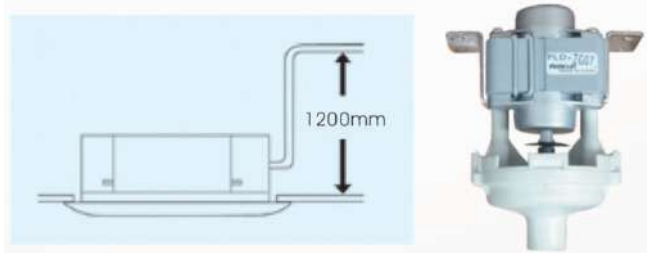
The appearance is elegant

(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 1.2 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



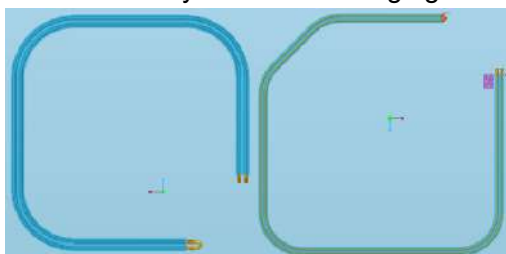
(8) Plastic drip tray adopts innovative foam combined with plastic technical

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

(9) 4 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



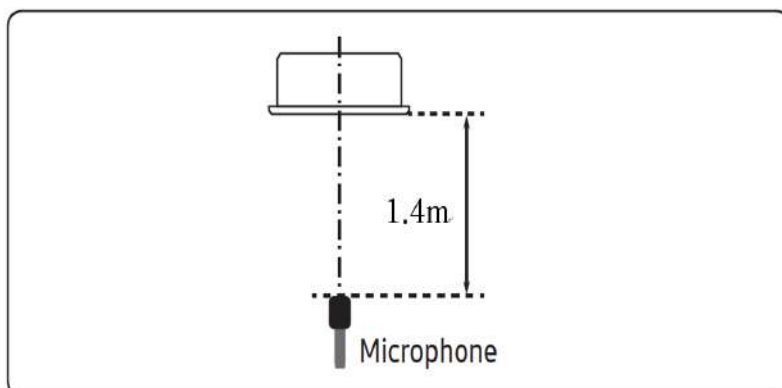
(13) Failure automatic detection

—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.



4. Sound level

4.1 Test condition



4.2 Test value

● E series

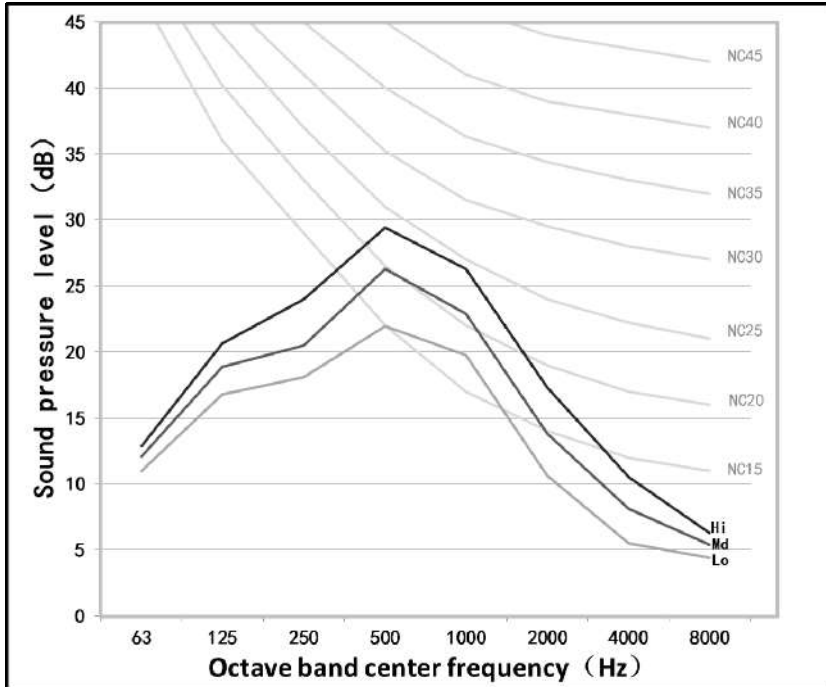
Series	Models	Noise level under three speeds of fan (dB(A))		
		H	M	L
50&60HZ E Series	ARVCA-H071/R1X	38	34	30
	ARVCA-H080/R1X	38	34	30
	ARVCA-H090/R1X	41	37	34
	ARVCA-H100/R1X	41	37	34
	ARVCA-H112/R1X	41	38	35
	ARVCA-H125/R1X	41	38	35
	ARVCA-H140/R1X	41	38	35
50HZ E Series	ARVCA-H071/4R1BB	38	34	30
	ARVCA-H080/4R1BB	38	34	30
	ARVCA-H090/4R1BB	41	37	34
	ARVCA-H100/4R1BB	41	37	34
	ARVCA-H112/4R1BB	41	38	35
	ARVCA-H125/4R1BB	41	38	35
	ARVCA-H140/4R1BB	41	38	35
60HZ E Series	ARVCA-H071/2R1BB	38	34	30
	ARVCA-H080/2R1BB	38	34	30
	ARVCA-H090/2R1BB	41	37	34
	ARVCA-H100/2R1BB	41	37	34
	ARVCA-H112/2R1BB	41	38	35
	ARVCA-H125/2R1BB	41	38	35
	ARVCA-H140/2R1BB	41	38	35

● Y series

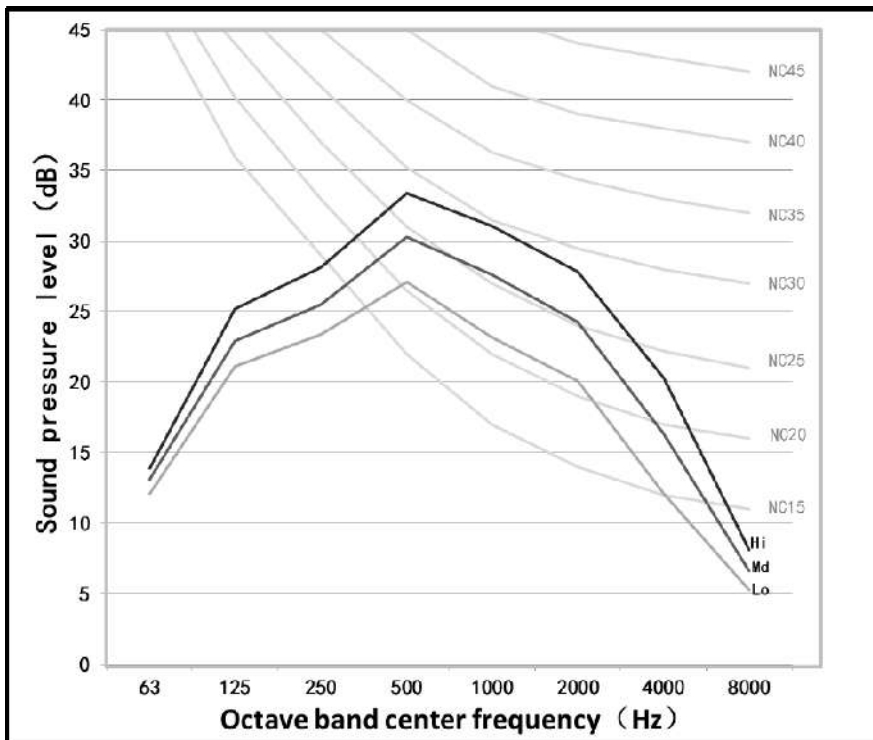
Series	Models	Noise level under three speeds of fan (dB(A))		
		H	M	L
50&60HZ Y Series	ARVCA-H22/4R1YB	35	32	28
	ARVCA-H25/4R1YB	35	32	28
	ARVCA-H28/4R1YB	35	32	28
	ARVCA-H32/4R1YB	35	32	28
	ARVCA-H36/4R1YB	35	32	28
	ARVCA-H40/4R1YB	35	32	28
	ARVCA-H45/4R1YB	35	32	28
	ARVCA-H50/4R1YB	35	32	28
	ARVCA-H56/4R1YB	35	32	28
	ARVCA-H63/4R1YB	38	34	30
	ARVCA-H71/4R1YB	38	34	30
	ARVCA-H80/4R1YB	38	34	30
	ARVCA-H90/4R1YB	38	34	30
	ARVCA-H100/4R1YB	44	42	40
	ARVCA-H112/4R1YB	44	42	40
	ARVCA-H125/4R1YB	44	42	40
	ARVCA-H140/4R1YAB	46	43	41
	ARVCA-H140/4R1YB	46	43	41
50HZ Y Series	ARVCA-H22/4R1YB	36	34	33
	ARVCA-H25/4R1YB	36	34	33
	ARVCA-H28/4R1YB	36	34	33
	ARVCA-H32/4R1YB	36	34	33
	ARVCA-H36/4R1YB	36	34	33
	ARVCA-H40/4R1YB	36	34	33
	ARVCA-H45/4R1YB	36	34	33
	ARVCA-H50/4R1YB	36	34	33
	ARVCA-H56/4R1YB	36	34	33
	ARVCA-H63/4R1YB	43	39	37
	ARVCA-H71/4R1YB	43	39	37
	ARVCA-H80/4R1YB	43	39	37
	ARVCA-H90/4R1YB	43	39	37
	ARVCA-H100/4R1YB	45	40	39
	ARVCA-H112/4R1YB	45	40	39
	ARVCA-H125/4R1YB	45	40	39
	ARVCA-H140/4R1YAB	46	41	39
	ARVCA-H140/4R1YB	46	43	41

4.3 NC curves

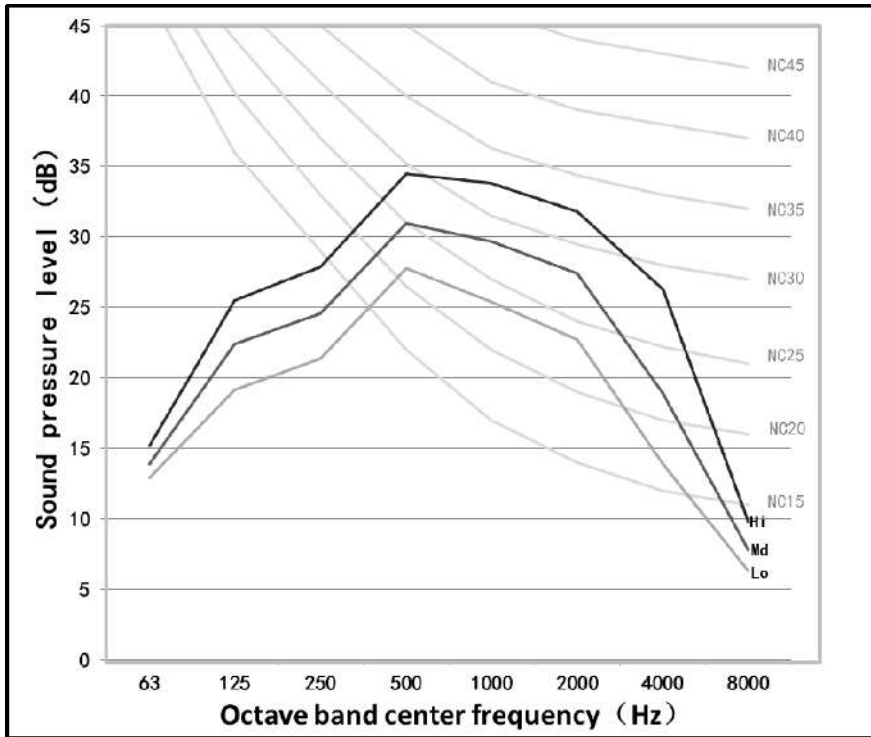
ARVCA-H22/4R1YB, ARVCA-H25/4R1YB, ARVCA-H28/4R1YB, ARVCA-H32/4R1YB
 ARVCA-H36/4R1YB, ARVCA-H40/4R1YB, ARVCA-H45/4R1YB, ARVCA-H50/4R1YB,
 ARVCA-H56/4R1YB



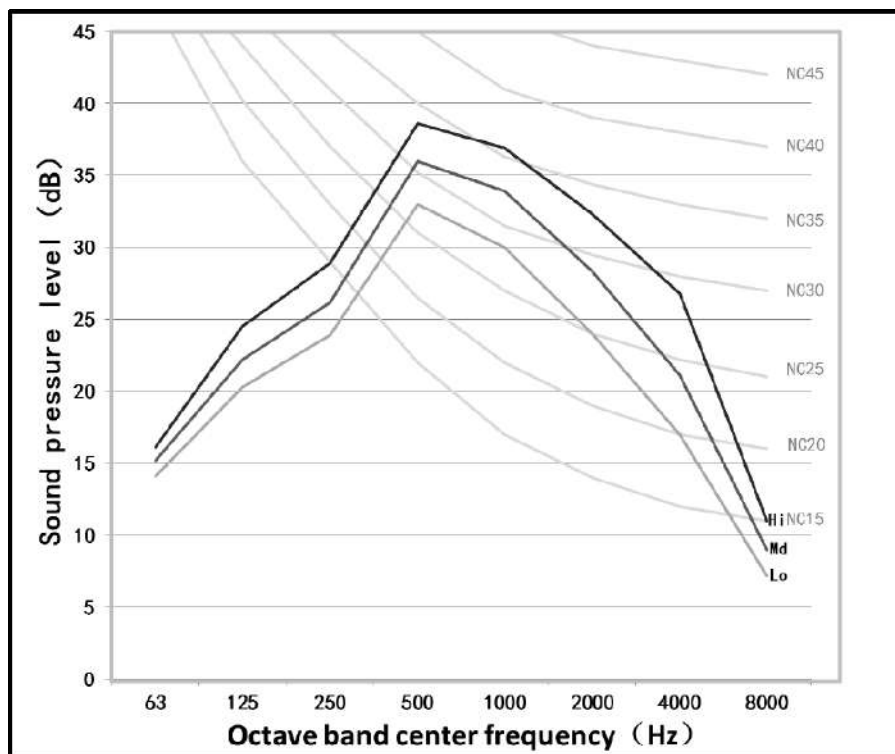
ARVCA-H63/4R1YB, ARVCA-H71/4R1YB, ARVCA-H80/4R1YB, ARVCA-H90/4R1YB



ARVCA-H100/4R1YB, ARVCA-H112/4R1YB, ARVCA-H125/4R1YB



ARVCA-H140/4R1YAB, ARVCA-H140/4R1YB,



5. Capacity table

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

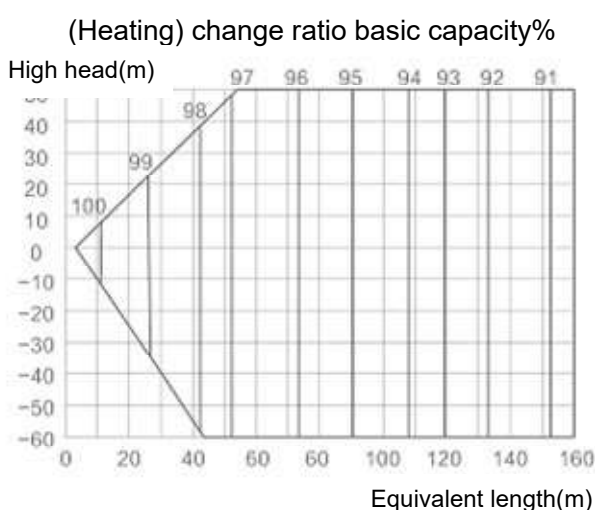
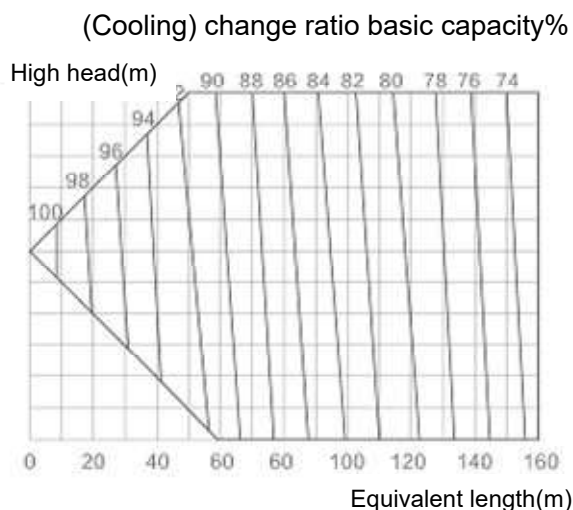
Outdoor dry bulb temperature [°C]	Correction coefficient	Indoor dry/wet bulb temperature[°C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.1	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	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[°C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [°C]		
		15	20	25
-20/-21	Heating capacity	0.58	0.53	0.49
	Power	0.50	0.56	0.62

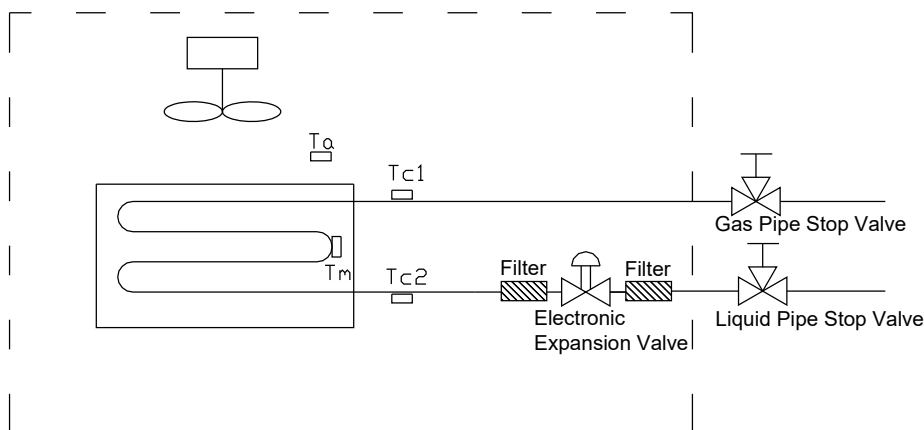
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	Power	0.72	0.78	0.84
-7/-8	Heating capacity	0.76	0.72	0.67
	Power	0.81	0.87	0.93
-1/-2	Heating capacity	0.79	0.74	0.7
	Power	0.86	0.92	0.98
2/1	Heating capacity	0.81	0.76	0.72
	Power	0.89	0.95	1.01
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)

6. Refrigerant piping diagram



Refrigerant pipe connection port diameters (mm)

Model		Gas	Liquid
50&60HZ E Series	ARVCA-H071/R1X	$\Phi 15.88$	$\Phi 9.52$
	ARVCA-H080/R1X		
	ARVCA-H090/R1X		
	ARVCA-H100/R1X		
	ARVCA-H112/R1X		
	ARVCA-H125/R1X		
50HZ E Series	ARVCA-H140/R1X	$\Phi 15.88$	$\Phi 9.52$
	ARVCA-H071/4R1BB		
	ARVCA-H080/4R1BB		
	ARVCA-H090/4R1BB		
	ARVCA-H100/4R1BB		
	ARVCA-H112/4R1BB		
60HZ E Series	ARVCA-H125/4R1BB	$\Phi 15.88$	$\Phi 9.52$
	ARVCA-H140/4R1BB		
	ARVCA-H071/2R1BB		
	ARVCA-H080/2R1BB		
	ARVCA-H090/2R1BB		
	ARVCA-H100/2R1BB		
	ARVCA-H112/2R1BB		
	ARVCA-H125/2R1BB		
	ARVCA-H140/2R1BB		

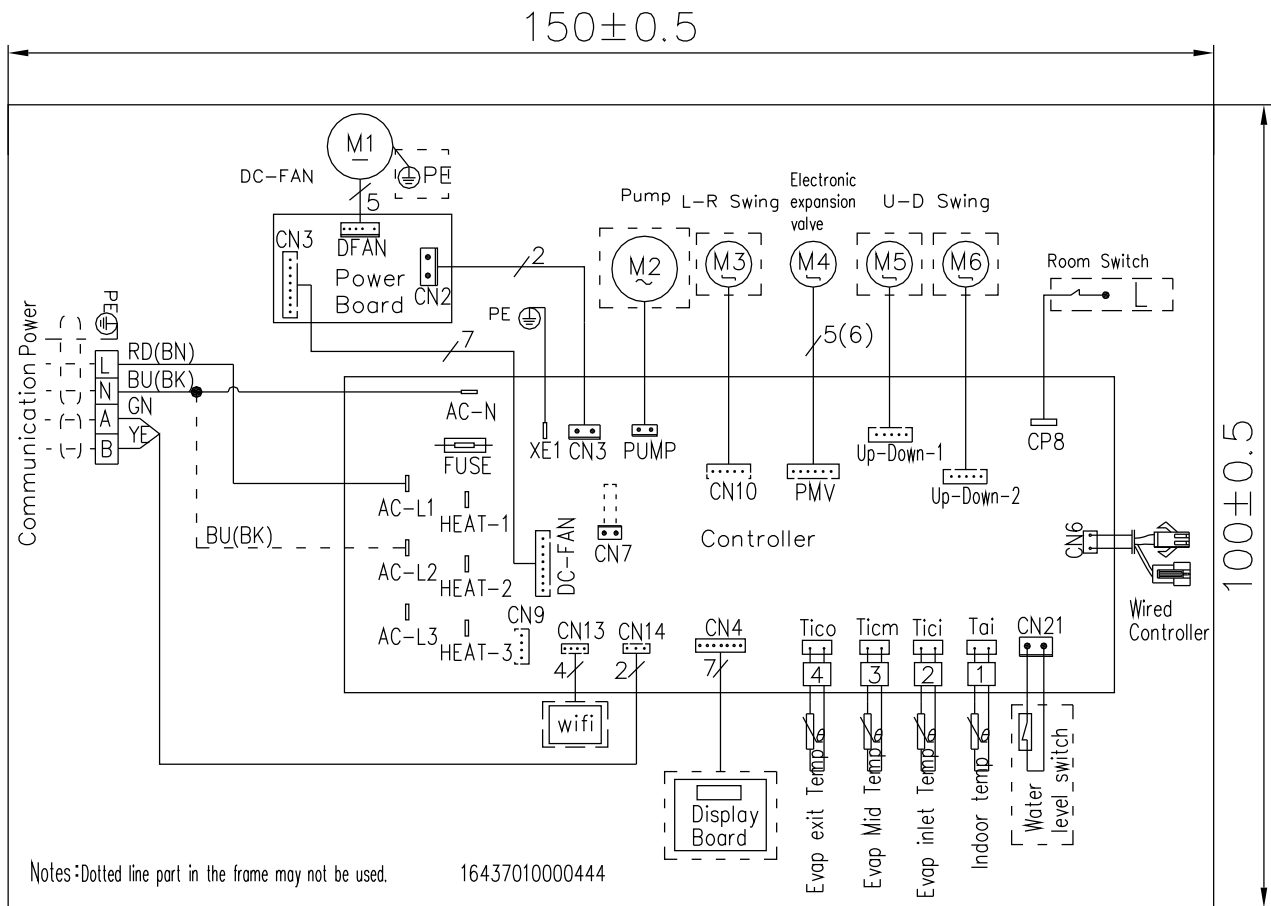
Model		Gas	Liquid
50&60HZ Y Series	ARVCA-H22/NR1DYB	Φ12.7	Φ6.35
	ARVCA-H25/NR1DYB		
	ARVCA-H28/NR1DYB		
	ARVCA-H32/NR1DYB		
	ARVCA-H36/NR1DYB		
	ARVCA-H40/NR1DYB		
	ARVCA-H45/NR1DYB		
	ARVCA-H50/NR1DYB		
	ARVCA-H56/NR1DYB	Φ15.88	Φ9.52
	ARVCA-H63/NR1DYB		
	ARVCA-H71/NR1DYB		
	ARVCA-H80/NR1DYB		
	ARVCA-H90/NR1DYB		
	ARVCA-H100/NR1DYB		
	ARVCA-H112/NR1DYB		
	ARVCA-H125/NR1DYB		
ARVCA-H140/NR1DYAB			
ARVCA-H140/NR1DYB			
50HZ Y Series	ARVCA-H22/4R1YB	Φ12.7	Φ6.35
	ARVCA-H25/4R1YB		
	ARVCA-H28/4R1YB		
	ARVCA-H32/4R1YB		
	ARVCA-H36/4R1YB		
	ARVCA-H40/4R1YB		
	ARVCA-H45/4R1YB		
	ARVCA-H50/4R1YB		
	ARVCA-H56/4R1YB	Φ15.88	Φ9.52
	ARVCA-H63/4R1YB		
	ARVCA-H71/4R1YB		
	ARVCA-H80/4R1YB		
	ARVCA-H90/4R1YB		
	ARVCA-H100/4R1YB		
	ARVCA-H112/4R1YB		
	ARVCA-H125/4R1Y B		
ARVCA-H140/4R1YAB			
ARVCA-H140/4R1YB			

7. Wiring diagram

2.1 E Series- 50&60HZ Type

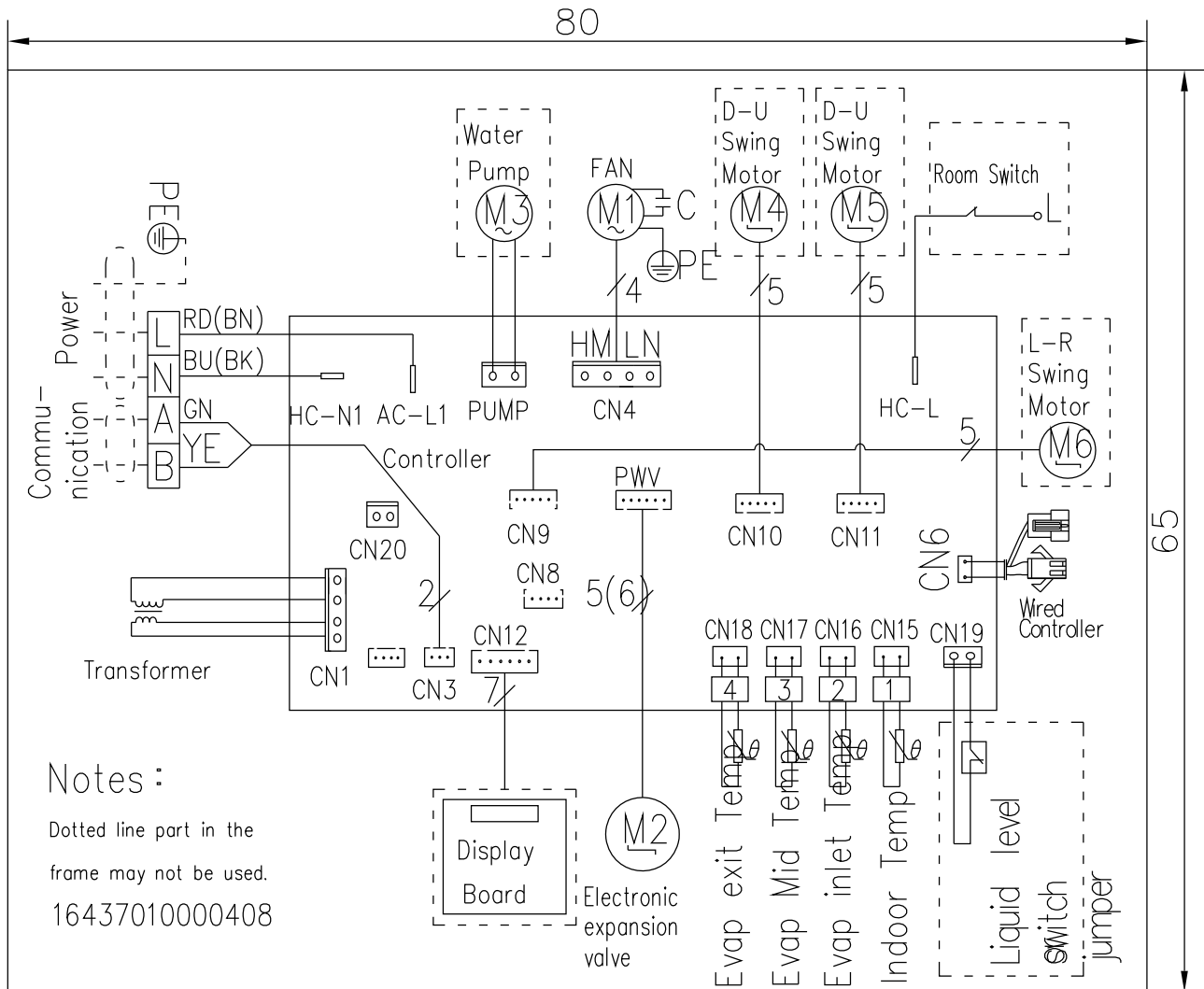
ARVCA-H071/R1X , ARVCA-H080/R1X , ARVCA-H090/R1X , ARVCA-H100/R1X

ARVCA-H112/R1X , ARVCA-H125/R1X , ARVCA-H140/R1X



2.2 E Series- 50HZ Type

ARVCA-H071/4R1B , ARVCA-H080/4R1B , ARVCA-H090/4R1B
 ARVCA-H100/4R1B , ARVCA-H112/4R1B , ARVCA-H125/4R1B , ARVCA-H140/4R1B
 ARVCA-H071/2R1B , ARVCA-H080/2R1B , ARVCA-H090/2R1B
 ARVCA-H100/2R1B , ARVCA-H112/2R1B , ARVCA-H125/2R1B , ARVCA-H140/2R1B

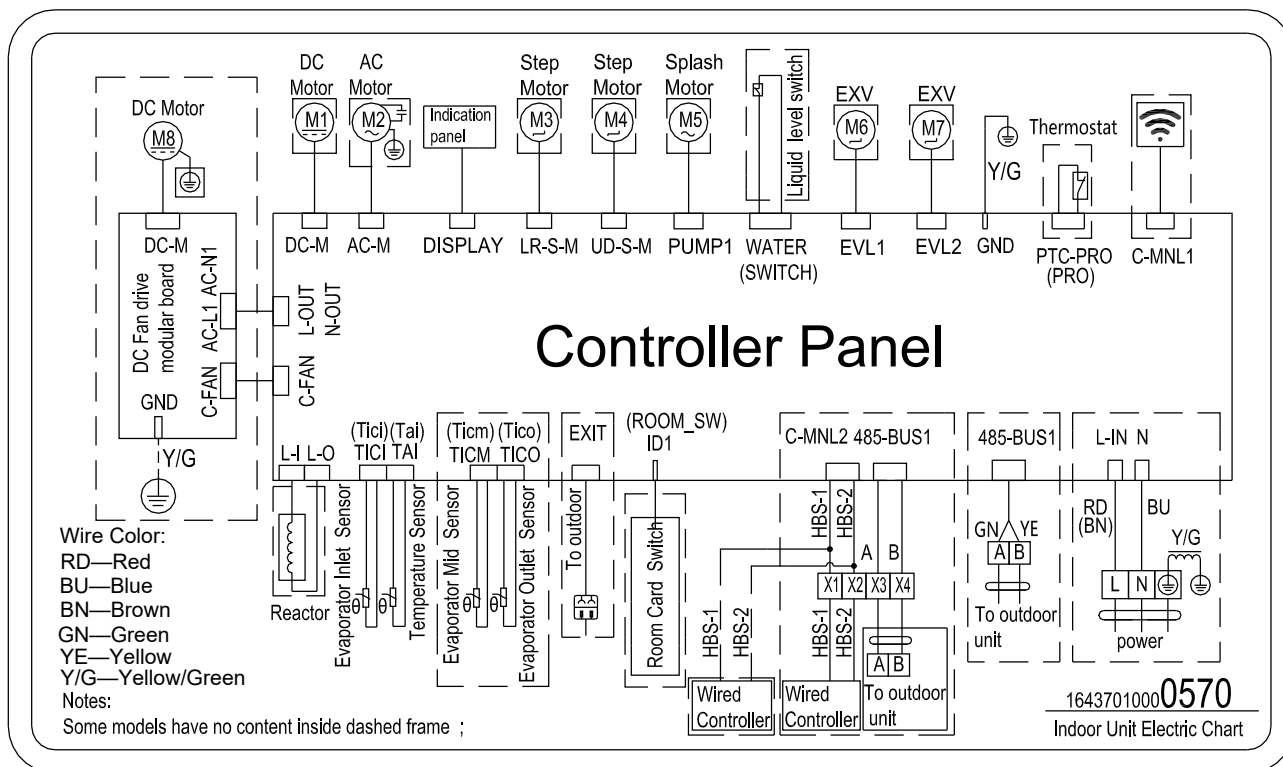


2.3 Y Series- 50&60HZ Type

ARVCA-H22/ NR1DYB ; ARVCA-H25/ NR1DYB ; ARVCA-H28/ NR1DYB ; ARVCA-H30/ NR1DYB ;
 ARVCA-H36/ NR1DYB ; ARVCA-H40/ NR1DYB ; ARVCA-H45/ NR1DYB ; ARVCA-H50/ NR1DYB ;
 ARVCA-H56/ NR1DYB ; ARVCA-H63/ NR1DYB ; ARVCA-H71/ NR1DYB ; ARVCA-H80/ NR1DYB ;
 ARVCA-H90/ NR1DYB ; ARVCA-H100/ NR1DYB ; ARVCA-H112/ NR1DYB ; ARVCA-H125/ NR1DYB ;
 ARVCA-H140/ NR1DYAB ; ARVCA-H140/ NR1DYB ;

2.4 Y Series- 50HZ Type

ARVCA-H22/4R1YB ; ARVCA-H25/4R1YB ; ARVCA-H28/4R1YB ; ARVCA-H30/4R1YB ;
 ARVCA-H36/4R1YB ; ARVCA-H40/4R1YB ; ARVCA-H45/4R1YB ; ARVCA-H50/4R1YB ;
 ARVCA-H56/4R1YB ; ARVCA-H63/4R1YB ; ARVCA-H71/4R1YB ; ARVCA-H80/4R1YB ;
 ARVCA-H90/4R1YB ; ARVCA-H100/4R1YB ; ARVCA-H112/4R1YB ; ARVCA-H125/4R1YB ;
 ARVCA-H140/4R1YAB ; ARVCA-H140/4R1YB ;



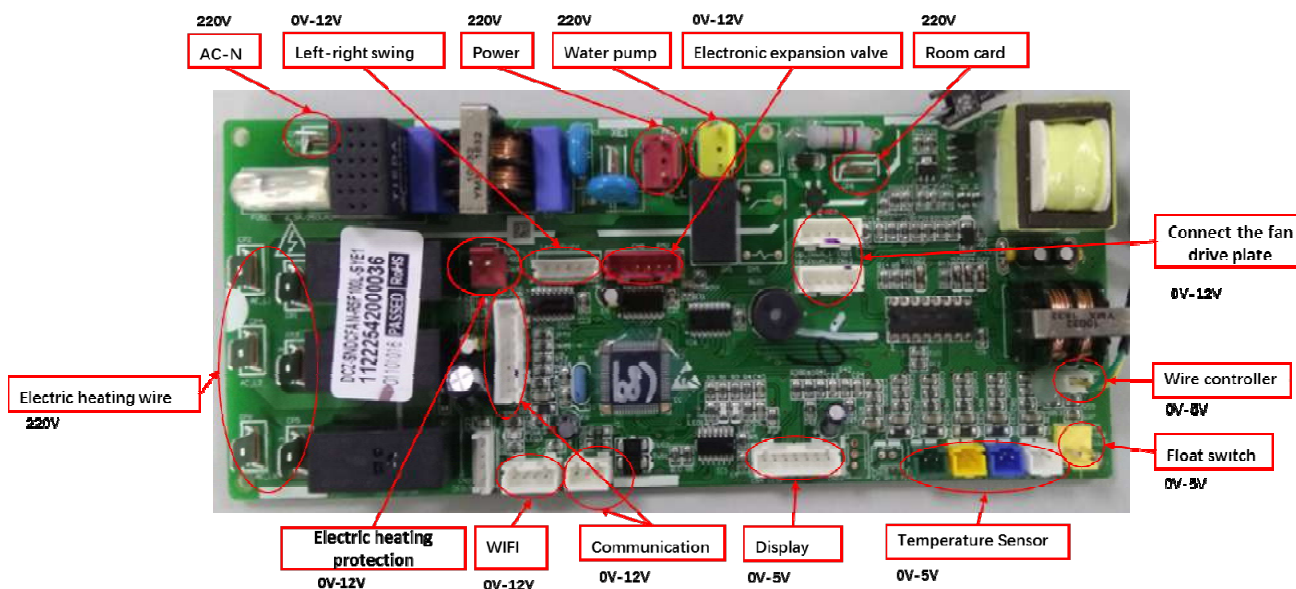
8. PCB Port Introduction

2.1 E Series- DC Type

ARVCA-H071/R1X, ARVCA-H080/R1X, ARVCA-H090/R1X

ARVCA-H100/R1X, ARVCA-H112/R1X, ARVCA-H125/R1X, ARVCA-H140/R1X

Main board-- 11222542000036CJ 控制板 DCZ-SNDCFAN-R5F100L-SYE1



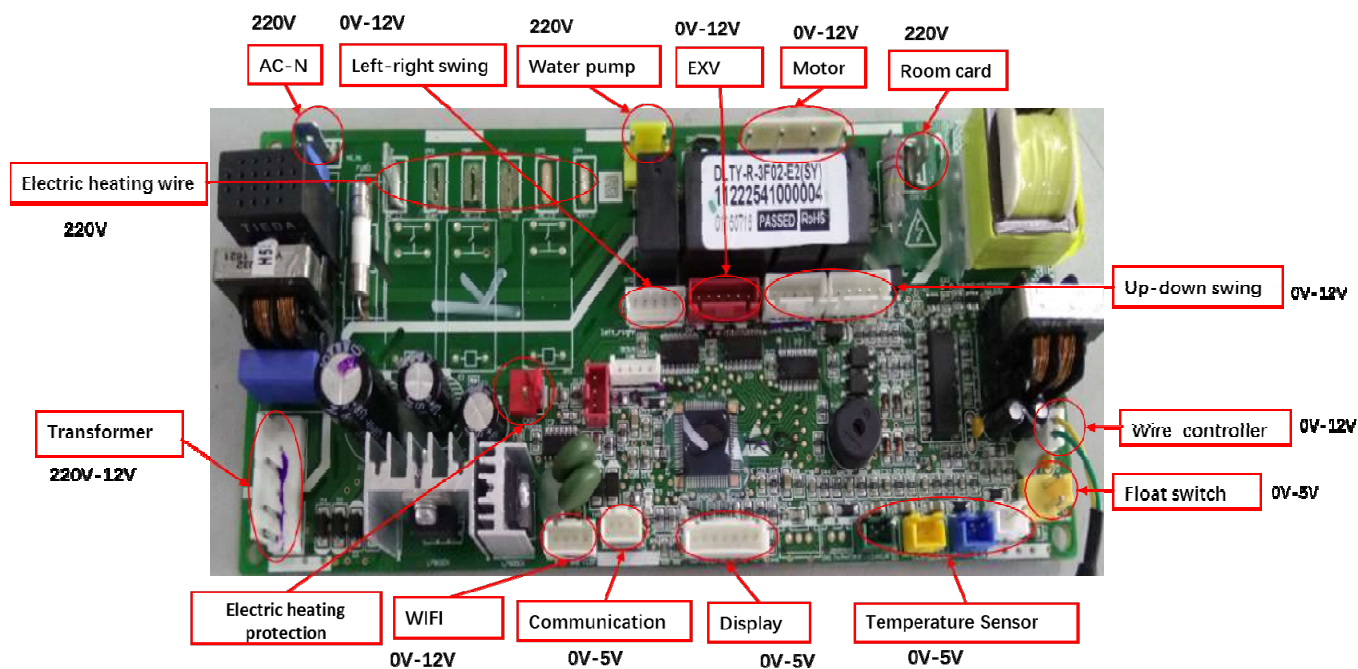
Fan board-- 11222542000059 控制板 CJ-F-SYEDCZ-SNPOWER-1



2.2 E Series - AC Type

ARVCA-H071/4R1B , ARVCA-H080/4R1B , ARVCA-H090/4R1B
 ARVCA-H100/4R1B , ARVCA-H112/4R1B , ARVCA-H125/4R1B , ARVCA-H140/4R1B
 ARVCA-H071/2R1B , ARVCA-H080/2R1B , ARVCA-H090/2R1B
 ARVCA-H100/2R1B , ARVCA-H112/2R1B , ARVCA-H125/2R1B , ARVCA-H140/2R1B

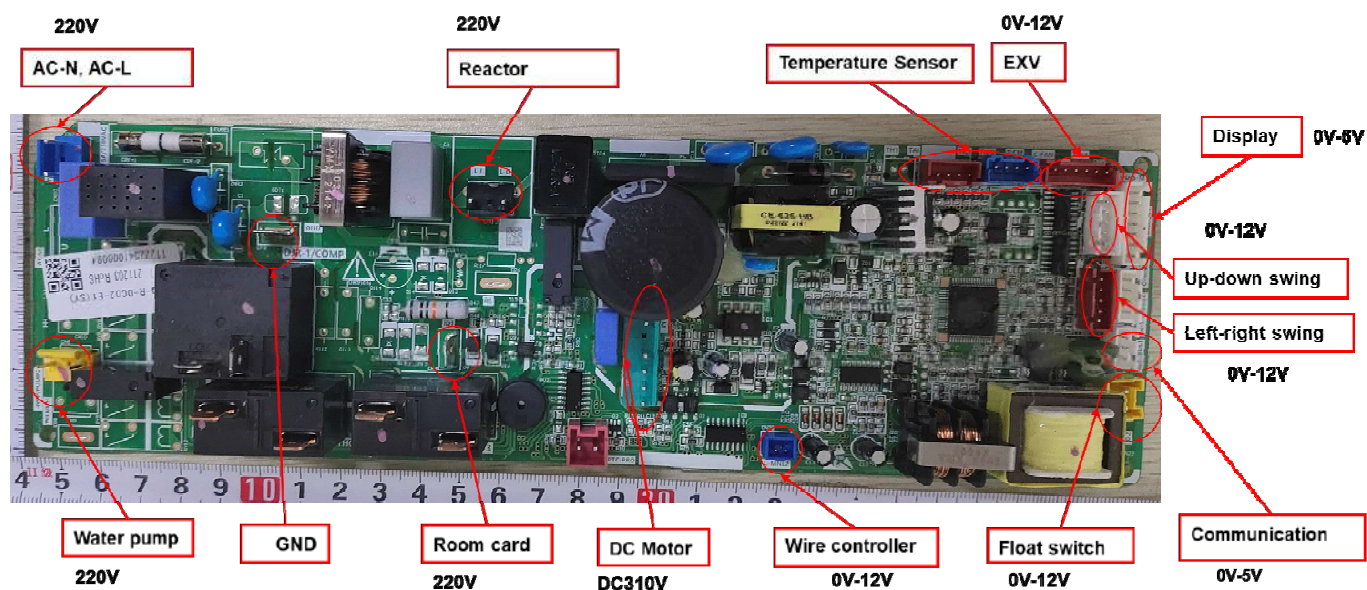
Main board-- 11222541000047 CJ 控制板 DLTY-R-3F02-E3(SY)



2.3 Y Series – 50&60HZ Type

ARVCA-H22/NR1DYB ; ARVCA-H25/NR1DYB ; ARVCA-H28/NR1DYB ; ARVCA-H30/NR1DYB ;
 ARVCA-H36/NR1DYB ; ARVCA-H40/NR1DYB ; ARVCA-H45/NR1DYB ; ARVCA-H50/NR1DYB ;
 ARVCA-H56/NR1DYB ; ARVCA-H63/NR1DYB ; ARVCA-H71/NR1DYB ; ARVCA-H80/NR1DYB ;
 ARVCA-H90/NR1DYB ; ARVCA-H100/NR1DYB ; ARVCA-H112/NR1DYB ; ARVCA-H125/NR1DYB ;
 ARVCA-H140/NR1DYAB ; ARVCA-H140/NR1DYB ;

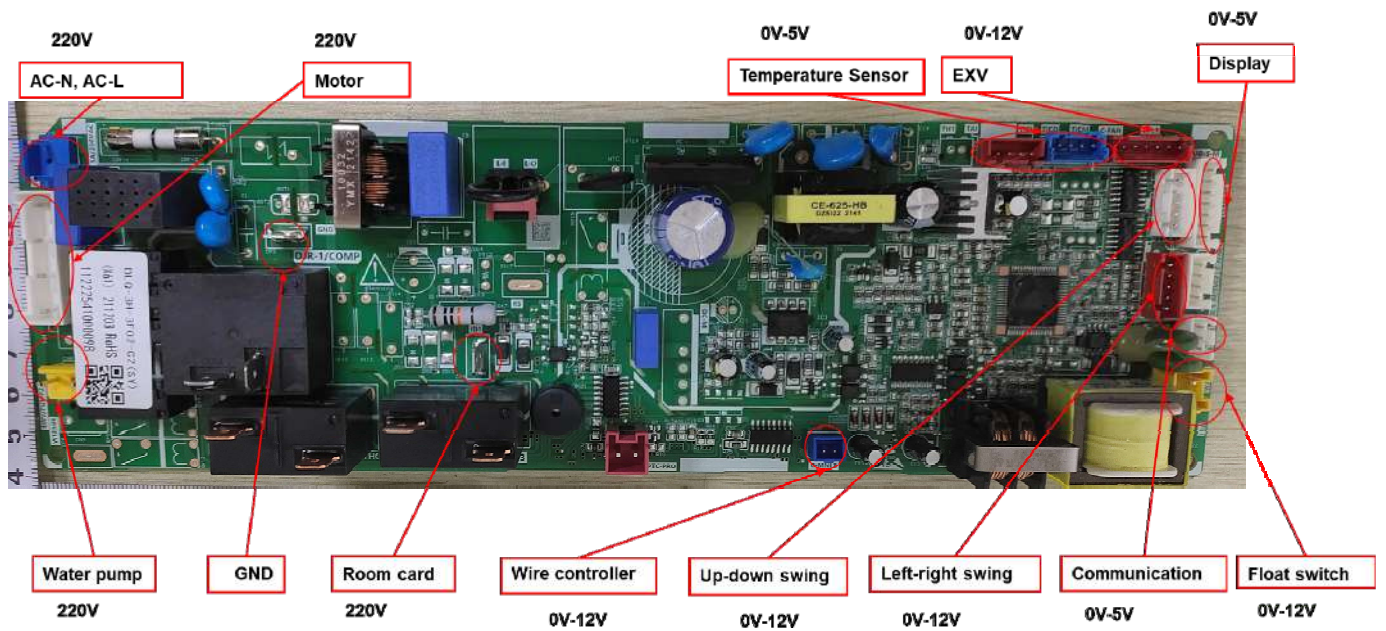
Main board-- 11222541000084 CJ 控制板 DLQ-R-DC02-E1(SY)



2.4 Y Series – 50HZ Type






ARVCA-H22/4R1YB ; ARVCA-H25/4R1YB ; ARVCA-H28/4R1YB ; ARVCA-H30/4R1YB ;
 ARVCA-H36/4R1YB ; ARVCA-H40/4R1YB ; ARVCA-H45/4R1YB ; ARVCA-H50/4R1YB ;
 ARVCA-H56/4R1YB ; ARVCA-H63/4R1YB ; ARVCA-H71/4R1YB ; ARVCA-H80/4R1YB ;
 ARVCA-H90/4R1YB ; ARVCA-H100/4R1YB ; ARVCA-H112/4R1YB ; ARVCA-H125/4R1YB ;
 ARVCA-H140/4R1YAB ; ARVCA-H150/4R1YB ;

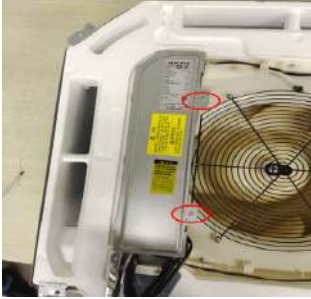

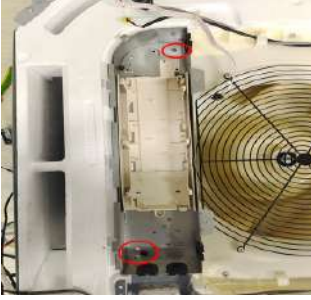
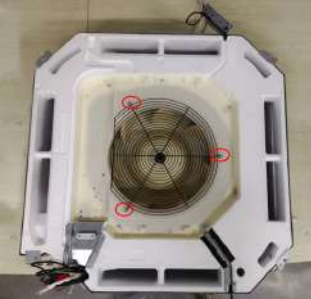
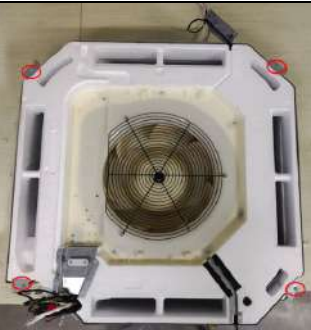
Main board-- 11222541000098 CJ 控制板 DLQ-3H-3F02-C2(SY)









9. Disassembly and reassembly






EXAMPLE: 50&60HZ Y Series

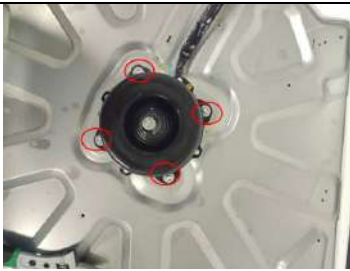
No	Parts	Procedure	Remark Photos
1	Panel	1) Remove the 4 cover plate connecting pieces at the corner of the panel ;	
1	Panel	2) Open the screw at the position shown in the figure and remove the 4 hooks on the panel ;	
1	Panel		
1	Panel	3) Press down the grille latch and turn over to open the grille ;	
1	Panel	4) Separate the motor connecting wire terminal and remove the panel.	

No	Parts	Procedure	Remark Photos
2	Electrical box	1) Remove 2 fixing screws and remove the cover plate of the electric control box ;	
2	Electrical box	2) Remove the terminal on the electric control board and remove the electric control board ;	
2	Electrical box	3) Remove 3 fixing screws and remove the electric control box ;	
2	Electrical box	4) Remove 3 fixing screws and remove the fan blade net cover ;	
2	Electrical box	5) Remove 4 fixing screws and remove the water tray.	




No	Parts	Procedure	Remark Photos
3	Water Pump	1) Remove 3 water pump fixing screws ;	
3	Water Pump	2) Remove the connection between the water hose and the water pump according to the direction shown in the figure	
3	Water Pump	3) Remove 2 fixing screws and remove the water outlet nozzle.	
4	Water float switch	1)Remove one fixing screw and remove the float switch.	
5	Evaporator	1)Remove one fixing screw and remove the float switch ;	

5	Evaporator	2) Remove 2 fixing screws and separate the connecting plate between the chassis and the evaporator ;	
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No	Parts	Procedure	Remark Photos
5	Evaporator	3) Remove 3 temperature sensing bags ;	
5	Evaporator	4) Remove one fixing screw and remove the evaporator fixing plate ; 5) Remove the evaporator.	
6	Fan wheel	1) Unscrew the fixing nut with an adjustable wrench and remove the fan wheel	
7	Fan motor	1) Remove 2 fixing screws and remove the crimping plate ;	
7	Fan motor	2) Remove the grounding screw ;	

7	Fan motor	3) Unscrew 4 fixing nuts with an adjustable wrench and remove the fan motor.	
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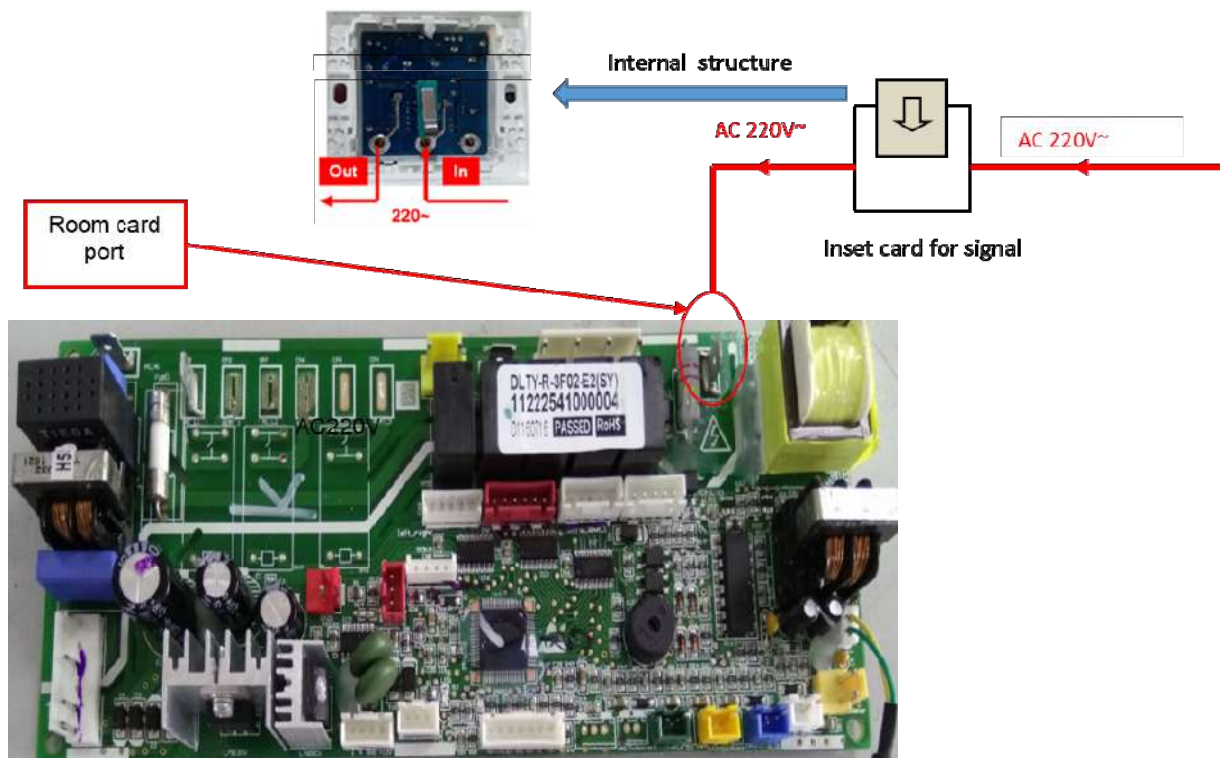
10. Split controller

Split Controller			
IDU Type	Standard	Optional	
	K type	L type	XK-02
<p>ARVCA-H***/4R1Y ***(22,25,28,30,36,40, 45,50,56,63,71,80,90, 100,112,125,140,150)</p> <p>ARVCA-H***/NR1DY ***(22,25,28,30,36,40, 45,50,56,63,71,80,90, 100,112,125,140,150)</p> <p>ARVCA-H***/R1X ***(071,080,090, 100,112,125,140)</p> <p>ARVCA-H***/4R1BB ***(071,080,090, 100,112,125,140)</p> <p>ARVCA-H***/2R1BB ***(071,080,090, 100,112,125,140)</p>			

11.Room card function

Parameter	Function	Insert key card	Remove key card
0901	Valid	Standby, IDU can be controlled	Standby, IDU can't be controlled

Wiring diagram



12.Parameter setting

1. Parameter setting table

Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVCA-H071/R1X	11	26	00	01
ARVCA-H080/R1X	11	30	00	01
ARVCA-H090/R1X	11	32	00	01
ARVCA-H100/R1X	11	36	00	01
ARVCA-H112/R1X	11	40	00	01
ARVCA-H125/R1X	11	45	00	01
ARVCA-H140/R1X	11	50	00	01
ARVCA-H071/4R1BB	11	26	00	01
ARVCA-H080/4R1BB	11	30	00	01
ARVCA-H090/4R1BB	11	32	00	01
ARVCA-H100/4R1BB	11	36	00	01
ARVCA-H112/4R1BB	11	40	00	01
ARVCA-H125/4R1BB	11	45	00	01
ARVCA-H140/4R1BB	11	48	00	01
ARVCA-H071/2R1BB	11	26	00	01
ARVCA-H080/2R1BB	11	30	00	01
ARVCA-H090/2R1BB	11	32	00	01
ARVCA-H100/2R1BB	11	36	00	01
ARVCA-H112/2R1BB	11	40	00	01
ARVCA-H125/2R1BB	11	45	00	01
ARVCA-H140/2R1BB	11	48	00	01

- 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,
- 0900 means room card function invalid, 0901 means valid
- 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value

Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

Yseries

Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVCA-H22/NR1DYB	1	8	00	01
ARVCA-H25/NR1DYB	1	9	00	01
ARVCA-H28/NR1DYB	1	10	00	01
ARVCA-H32/NR1DYB	1	11	00	01
ARVCA-H36/NR1DYB	1	13	00	01
ARVCA-H40/NR1DYB	1	14	00	01
ARVCA-H45/NR1DYB	1	16	00	01
ARVCA-H50/NR1DYB	1	18	00	01
ARVCA-H56/NR1DYB	1	20	00	01
ARVCA-H63/NR1DYB	1	23	00	01
ARVCA-H71/NR1DYB	1	25	00	01
ARVCA-H80/NR1DYB	1	29	00	01
ARVCA-H90/NR1DYB	1	32	00	01
ARVCA-H100/NR1DYB	1	36	00	01
ARVCA-H112/NR1DYB	1	40	00	01
ARVCA-H125/NR1DYB	1	45	00	01
ARVCA-H140/NR1DYAB	1	50	00	01
ARVCA-H140/NR1DYB	1	50	00	01
ARVCA-H22/4R1YB	1	8	00	01
ARVCA-H25/4R1YB	1	9	00	01
ARVCA-H28/4R1YB	1	10	00	01
ARVCA-H32/4R1YB	1	11	00	01
ARVCA-H36/4R1YB	1	13	00	01
ARVCA-H40/4R1YB	1	14	00	01
ARVCA-H45/4R1YB	1	16	00	01
ARVCA-H50/4R1YB	1	18	00	01
ARVCA-H56/4R1YB	1	20	00	01
ARVCA-H63/4R1YB	1	23	00	01
ARVCA-H71/4R1YB	1	25	00	01
ARVCA-H80/4R1YB	1	29	00	01
ARVCA-H90/4R1YB	1	32	00	01
ARVCA-H100/4R1YB	1	36	00	01
ARVCA-H112/4R1YB	1	40	00	01
ARVCA-H125/4R1YB	1	45	00	01
ARVCA-H140/4R1YAB	1	50	00	01
ARVCA-H140/4R1YB	1	50	00	01


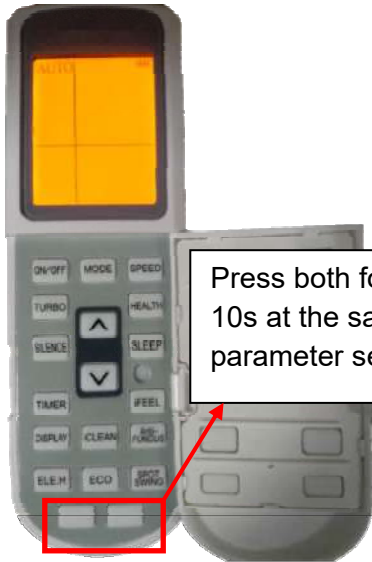
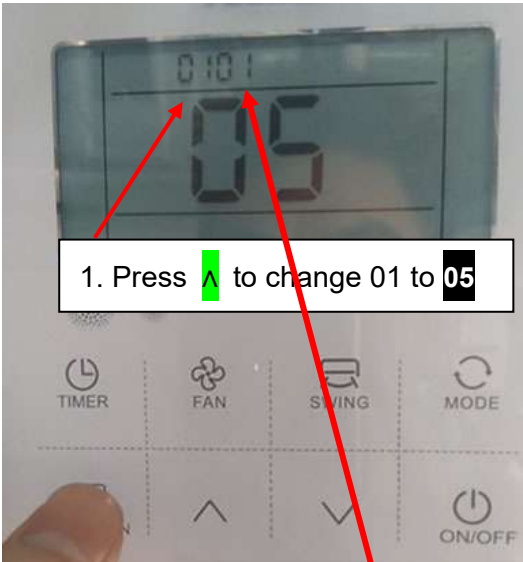
1. 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,

- 2. 0900 means room card function invalid, 0901 means valid
- 3. 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value

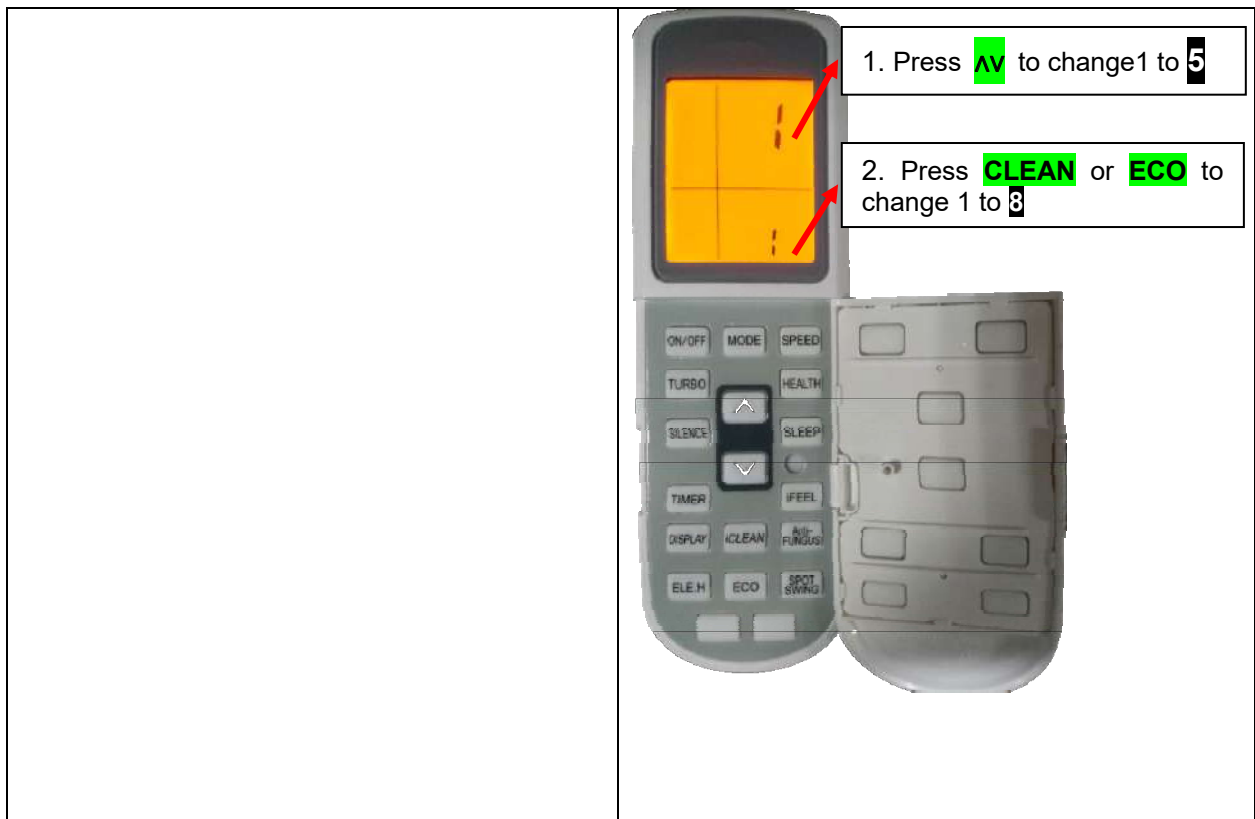
Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

2. Parameter setting method

E.g.: set the parameter for 2.2kw IDU. (Parameter: 0508)






Wired controller	Remote controller
<p>Step1</p>  <p>Press FUNCTION for more than 10s, enter parameter setting</p>	<p>Step1</p>  <p>Press both for more than 10s at the same time, enter parameter setting</p>
<p>Step2</p>  <p>1. Press ▲ to change 01 to 05</p>	<p>Step2</p>

- 2. Press **FUNCTION** for more than 5s, then **01** will flicker
- 3. then press **▲** to change 00 to **08**
- 4. Press **FUNCTION** 5s to send the order



13.Group control

Group control			
IDU type	Centralized controller	BMS-MODBUS control	Monitoring control
	Max.256 IDUs	Quantity no limit	one refrigerant system

<p>ARVCA-H***/4R1YB ***(22,25,28,30,36,40, 45,50.56.63,71,80,90, 100,112,125,140)</p> <p>ARVCA-H***/NR1DYB ***(22,25,28,30,36,40, 45,50.56.63,71,80,90, 100,112,125,140)</p> <p>ARVCA-H***/R1X ***(071,080,090, 100,112,125,140)</p> <p>ARVCA-H***/4R1BB ***(071,080,090, 100,112,125,140)</p> <p>ARVCA-H***/2R1BB ***(071,080,090, 100,112,125,140)</p>	 		 
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Note: More details about connection wiring , function introduce Please check the <Control system technical manual>

Part5 Ceiling floor

1. Product Line-up

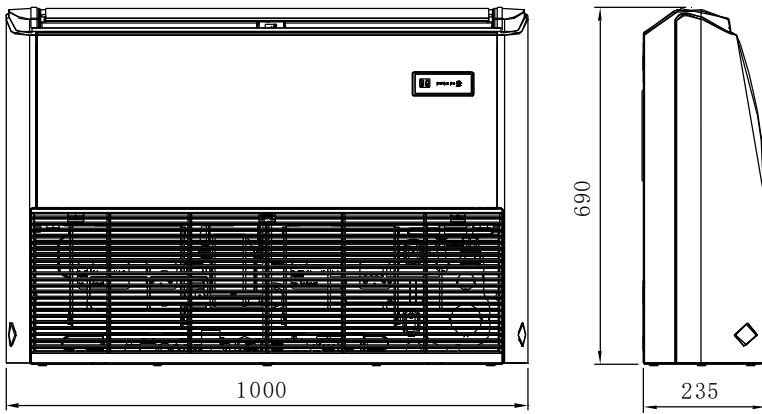
Series	Models	Photos
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50&60HZ F Series	ARVCF-H45/NR1DF	
	ARVCF-H56/NR1DF	
	ARVCF-H71/NR1DF	
	ARVCF-H80/NR1DF	
	ARVCF-H90/NR1DF	
	ARVCF-H112/NR1DF	
	ARVCF-H125/NR1DF	
	ARVCF-H140/NR1DF	
50HZ C Series	ARVCF-H045/4R1A	
	ARVCF-H056/4R1A	
	ARVCF-H071/4R1A	
	ARVCF-H080/4R1A	
	ARVCF-H090/4R1A	
	ARVCF-H100/4R1A	
	ARVCF-H112/4R1A	
	ARVCF-H125/4R1A	
	ARVCF-H140/4R1A	
60HZ C Series	ARVCF-H045/2R1A	
	ARVCF-H056/2R1A	
	ARVCF-H071/2R1A	
	ARVCF-H080/2R1A	
	ARVCF-H090/2R1A	
	ARVCF-H100/2R1A	
	ARVCF-H112/2R1A	
	ARVCF-H125/2R1A	
	ARVCF-H140/2R1A	

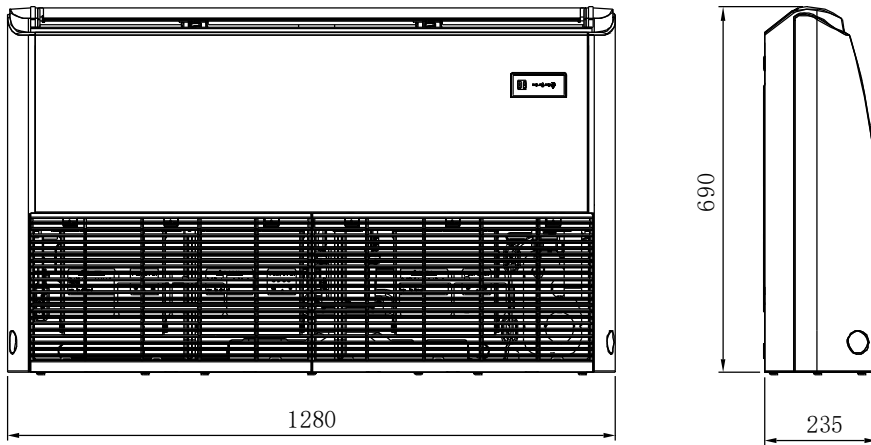
Remark: **Discontinued** (50HZ C Series, 60HZ C Series)

2. Dimensions

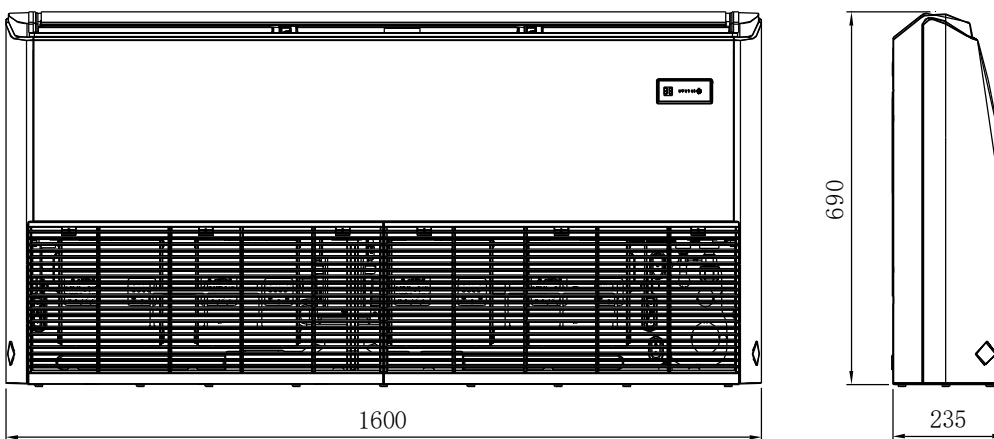
ARVCF-H45/NR1DF、ARVCF-H56/NR1DF、ARVCF-H71/NR1DF

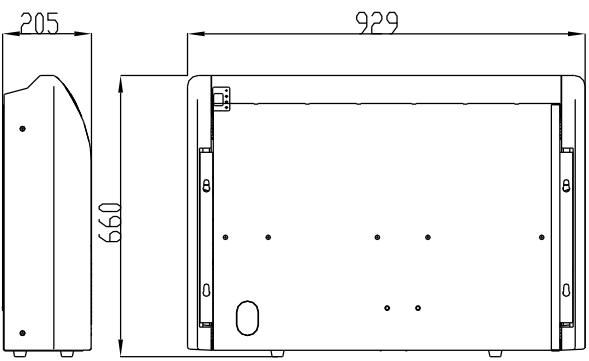


ARVCF-H80/NR1DF、ARVCF-H90/NR1DF

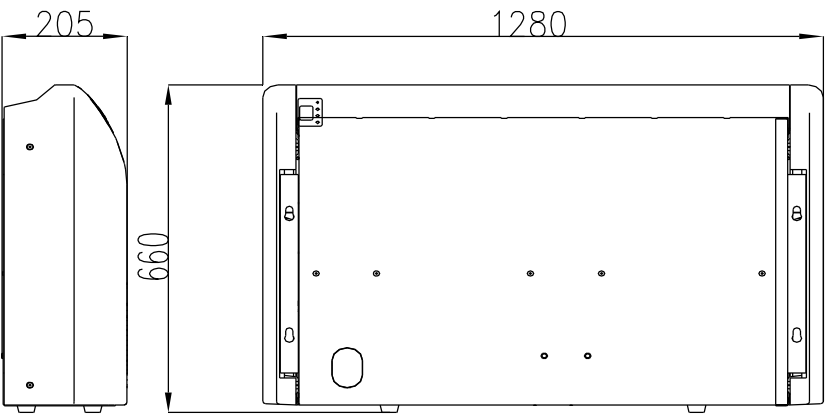


ARVCF-H112/NR1DF、ARVCF-H125/NR1DF、ARVCF-H140/NR1DF

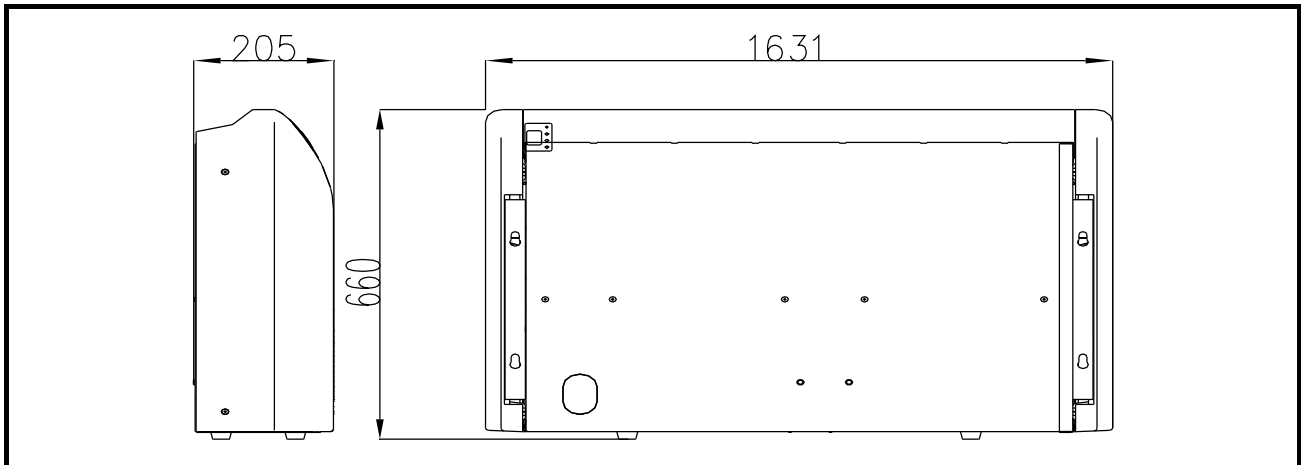




Physical Dimension		ARVCF-H045/4R1A ARVCF-H056/4R1A	ARVCF-H045/2R1A ARVCF-H056/2R1A
Length	mm	929	929
Height	mm	660	660
Width	mm	205	205



Physical Dimension		ARVCF-H071/4R1A ARVCF-H080/4R1A ARVCF-H090/4R1A ARVCF-H100/4R1A	ARVCF-H071/2R1A ARVCF-H080/2R1A ARVCF-H090/2R1A ARVCF-H100/2R1A
Length	mm	1280	1280
Height	mm	660	660
Width	mm	205	205

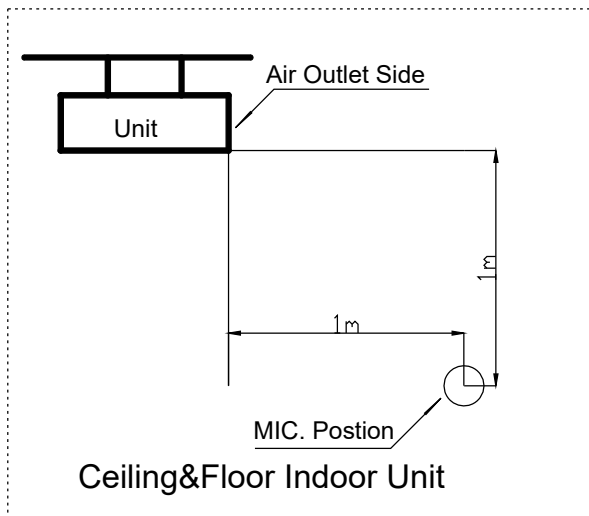


Physical Dimension		ARVCF-H112/4R1A ARVCF-H125/4R1A ARVCF-H140/4R1A	ARVCF-H112/2R1A ARVCF-H125/2R1A ARVCF-H140/2R1A
Length	mm	1631	1631
Height	mm	660	660
Width	mm	205	205

3. Feature

- 1) Fin guide design -- Optimize the air duct , improve the air supply distance
- 2) Two way drainage design -- Suitable for kinds of installation sites, more convenient for drainage
- 3) High precise control EXV -- Multi-stage gear transmission, lower running sound and no abnormal noise ;There is no sudden change in the refrigerant flow characteristic diagram, and the flow control is stable
- 4) Wired controller optional, Suitable for kinds of customer requirement, Embedded wall installation, simple and beautiful
- 5) Smart WIFI control , Through A-link module able to remote control indoor unit ON/OFF, set temperature, fan speed ...Bring users a comfortable and intelligent control experience
- 6) Room card function, Insert card , Indoor unit can be controlled by remote/wired controller, Remove card ,indoor unit keep off status, not response the signal from controller
- 7) Wired group Control , Max **16** units can be controlled by one wired controller, All units can be controlled at the same time (not individual control)
- 8) Centralized control , Max **256** units can be controlled by Touch screen centralized controller **CC02**
All units can be controlled individual, support weekly schedule control

4. Sound level



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 coefficient) of the particular room in which the equipments installed.

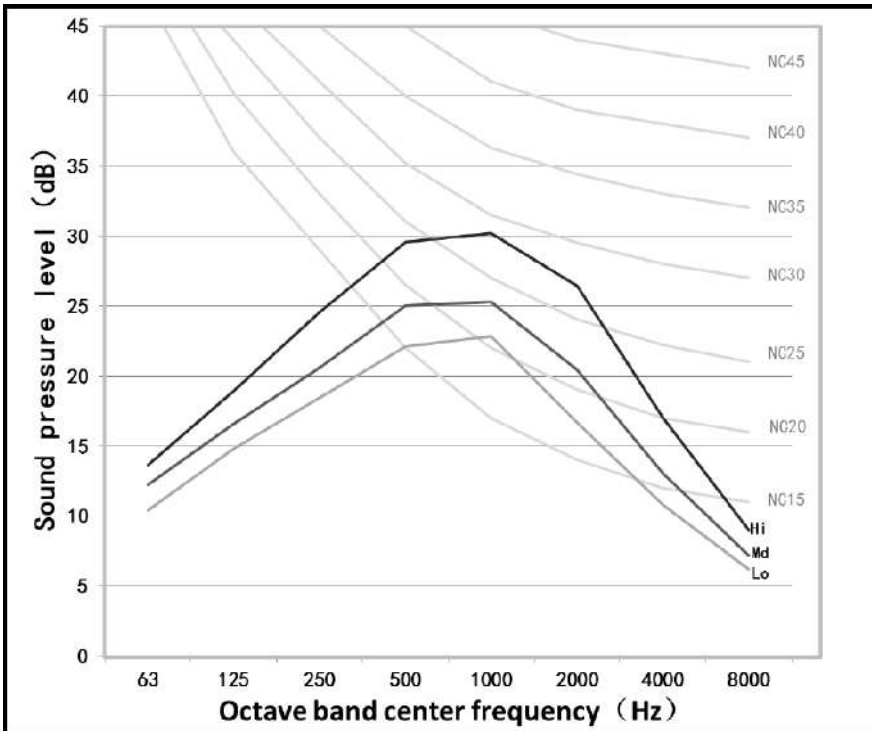
4.1 Test value

Series	Models	Noise level under three speeds of fan (dB(A))				
		T	H	M	L	S
50&60HZ F Series	ARVCF-H45/NR1DF	42	41	38	37	36
	ARVCF-H56/NR1DF	42	41	38	37	36
	ARVCF-H71/NR1DF	42	41	38	37	36
	ARVCF-H80/NR1DF	43	42	39	38	37
	ARVCF-H90/NR1DF	43	42	39	38	37
	ARVCF-H112/NR1DF	50	49	45	43	41
	ARVCF-H125/NR1DF	50	49	45	43	41
	ARVCF-H140/NR1DF	50	49	45	43	41
50HZ C Series	ARVCF-H045/4R1A	/	42	39	36	
	ARVCF-H056/4R1A	/	42	39	36	
	ARVCF-H071/4R1A	/	45	42	39	
	ARVCF-H080/4R1A	/	47	44	41	
	ARVCF-H090/4R1A	/	47	44	41	
	ARVCF-H100/4R1A	/	47	44	41	
	ARVCF-H112/4R1A	/	48	45	42	
	ARVCF-H125/4R1A	/	48	45	42	
	ARVCF-H140/4R1A	/	48	45	42	
60HZ C Series	ARVCF-H045/2R1A	/	42	39	36	
	ARVCF-H056/2R1A	/	42	39	36	
	ARVCF-H071/2R1A	/	45	42	39	
	ARVCF-H080/2R1A	/	47	44	41	
	ARVCF-H090/2R1A	/	47	44	41	
	ARVCF-H100/2R1A	/	47	44	41	
	ARVCF-H112/2R1A	/	48	45	42	
	ARVCF-H125/2R1A	/	48	45	42	
	ARVCF-H140/2R1A	/	48	45	42	

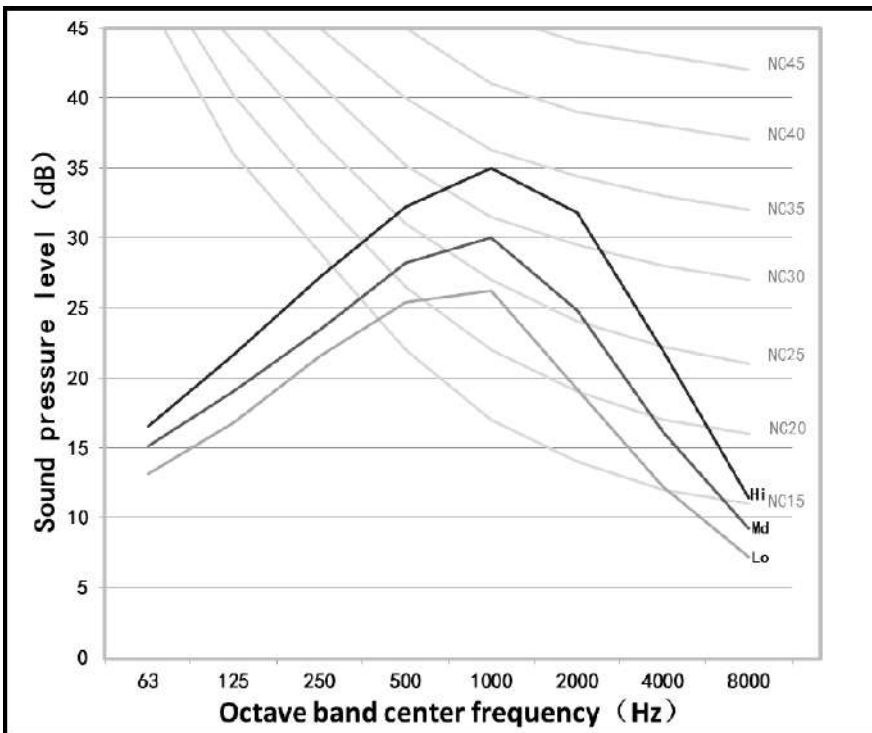
Remark: **Discontinued** (50HZ C Series, 60HZ C Series)

4.2 NC curves

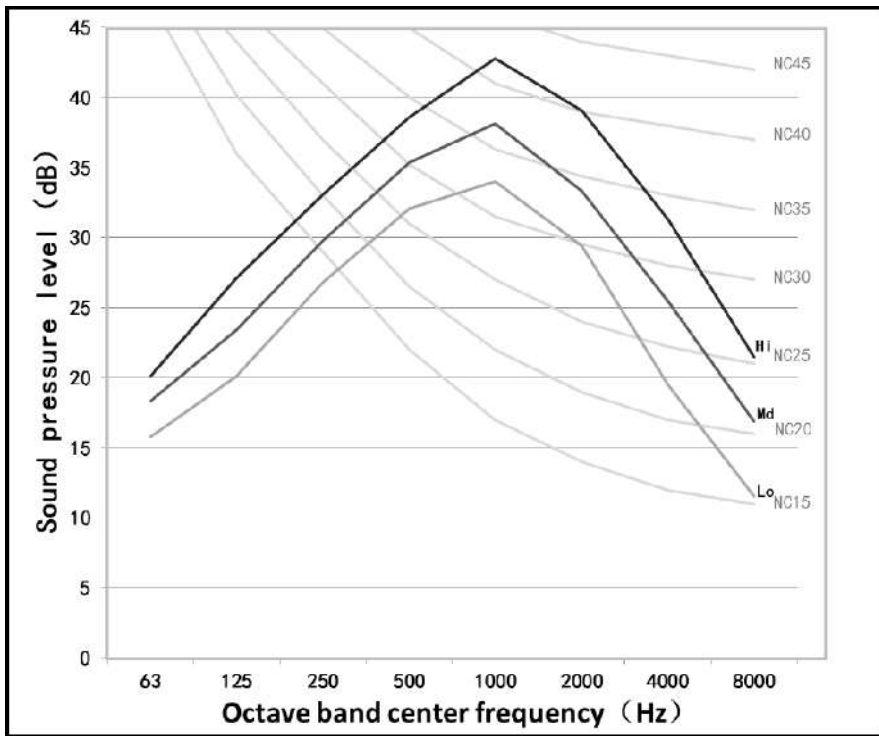
ARVCF-H45/NR1DF、ARVCF-H56/NR1DF、ARVCF-H71/NR1DF



ARVCF-H80/NR1DF、ARVCF-H90/NR1DF



ARVCF-H112/NR1DF、ARVCF-H125/NR1DF、ARVCF-H140/NR1DF



5. Capacity table

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

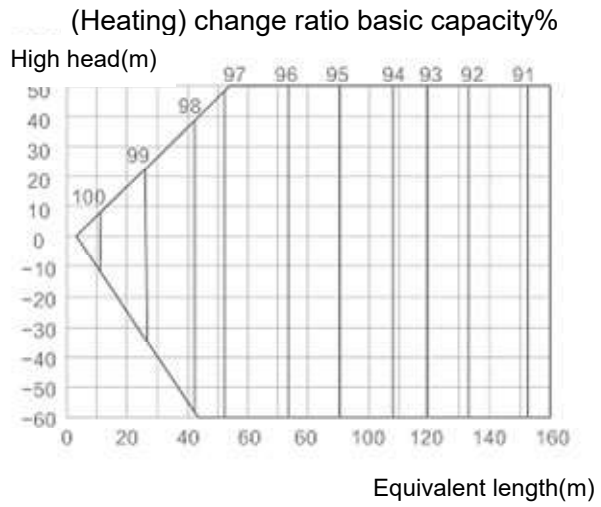
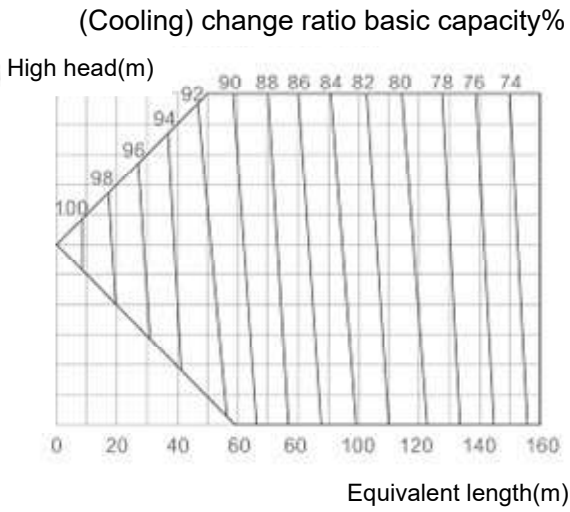
Outdoor dry bulb temperature [°C]	Correction coefficient	Indoor dry/wet bulb temperature [°C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling 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 bulb [°C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [°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		

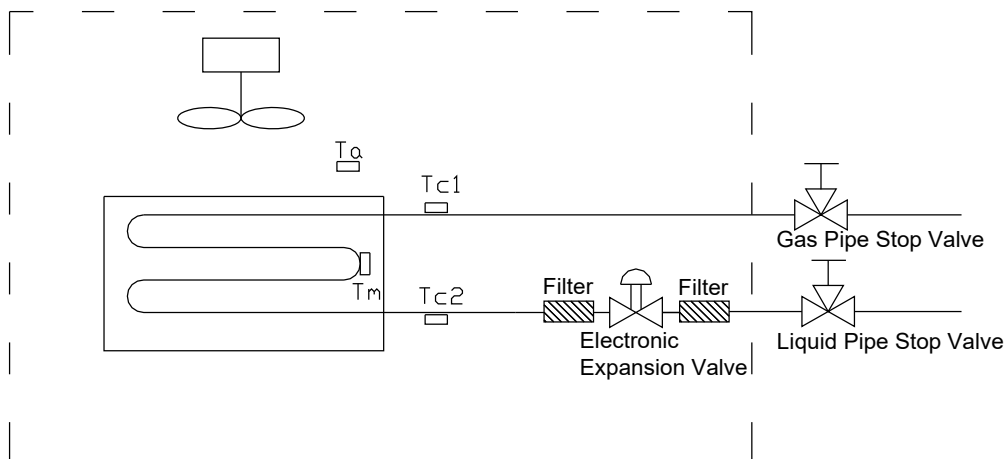
	Power	0.80 – 1.20 of nominal
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Length Correction Coefficient of Indoor/Outdoor Unit Connecting Tube



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)

6. Refrigerant piping diagram



Refrigerant pipe connection port diameters (mm)

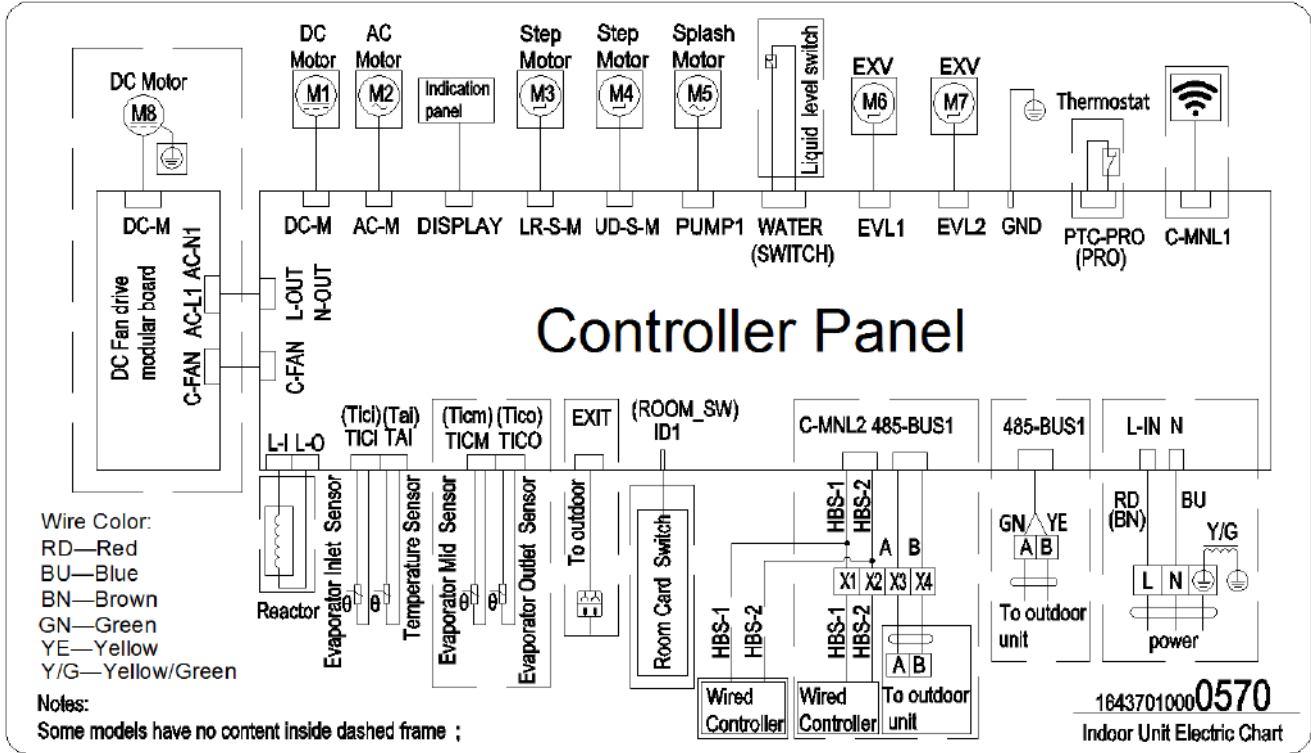
Model	Gas	Liquid
ARVCF-H45/ NR1DF ARVCF-H045/4R1A;ARVCF-H045/2R1A	12.7	6.35
ARVCF-H56/ NR1DF ARVCF-H056/4R1A;ARVCF-H056/2R1A		
ARVCF-H71/ NR1DF ARVCF-H071/4R1A;ARVCF-H071/2R1A	15.88	9.52
ARVCF-H80/ NR1DF ARVCF-H080/4R1A;ARVCF-H080/2R1A		
ARVCF-H90/ NR1DF ARVCF-H090/4R1A;ARVCF-H090/2R1A		
ARVCF-H100/ NR1DF ARVCF-H100/4R1A;ARVCF-H100/2R1A		
ARVCF-H112/ NR1DF ARVCF-H112/4R1A;ARVCF-H112/2R1A		
ARVCF-H125/ NR1DF ARVCF-H125/4R1A;ARVCF-H125/2R1A		
ARVCF-H140/ NR1DF ARVCF-H140/4R1A;ARVCF-H140/2R1A		

7. Wiring diagram

50&60HZ F Series

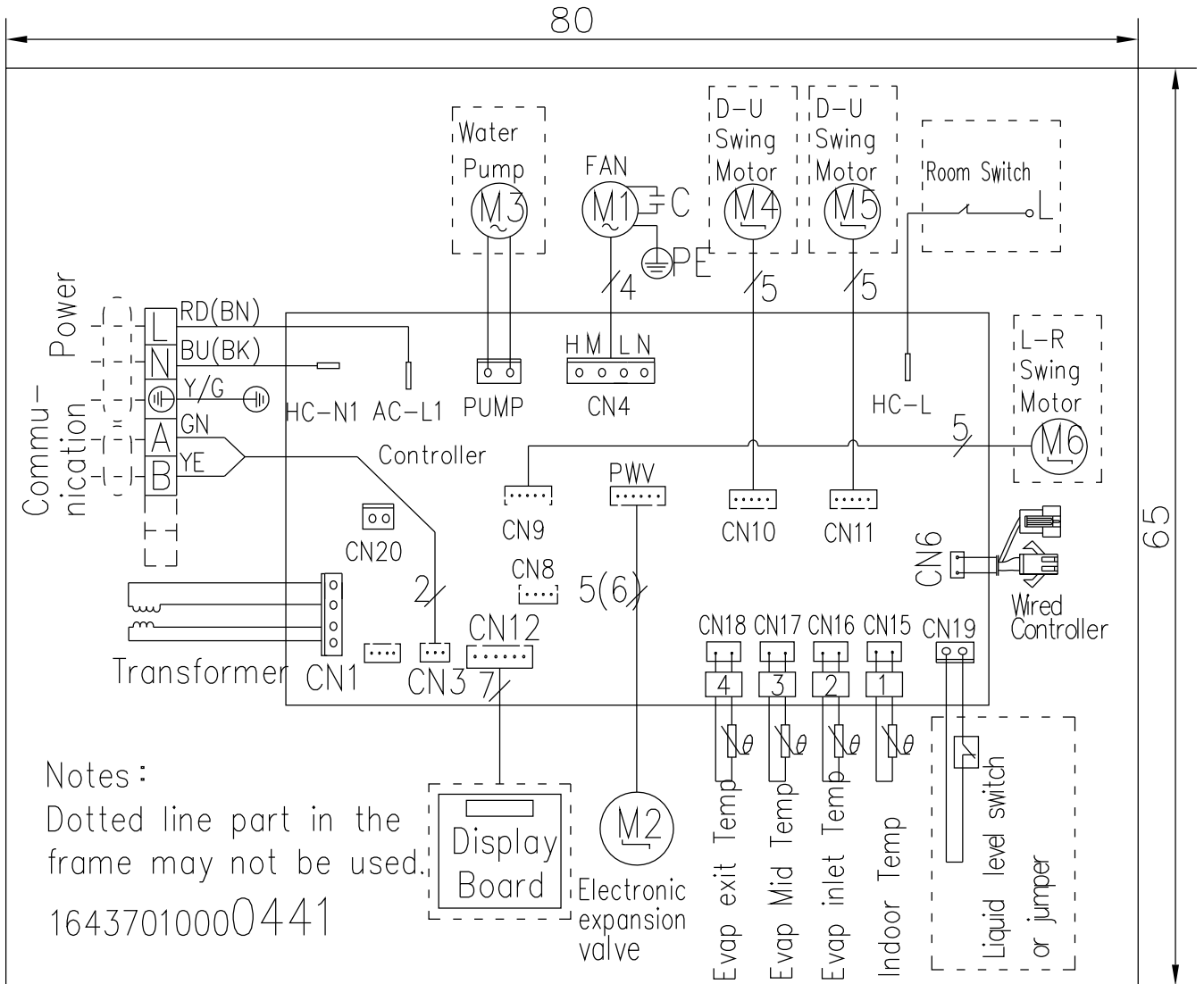
ARVCF-H45/NR1DF, ARVCF-H56/NR1DF, ARVCF-H71/NR1DF, ARVCF-H80/NR1DF, ARVCF-H90/NR1DF,

ARVCF-H112/NR1DF, ARVCF-H125/NR1DF, ARVCF-H140/NR1DF



50HZ C Series; 60HZ C Series

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
 ARVCF-H045/2R1A; ARVCF-H056/2R1A; ARVCF-H071/2R1A; ARVCF-H080/2R1A; ARVCF-H090/2R1A ,
 ARVCF-H100/2R1A; ARVCF-H112/2R1A; ARVCF-H125/2R1A; ARVCF-H140/2R1A

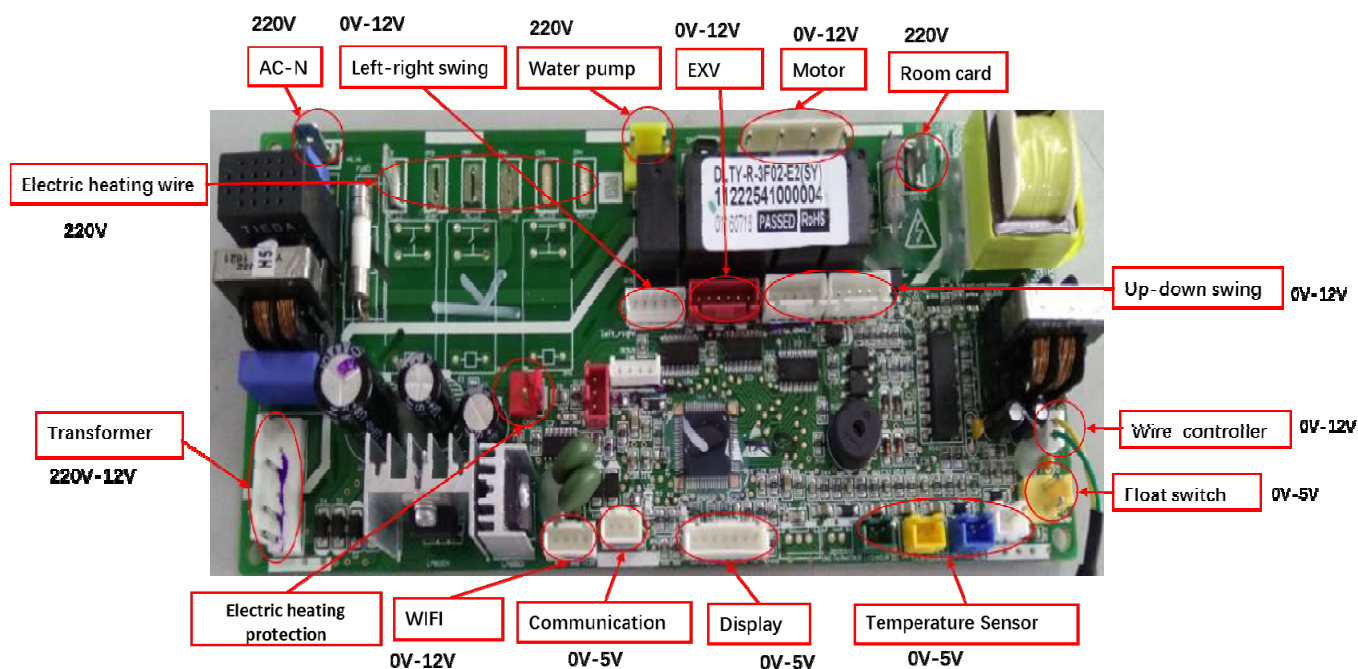


8. PCB Port Introduction

50HZ C Series; 60HZ C series

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
 ARVCF-H045/2R1A; ARVCF-H056/2R1A; ARVCF-H071/2R1A; ARVCF-H080/2R1A; ARVCF-H090/2R1A ,
 ARVCF-H100/2R1A; ARVCF-H112/2R1A; ARVCF-H125/2R1A; ARVCF-H140/2R1A

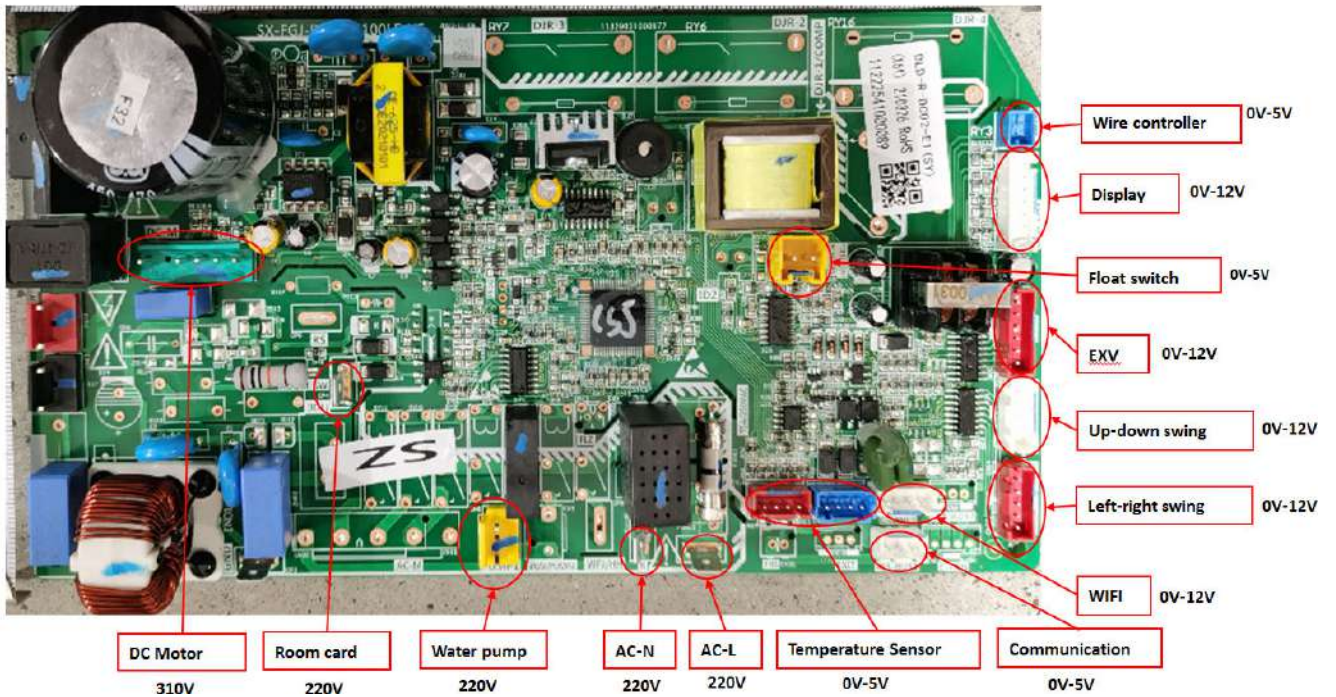
Main board-- 11222541000047 CJ 控制板 DLTY-R-3F02-E3(SY)



50&60HZ F Series





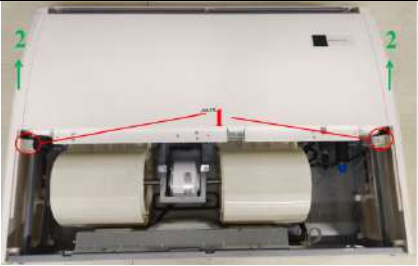
ARVCF-H45/NR1DF、ARVCF-H56/NR1DF、ARVCF-H71/NR1DF、ARVCF-H80/NR1DF、ARVCF-H90/NR1DF、
ARVCF-H112/NR1DF、ARVCF-H125/NR1DF、ARVCF-H140/NR1DF

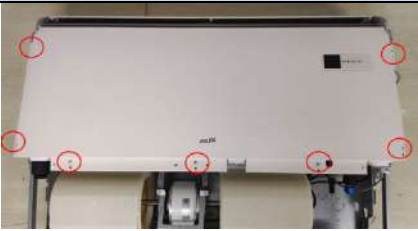
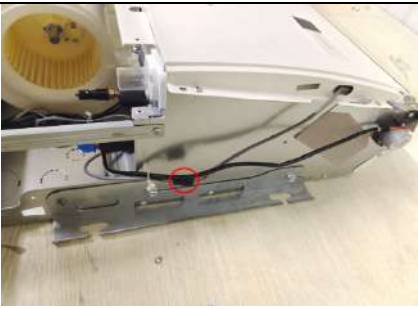
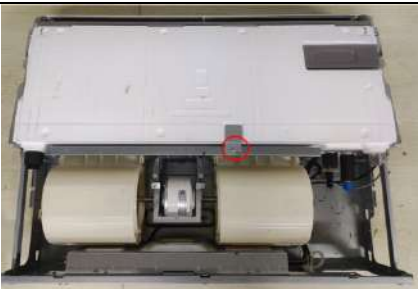


Main board-- 1122254100089 CJ控制板DLD-R-DC02-E1(SY)


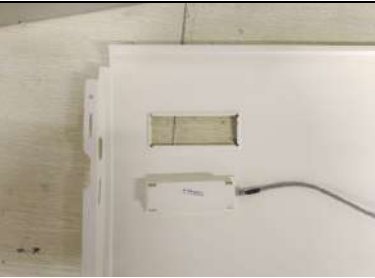
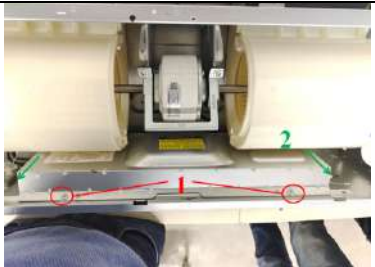





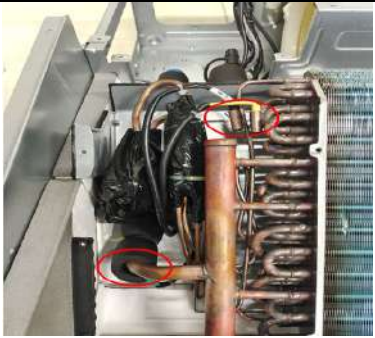
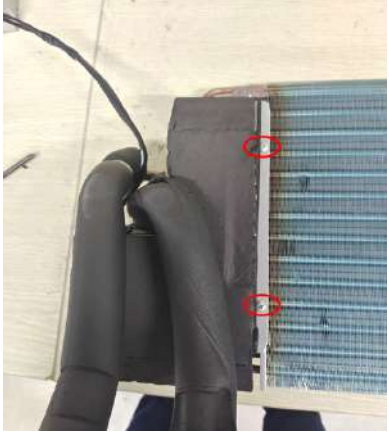

9. Disassembly and reassembly




EXAMPLE: 50&60HZ F Series

No	Parts	Procedure	Remark Photos
1	Air inlet grille assembly	1) Open 3 latches downward and remove 3 screws at corresponding positions	
1	Air inlet grille assembly	2)After rotating and opening the grid, remove the latch according to the direction shown in the figure and remove the grid assembly	
2	Support plate	1) Remove the screw ;	
2	Support plate	2) After 90 ° rotation, remove the support plate.	
3	Left and right end caps	1) Remove 2 fixing screws; 2) Remove the left and right end caps in the direction shown in the figure.	







No	Parts	Procedure	Remark Photos
4	Panel	1) Remove seven screws ;	
4	Panel	2) Disconnect the lamp board connecting wire ;	
4	Panel	3)Remove one fixing screw and remove the fixing plate ;	
4	Panel	4) Remove the air deflector ;	
4	Panel	5) Remove 2 fixing screws and remove the stepper motor	

No	Parts	Procedure	Remark Photos
5	Display board	1) Open the clips around the lamp panel according to the direction shown in the figure, and remove the lamp panel from the panel.	
5	Display board		
6	Control box	1) Remove 2 fixing screws and take out the electric control box assembly	
6	Control box	2) Remove 2 fixing screws and open the cover plate of the electric control box;	
6	Control box	3) Remove the terminals on the PCB and remove the PCB.	

No	Parts	Procedure	Remark Photos
7	Evaporator	1) Remove 9 fixing screws, remove the support side plate and remove the valve plate ;	
7	Evaporator	2) Remove the temperature sensing package and remove the evaporator ;	
7	Evaporator	3) Remove 2 fixing screws and remove the fixing plate ;	
7	Evaporator	4) Remove the damping block and remove the coil of the electronic expansion valve.	

No	Parts	Procedure	Remark Photos
8	Fan motor and fan wheel	1) Remove 2 fixing screws and remove the motor clamp ;	
8	Fan motor and fan wheel	2) Remove the lock catch between the upper and lower volute and remove the upper volute ;	
8	Fan motor and fan wheel	3)Use No. 5 I-wrench to remove the wind wheel at the position shown in the figure.	

10. Split controller

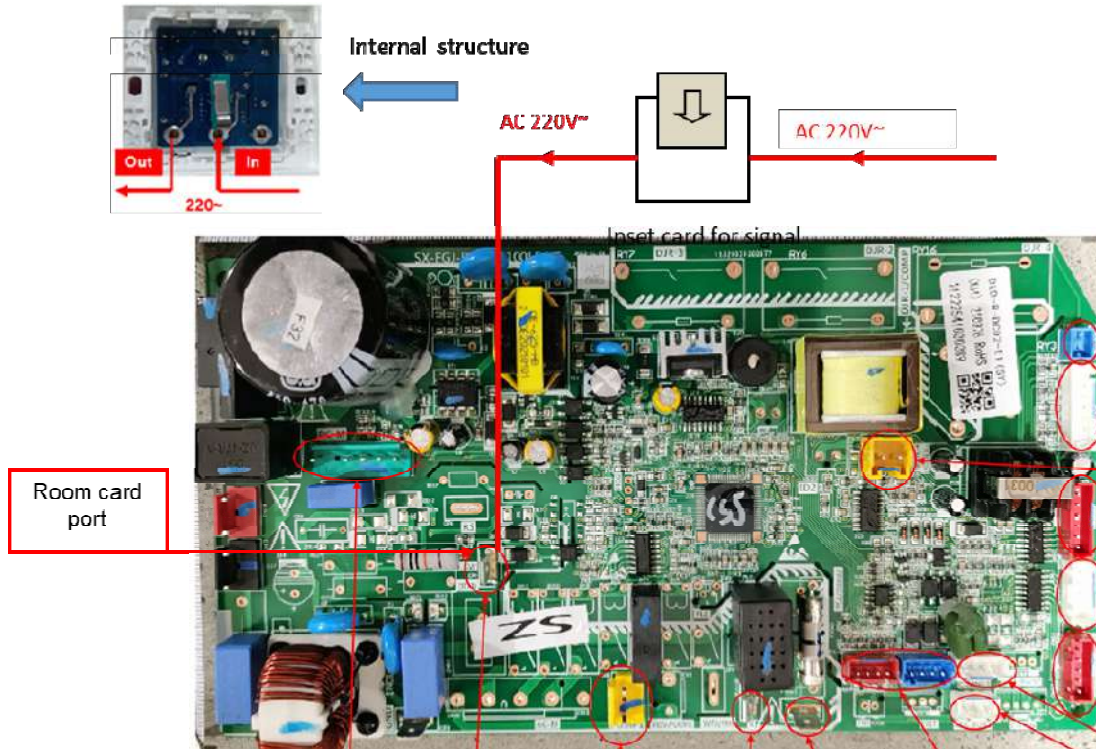
Split Controller			
IDU Type	Standard	Optional	
ARVCF-H45/NR1DF ARVCF-H56/NR1DF ARVCF-H71/NR1DF ARVCF-H80/NR1DF ARVCF-H90/NR1DF ARVCF-H112/NR1DF ARVCF-H125/NR1DF ARVCF-H140/NR1DF	T type	L type	XK-02
			
ARVCF-H045/4R1A ARVCF-H056/4R1A ARVCF-H071/4R1A ARVCF-H080/4R1A ARVCF-H090/4R1A ARVCF-H100/4R1A ARVCF-H112/4R1A ARVCF-H125/4R1A ARVCF-H140/4R1A ARVCF-H045/2R1A ARVCF-H056/2R1A ARVCF-H071/2R1A ARVCF-H080/2R1A ARVCF-H090/2R1A ARVCF-H100/2R1A ARVCF-H112/2R1A ARVCF-H125/2R1A ARVCF-H140/2R1A	K type	L type	XK-02
			

Remark: **Discontinued** (50HZ C Series, 60HZ C Series)

11.Room card function

Parameter	Function	Insert key card	Remove key card
0901	Valid	Standby, IDU can be controlled	Standby, IDU can't be controlled

Wiring diagram



12.Parameter setting

3.1 Parameter setting table


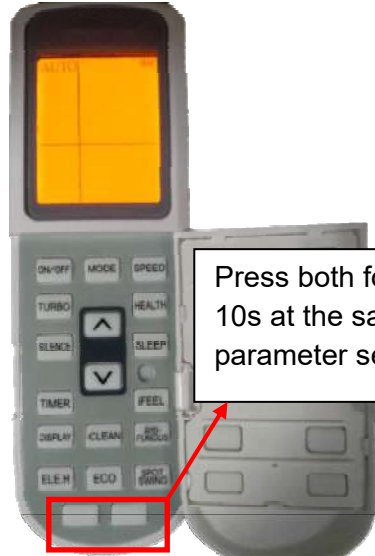
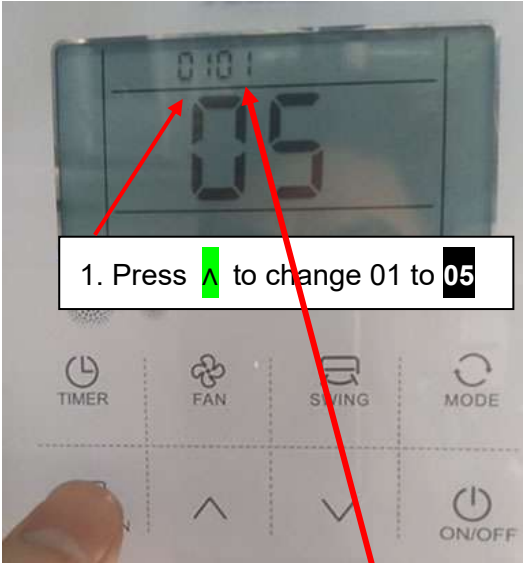
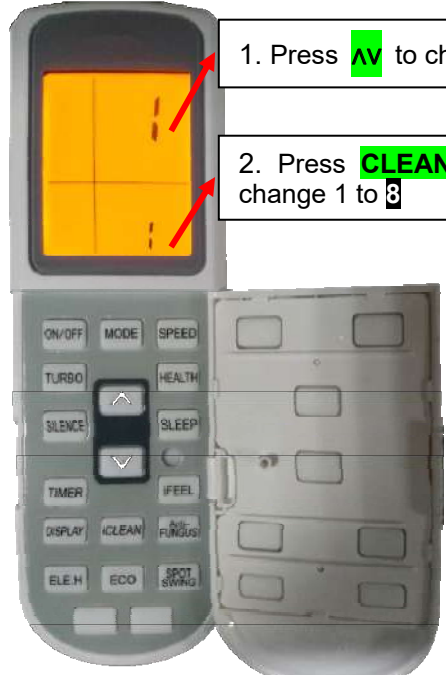
Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVCF-H45/NR1DF	46	16	00	01
ARVCF-H56/NR1DF	46	20	00	01
ARVCF-H71/NR1DF	46	25	00	01
ARVCF-H80/NR1DF	46	29	00	01
ARVCF-H90/NR1DF	46	32	00	01
ARVCF-H112/NR1DF	46	40	00	01
ARVCF-H125/NR1DF	46	45	00	01
ARVCF-H140/NR1DF	46	50	00	01
ARVCF-H045/4R1A	13	16	00	01
ARVCF-H056/4R1A	13	20	00	01
ARVCF-H071/4R1A	13	25	00	01
ARVCF-H080/4R1A	13	29	00	01
ARVCF-H090/4R1A	13	32	00	01
ARVCF-H100/4R1A	13	36	00	01
ARVCF-H112/4R1A	13	40	00	01
ARVCF-H125/4R1A	13	45	00	01
ARVCF-H140/4R1A	13	50	00	01
ARVCF-H045/2R1A	13	16	00	01
ARVCF-H056/2R1A	13	20	00	01
ARVCF-H071/2R1A	13	25	00	01
ARVCF-H080/2R1A	13	29	00	01
ARVCF-H090/2R1A	13	32	00	01
ARVCF-H100/2R1A	13	36	00	01
ARVCF-H112/2R1A	13	40	00	01
ARVCF-H125/2R1A	13	45	00	01
ARVCF-H140/2R1A	13	50	00	01

- 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,
- 0900 means room card function invalid, 0901 means valid
- 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value

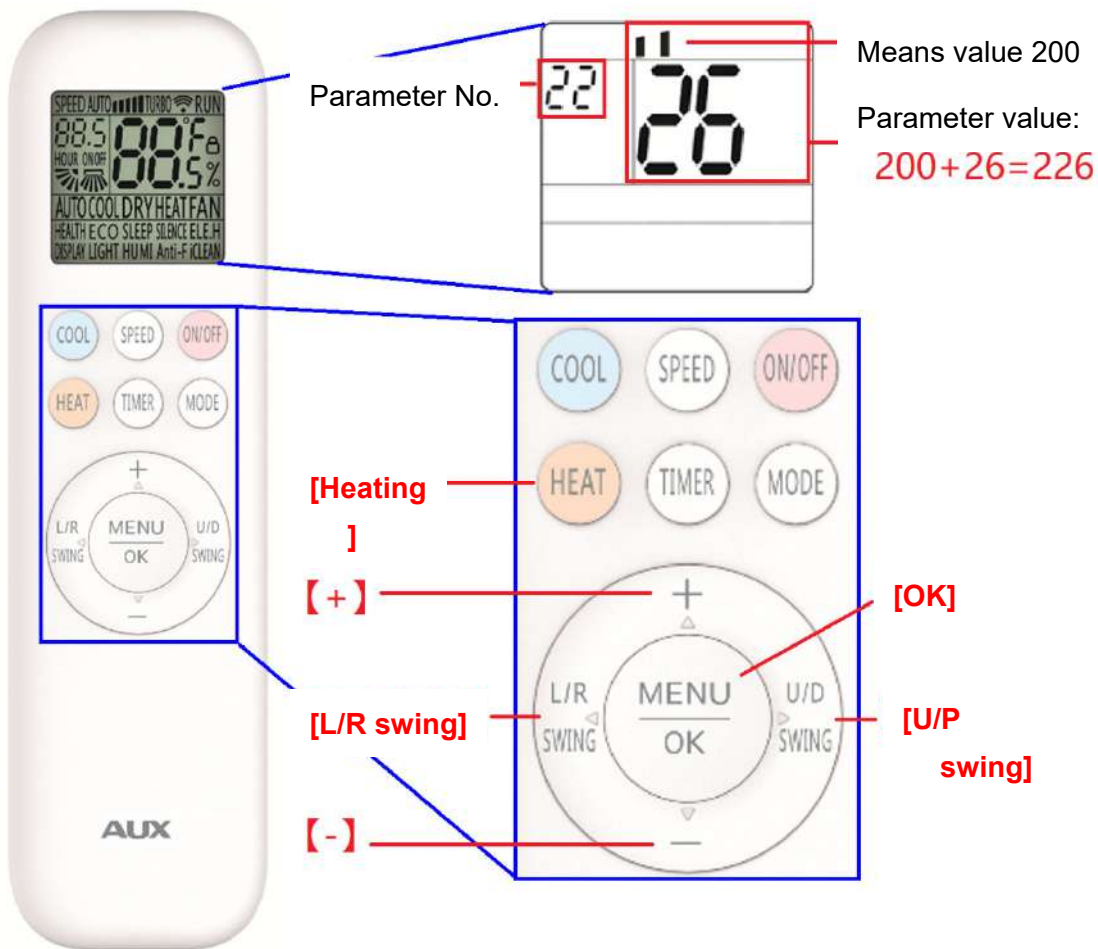
Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

3.2 Parameter setting method

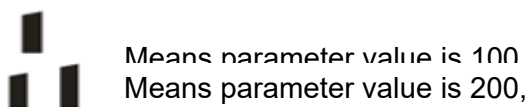
E.g.: set the parameter for 2.2kw IDU. (Parameter: 0508)

Wired controller	Remote controller L type
<p>Step1</p>  <p>Press FUNCTION for more than 10s, enter parameter setting</p>	<p>Step1</p>  <p>Press both for more than 10s at the same time, enter parameter setting</p>
<p>Step2</p>  <p>1. Press ▲ to change 01 to 05</p> <p>2. Press FUNCTION for more than 5s, then 01 will flicker</p> <p>3. then press ▲ to change 00 to 08</p> <p>4. Press FUNCTION 5s to send the order</p>	<p>Step2</p>  <p>1. Press ▲ to change 1 to 5</p> <p>2. Press CLEAN or ECO to change 1 to 3</p>

Remote controller T type






The “Fan speed” icon combination indicates the parameter value (range 0-255), Example



◆ Parameter setting

- 1: Under off state, press the [Heating] and [U/P swing] keys at the same time for 3 seconds to enter the parameter setting state
2. Press the [L/R swing] and [U/P swing] keys to switch parameter NO. Flashing indicates that it is in the settable state; Press [+] and [-] to adjust the parameter value.
- 3: Press the [OK] key to confirm parameter setting. One appear sound of buzzer indicates set successfully.
- 4: Exit the parameter setting: once no operation for 3 minutes or press the [Heating] and [U/P swing] keys for 3 seconds at the same time

13.Group control

Group control			
IDU type	Centralized controller	BMS-MODBUS control	Monitoring control
	Max.256 IDUs	Quantity no limit	one refrigerant system
ARVCF-H45/NR1DF			
ARVCF-H56/NR1DF			
ARVCF-H71/NR1DF			
ARVCF-H80/NR1DF			
ARVCF-H90/NR1DF			
ARVCF-H112/NR1DF			
ARVCF-H125/NR1DF			
ARVCF-H140/NR1DF			
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			
ARVCF-H045/2R1A			
ARVCF-H056/2R1A			
ARVCF-H071/2R1A			
ARVCF-H080/2R1A			
ARVCF-H090/2R1A			
ARVCF-H100/2R1A			
ARVCF-H112/2R1A			
ARVCF-H125/2R1A			
ARVCF-H140/2R1A			

Note: More details about connection wiring , function introduce Please check the <Control system technical manual>

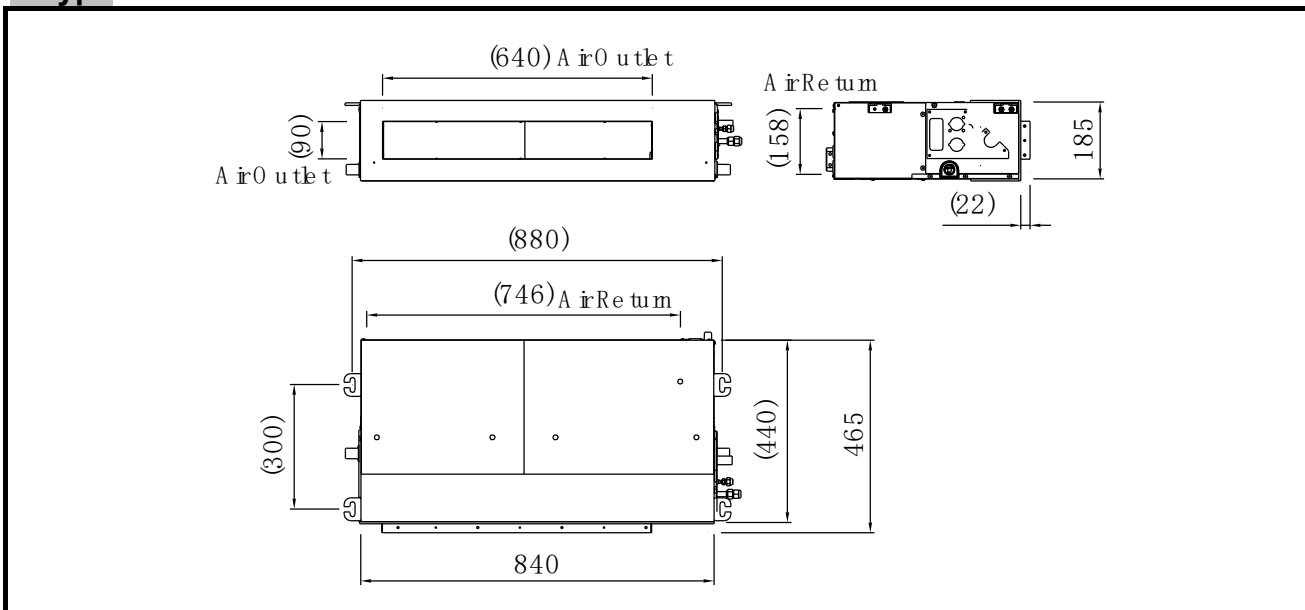
Part6 Low Static Pressure Duct

1. Product Line-up

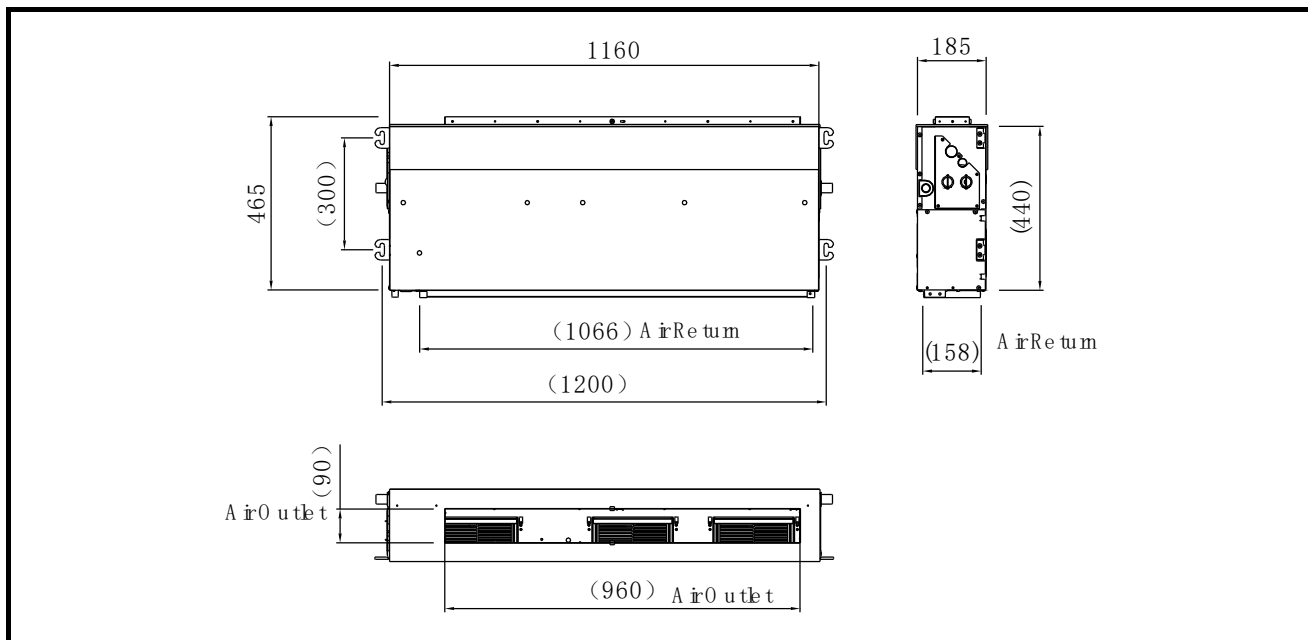
Series	Models	Photos
50HZ Y Series ESP 10Pa	ARVLD-H22/4R1Y	
	ARVLD-H28/4R1Y	
	ARVLD-H36/4R1Y	
	ARVLD-H45/4R1Y	
	ARVLD-H56/4R1Y	
	ARVLD-H71/4R1Y	
50&60HZ Y Series ESP 13Pa (50Pa)	ARVLD-H22/NR1DY	
	ARVLD-H28/ NR1DY	
	ARVLD-H36/ NR1DY	
	ARVLD-H45/ NR1DY	
	ARVLD-H56/ NR1DY	
	ARVLD-H71/ NR1DY	
50&60HZ E Series ESP 10Pa (30Pa)	ARVSD-H022/R1X	
	ARVSD-H028/R1X	
	ARVSD-H036/R1X	
	ARVSD-H045/R1X	
	ARVSD-H056/R1X	
	ARVSD-H071/R1X	
50HZ E Series ESP 10Pa (30Pa)	ARVSD-H022/4R1A	
	ARVSD-H028/4R1A	
	ARVSD-H036/4R1A	
	ARVSD-H045/4R1A	
	ARVSD-H056/4R1A	
	ARVSD-H071/4R1A	
60HZ E Series ESP 10Pa (30Pa)	ARVSD-H022/2R1A	
	ARVSD-H028/2R1A	
	ARVSD-H036/2R1A	
	ARVSD-H045/2R1A	
	ARVSD-H056/2R1A	
	ARVSD-H071/2R1A	

2. Dimension

E Type

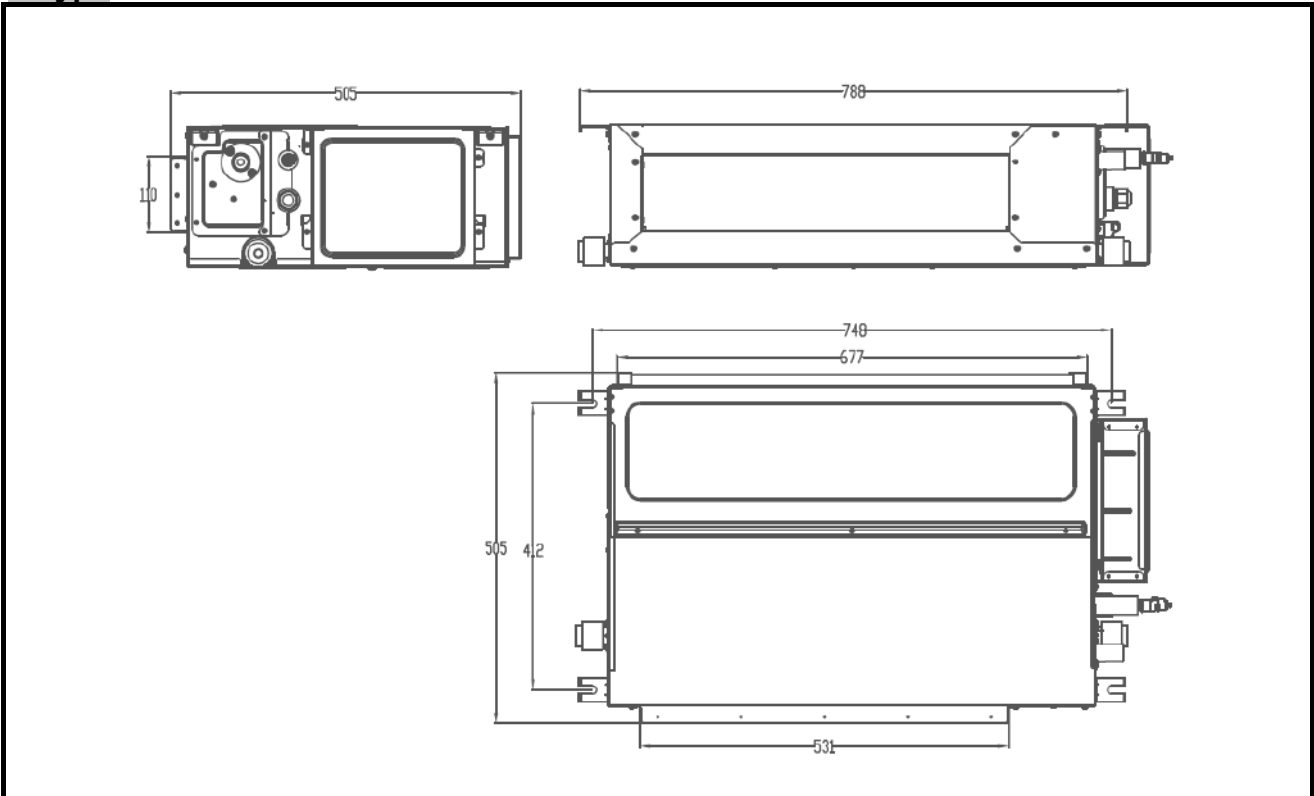


Physical Dimension		ARVSD-H022/R1X ARVSD-H028/R1X ARVSD-H036/R1X	ARVSD-H022/4R1A ARVSD-H028/4R1A ARVSD-H036/4R1A	ARVSD-H022/2R1A ARVSD-H028/2R1A ARVSD-H036/2R1A
Length	mm	840	840	840
Height	mm	185	185	185
Width	mm	440	440	440



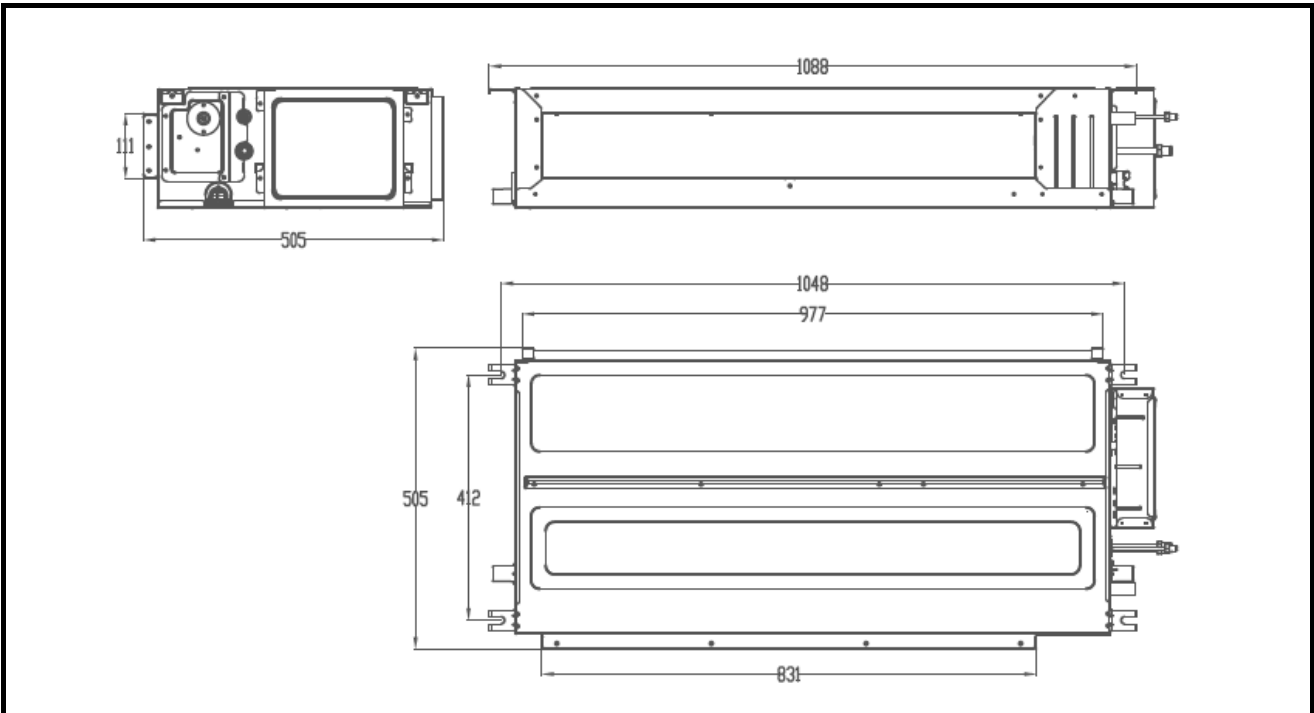
Physical Dimension		ARVSD-H045/R1X ARVSD-H056/R1X ARVSD-H071/R1X	ARVSD-H045/4R1A ARVSD-H056/4R1A ARVSD-H071/4R1A	ARVSD-H045/2R1A ARVSD-H056/2R1A ARVSD-H071/2R1A
Length	mm	1160	1160	1160
Height	mm	185	185	185
Width	mm	440	440	440

Y Type



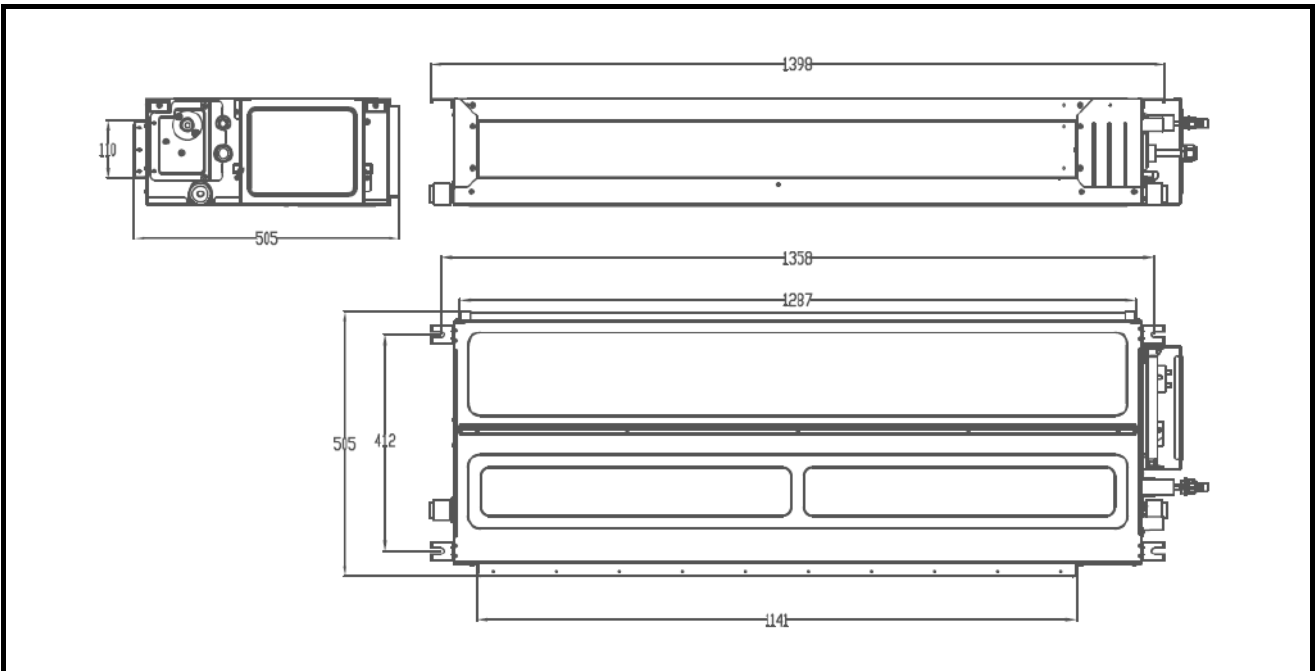
Physical Dimension		ARVLD-H22/4R1Y ARVLD-H22/NR1DY ARVLD-H28/4R1Y ARVLD-H28/NR1DY ARVLD-H36/4R1Y ARVLD-H36/NR1DY
Length	mm	700
Height	mm	200
Width	mm	470

Y Type



Physical Dimension		ARVLD-H45/4R1Y ARVLD-H45/NR1DY ARVLD-H56/4R1Y ARVLD-H56/NR1DY
Length	mm	1000
Height	mm	200
Width	mm	470

Y Type



Physical Dimension		ARVLD-H71/4R1Y ARVLD-H71/NR1DY	
Length	mm	1360	
Height	mm	200	
Width	mm	470	

3. Features

Slim Duct Series E Type

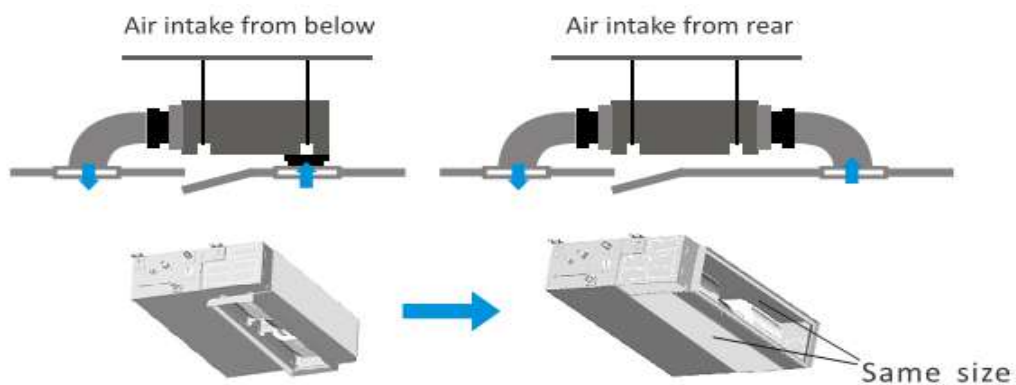
1. Compact unit body

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



4.4.2 Slim Duct Series YType

(1) High performance

I-type evaporator is adopted to increase the air inlet area, wind resistance reduction improve product performance, quick cooling and quick heating.

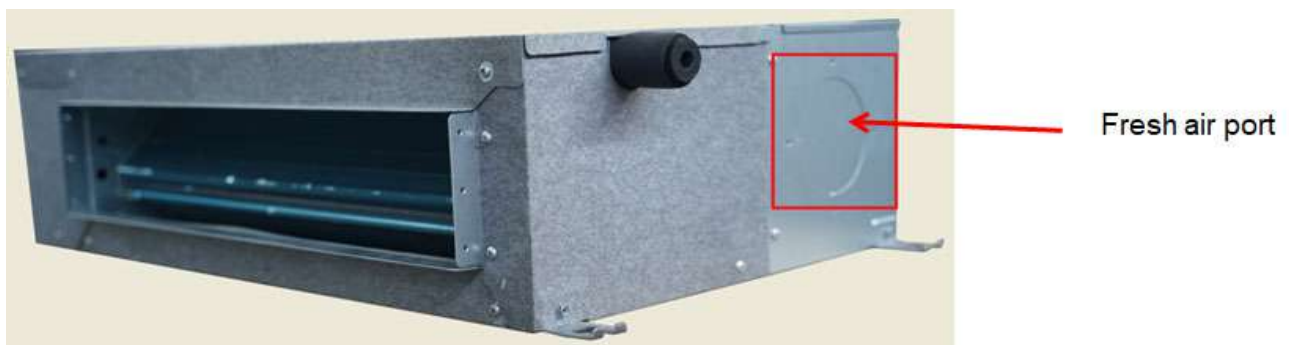


(2) Strong air supply

Strong air supply, 0.7m from the ground, improve comfort

<p>project</p>	<p>AUX(new)</p>
<p>temperature rise</p>	
<p>The air supply is high above the ground</p>	<p>0.7m</p>

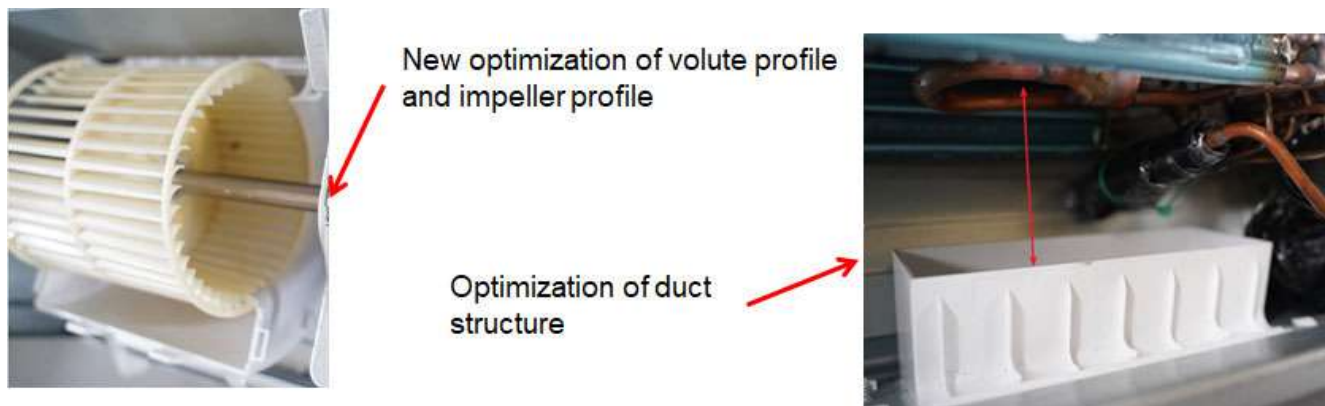
(3) Bring fresh air



(4) Low noise

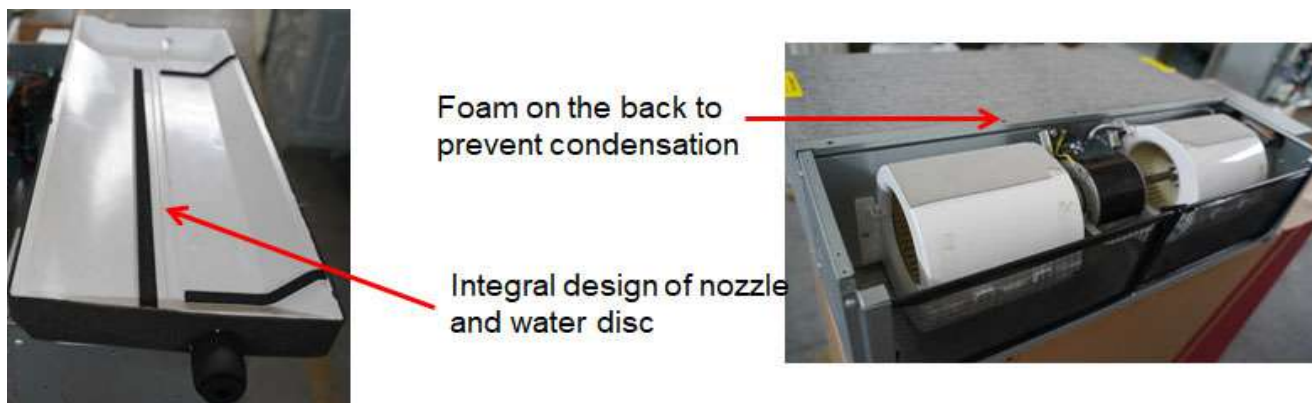
New optimized volute profile and impeller blade profile, optimized air duct structure, effectively reduced unit noise;

Gear division, to solve the home decoration noise, tooling static pressure



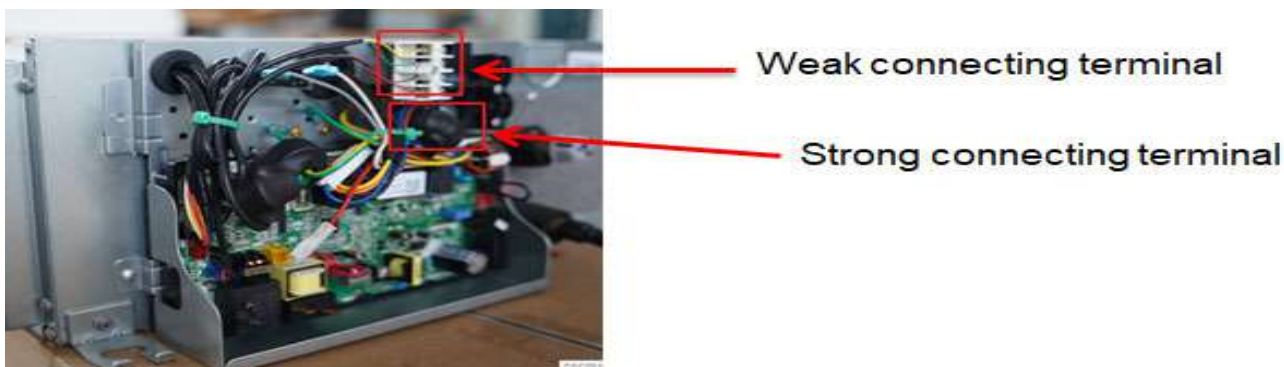
(5) Prevent leakage

The integrated design of water nozzle and water plate improves the strength of the water plate and causes water leakage. Meanwhile, in order to ensure the heat preservation effect of the water plate, the foam is covered on the back to prevent condensation of the unit



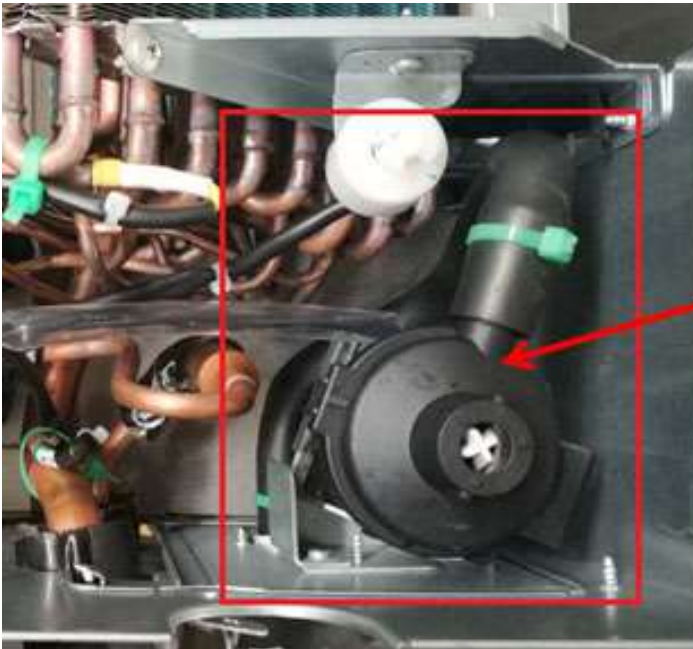
(6) Safe and reliable

Strong and weak electric connection terminals are separated to ensure safe and reliable use of electricity



(7) Silent water pump

Select silent water pump to ensure different customer installation requirements



The head of the pump is 1.2m, and the actual measurement can reach 1.5m.

(8) Easy to install

Ultra-thin fuselage, Y new product reduces the shell length and increases the customer installation scene



(9) Double return

Two return air modes are selected (back return air and down return air), and the bottom plate is removed to change the lower return air



Back return air



the bottom plate is disassembled to change down return air

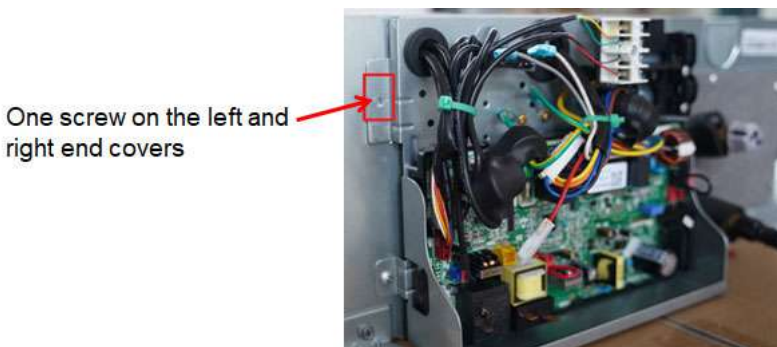
Easy drainage

Double drainage design on the left and right side of the water plate, flexible to adapt to the installation site

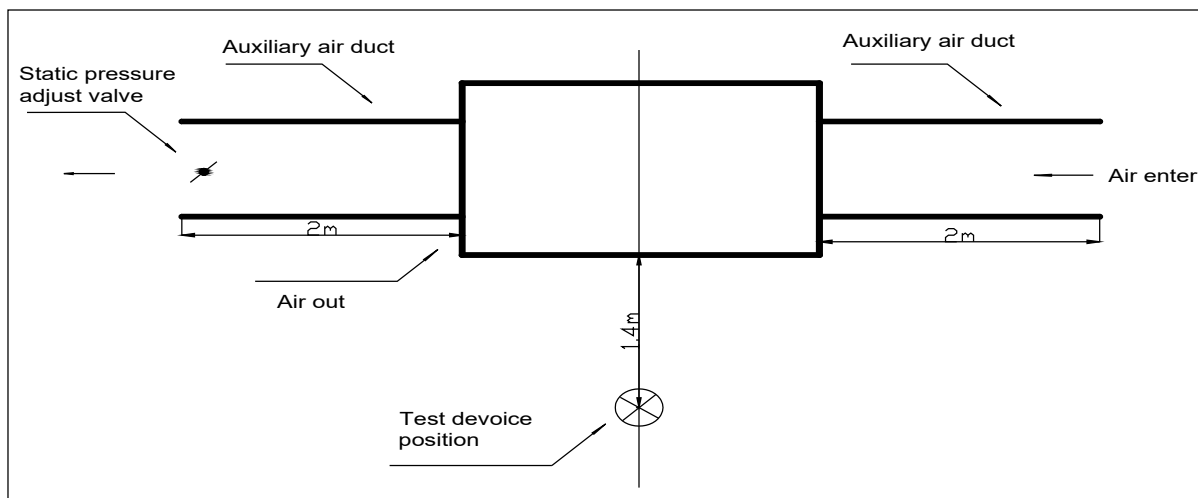


Easy maintenance

Quickly remove 1 screw from the left and right end cover. Change the direction of output line, maintenance without shielding, increase the maintenance space



4. Sound level



4.1 Test value

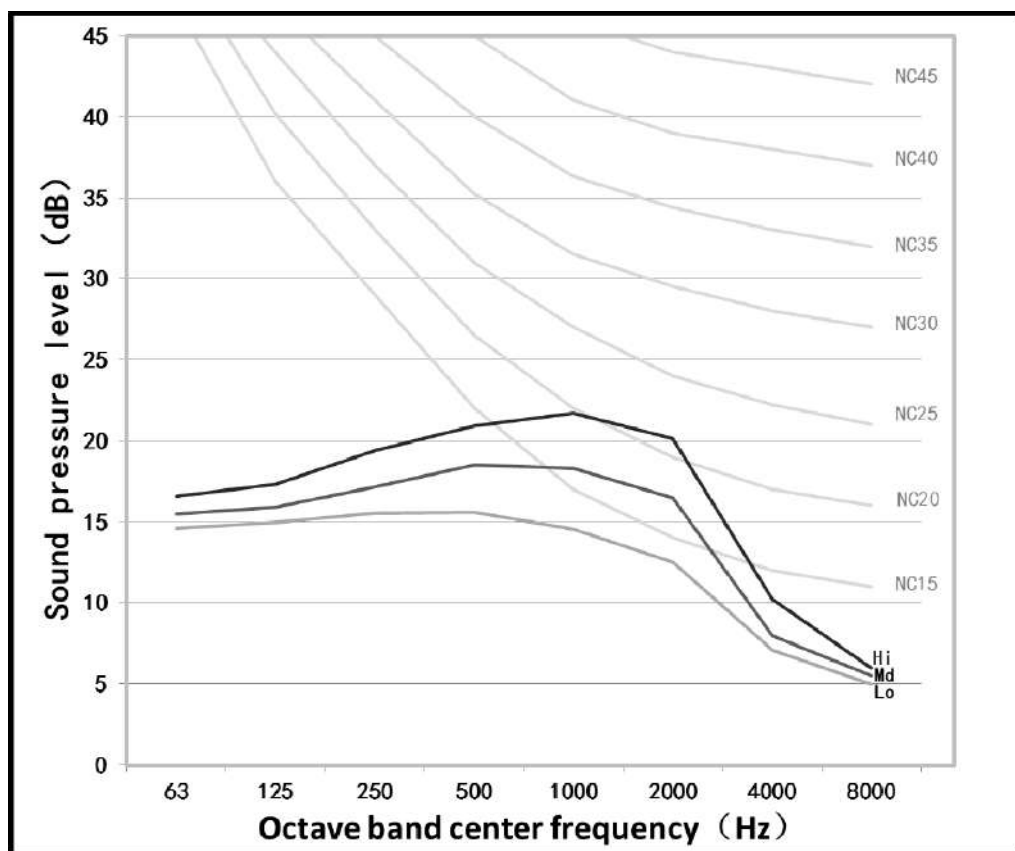
Series	Models	Noise level under three speeds of fan (dB(A))		
		H	M	L
50&60HZ E Series ESP 10Pa (30Pa)	ARVSD-H022/R1X	30	26	23
	ARVSD-H028/R1X	32	28	25
	ARVSD-H036/R1X	32	28	25
	ARVSD-H045/R1X	38	35	32
	ARVSD-H056/R1X	38	35	32
	ARVSD-H071/R1X	39	36	32
50HZ E Series ESP 10Pa (30Pa)	ARVSD-H022/4R1A	30	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
60HZ E Series ESP 10Pa (30Pa)	ARVSD-H022/2R1A	30	26	23
	ARVSD-H028/2R1A	32	28	25
	ARVSD-H036/2R1A	32	28	25
	ARVSD-H045/2R1A	38	35	32
	ARVSD-H056/2R1A	38	35	32
	ARVSD-H071/2R1A	39	36	32

Y series

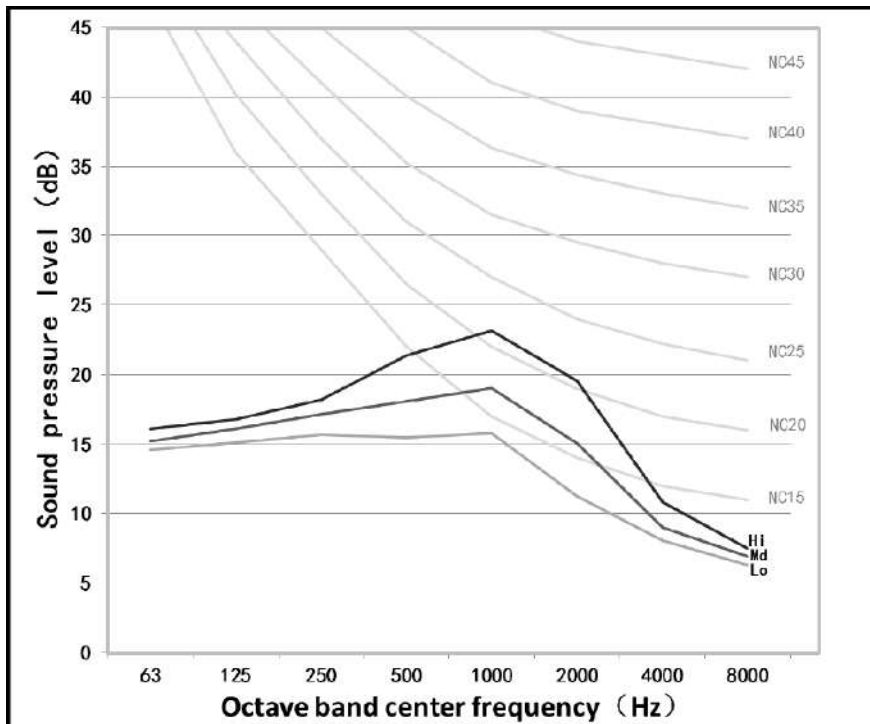
Series	Models	Noise level under three speeds of fan (dB(A))		
		H	M	L
50HZ Y Series ESP 10Pa	ARVLD-H22/4R1Y	31	27	25
	ARVLD-H28/4R1Y	31	27	25
	ARVLD-H36/4R1Y	33	30	27
	ARVLD-H45/4R1Y	34	30	28
	ARVLD-H56/4R1Y	34	30	28
	ARVLD-H71/4R1Y	34	31	30
50&60HZ Y Series ESP 13Pa	ARVLD-H22/NR1DY	32	28	26
	ARVLD-H28/ NR1DY	32	28	26
	ARVLD-H36/ NR1DY	33	29	27
	ARVLD-H45/ NR1DY	34	30	28
	ARVLD-H56/ NR1DY	34	30	28
	ARVLD-H71/ NR1DY	34	30	28

4.3 NC curves

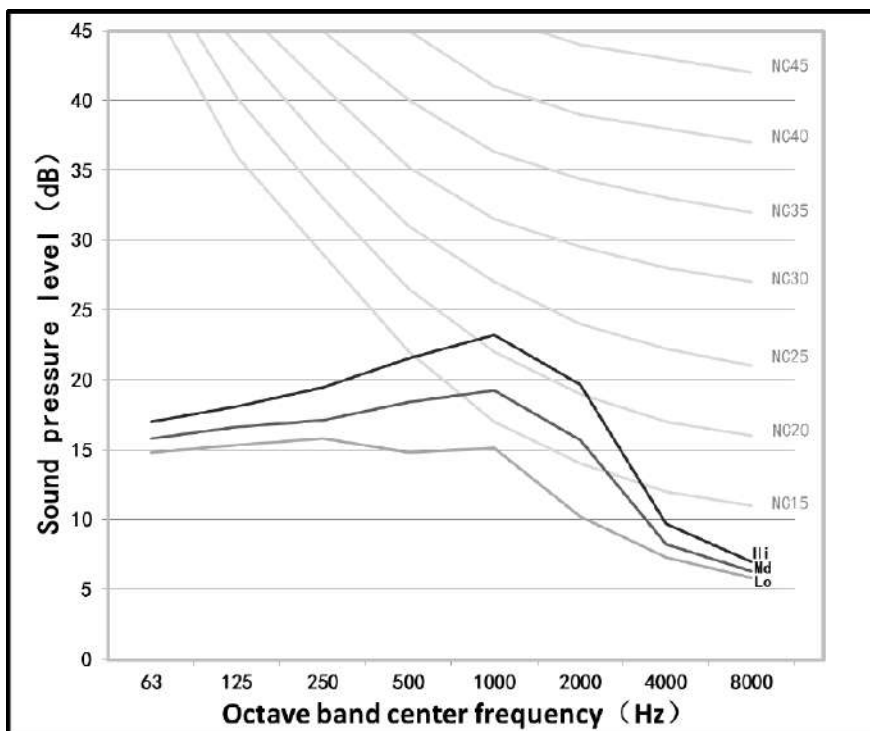
ARVLD-H22/4R1Y, ARVLD-H28/4R1Y



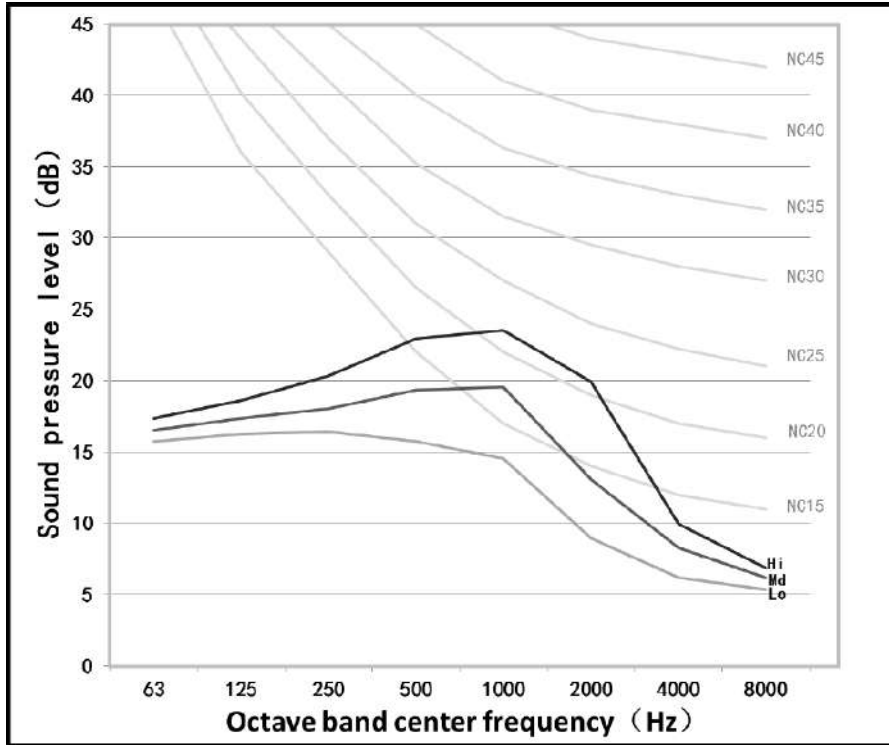
ARVLD-H36/4R1Y



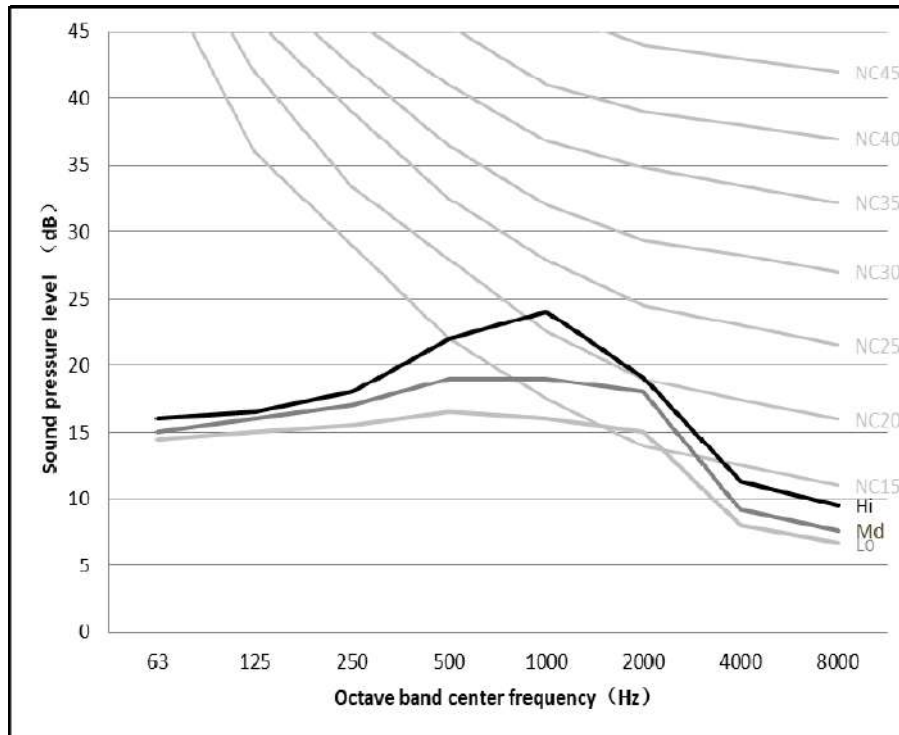
ARVLD-H45/4R1Y, ARVLD-H56/4R1Y



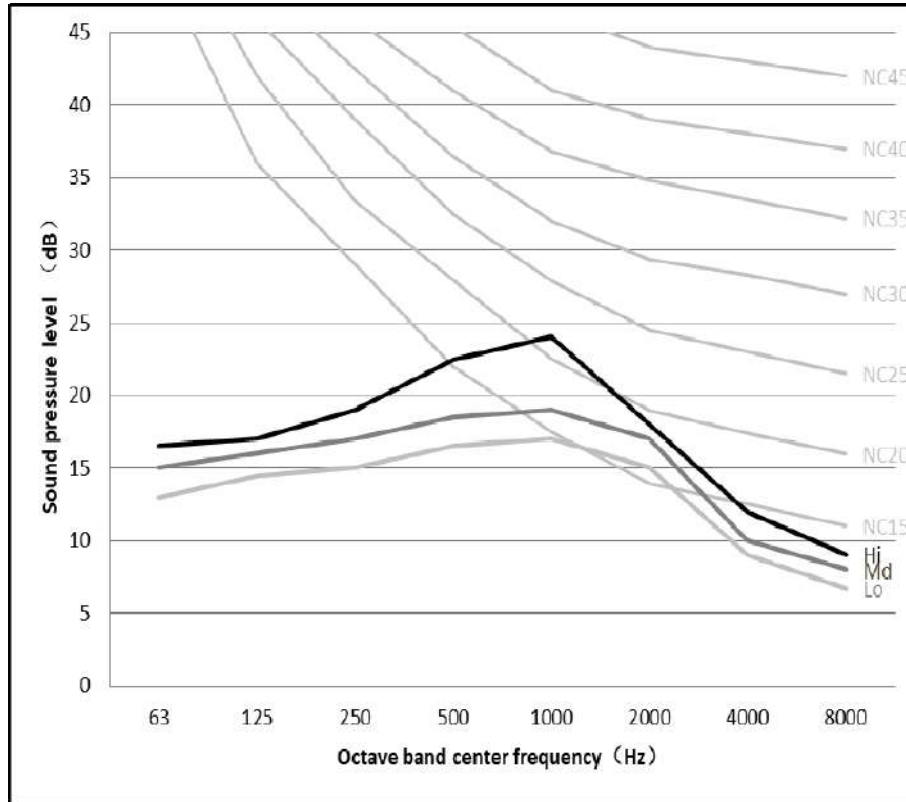
ARVLD-H71/4R1Y



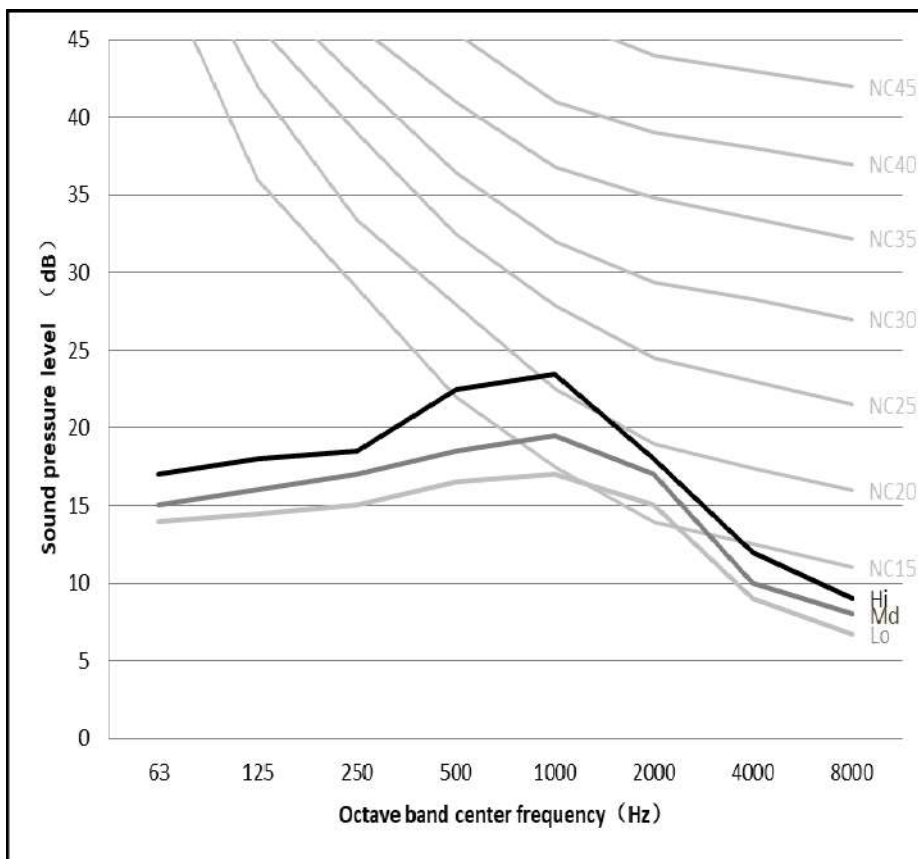
ARVLD-H22/NR1DY, ARVLD-H28/NR1DY



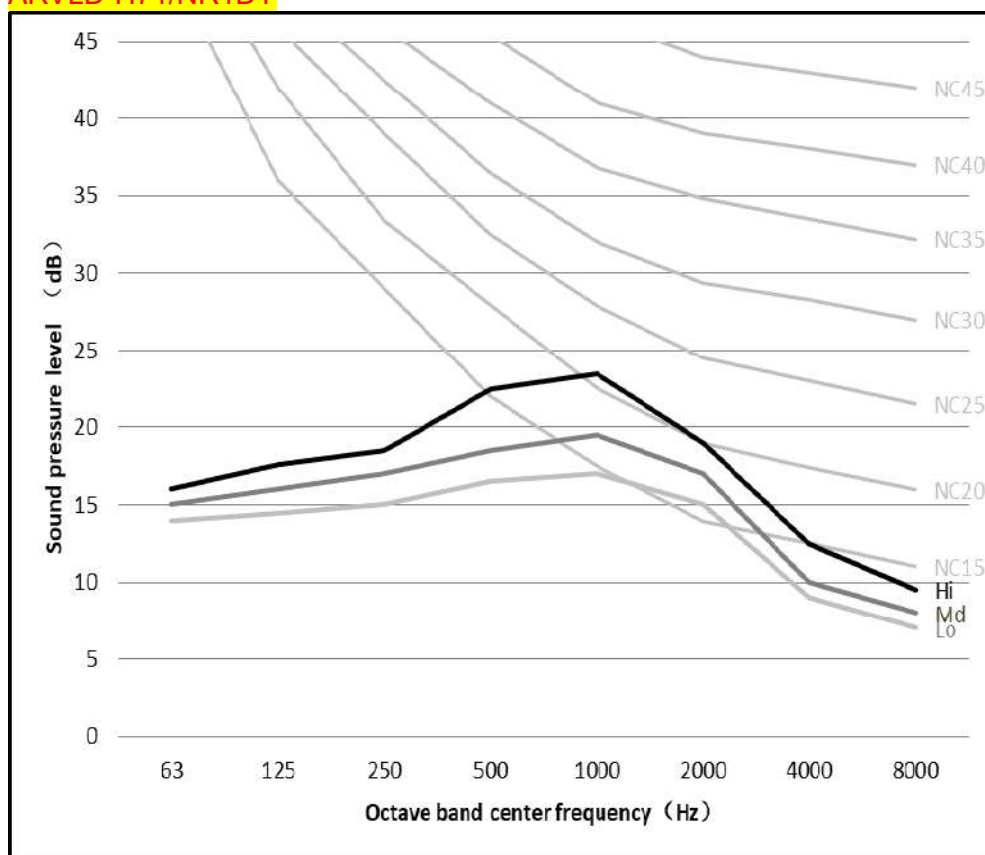
ARVLD-H36/NR1DY



ARVLD-H45/NR1DY, ARVLD-H56/NR1DY



ARVLD-H71/NR1DY



5. Fan performance

5.1 Default & optional ESP

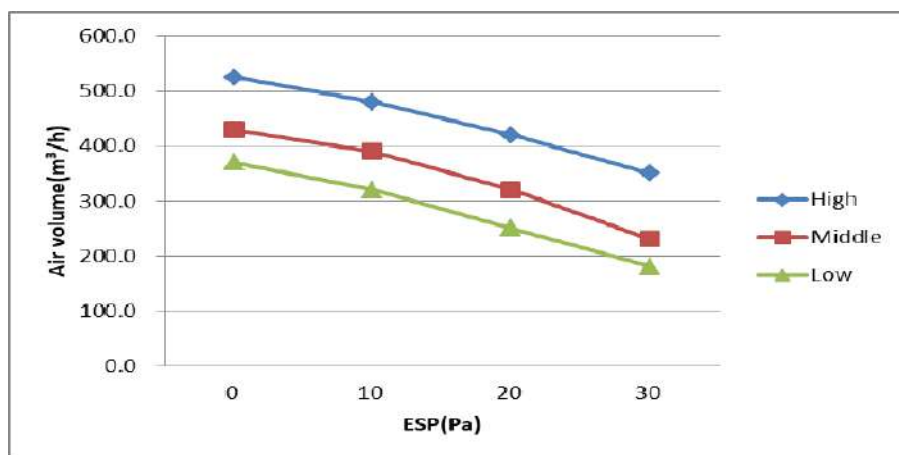
Series	Models	Default ESP		Optional ESP	
		Value	Remark	Value	Remark
50HZ Y Series ESP 10Pa	ARVLD-H22/4R1Y	10	/	/	/
	ARVLD-H28/4R1Y	10			
	ARVLD-H36/4R1Y	10			
	ARVLD-H45/4R1Y	10			
	ARVLD-H56/4R1Y	10			
	ARVLD-H71/4R1Y	10			
50&60HZ Y Series ESP 13Pa	ARVLD-H22/NR1DY	13	/	/	/
	ARVLD-H28/NR1DY	13			
	ARVLD-H36/NR1DY	13			
	ARVLD-H45/NR1DY	13			
	ARVLD-H56/NR1DY	13			
	ARVLD-H71/NR1DY	13			
50&60HZ E Series ESP 10Pa	ARVSD-H022/R1X	10	Parameter 0602	30	Parameter 0603
	ARVSD-H028/R1X	10	Parameter 0602	30	Parameter 0603
	ARVSD-H036/R1X	10	Parameter 0604	30	Parameter 0605
	ARVSD-H045/R1X	10	Parameter 0606	30	Parameter 0607
	ARVSD-H056/R1X	10	Parameter 0606	30	Parameter 0607
	ARVSD-H071/R1X	10	Parameter 0608	30	Parameter 0609
50HZ E	ARVSD-H022/4R1A	10	Fan motor(bule	30	Fan motor(red

Series ESP 10Pa	ARVSD-H028/4R1A	10	wire +bule wire)	30	wire +bule wire)
	ARVSD-H036/4R1A	10		30	
	ARVSD-H045/4R1A	10		30	
	ARVSD-H056/4R1A	10		30	
	ARVSD-H071/4R1A	10		30	
60HZ E Series ESP 10Pa	ARVSD-H022/2R1A	10	Fan motor(bule wire +bule wire)	30	Fan motor(red wire +bule wire)
	ARVSD-H028/2R1A	10		30	
	ARVSD-H036/2R1A	10		30	
	ARVSD-H045/2R1A	10		30	
	ARVSD-H056/2R1A	10		30	
	ARVSD-H071/2R1A	10		30	

E type

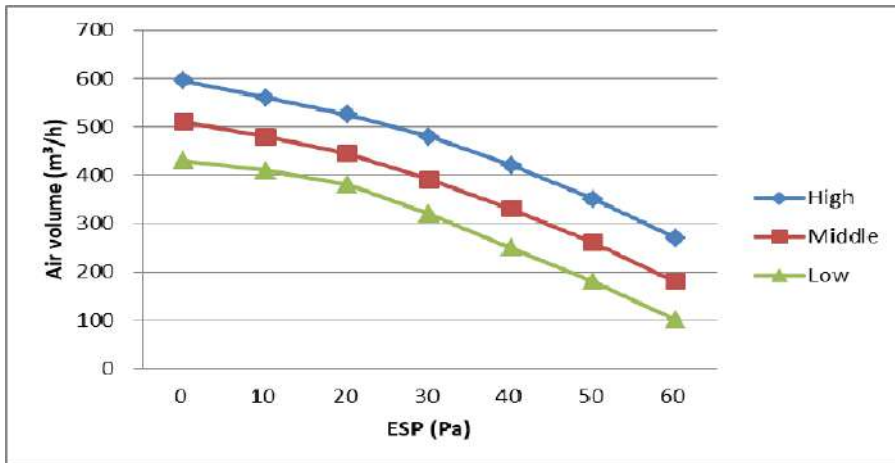
ARVSD-H022/R1X; ARVSD-H022/4R1A; ARVSD-H022/2R1A;
 ARVSD-H028/R1X; ARVSD-H028/4R1A; ARVSD-H028/2R1A;

Remark	ESP (Pa)	Air volume(m ³ /h)		
		High	Middle	Low
Default (10Pa)	0	525.0	430.0	370.0
	10	480.0	390.0	320.0
	20	420.0	320.0	250.0
	30	350.0	230.0	180.0



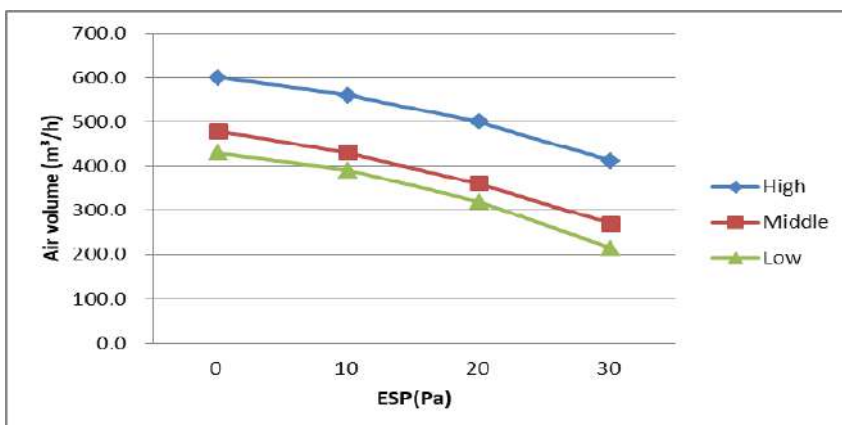
Remark	ESP	Air volume(m ³ /h)
--------	-----	-------------------------------

	(Pa)	High	Middle	Low
Optional (30Pa)	0	595	510	430
	10	560	480	410
	20	525	445	380
	30	480	390	320
	40	420	330	250
	50	350	260	180
	60	270	180	100



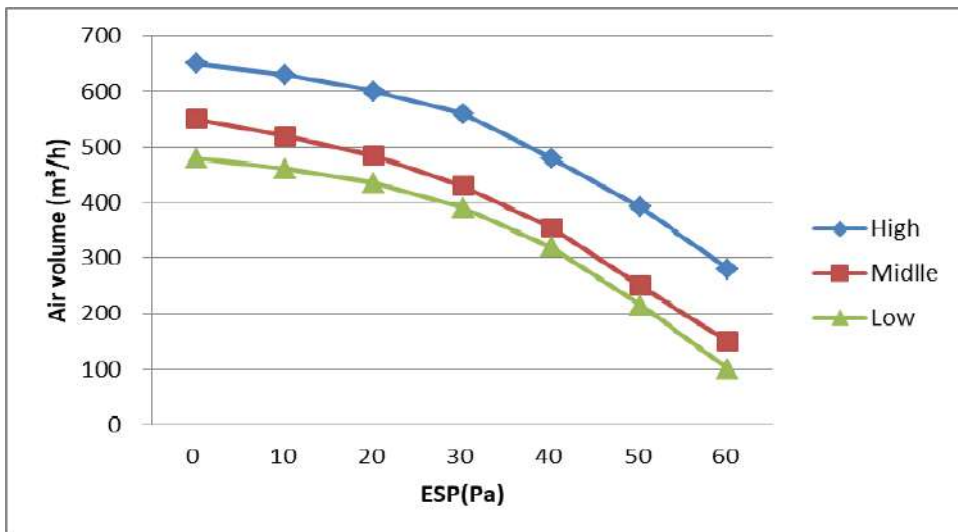
ARVSD-H036/R1X; ARVSD-H036/4R1A; ARVSD-H036/2R1A;

Remark	ESP (Pa)	Air volume(m ³ /h)		
		High	Middle	Low
Default (10Pa)	0	600.0	480.0	430.0
	10	560.0	430.0	390.0
	20	500.0	360.0	320.0
	30	412.0	270.0	215.0



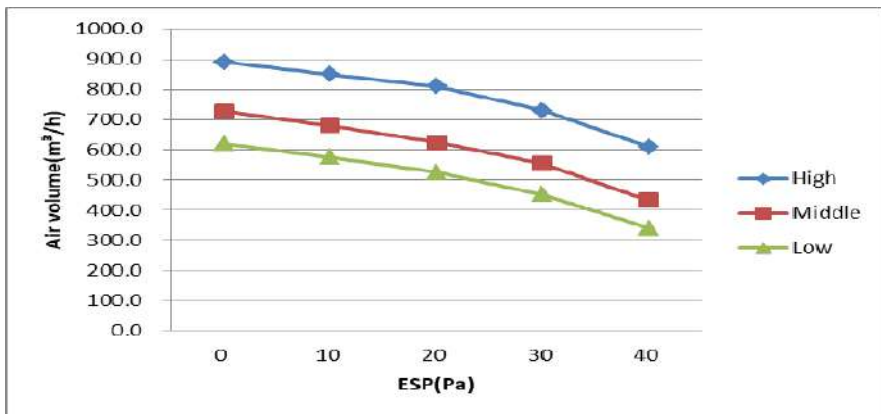
Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed

Optional (30Pa)	0	650	550	480
	10	630	520	460
	20	600	485	435
	30	560	430	390
	40	480	355	320
	50	392	250	215
	60	280	150	100

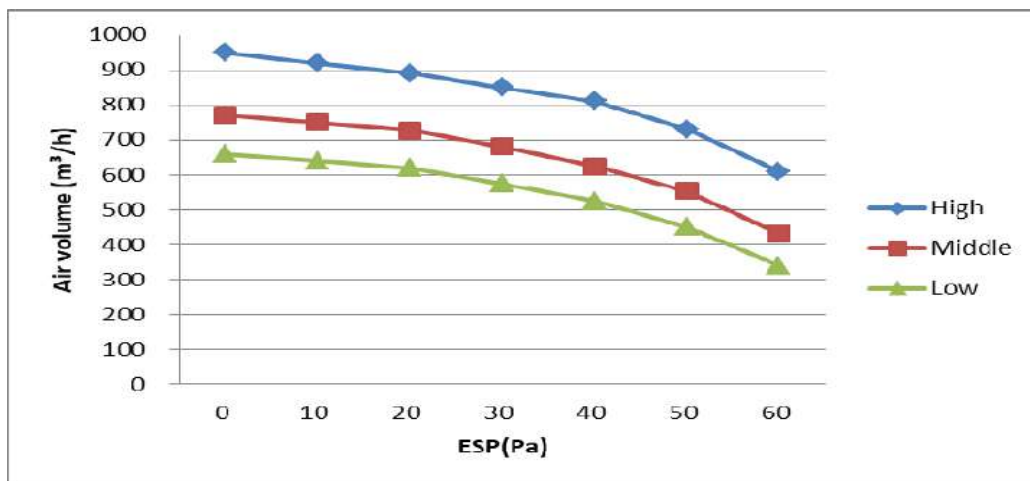


ARVSD-H045/R1X; ARVSD-H045/4R1A; ARVSD-H045/2R1A;
 ARVSD-H056/R1X; ARVSD-H056/4R1A; ARVSD-H056/2R1A;

Remark	ESP (Pa)	Air volume(m ³ /h)		
		High	Middle	Low
Default (10Pa)	0	890.0	728.0	620.0
	10	850.0	680.0	575.0
	20	810.0	625.0	525.0
	30	730.0	553.0	450.0
	40	610.0	433.0	340.0

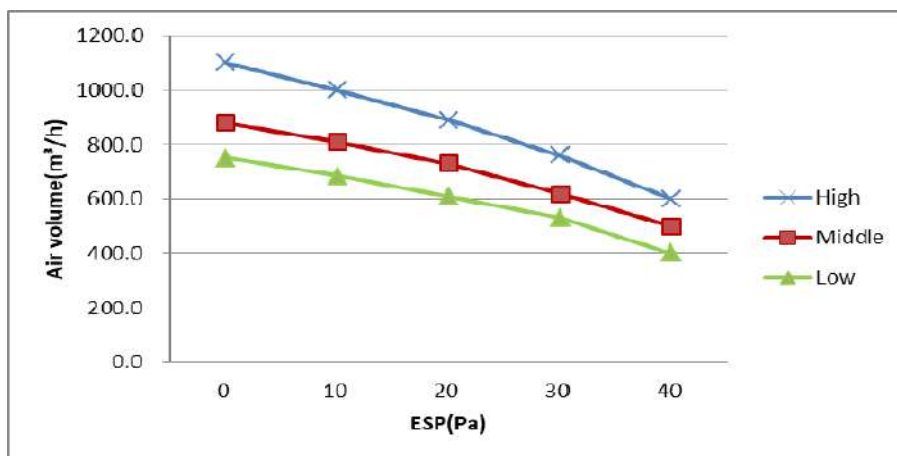


Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
Optional (30Pa)	0	950	770	660
	10	920	750	640
	20	890	728	620
	30	850	680	575
	40	810	625	525
	50	730	553	450
	60	610	433	340

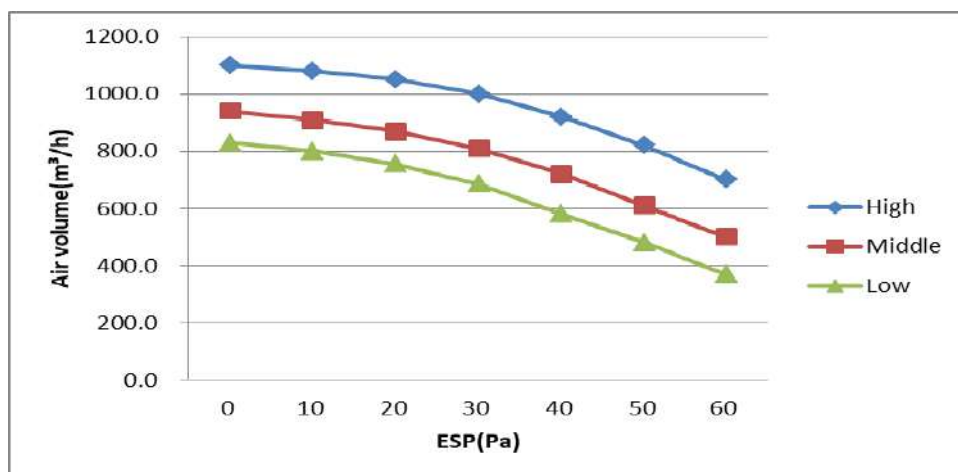


ARVSD-H071/R1X; ARVSD-H071/4R1A; ARVSD-H071/2R1A;

Remark	ESP (Pa)	Air volume(m ³ /h)		
		High	Middle	Low
Default (10Pa)	0	1100.0	880.0	750.0
	10	1000.0	810.0	685.0
	20	890.0	730.0	610.0
	30	760.0	620.0	530.0
	40	600.0	500.0	400.0



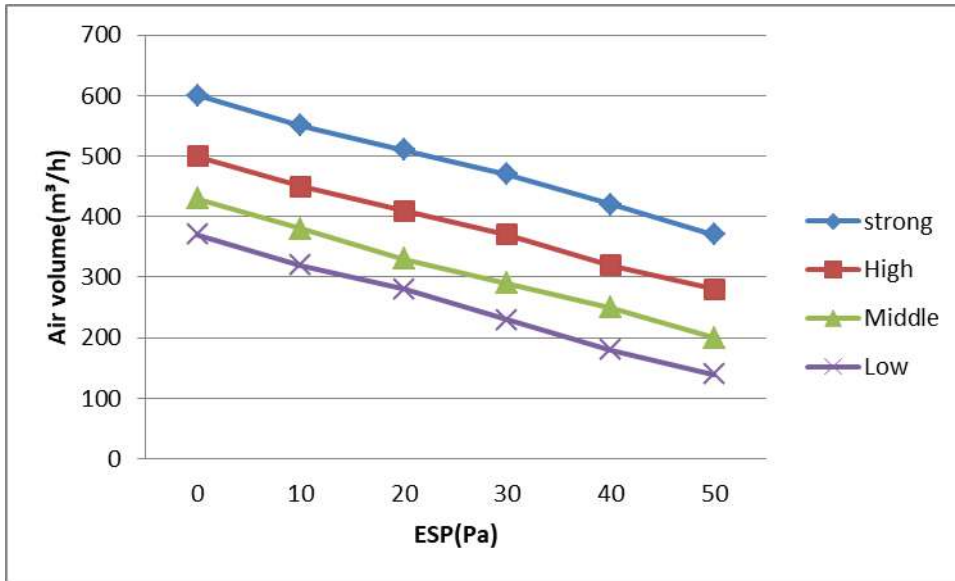
Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
Optional (30Pa)	0	1100.0	940.0	830.0
	10	1080.0	910.0	800.0
	20	1050.0	870.0	755.0
	30	1000.0	810.0	685.0
	40	920.0	720.0	580.0
	50	820.0	610.0	480.0
	60	700.0	500.0	370.0



50HZ Y Series

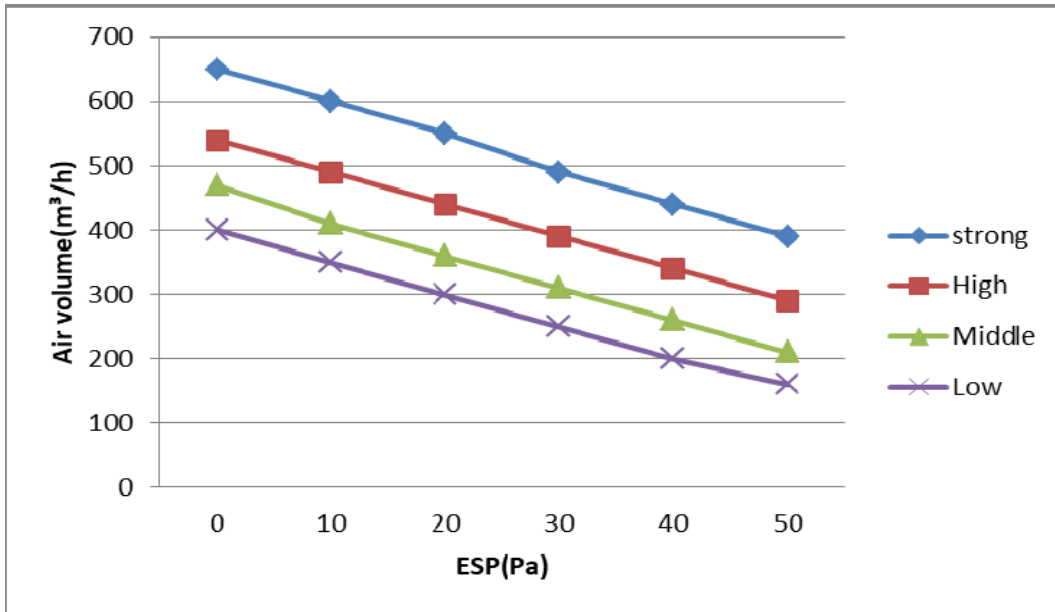
ARVLD-H22/4R1Y; ARVLD-H28/4R1Y;

Remark	ESP (Pa)	Air volume(m ³ /h)			
		Strong	High	Middle	Low
Default (10Pa)	0	600	500	430	370
	10	550	450	380	320
	20	510	410	330	280
	30	470	370	290	230
	40	420	320	250	180
	50	370	280	200	140



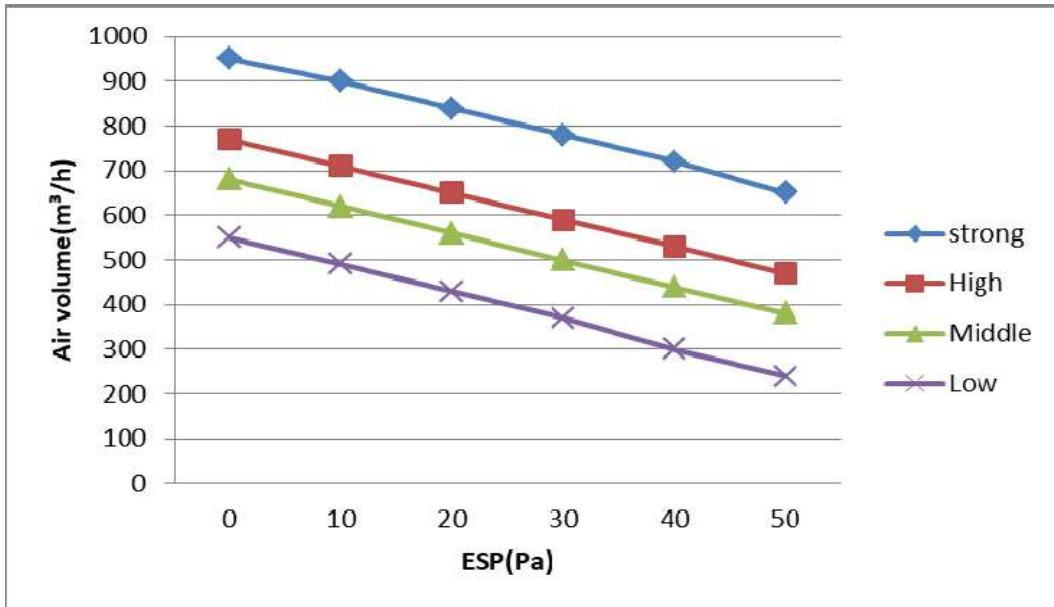
ARVLD-H36/4R1Y;

Remark	ESP (Pa)	Air volume(m ³ /h)			
		Strong	High	Middle	Low
Default (10Pa)	0	650	540	470	400
	10	600	490	410	350
	20	550	440	360	300
	30	490	390	310	250
	40	440	340	260	200
	50	390	290	210	160



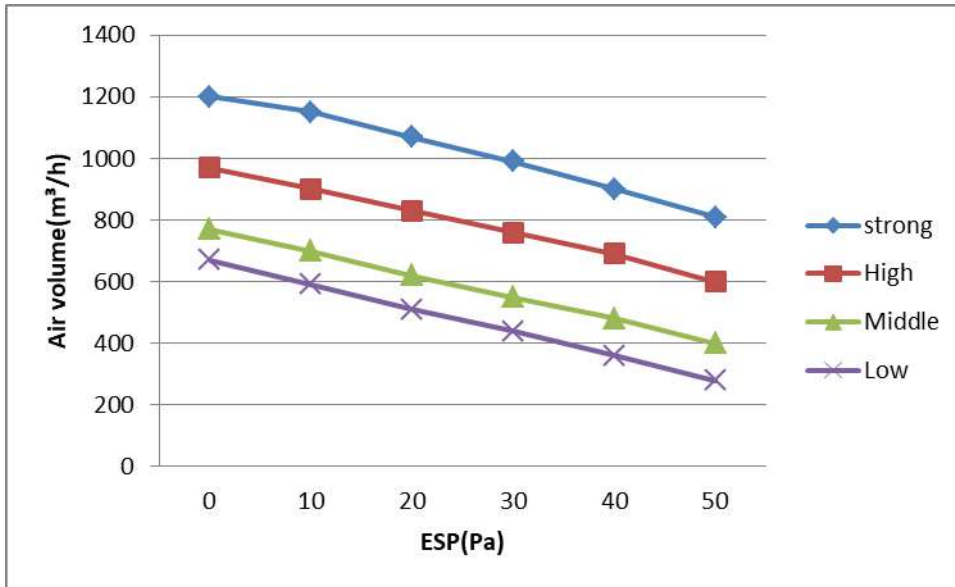
ARVLD-H45/4R1Y; ARVLD-H56/4R1Y;

Remark	ESP (Pa)	Air volume(m ³ /h)			
		Strong	High	Middle	Low
Default (10Pa)	0	950	770	680	550
	10	900	710	620	490
	20	840	650	560	430
	30	780	590	500	370
	40	720	530	440	300
	50	650	470	380	240



ARVLD-H71/4R1Y;

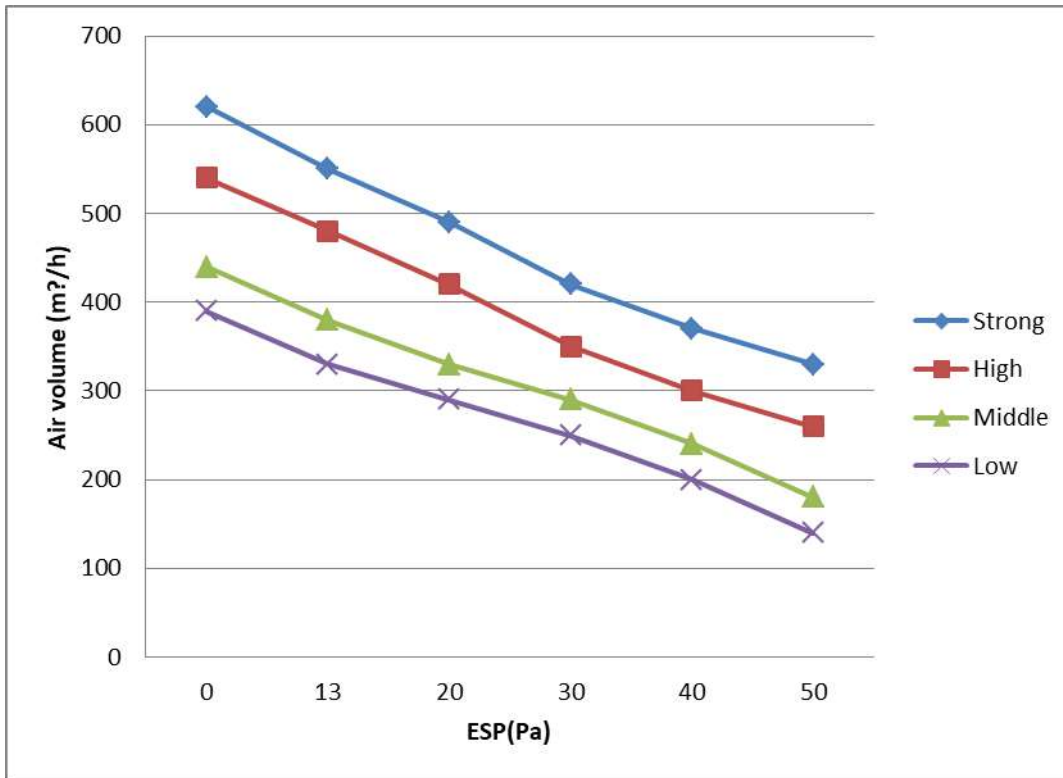
Remark	ESP (Pa)	Air volume(m ³ /h)			
		Strong	High	Middle	Low
Default (10Pa)	0	1200	970	770	670
	10	1150	900	700	590
	20	1070	830	620	510
	30	990	760	550	440
	40	900	690	480	360
	50	810	600	400	280



50&60HZ Y Series

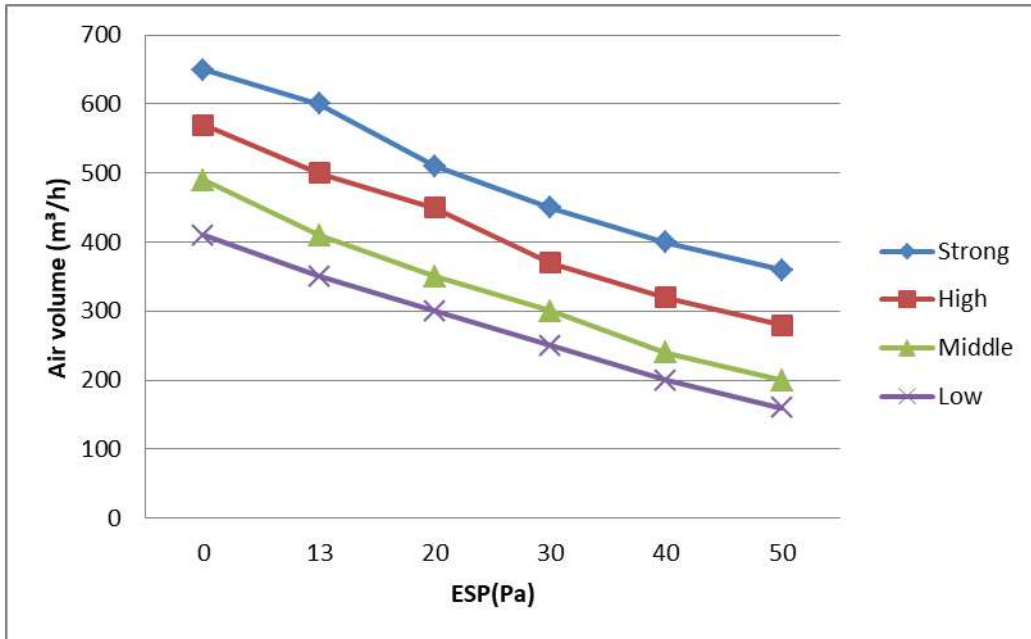
ARVLD-H22/NR1DY; ARVLD-H28/NR1DY;

Remark	ESP (Pa)	Air volume(m ³ /h)			
		Strong	High	Middle	Low
Default (13Pa)	0	620	540	440	390
	13	550	480	380	330
	20	490	420	330	290
	30	420	350	290	250
	40	370	300	240	200
	50	330	260	180	140



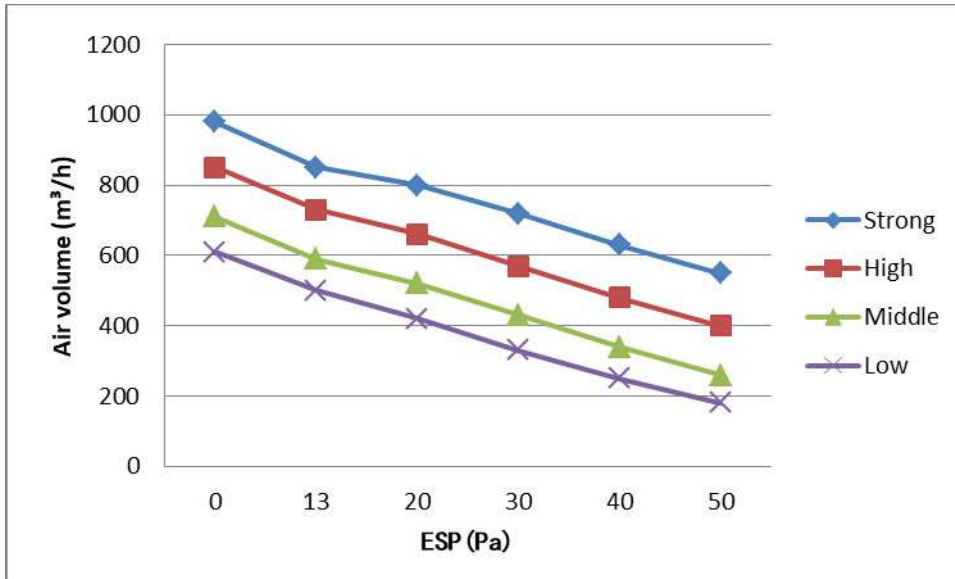
ARVLD-H36/NR1DY

Remark	ESP (Pa)	Air volume(m ³ /h)			
		Strong	High	Middle	Low
Default (13Pa)	0	650	570	490	410
	13	600	500	410	350
	20	510	450	350	300
	30	450	370	300	250
	40	400	320	240	200
	50	360	280	200	160



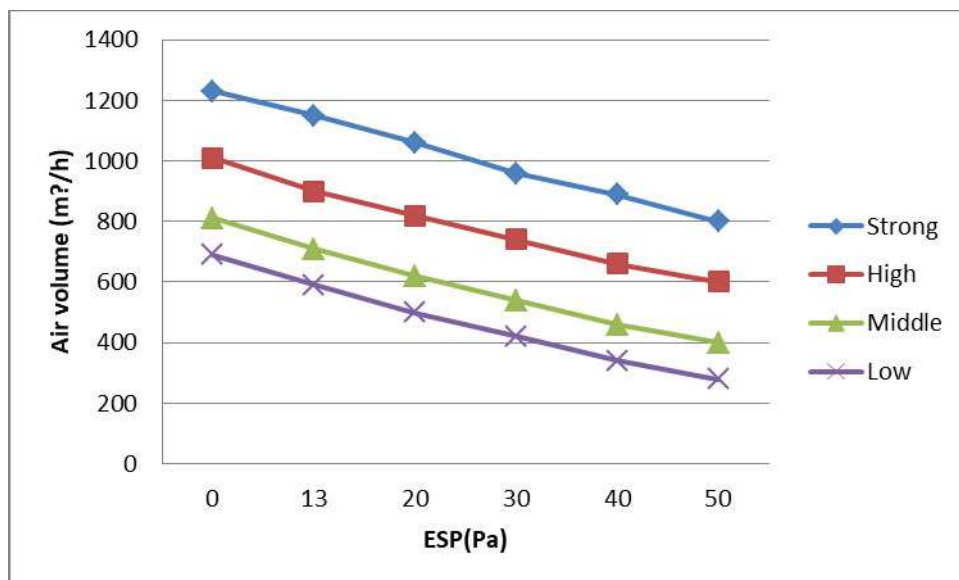
ARVLD-H45/NR1DY; ARVLD-H56/NR1DY;

Remark	ESP (Pa)	Air volume(m ³ /h)			
		Strong	High	Middle	Low
Default (13Pa)	0	980	850	710	610
	13	850	730	590	500
	20	800	660	520	420
	30	720	570	430	330
	40	630	480	340	250
	50	550	400	260	180



ARVLD-H71/NR1DY

Remark	ESP (Pa)	Air volume(m ³ /h)			
		Strong	High	Middle	Low
Default (13Pa)	0	1230	1010	810	690
	13	1150	900	710	590
	20	1060	820	620	500
	30	960	740	540	420
	40	890	660	460	340
	50	800	600	400	280



6. Capacity table

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

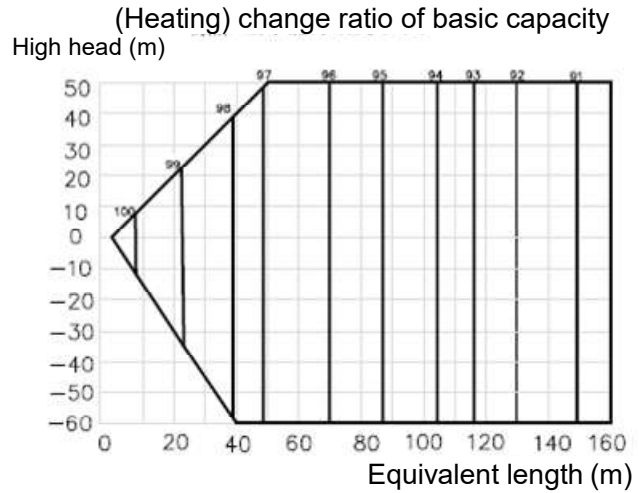
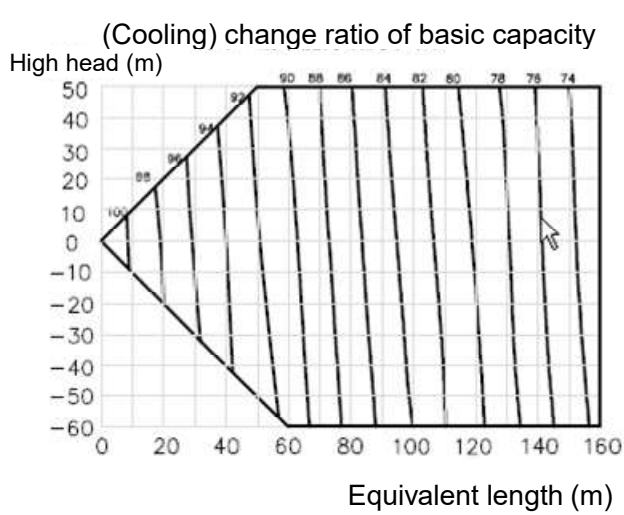
Outdoor dry bulb temperature [°C]	Correction coefficient	Indoor dry/wet bulb temperature [°C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling 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.

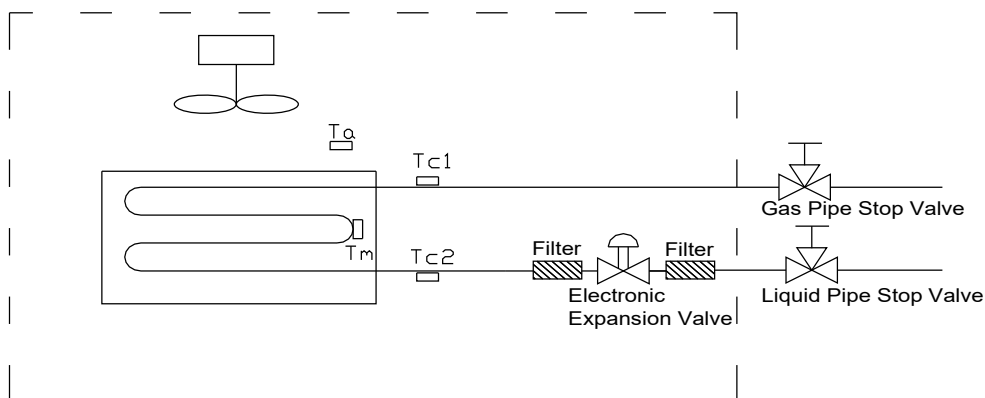
Outdoor ambient temperature of dry/wet bulb[°C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [°C]		
		15	20	25
-20/-21	Heating capacity	0.58	0.53	0.49
	Power	0.50	0.56	0.62
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	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).

7. Refrigerant piping diagram



Refrigerant pipe connection port diameters

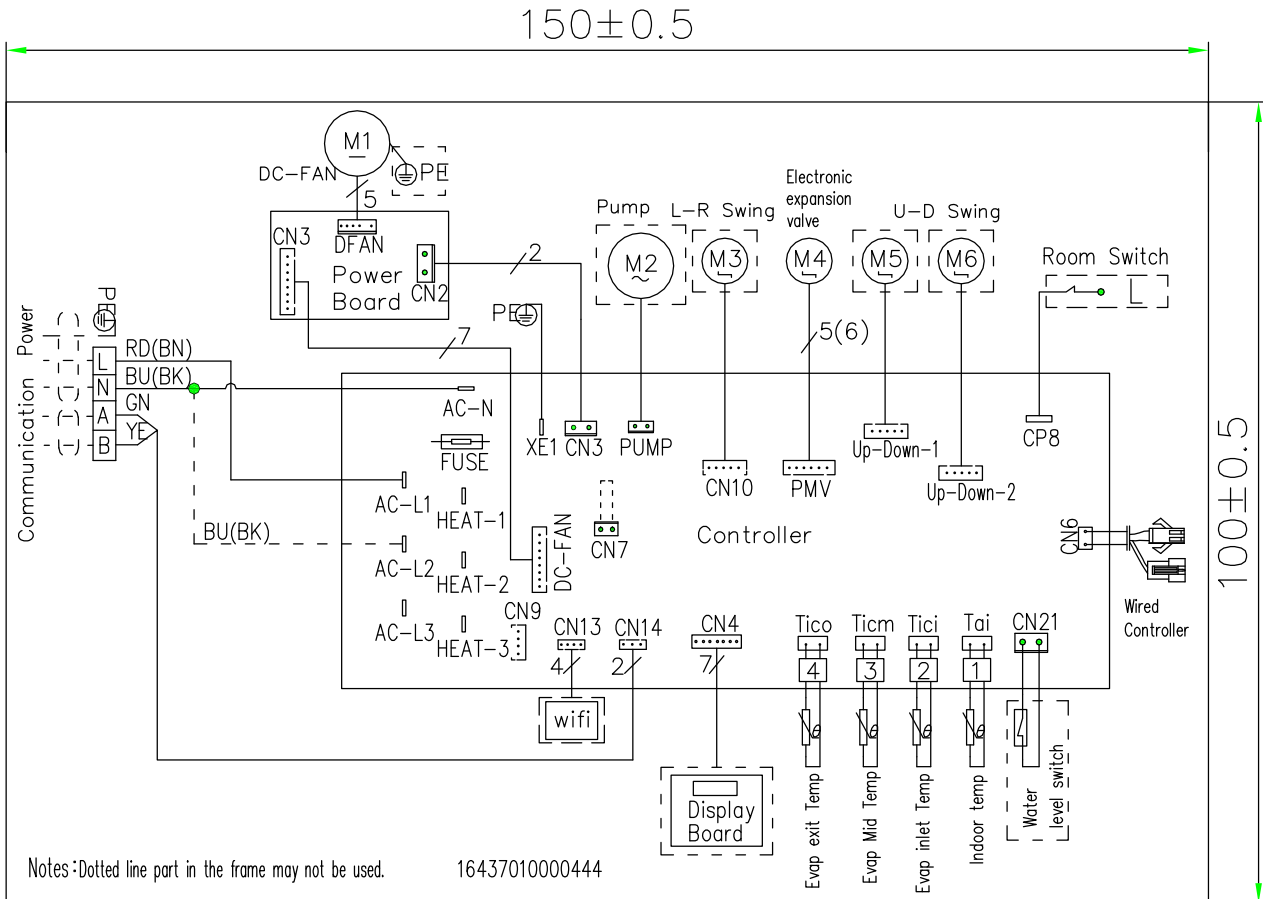
(mm)

Model	Gas	Liquid
ARVLD-H22/4R1Y; ARVLD-H28/4R1Y ARVLD-H22/NR1DY; ARVLD-H28/NR1DY ARVSD-H022/R1X; ARVSD-H028/R1X ARVSD-H022/4R1A; ARVSD-H028/4R1A ARVSD-H022/2R1A; ARVSD-H028/2R1A	Φ9.52	Φ6.35
ARVLD-H36/4R1Y; ARVLD-H45/4R1Y; ARVLD-H56/4R1Y ARVLD-H36/NR1DY; ARVLD-H45/NR1DY; ARVLD-H56/NR1DY; ARVSD-H036/R1X; ARVSD-H045/R1X; ARVSD-H056/R1X ARVSD-H036/4R1A; ARVSD-H045/4R1A; ARVSD-H056/4R1A ARVSD-H036/2R1A; ARVSD-H045/2R1A; ARVSD-H056/2R1A	Φ12.7	Φ6.35
ARVLD-H71R1Y ARVLD-H71RN1DY ARVSD-H071/R1X ARVSD-H071/4R1A ARVSD-H071/2R1A	Φ15.88	Φ9.52

8. Wiring diagram

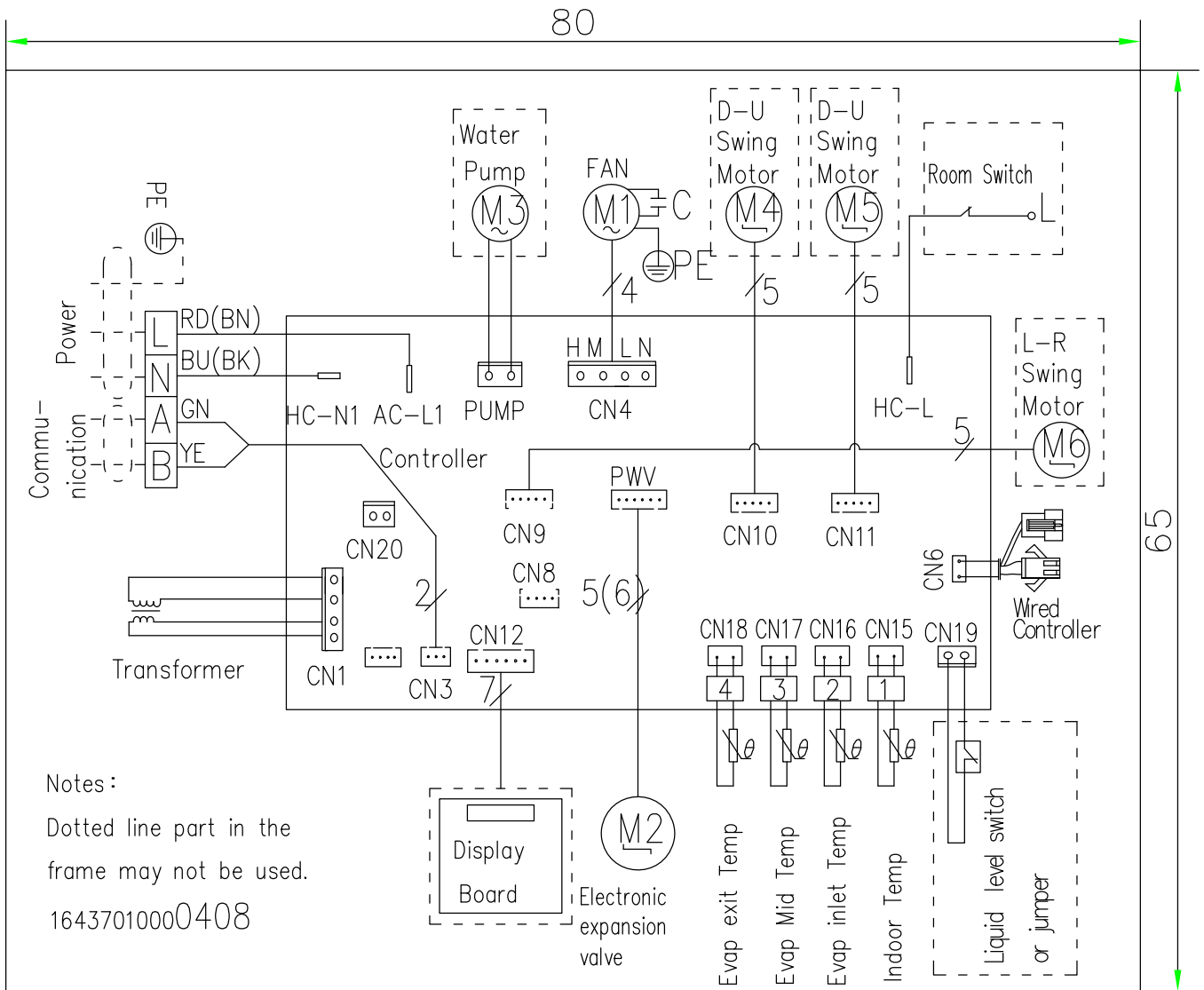
4.1 Slim Duct Type DC, E Type

ARVSD-H022/R1X , ARVSD-H028/R1X , ARVSD-H036/R1X
 ARVSD-H045/R1X , ARVSD-H056/R1X , ARVSD-H071/R1X



4.2 Slim Duct Type AC, E Type

ARVSD-H022/4R1A , ARVSD-H028/4R1A , ARVSD-H036/4R1A
 ARVSD-H045/4R1A , ARVSD-H056/4R1A , ARVSD-H071/4R1A
 ARVSD-H022/2R1A , ARVSD-H028/2R1A , ARVSD-H036/2R1A
 ARVSD-H045/2R1A , ARVSD-H056/2R1A , ARVSD-H071/2R1A



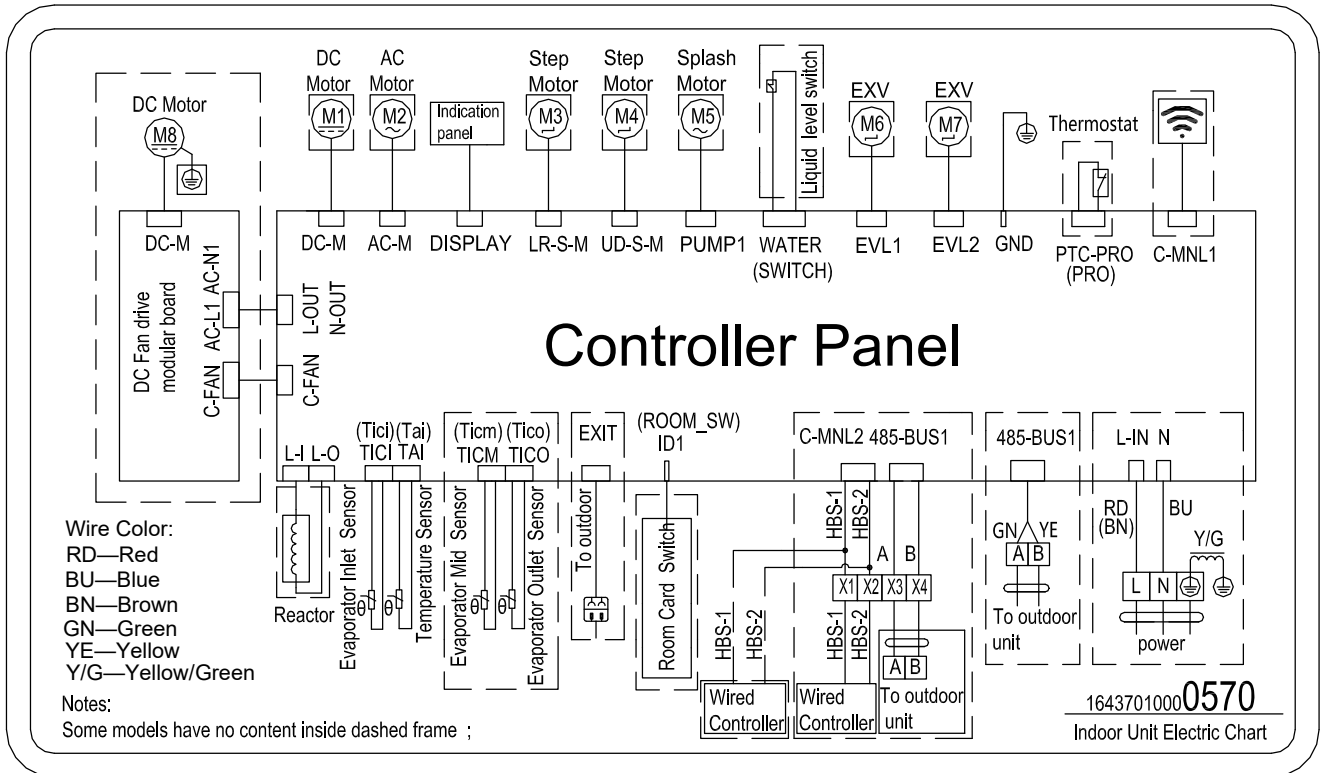
4.3 Slim Duct Type Y Type

ARVLD-H22/4R1Y , ARVLD-H28/4R1Y , ARVLD-H36/4R1Y

ARVLD-H45/4R1Y , ARVLD-H56/4R1Y , ARVLD-H71/4R1Y

ARVLD-H22/NR1DY , ARVLD-H28/NR1DY , ARVLD-H36/NR1DY

ARVLD-H45/NR1DY , ARVLD-H56/NR1DY , ARVLD-H71/NR1DY



9. PCB Port Introduction

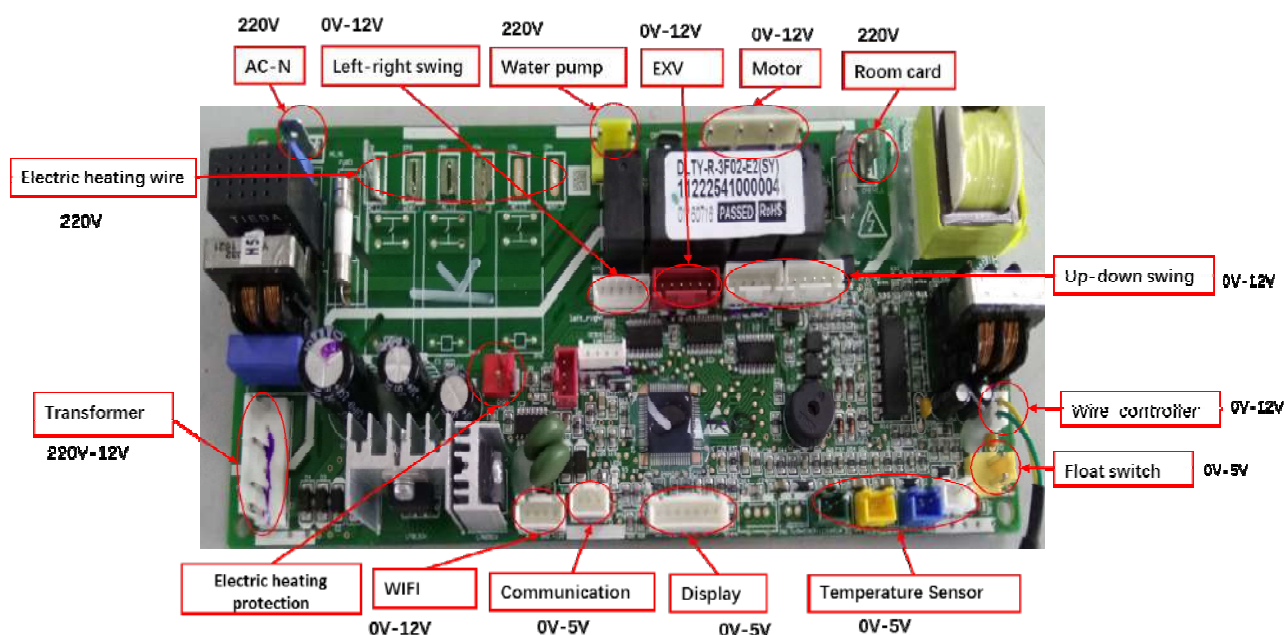
50HZ E Series;

ARVSD-H022/4R1A; ARVSD-H028/4R1A; ARVSD-H036/4R1A
 ARVSD-H045/4R1A; ARVSD-H056/4R1A; ARVSD-H071/4R1A

60HZ E series

ARVSD-H022/2R1A; ARVSD-H028/2R1A; ARVSD-H036/2R1A
 ARVSD-H045/2R1A; ARVSD-H056/2R1A; ARVSD-H071/2R1A

Main board-- 11222541000047 CJ 控制板 DLTY-R-3F02-E3(SY)

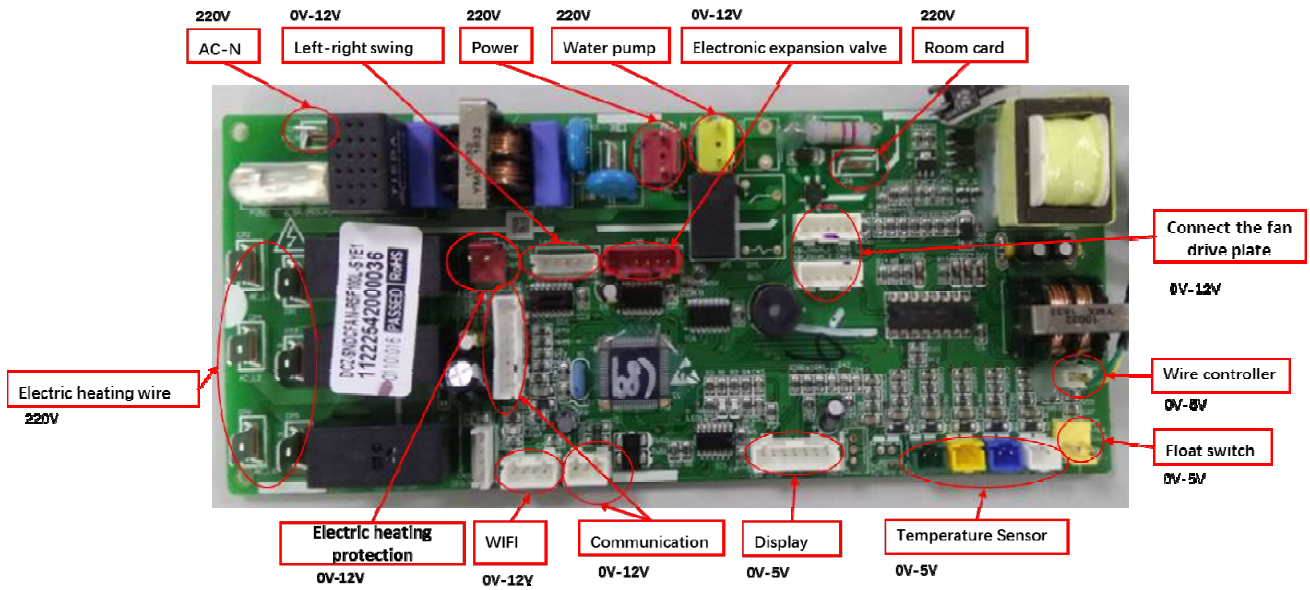


50&60HZ E Series;

ARVSD-H022/R1X; ARVSD-H028/R1X; ARVSD-H036/R1X
 ARVSD-H045/R1X; ARVSD-H056/R1X; ARVSD-H071/R1X

Main board

11222542000036 **CJ 控制板 DCZ-SNDCFAN-R5F100L-SYE1**



Fan board

11222542000059 **控制板 CJ-F-SYEDCZ-SNPOWER-1**

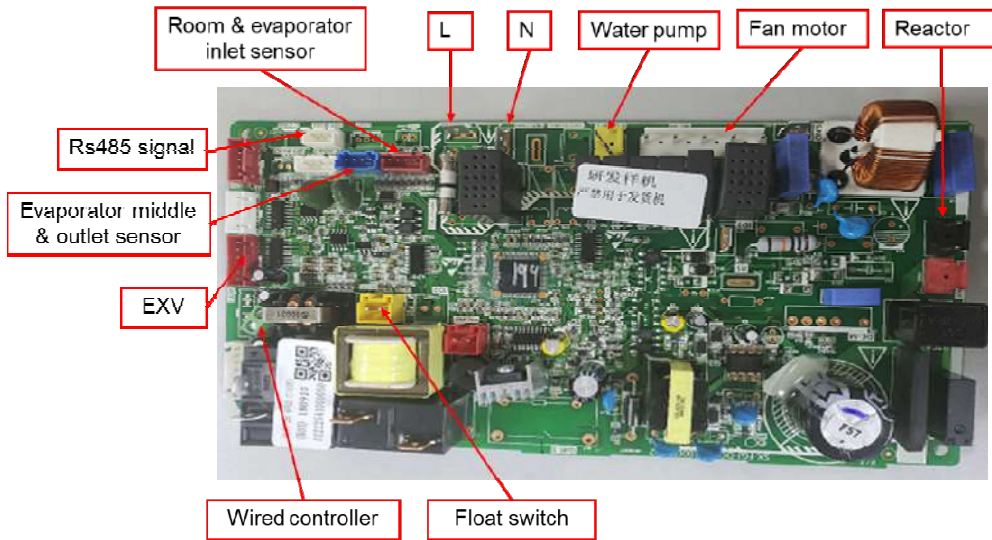


50HZ Y Series;

ARVLD-H22/4R1Y; ARVLD-H28/4R1Y; ARVLD-H36/4R1Y
 ARVLD-H45/4R1Y; ARVLD-H56/4R1Y; ARVLD-H71/4R1Y

Main board

1122254100093 CJ 控制板 DLTY-R-4F02-E1(SY)

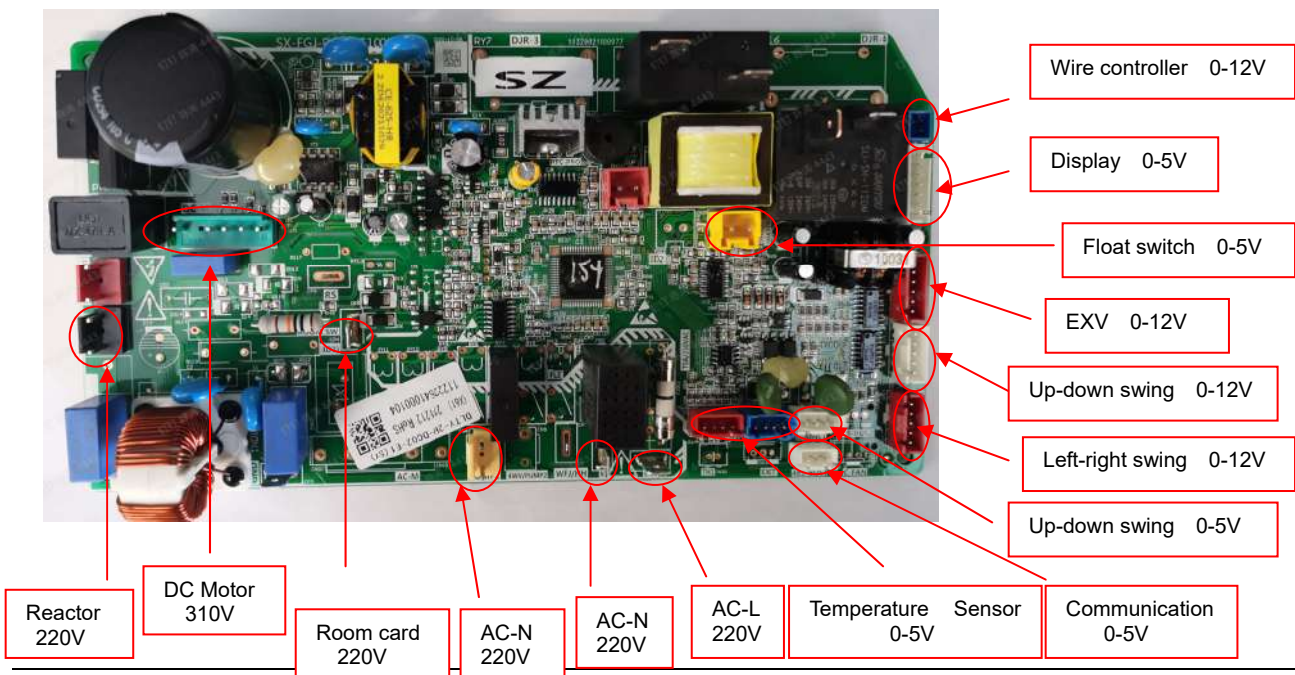


50\$60HZ Y Series;

ARVLD-H22/NR1DY; ARVLD-H28/NR1DY; ARVLD-H36/NR1DY;
 ARVLD-H45/NR1DY; ARVLD-H56/NR1DY; ARVLD-H71/NR1DY;







Main board



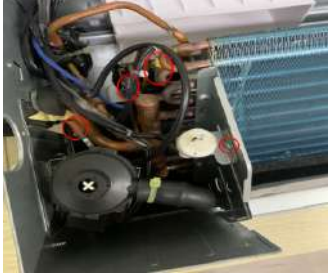



11222541000104 CJ 控制板 DLTY-2H-DC02-E1(SY)






10. Disassembly and reassembly

EXAMPLE: 50HZ Y Series

No	Parts	Procedure	Remark Photos
1	Filter	1) Remove 4 mounting screws, remove the filter baffle, and pull out the filter from the left or right according to the arrow in the drawing	
1	Filter	2) Remove 8 fixing screws and remove the return air flange;	
1	Filter	3) Remove 5 fixing screws and remove the chassis ;	
1	Filter	5) Remove the water tray	
2	Control box	1) Remove 5 fixing screws and remove the cover plate of the electric control box ;	
2	Control box	2) Remove the electric control board terminal and remove the electric control board	

No	Parts	Procedure	Remark Photos
3	Evaporator	1) Remove 2 screws and remove the evaporator connecting pipe diaphragm ;	
3	Evaporator	2) Remove 6 fixing screws	
3	Evaporator	3) Remove one fixing screw 4) Remove 3 temperature sensing bags; 5) Take out the evaporator from the right	
4	Fan motor and fan wheel	1) Open the latch between the upper and lower volute and remove the upper volute ;	
4	Fan motor and fan wheel	2) Remove one grounding screw and two fixing screws, and remove the clamp ;	
4	Fan motor and fan wheel	3) According to the position shown in the figure, unscrew the fixing nut with No. 5 I-wrench and remove the wind wheel	

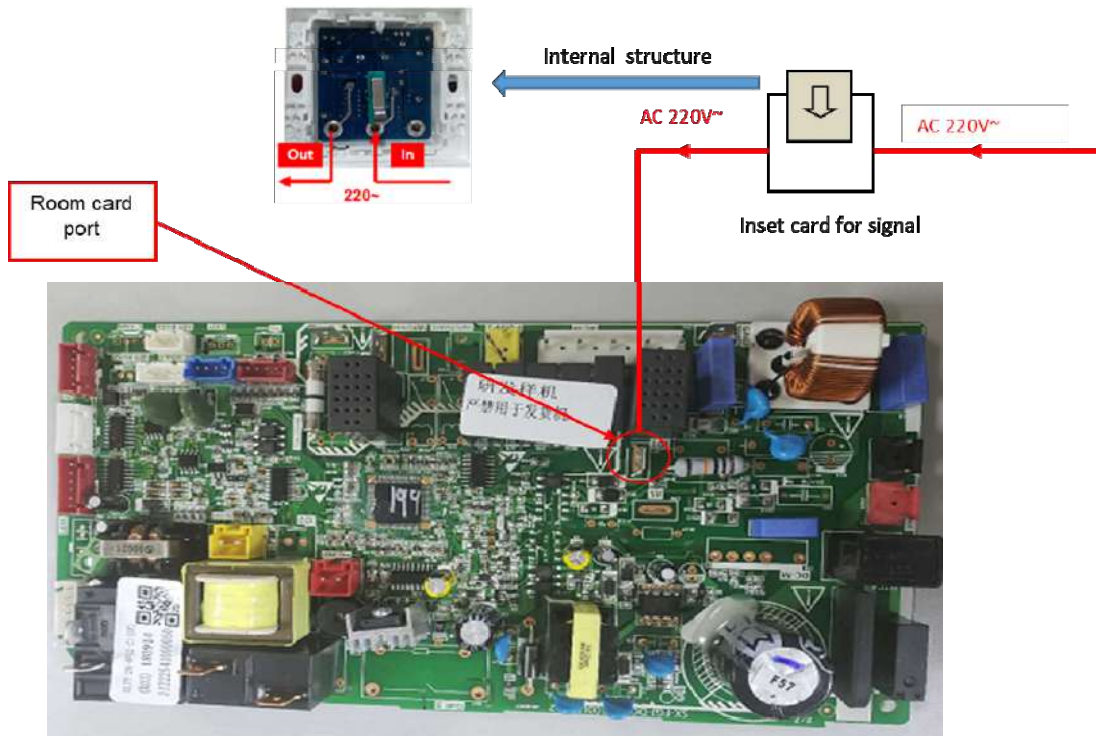
11. Split controller

Split Controller			
IDU Type	Standard	Optional	
<p>ARVLD-H22/4R1Y ARVLD-H28/4R1Y ARVLD-H36/4R1Y ARVLD-H45/4R1Y ARVLD-H56/4R1Y ARVLD-H71/4R1Y</p> <p>ARVLD-H22/NR1DY ARVLD-H28/NR1DY ARVLD-H36/NR1DY ARVLD-H45/NR1DY ARVLD-H56/NR1DY ARVLD-H71/NR1DY</p> <p>ARVSD-H022/R1X ARVSD-H028/R1X ARVSD-H036/R1X ARVSD-H045/R1X ARVSD-H056/R1X ARVSD-H071/R1X</p> <p>ARVSD-H022/4R1A ARVSD-H028/4R1A ARVSD-H036/4R1A ARVSD-H045/4R1A ARVSD-H056/4R1A ARVSD-H071/4R1A</p> <p>ARVSD-H022/2R1A ARVSD-H028/2R1A ARVSD-H036/2R1A ARVSD-H045/2R1A ARVSD-H056/2R1A ARVSD-H071/2R1A</p>	<p>XK05-DL</p> 	L type	T type
			

12.Room card function

Parameter	Function	Insert key card	Remove key card
0901	Valid	Standby, IDU can be controlled	Standby, IDU can't be controlled

Wiring diagram



13.Parameter setting

3.1 Parameter setting table

Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVLD-H22/4R1Y	44(42)	08	00	01
ARVLD-H28/4R1Y	44(42)	10	00	01
ARVLD-H36/4R1Y	44(42)	13	00	01
ARVLD-H45/4R1Y	44(42)	16	00	01
ARVLD-H56/4R1Y	44(42)	20	00	01
ARVLD-H71/4R1Y	44(42)	25	00	01
ARVLD-H22/NR1DY	44(42)	08	00	01
ARVLD-H28/NR1DY	44(42)	10	00	01
ARVLD-H36/NR1DY	44(42)	13	00	01
ARVLD-H45/NR1DY	44(42)	16	00	01
ARVLD-H56/NR1DY	44(42)	20	00	01
ARVLD-H71/NR1DY	44(42)	25	00	01
ARVSD-H022/R1X	24	08	00	01
ARVSD-H028/R1X	24	10	00	01
ARVSD-H036/R1X	24	13	00	01
ARVSD-H045/R1X	24	16	00	01
ARVSD-H056/R1X	24	18	00	01
ARVSD-H071/R1X	24	26	00	01
ARVSD-H022/4R1A	24	08	00	01
ARVSD-H028/4R1A	24	10	00	01
ARVSD-H036/4R1A	24	13	00	01
ARVSD-H045/4R1A	24	16	00	01
ARVSD-H056/4R1A	24	18	00	01
ARVSD-H071/4R1A	24	26	00	01
ARVSD-H022/2R1A	24	08	00	01
ARVSD-H028/2R1A	24	10	00	01
ARVSD-H036/2R1A	24	13	00	01
ARVSD-H045/2R1A	24	16	00	01
ARVSD-H056/2R1A	24	18	00	01
ARVSD-H071/2R1A	24	26	00	01

- 0442 means built in water pump , 0444 means no water pump
- 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,
- 0900 means room card function invalid, 0901 means valid
- 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value


Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

3.2 Parameter setting method

E.g.: set the parameter for 2.2kw IDU. (Parameter: 0508)


Wired controller

Step1



Press **FUNCTION** for more than 10s, enter parameter setting

Step2






1. Press **▲** to change 01 to **05**

2. Press **FUNCTION** for more than 5s, then **01** will flicker

3. then press **▲** to change 00 to **08**

4. Press **FUNCTION** 5s to send the order

14.Group control



Group control			
IDU type	Centralized controller	BMS-MODBUS control	Monitoring control
	Max.256 IDUs	Quantity no limit	one refrigerant system
ARVLD-H22/4R1Y			
ARVLD-H28/4R1Y			
ARVLD-H36/4R1Y			
ARVLD-H45/4R1Y			
ARVLD-H56/4R1Y			
ARVLD-H71/4R1Y			
ARVLD-H22/NR1DY			
ARVLD-H28/NR1DY			
ARVLD-H36/NR1DY			
ARVLD-H45/NR1DY			
ARVLD-H56/NR1DY			
ARVLD-H71/NR1DY			
ARVSD-H022/R1X			
ARVSD-H028/R1X			
ARVSD-H036/R1X			
ARVSD-H045/R1X			
ARVSD-H056/R1X			
ARVSD-H071/R1X			
ARVSD-H022/4R1A			
ARVSD-H028/4R1A			
ARVSD-H036/4R1A			
ARVSD-H045/4R1A			
ARVSD-H056/4R1A			
ARVSD-H071/4R1A			
ARVSD-H022/2R1A			
ARVSD-H028/2R1A			
ARVSD-H036/2R1A			
ARVSD-H045/2R1A			
ARVSD-H056/2R1A			
ARVSD-H071/2R1A			

Note: More details about connection wiring , function introduce Please check the <Control system technical manual>

Part7 Medium Static Pressure Duct

1. Product Line-up

Series	Models	Photos
50&60HZ E Series ESP 80Pa	ARVMD-H045/R1X	
	ARVMD-H056/R1X	
	ARVMD-H071/R1X	
	ARVMD-H080/R1X	
	ARVMD-H090/R1X	
	ARVMD-H100/R1X	
	ARVMD-H112/R1X	
	ARVMD-H125/R1X	
	ARVMD-H140/R1X	
ARVMD-H150/R1X		
50HZ S3 Series ESP 80Pa	ARVMD-H045/4R1A	
	ARVMD-H056/4R1A	
	ARVMD-H071/4R1A	
	ARVMD-H080/4R1A	
	ARVMD-H090/4R1A	
	ARVMD-H100/4R1A	
	ARVMD-H112/4R1A	
	ARVMD-H125/4R1A	
	ARVMD-H140/4R1A	
ARVMD-H150/4R1A		
60HZ S3 Series ESP 80Pa	ARVMD-H045/2R1A	
	ARVMD-H056/2R1A	
	ARVMD-H071/2R1A	
	ARVMD-H080/2R1A	
	ARVMD-H090/2R1A	
	ARVMD-H100/2R1A	
	ARVMD-H112/2R1A	
	ARVMD-H125/2R1A	
	ARVMD-H140/2R1A	
ARVMD-H150/2R1A		

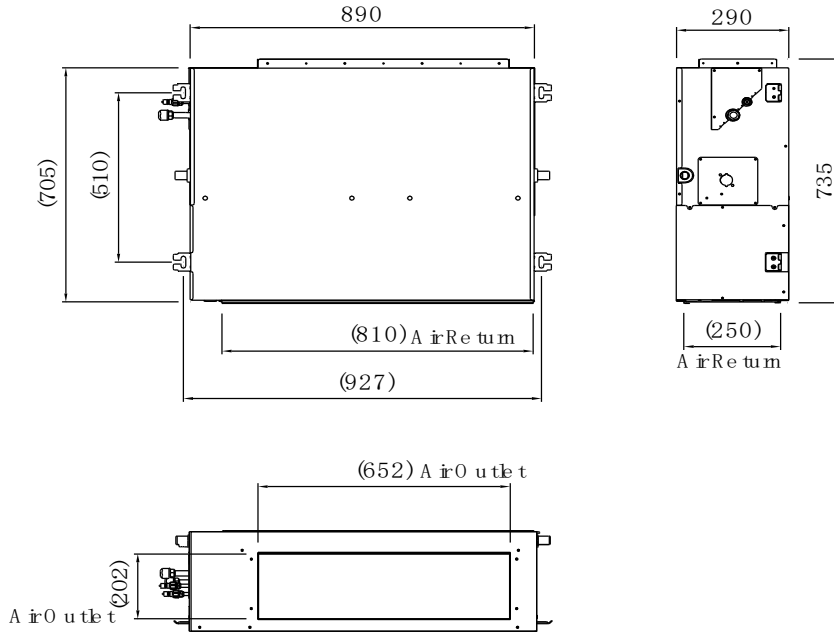
Series	Models	Photos
<p>50&60HZ M Series Default ESP 50Pa (0-160Pa) settable</p>	ARVMD-H45/NR1DM	
	ARVMD-H56/NR1DM	
	ARVMD-H63/NR1DM	
	ARVMD-H71/NR1DM	
	ARVMD-H80/NR1DM	
	ARVMD-H90/NR1DM	
	ARVMD-H100/NR1DM	
	ARVMD-H112/NR1DM	
	ARVMD-H125/NR1DM	
	ARVMD-H140/NR1DM	
	ARVMD-H150/NR1DM	
<p>50HZ M Series Default ESP 50Pa</p>	ARVMD-H45/4R1M	
	ARVMD-H56/4R1M	
	ARVMD-H63/4R1M	
	ARVMD-H71/4R1M	
	ARVMD-H80/4R1M	
	ARVMD-H90/4R1M	
	ARVMD-H100/4R1M	
	ARVMD-H112/4R1M	
	ARVMD-H125/4R1M	
	ARVMD-H140/4R1M	
	ARVMD-H150/4R1M	

Remark: M series be developed and valid in Dec. 2021

2. Dimension

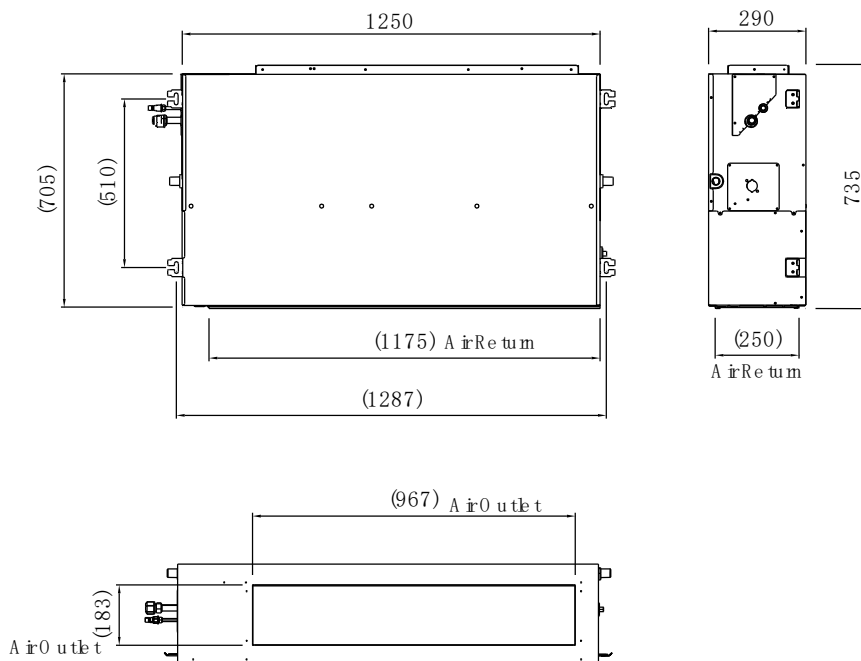
■ E Type 50&60HZ Series

ARVMD-H045/R1X; ARVMD-H056/R1X; ARVMD-H071/R1X
 ARVMD-H080/R1X; ARVMD-H090/R1X; ARVMD-H100/R1X



■ E Type 50&60HZ Series

ARVMD-H112/R1X; ARVMD-H125/R1X; ARVMD-H140/R1X; ARVMD-H150/R1X



■ S Type

50HZ Series

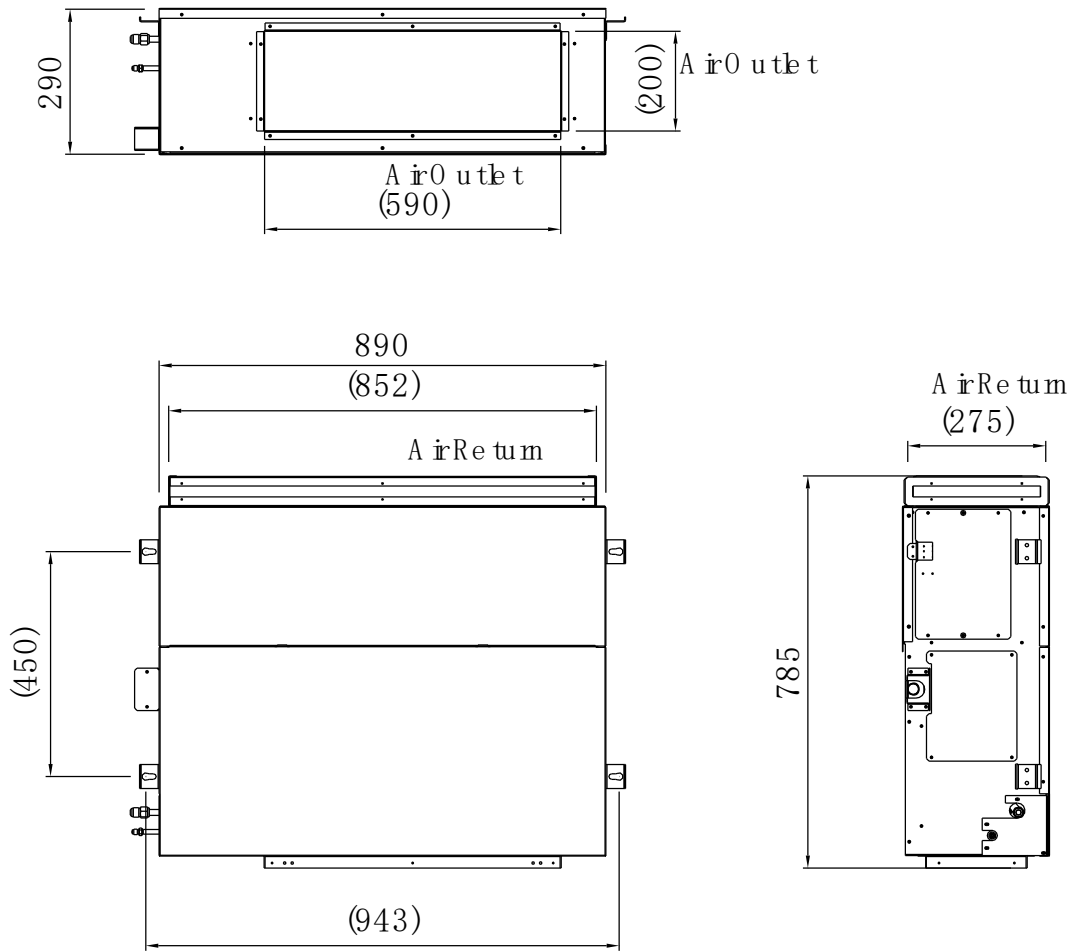
ARVMD-H045/4R1A; ARVMD-H056/4R1A; ARVMD-H071/4R1A

ARVMD-H080/4R1A; ARVMD-H090/4R1A; ARVMD-H100/4R1A

60HZ Series

ARVMD-H045/2R1A; ARVMD-H056/2R1A; ARVMD-H071/2R1A

ARVMD-H080/2R1A; ARVMD-H090/2R1A; ARVMD-H100/2R1A



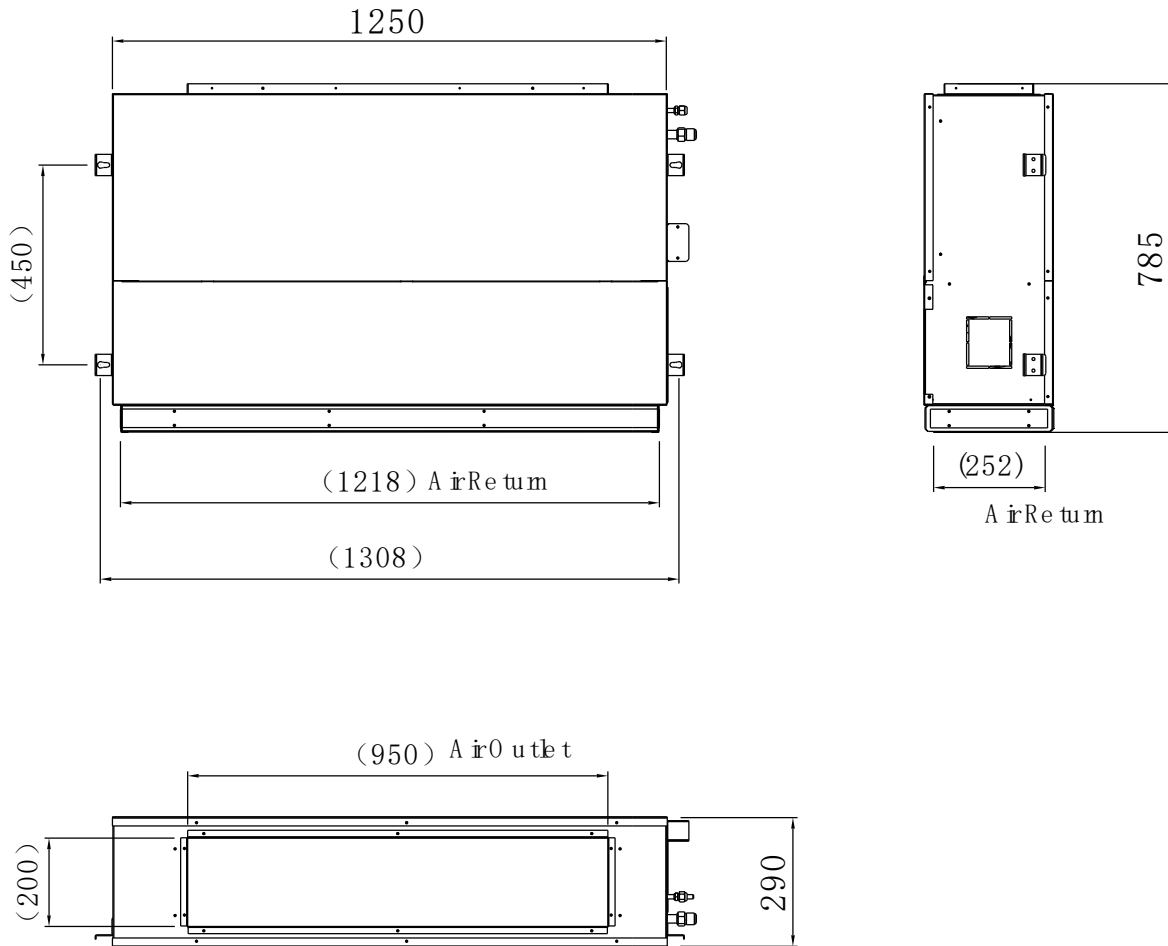
■ S Type

50HZ Series

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

60HZ Series

ARVMD-H112/2R1A; ARVMD-H125/2R1A; ARVMD-H140/2R1A; ARVMD-H150/2R1A



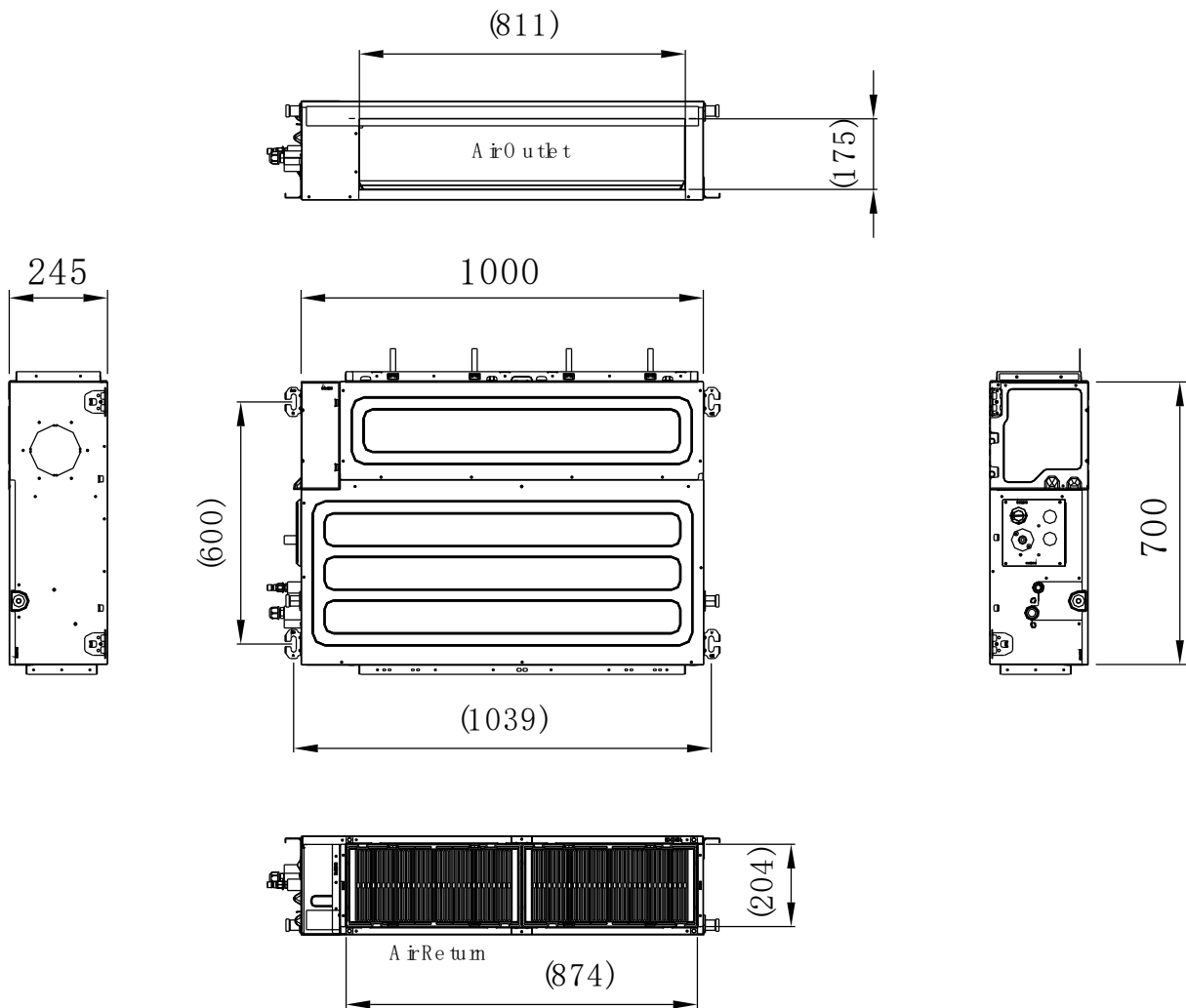
■ M Series Type

50&60HZ M Series

ARVMD-H45/NR1DM; ARVMD-H56/NR1DM; ARVMD-H63/NR1DM; ARVMD-H71/NR1DM
 ARVMD-H80/NR1DM; ARVMD-H90/NR1DM; ARVMD-H100/NR1DM

50HZ M Series

ARVMD-H45/4R1M; ARVMD-H56/4R1M; ARVMD-H63/4R1M; ARVMD-H71/4R1M
 ARVMD-H80/4R1M; ARVMD-H90/4R1M; ARVMD-H100/4R1M

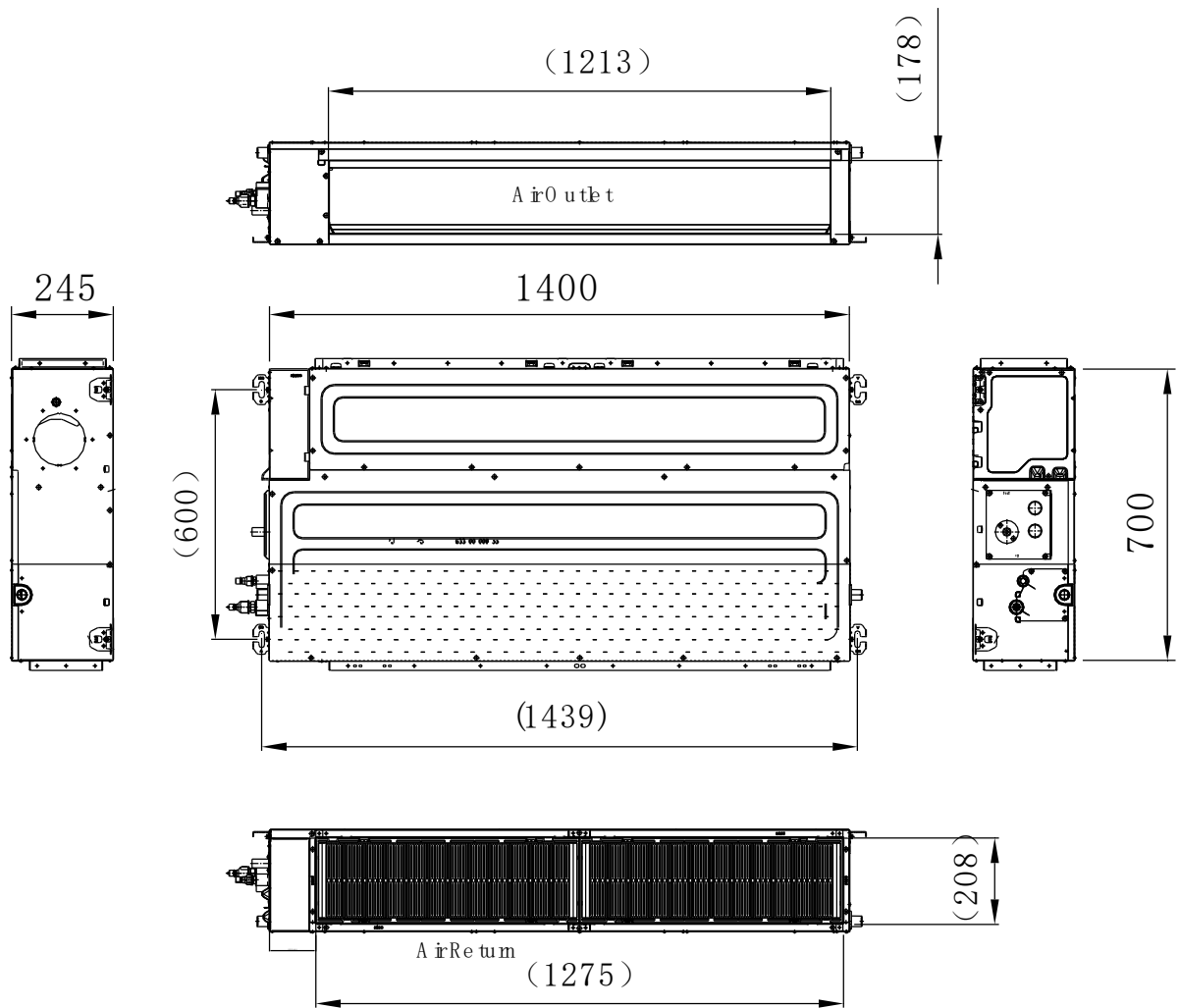


50&60HZ M Series

ARVMD-H112/NR1DM; ARVMD-H125/NR1DM; ARVMD-H140/NR1DM; ARVMD-H150/NR1DM

50HZ M Series

ARVMD-H112/4R1M; ARVMD-H125/4R1M; ARVMD-H140/4R1M; ARVMD-H150/4R1M

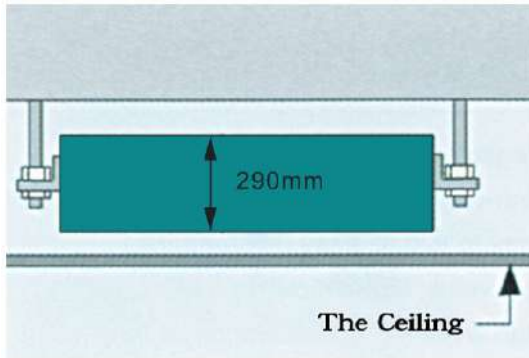


3.Features

■ E Series & S series features

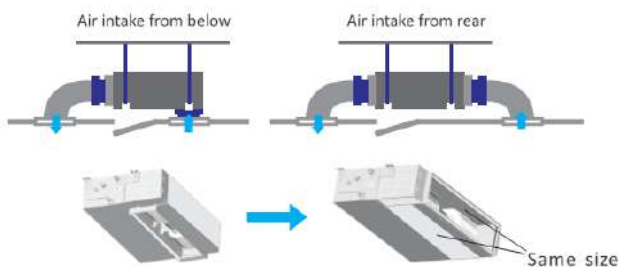
Ultra slim design

Thinner and Lighter, Only 290mm



Flexible air intake options

Air intake from rear as standard, from bottom as 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)

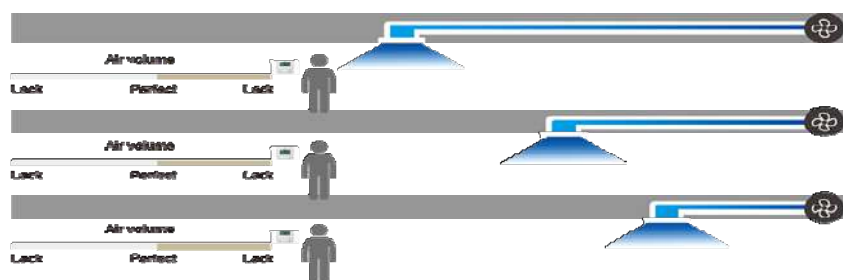
The built-in pump can lift condensing water up 1200mm high from the drainage pan.

■ M Series features

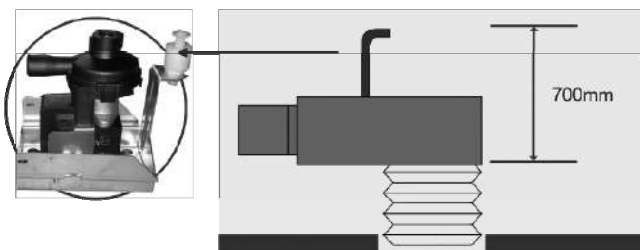
The thickness is only 245mm, requires less space for installation.



Static pressure is adjustable, from 0 to 150 Pa(50&60HZ series) . Match with different ducting length, it is convenient for installation.



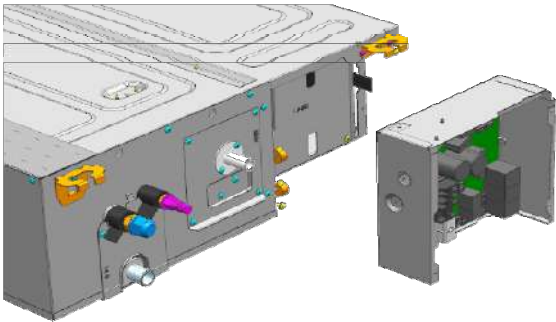
The built-in drain pump can lift condensing water up to 700mm from the drainage pan



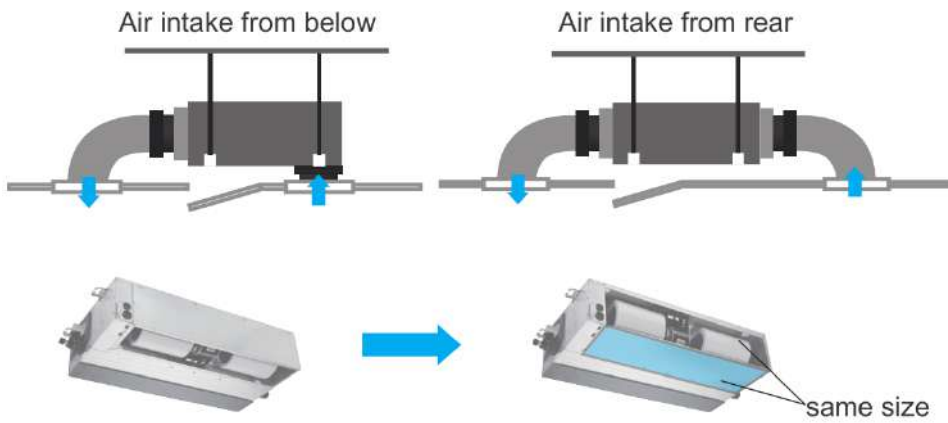
0 Screws, Easy disassembly, convenient to wash W type high efficiency filter



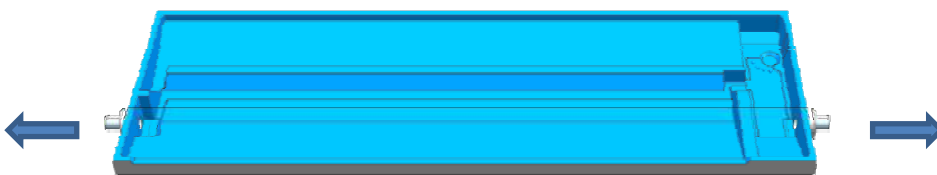
Detachable electric box, 2 Screws, easy to remove & maintenance



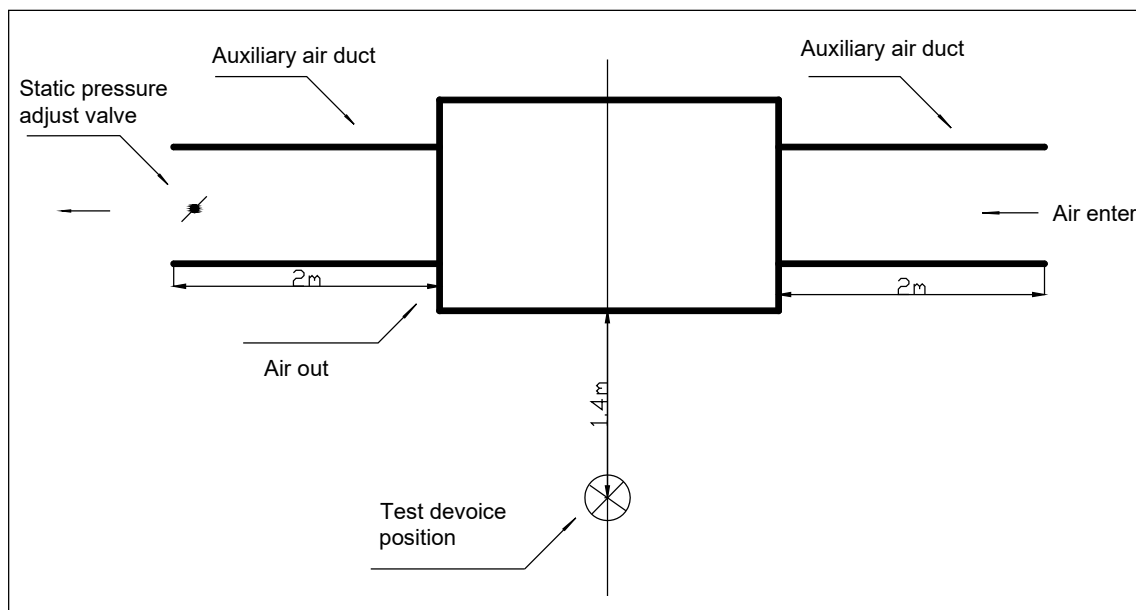
The frame size of air inlet in rear and bottom is the same. It's very easy to switch to match different application.



New Drain Pan Bliste (plastic suction) 2 way



4. Sound level



4.1 Test value

Model	High (dB)	Medium (dB)	Low (dB)
ARVMD-H045/056/4R1A	42	39	37
ARVMD-H045/056/2R1A			
ARVMD-H071/4R1A	45	42	39
ARVMD-H071/2R1A			
ARVMD-H080/090/100/4R1A	48	45	42
ARVMD-H080/090/100/2R1A			
ARVMD-H112/125/140/150/4R1A	51	48	45
ARVMD-H112/125/140/150/2R1A			

Model	High (dB)	Medium (dB)	Low (dB)
ARVMD-H045/056/R1X	40	37	33
ARVMD-H071/080/R1X	41	39	36
ARVMD-H090/100/R1X	44	41	39
ARVMD-H112/125/R1X	45	42	39
ARVMD-H140/150R1X	47	43	41

M series

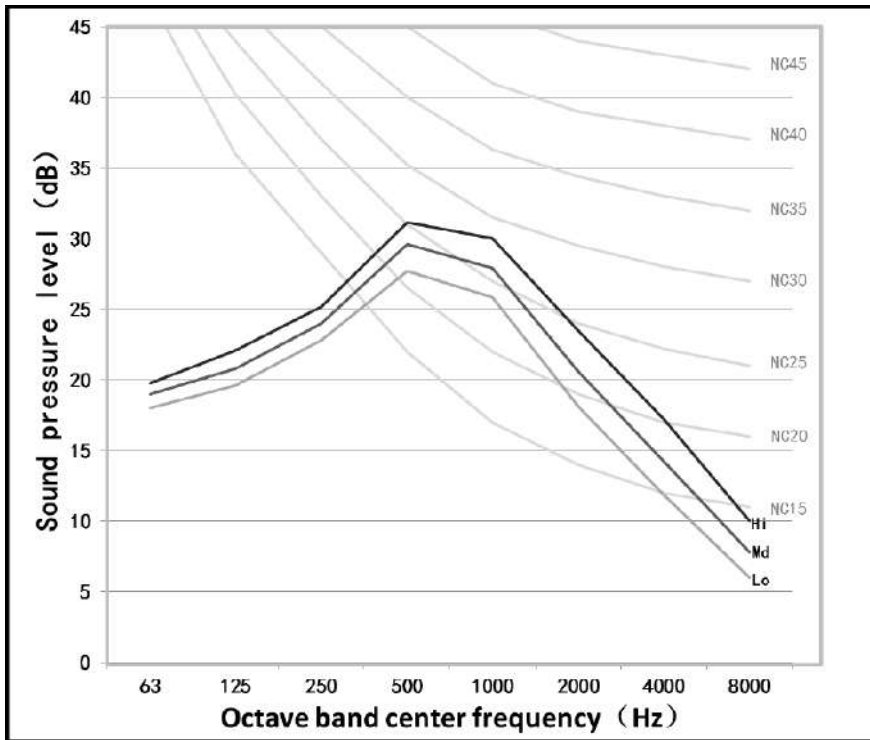
Model	Sound test value dB(A)		
	Hi	Md	Lo
ARVMD-H45/NR1DM	39	37	35
ARVMD-H56/ NR1DM	39	37	35
ARVMD-H63/ NR1DM	40	38	36
ARVMD-H71/ NR1DM	40	38	36
ARVMD-H80/ NR1DM	41	39	37
ARVMD-H90/ NR1DM	41	39	37
ARVMD-H100/ NR1DM	42	40	38
ARVMD-H112/ NR1DM	44	42	40
ARVMD-H125/ NR1DM	44	42	40
ARVMD-H140/ NR1DM	44	42	40
ARVMD-H150/ NR1DM	45	43	41

M series

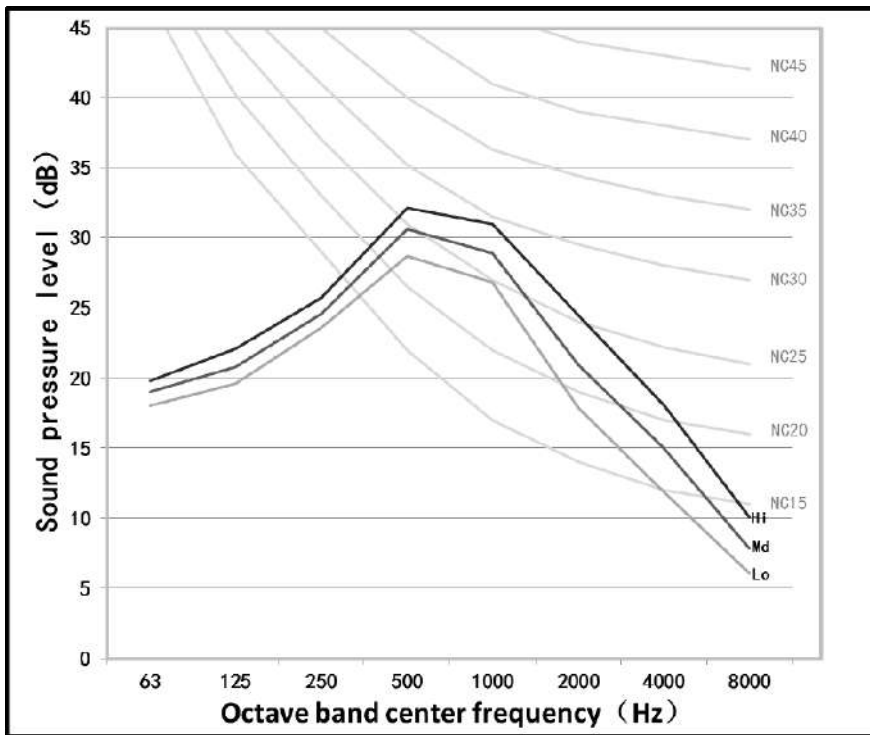
Model	Sound test value dB(A)		
	Hi	Md	Lo
ARVMD-H45/4R1M	42	39	36
ARVMD-H56/4R1M	42	39	36
ARVMD-H63/4R1M	43	40	37
ARVMD-H71/4R1M	43	40	37
ARVMD-H80/4R1M	43	40	37
ARVMD-H90/4R1M	44	41	38
ARVMD-H100/4R1M	44	41	38
ARVMD-H112/4R1M	46	42	39
ARVMD-H125/4R1M	46	42	39
ARVMD-H140/4R1M	46	42	39
ARVMD-H150/4R1M	47	43	40

4.2 NC curves- 50&60HZ M Series

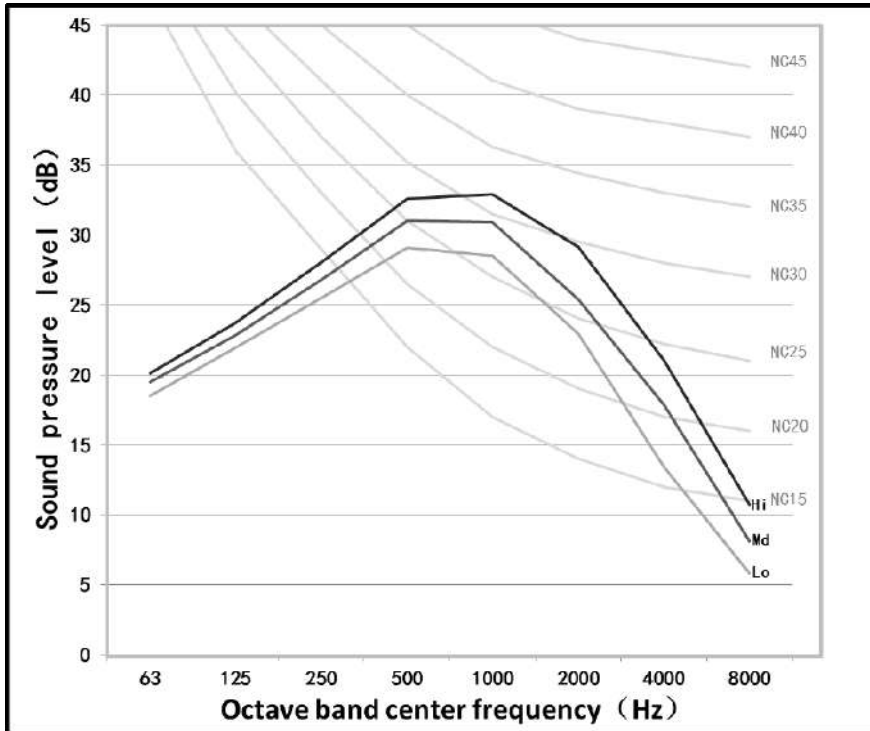
ARVMD-H45/4R1M, ARVMD-H56/4R1M



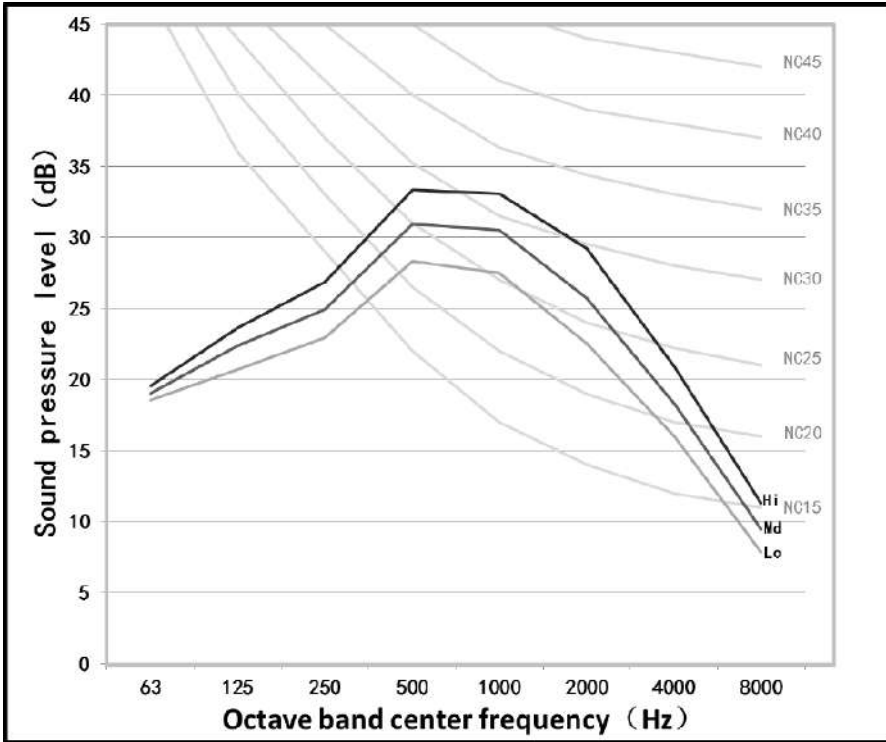
ARVMD-H63/4R1M, ARVMD-H71/4R1M, ARVMD-H80/4R1M



ARVMD-H90/4R1M, ARVMD-H100/4R1M

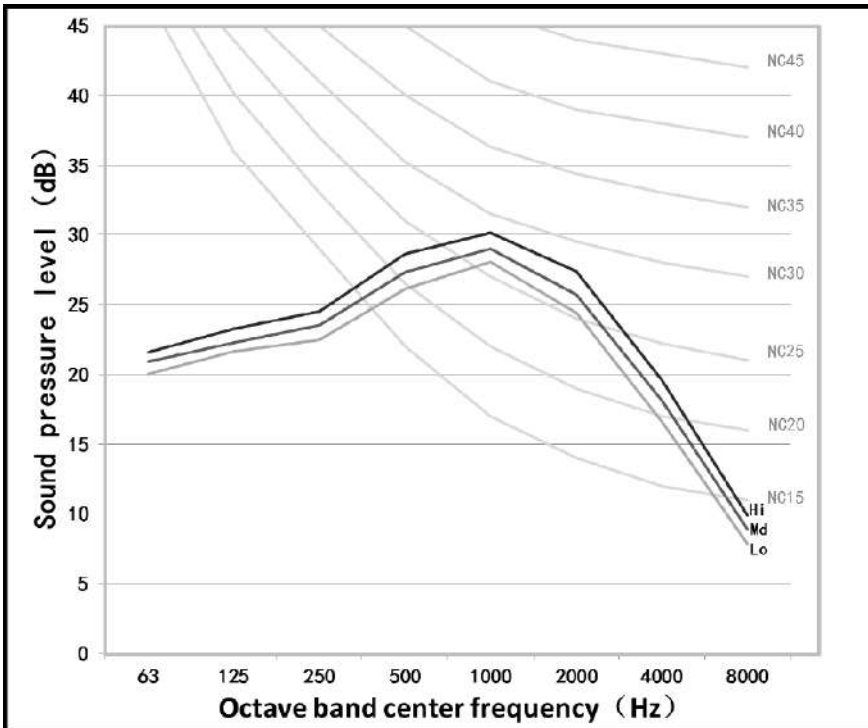


ARVMD-H112/4R1M, ARVMD-H125/4R1M, ARVMD-H140/4R1M, ARVMD-H150/4R1M

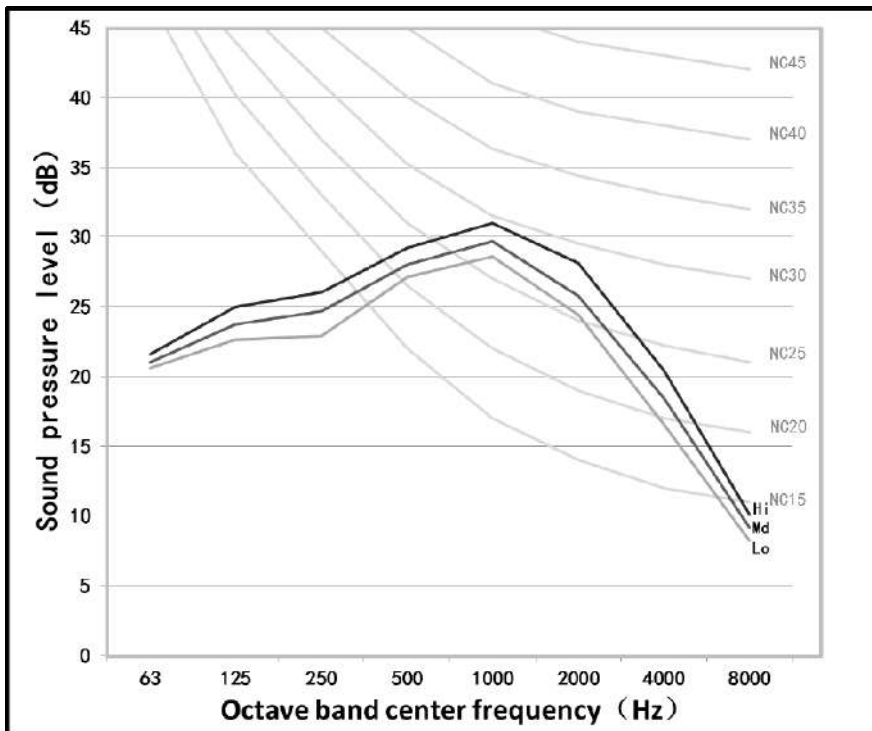


4.2 NC curves- 50HZ M Series

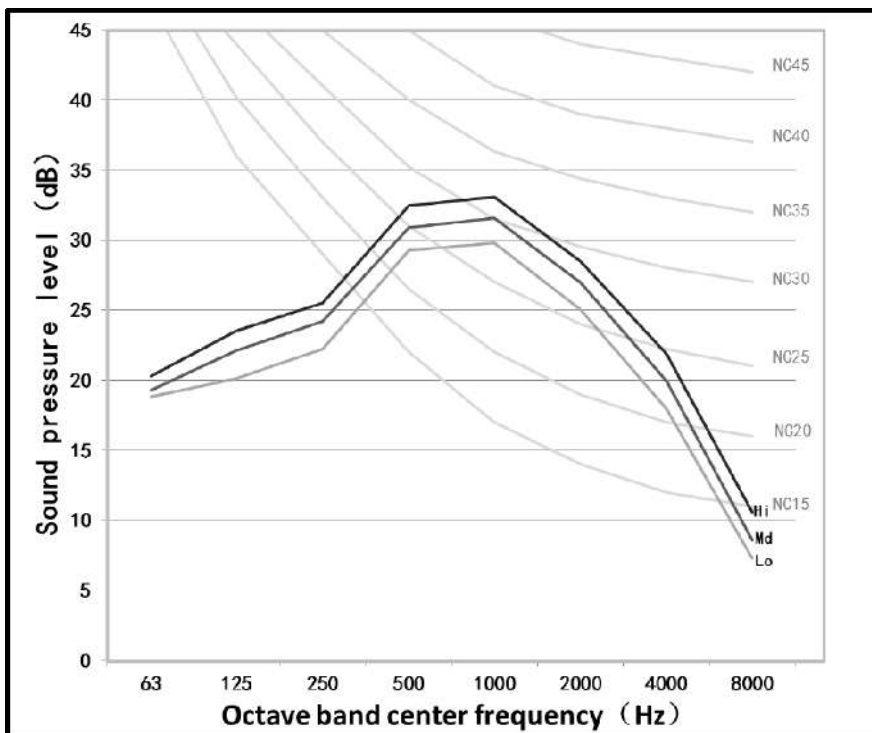
ARVMD-H45/NR1DM, ARVMD-H56/NR1DM



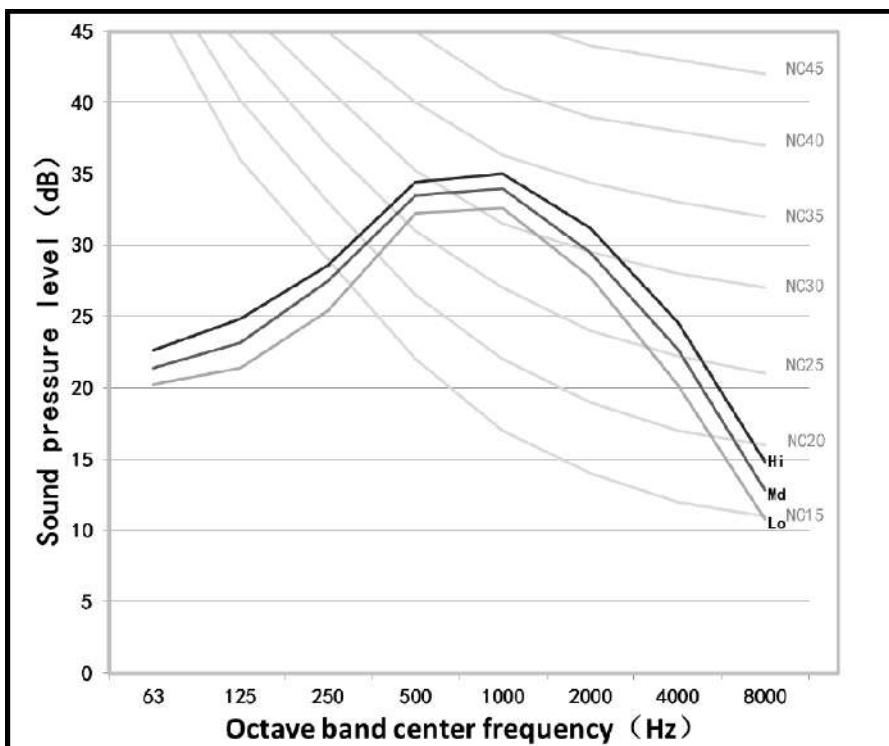
ARVMD-H63/NR1DM, ARVMD-H71/NR1DM, ARVMD-H80/NR1DM



ARVMD-H90/NR1DM, ARVMD-H100/NR1DM



ARVMD-H112/NR1DM, ARVMD-H125/NR1DM, ARVMD-H140/NR1DM, ARVMD-H150/NR1DM



5. Fan performance

5.1 Default & optional ESP

E series

Series	Models	Default ESP		Optional ESP	
		Value	Remark	Value	Remark
50&60HZ E Series ESP 80Pa	ARVMD-H045/R1X	80	Parameter 0619	50	Parameter 0621
	ARVMD-H056/R1X	80	Parameter 0619	50	Parameter 0621
	ARVMD-H071/R1X	80	Parameter 0622	50	Parameter 0624
	ARVMD-H080/R1X	80	Parameter 0622	50	Parameter 0624
	ARVMD-H090/R1X	80	Parameter 0625	50	Parameter 0627
	ARVMD-H100/R1X	80	Parameter 0625	50	Parameter 0627
	ARVMD-H112/R1X	80	Parameter 0628	50	Parameter 0630
	ARVMD-H125/R1X	80	Parameter 0628	50	Parameter 0630
	ARVMD-H140/R1X	80	Parameter 0631	50	Parameter 0633
	ARVMD-H150/R1X	80	Parameter 0631	50	Parameter 0633
50HZ S3	ARVMD-H045/4R1A	80	Capacitor 4uf	50	Capacitor 3uf

Series ESP 80Pa	ARVMD-H056/4R1A	80	Capacitor 4uf	50	Capacitor 3uf
	ARVMD-H071/4R1A	80	Capacitor 3.5uf	50	Capacitor 2.5uf
	ARVMD-H080/4R1A	80	Capacitor 3.5uf	50	Capacitor 2.5uf
	ARVMD-H090/4R1A	80	Capacitor 8uf	50	Capacitor 5uf
	ARVMD-H100/4R1A	80	Capacitor 8uf	50	Capacitor 5uf
	ARVMD-H112/4R1A	80	Capacitor 8uf	50	Capacitor 6uf
	ARVMD-H125/4R1A	80	Capacitor 8uf	50	Capacitor 6uf
	ARVMD-H140/4R1A	80	Capacitor 8uf	50	Capacitor 6uf
	ARVMD-H150/4R1A	80	Capacitor 8uf	50	Capacitor 6uf
60HZ S3 Series ESP 80Pa	ARVMD-H045/2R1A	80	Capacitor 5uf	50	Capacitor 4uf
	ARVMD-H056/2R1A	80	Capacitor 5uf	50	Capacitor 4uf
	ARVMD-H071/2R1A	80	Capacitor 4uf	50	Capacitor 3.5uf
	ARVMD-H080/2R1A	80	Capacitor 4uf	50	Capacitor 3.5uf
	ARVMD-H090/2R1A	80	Capacitor 6uf	50	Capacitor 5uf
	ARVMD-H100/2R1A	80	Capacitor 6uf	50	Capacitor 5uf
	ARVMD-H112/2R1A	80	Capacitor 9uf	50	Capacitor 8uf
	ARVMD-H125/2R1A	80	Capacitor 9uf	50	Capacitor 8uf
	ARVMD-H140/2R1A	80	Capacitor 9uf	50	Capacitor 8uf
ARVMD-H150/2R1A	80	Capacitor 9uf	50	Capacitor 8uf	

Note: the optional ESP capacitor can be find out in the accessory bage

M series

Series	Models	Default ESP		Optional ESP	
		Value	Remark	Value	Remark
50&60HZ M Series Default ESP 50Pa (0-160Pa) settable	ARVMD-H45/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H56/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H63/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H71/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H80/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H90/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H100/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H112/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H125/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H140/NR1DM	50	Parameter 0605	0~150	0600~0615
	ARVMD-H150/NR1DM	50	Parameter 0605	0~150	0600~0615
50HZ M Series Default ESP	ARVMD-H45/4R1M	50	Capacitor 6uf	/	/
	ARVMD-H56/4R1M	50	Capacitor 6uf	/	/
	ARVMD-H63/4R1M	50	Capacitor 6uf	/	/

50Pa	ARVMD-H71/4R1M	50	Capacitor 6uf	/	/
	ARVMD-H80/4R1M	50	Capacitor 6uf	/	/
	ARVMD-H90/4R1M	50	Capacitor 6uf	/	/
	ARVMD-H100/4R1M	50	Capacitor 6uf	/	/
	ARVMD-H112/4R1M	50	Capacitor 10uf	/	/
	ARVMD-H125/4R1M	50	Capacitor 10uf	/	/
	ARVMD-H140/4R1M	50	Capacitor 10uf	/	/
	ARVMD-H150/4R1M	50	Capacitor 10uf	/	/

Note:

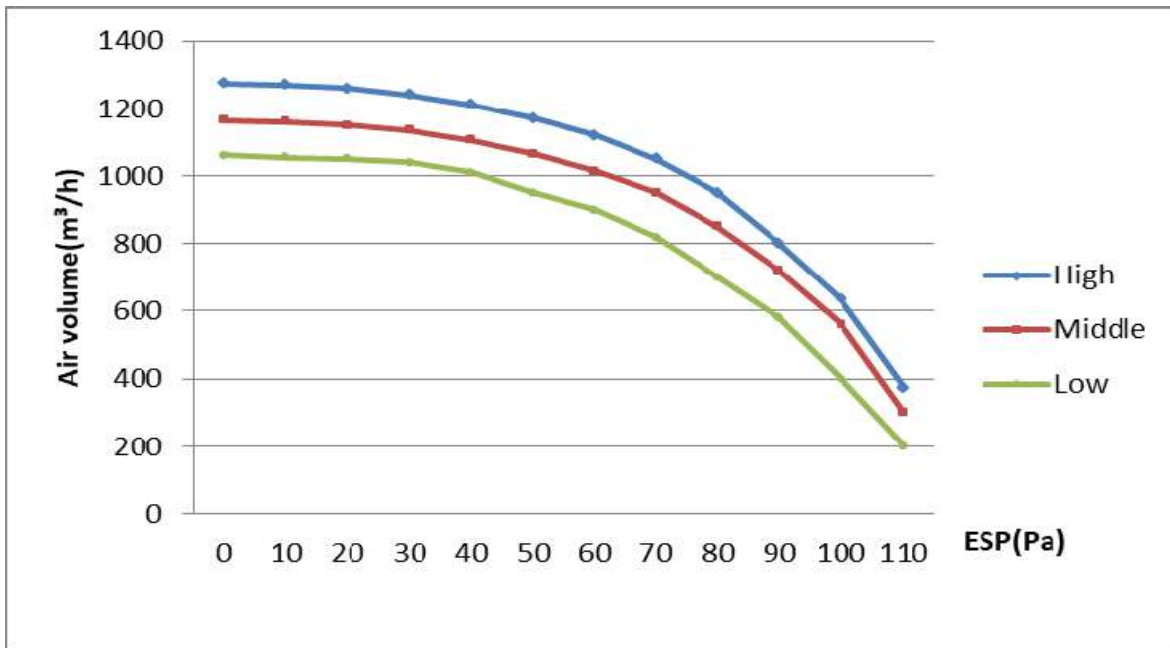
- 1、06 parameter can be set by wired controller
- 2、0605 means the ESP is 50Pa, it means the unit can support the air duct length about 5~10m
- 3、0615 means the ESP is 150Pa ,the parameter setting should meet the air pressure drop caused by the air duct length , Eg : install the air duct length is about 10m, so usually the average air pressure drop is about 80Pa , so the parameter should be set to 0608, otherwise it will cause air flow less than the rated value

50&60HZ E Series

ARVMD-H045/R1X; ARVMD-H056/R1X;

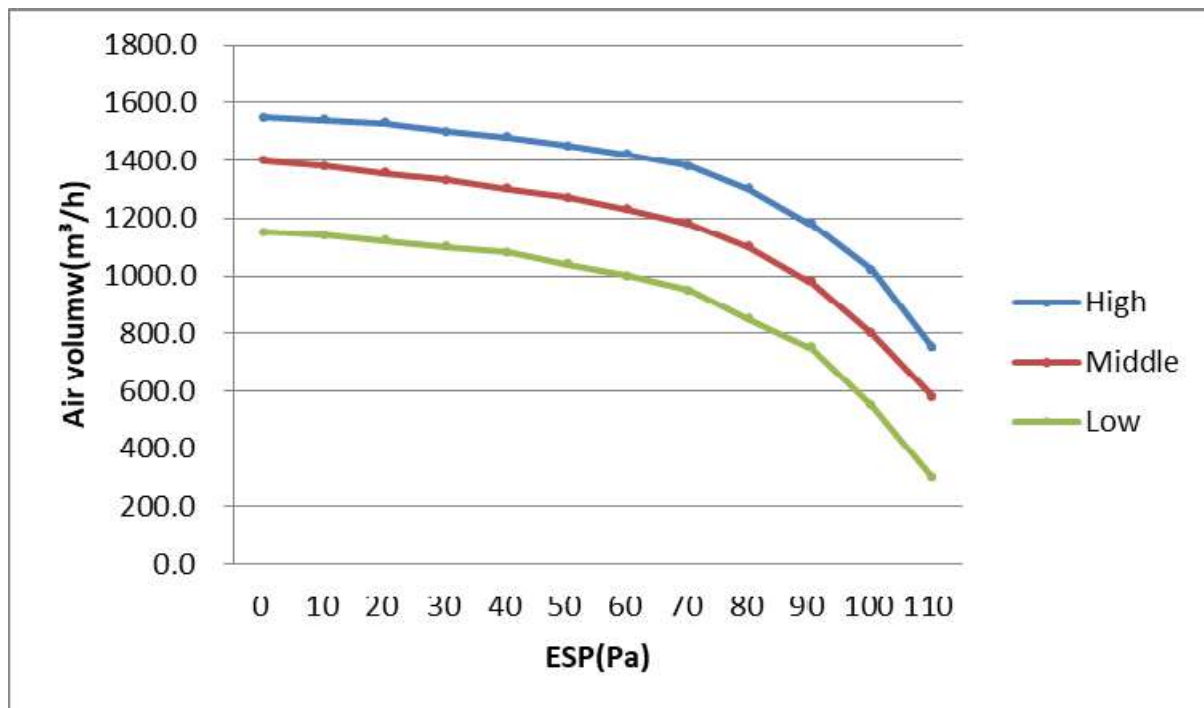
Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H045/R1X; ARVMD-H056/R1X; Default (80Pa)	0	1275	1165	1060
	10	1270	1160	1055
	20	1260	1150	1050
	30	1240	1135	1040
	40	1210	1105	1010
	50	1170	1065	950
	60	1120	1015	900
	70	1050	950	820
	80	950	850	700
	90	800	720	580
	100	635	560	400

	110	375	300	200
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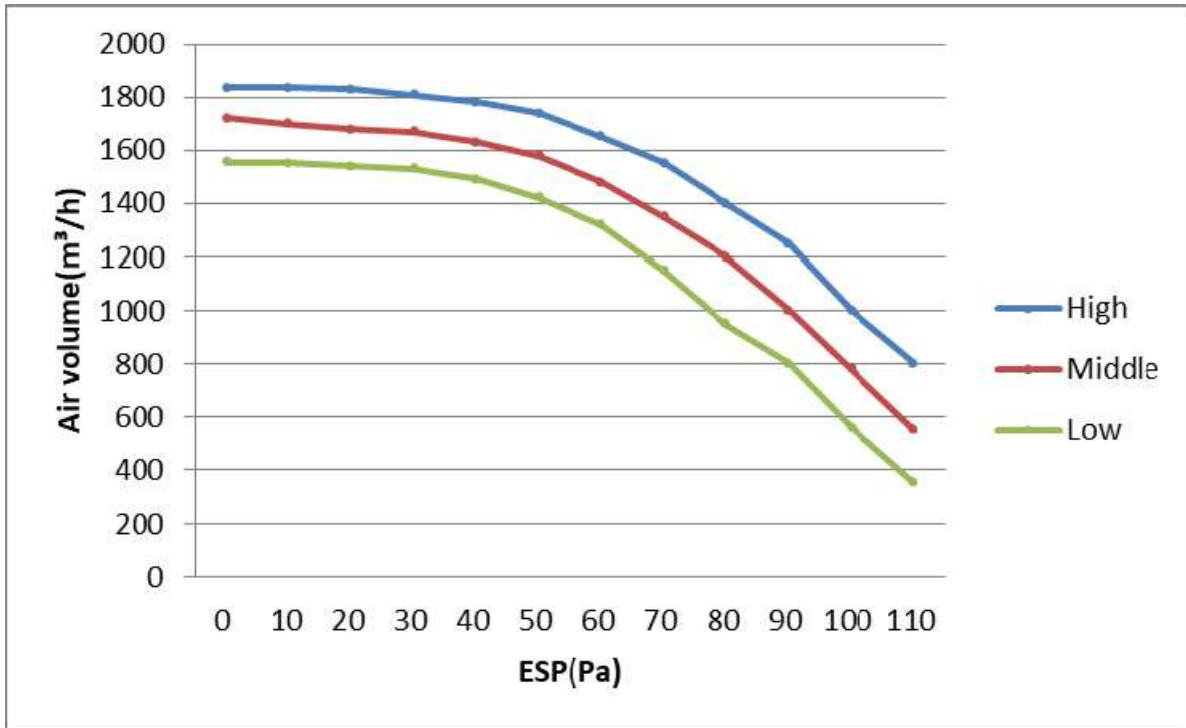
ARVMD-H071/R1X; ARVMD-H080/R1X;

Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H071/R1X; ARVMD-H080/R1X; Default (80Pa)	0	1550.0	1400.0	1150.0
	10	1540.0	1380.0	1140.0
	20	1530.0	1355.0	1120.0
	30	1500.0	1330.0	1100.0
	40	1480.0	1300.0	1080.0
	50	1450.0	1270.0	1040.0
	60	1420.0	1230.0	1000.0
	70	1380.0	1180.0	950.0
	80	1300.0	1100.0	850.0
	90	1180.0	980.0	750.0
	100	1020.0	800.0	550.0
110	750.0	580.0	300.0	



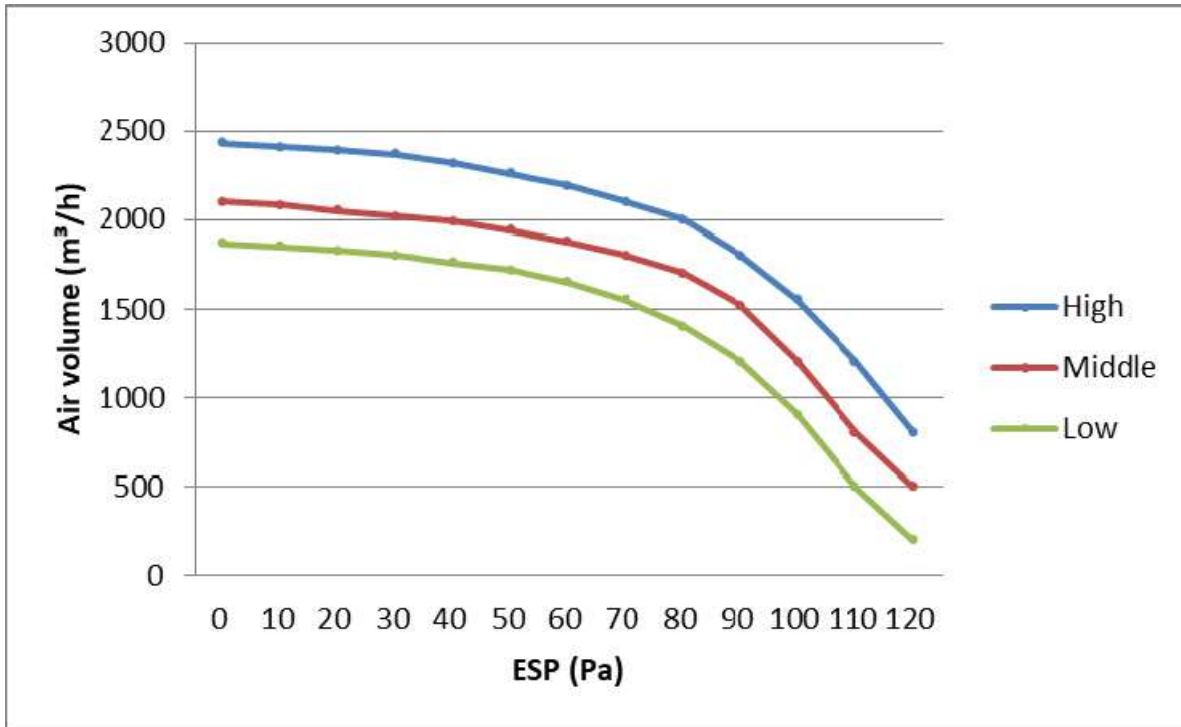
ARVMD-H090/R1X; ARVMD-H100/R1X;

Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H090/R1X; ARVMD-H100/R1X; Default (80Pa)	0	1836	1720	1555
	10	1835	1700	1550
	20	1830	1680	1540
	30	1810.0	1670.0	1530.0
	40	1780.0	1630.0	1490.0
	50	1740.0	1580.0	1420.0
	60	1650.0	1480.0	1320.0
	70	1550.0	1350.0	1150.0
	80	1400.0	1200.0	950.0
	90	1250.0	1000.0	800.0
	100	1000.0	780.0	560.0
	110	800.0	550.0	350.0



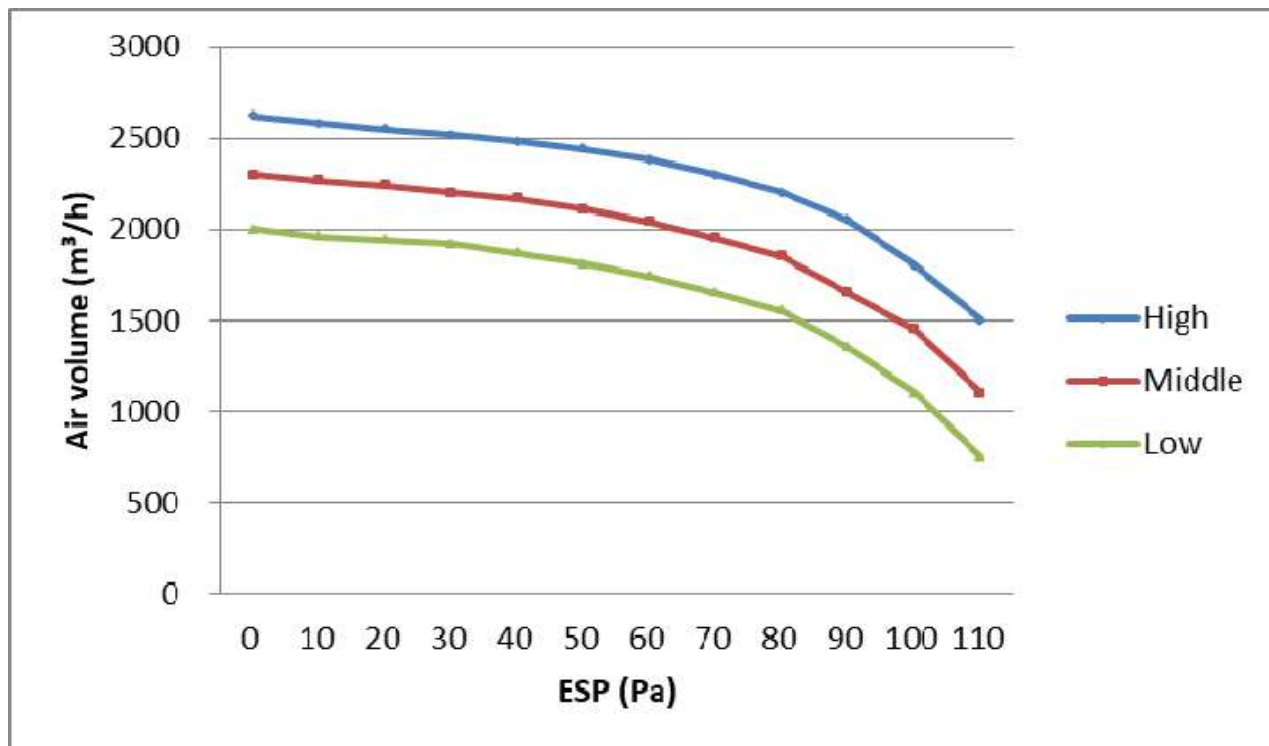
ARVMD-H112/R1X; ARVMD-H125/R1X;

Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H112/R1X; ARVMD-H125/R1X; Default (80Pa)	0	2430	2100	1870
	10	2410	2080	1850
	20	2390	2050	1830
	30	2370	2020	1800
	40	2320	1990	1760
	50	2260	1940	1720
	60	2190	1880	1650
	70	2100	1800	1550
	80	2000	1700	1400
	90	1800	1520	1200
	100	1550	1200	900
	110	1200	800	500



ARVMD-H140/R1X; ARVMD-H150/R1X;

Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H140/R1X; ARVMD-H150/R1X; Default (80Pa)	0	2620	2300	2000
	10	2580	2270	1960
	20	2550	2240	1940
	30	2520	2200	1920
	40	2480	2170	1870
	50	2440	2110	1810
	60	2380	2040	1740
	70	2300	1950	1650
	80	2200	1850	1550
	90	2050	1650	1350
	100	1800	1450	1100
110	1500	1100	750	



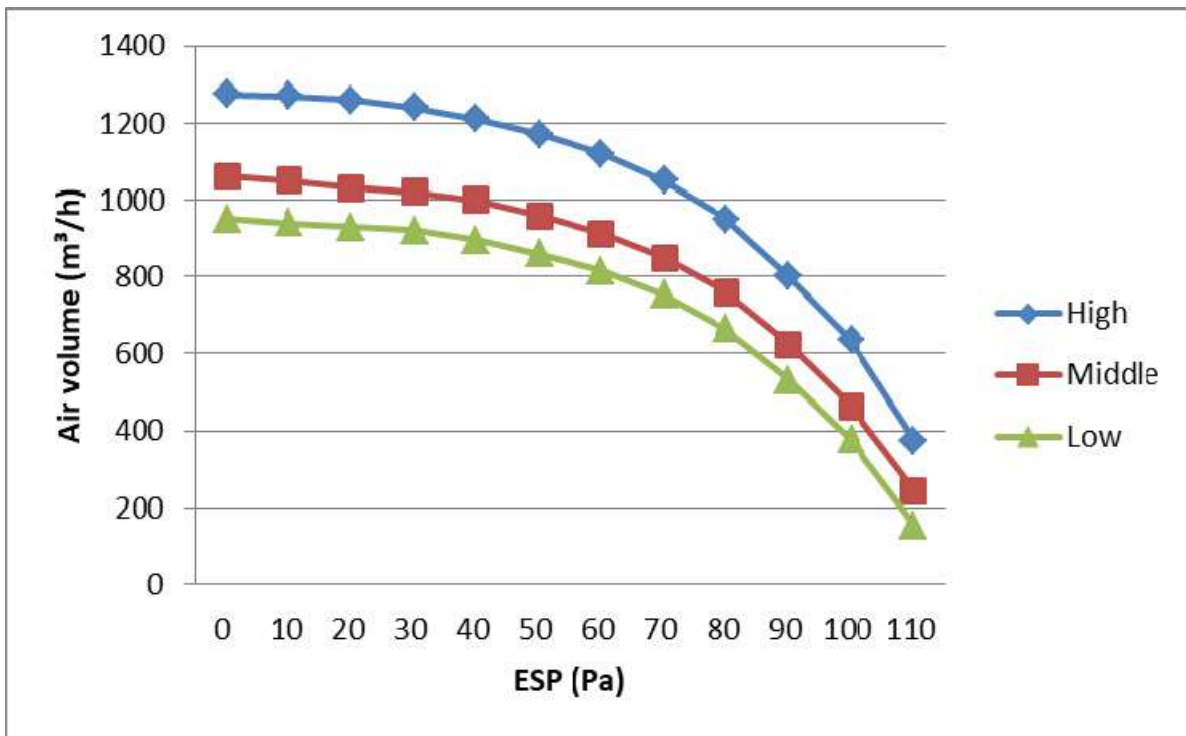
■ 50HZ S3 Series

ARVMD-H045/4R1A; ARVMD-H045/2R1A;

ARVMD-H056/4R1A; ARVMD-H056/2R1A;

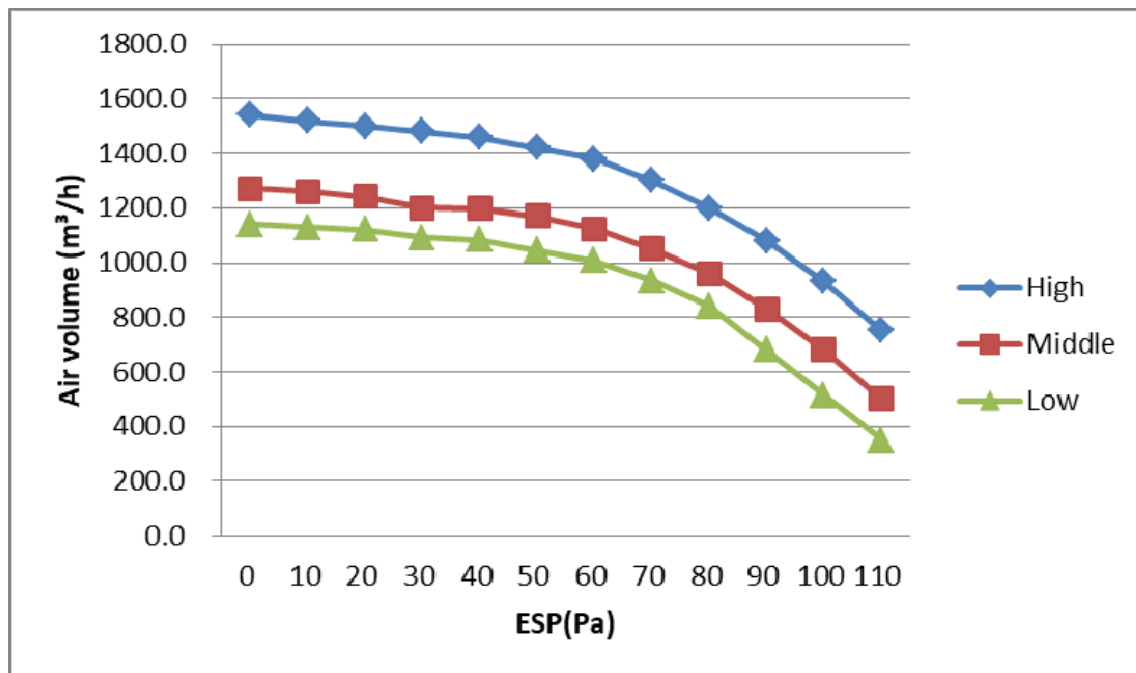
Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H045/4R1A; ARVMD-H045/2R1A; ARVMD-H056/4R1A; ARVMD-H056/2R1A; Default (80Pa)	0	1275	1060.0	950.0
	10	1270	1050.0	940.0
	20	1260	1030.0	930.0
	30	1240	1020.4	921.4
	40	1210	1000.0	894.9
	50	1170	960.0	859.4
	60	1120	912.5	815.1
	70	1050	849.6	753.1
	80	950	760.0	665.0
	90	800	624.8	531.6

	100	635	463.0	376.6
	110	375	242.7	155.1



ARVMD-H071/4R1A; ARVMD-H071/2R1A;

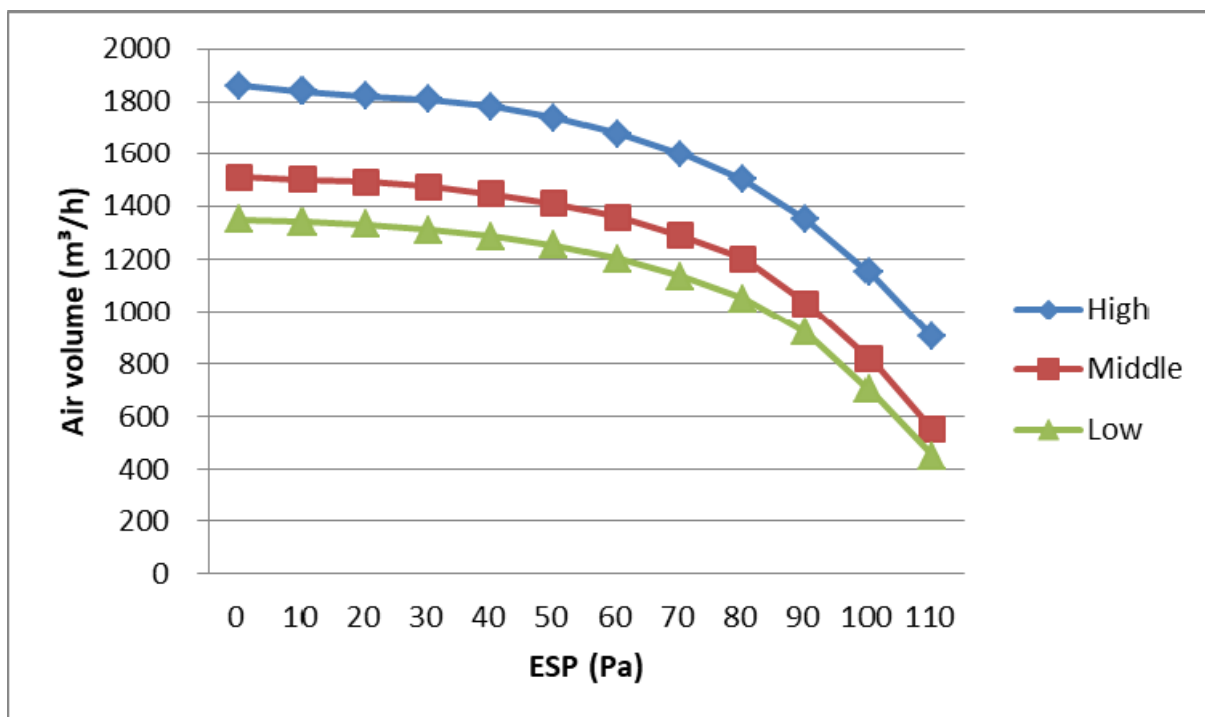
Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H071/4R1A; ARVMD-H071/2R1A; Default (80Pa)	0	1540.0	1270.0	1140.0
	10	1520.0	1260.0	1130.0
	20	1500.0	1240.0	1120.0
	30	1480.0	1200.0	1091.6
	40	1460.0	1197.3	1082.3
	50	1420.0	1170.0	1045.0
	60	1380.0	1124.2	1007.6
	70	1300.0	1051.1	933.0
	80	1200.0	960.0	840.0
	90	1080.0	830.0	680.0
	100	930.0	680.0	515.0
	110	750.0	500.0	350.0



ARVMD-H080/4R1A; ARVMD-H080/2R1A;
 ARVMD-H090/4R1A; ARVMD-H090/2R1A;
 ARVMD-H100/4R1A; ARVMD-H100/2R1A;

Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H080/4R1A; ARVMD-H080/2R1A; ARVMD-H090/4R1A; ARVMD-H090/2R1A; ARVMD-H100/4R1A; ARVMD-H100/2R1A; Default (80Pa)	0	1540.0	1270.0	1140.0
	10	1520.0	1260.0	1130.0
	20	1500.0	1240.0	1120.0
	30	1480.0	1200.0	1091.6
	40	1460.0	1197.3	1082.3
	50	1420.0	1170.0	1045.0
	60	1380.0	1124.2	1007.6
	70	1300.0	1051.1	933.0
	80	1200.0	960.0	840.0
	90	1080.0	830.0	680.0

	100	930.0	680.0	515.0
	110	750.0	500.0	350.0



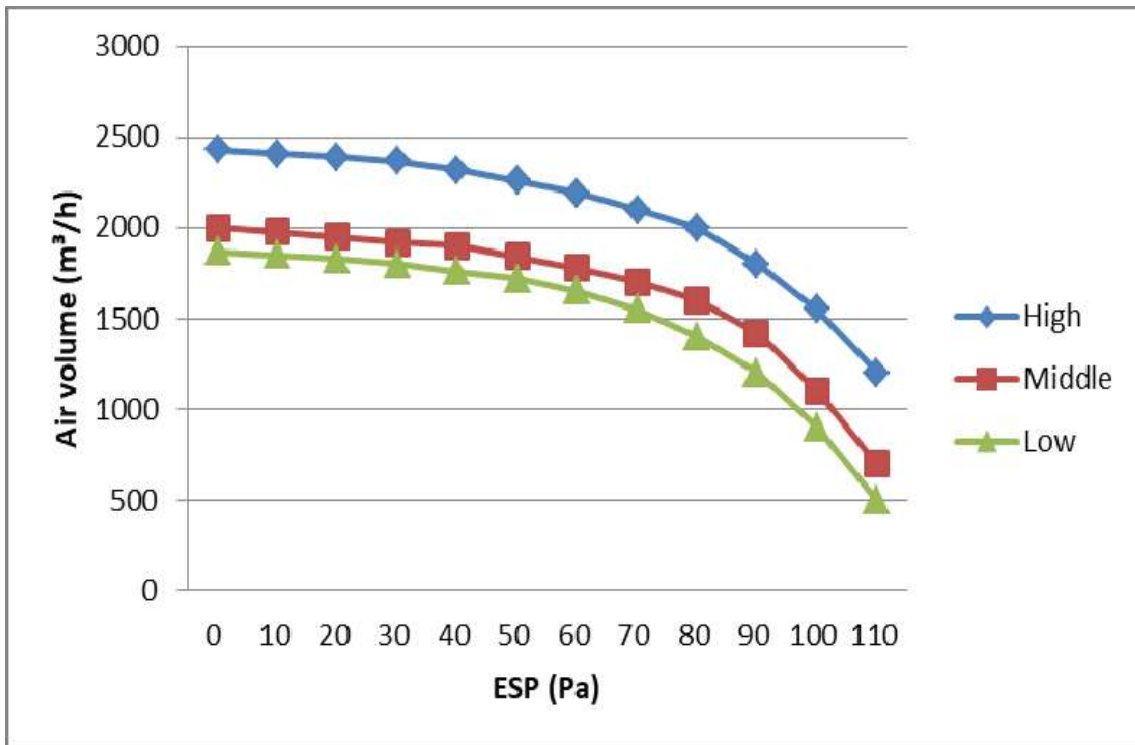
ARVMD-H112/4R1A; ARVMD-H112/2R1A;

ARVMD-H125/4R1A; ARVMD-H125/2R1A;

ARVMD-H140/4R1A; ARVMD-H140/2R1A;

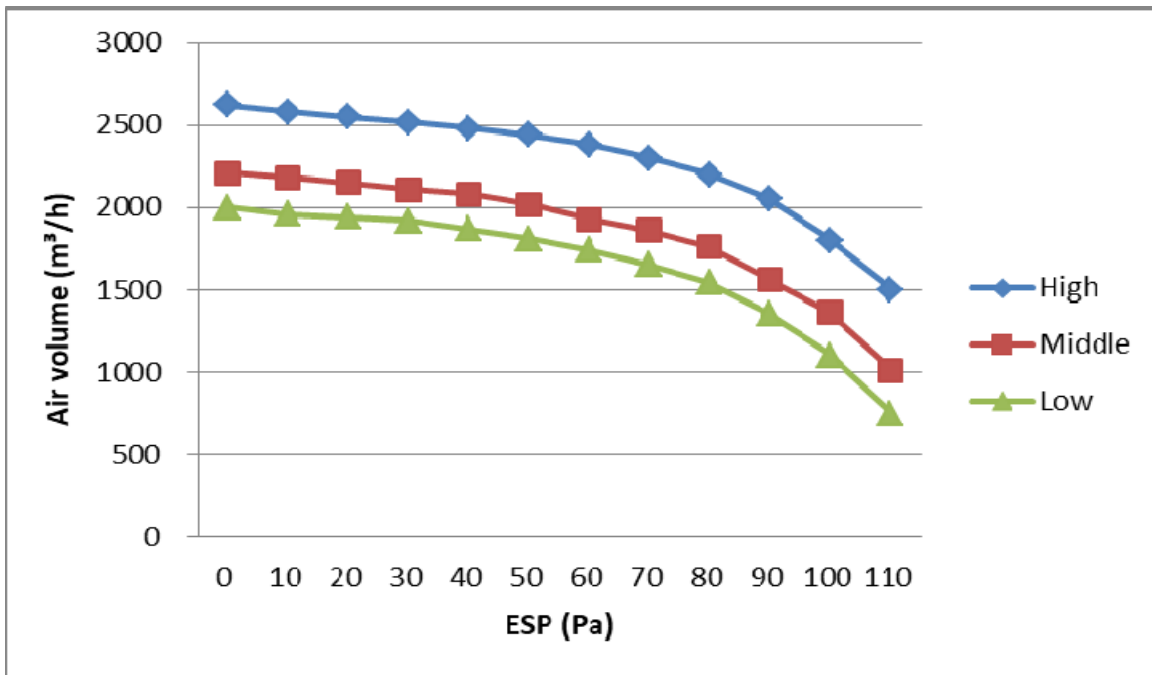
Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H112/4R1A; ARVMD-H112/2R1A; ARVMD-H125/4R1A; ARVMD-H125/2R1A; ARVMD-H140/4R1A; ARVMD-H40/2R1A; Default (80Pa)	0	2430	2000	1870
	10	2410	1980	1850
	20	2390	1950	1830
	30	2370	1920	1800
	40	2320	1900	1760
	50	2260	1840	1720
	60	2190	1780	1650
	70	2100	1700	1550
	80	2000	1600	1400
90	1800	1420	1200	

	100	1550	1100	900
	110	1200	700	500



ARVMD-H150/4R1A; ARVMD-H150/2R1A;

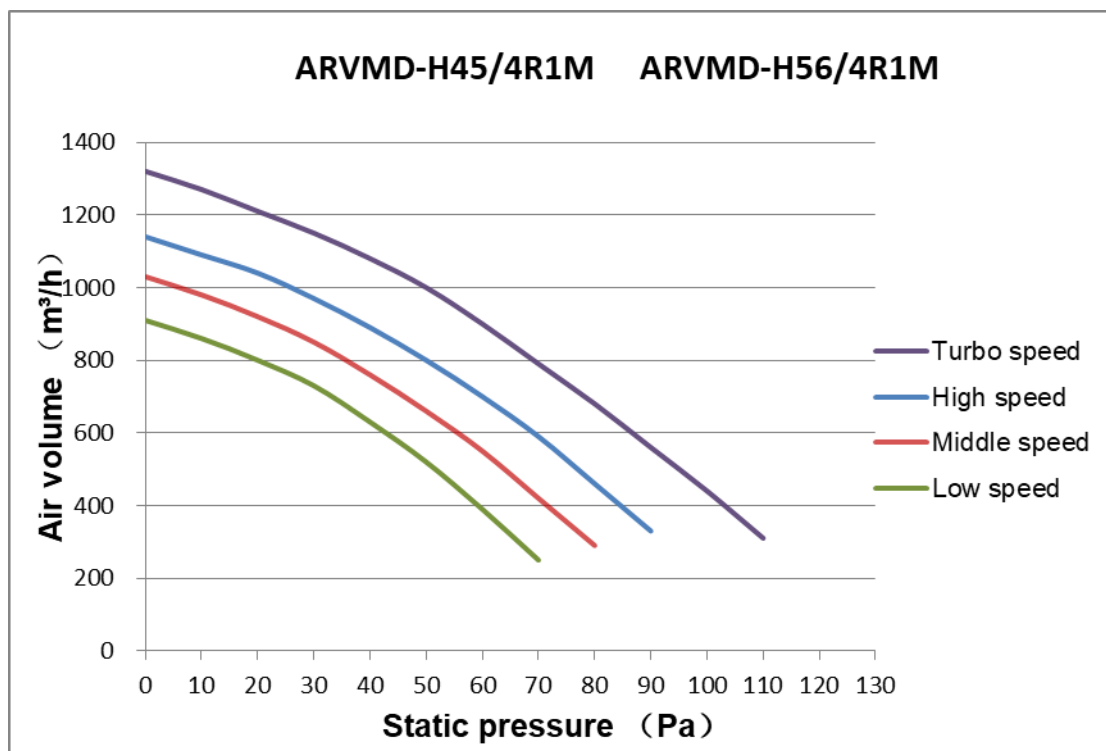
Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVMD-H150/4R1A; ARVMD-H50/2R1A; Default (80Pa)	0	2620	2210	2000
	10	2580	2180	1960
	20	2550	2150	1940
	30	2520	2110	1920
	40	2480	2080	1870
	50	2440	2020	1810
	60	2380	1930	1740
	70	2300	1860	1650
	80	2200	1760	1540
	90	2050	1560	1350
	100	1800	1360	1100
110	1500	1010	750	



■ 50HZ M Series

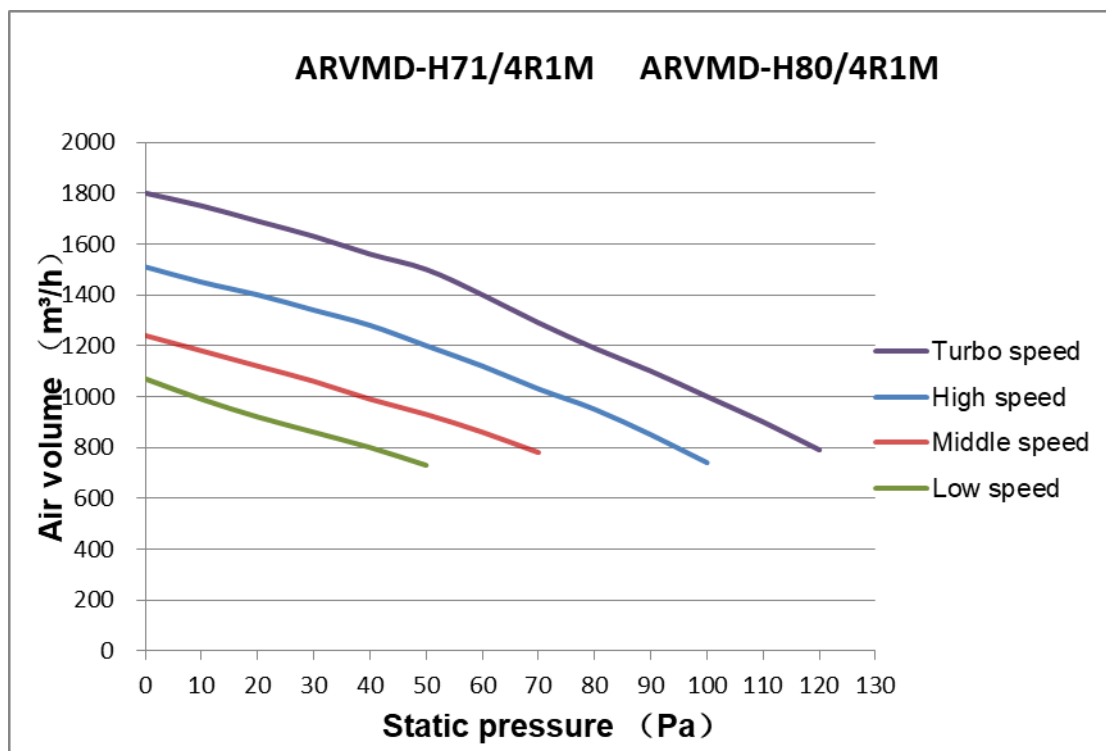
ARVMD-H45/4R1M; ARVMD-H56/4R1M;

Duct models	ESP (Pa)	Air volume(m ³ /h)			
		Turbo speed	High speed	Middle speed	Low speed
ARVMD-H45/4R1M; ARVMD-H56/4R1M; Default (50Pa)	0	1320	1140	1030	910
	10	1270	1090	980	860
	20	1210	1040	920	800
	30	1150	970	850	730
	40	1080	890	760	630
	50	1000	800	660	520
	60	900	700	550	390
	70	790	590	420	250
	80	680	460	290	-
	90	560	330	-	-
	100	440	-	-	-
	110	310	-	-	-



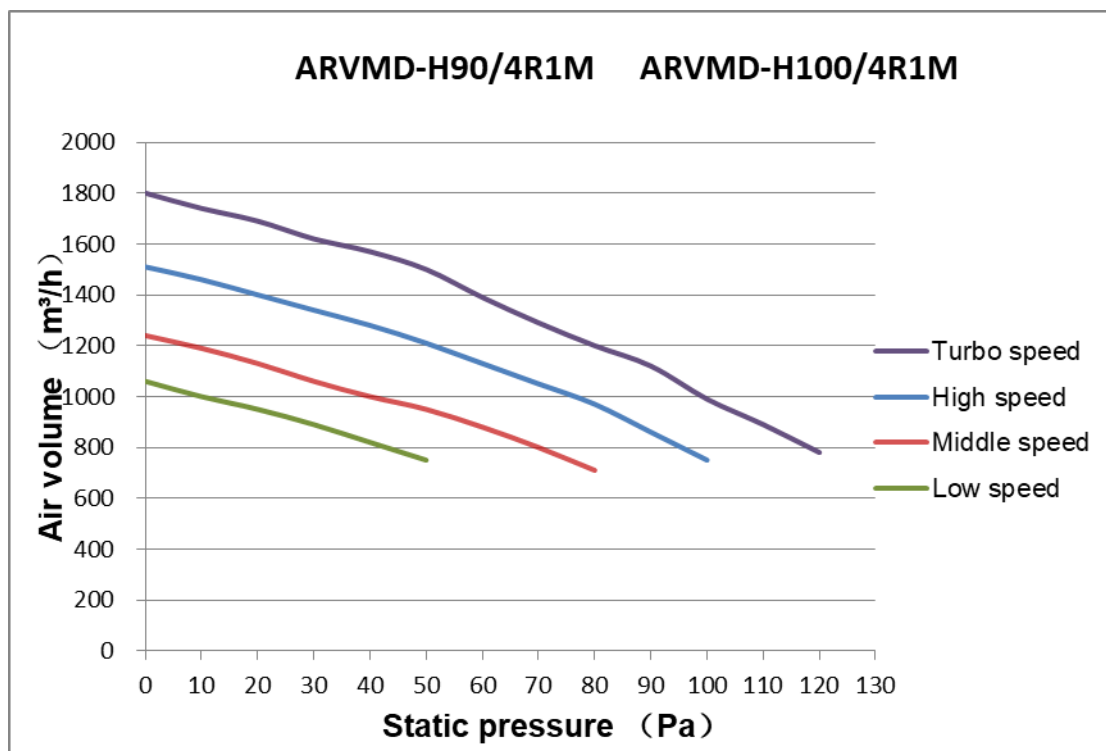
ARVMD-H63/4R1M; ARVMD-H71/4R1M; ARVMD-H80/4R1M;

Duct models	ESP (Pa)	Air volume(m ³ /h)			
		Turbo speed	High speed	Middle speed	Low speed
ARVMD-H63/4R1M; ARVMD-H71/4R1M; ARVMD-H80/4R1M; Default (50Pa)	0	1800	1510	1240	1070
	10	1750	1450	1180	990
	20	1690	1400	1120	920
	30	1630	1340	1060	860
	40	1560	1280	990	800
	50	1500	1200	930	730
	60	1400	1120	860	-
	70	1290	1030	780	-
	80	1190	950	-	-
	90	1100	850	-	-
	100	1000	740	-	-
	110	900	-	-	-



ARVMD-H90/4R1M; ARVMD-H100/4R1M;

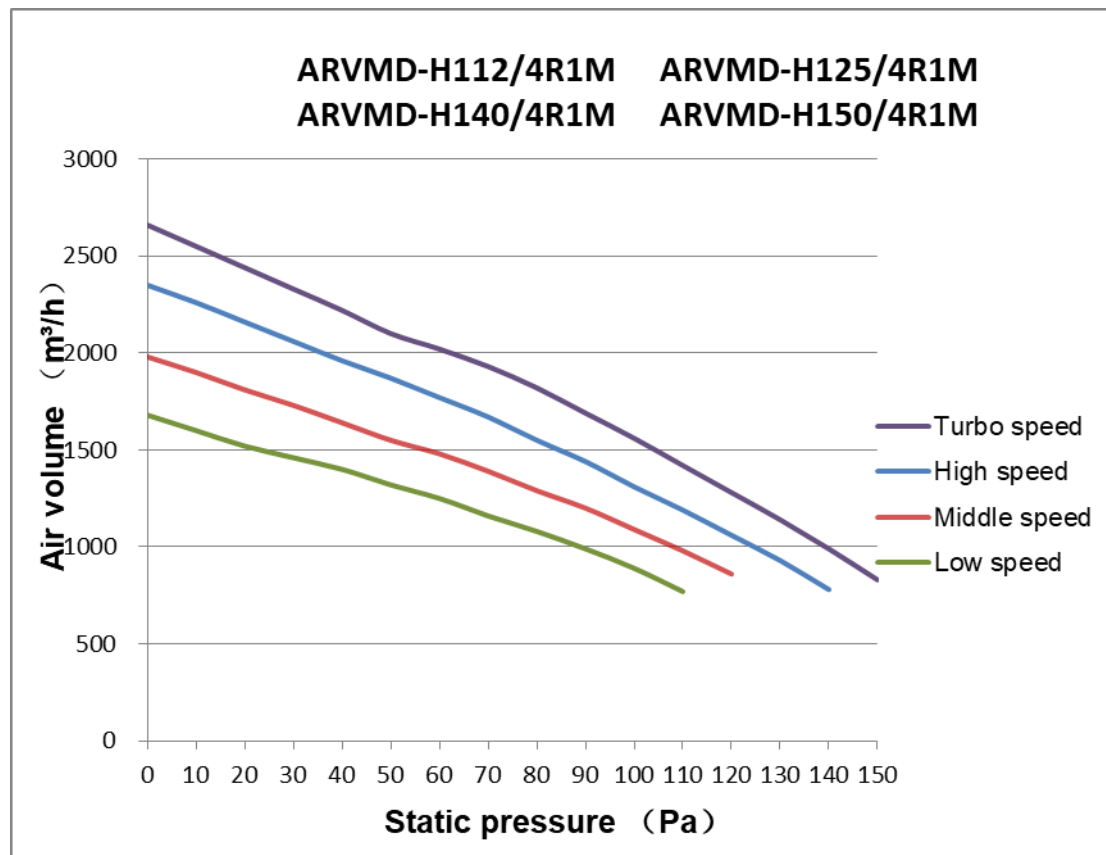
Duct models	ESP (Pa)	Air volume(m ³ /h)			
		Turbo speed	High speed	Middle speed	Low speed
ARVMD-H90/4R1M; ARVMD-H100/4R1M; Default (50Pa)	0	1800	1510	1240	1060
	10	1740	1460	1190	1000
	20	1690	1400	1130	950
	30	1620	1340	1060	890
	40	1570	1280	1000	820
	50	1500	1210	950	750
	60	1390	1130	880	-
	70	1290	1050	800	-
	80	1200	970	710	-
	90	1120	860	-	-
	100	990	750	-	-
	110	890	-	-	-



ARVMD-H112/4R1M; ARVMD-H125/4R1M; ARVMD-H140/4R1M; ARVMD-H150/4R1M;

Duct models	ESP (Pa)	Air volume(m ³ /h)			
		Turbo speed	High speed	Middle speed	Low speed
ARVMD-H112/4R1M; ARVMD-H125/4R1M; ARVMD-H140/4R1M; ARVMD-H150/4R1M; Default (50Pa)	0	2660	2350	1980	1680
	10	2550	2260	1900	1600
	20	2440	2160	1810	1520
	30	2330	2060	1730	1460
	40	2220	1960	1640	1400
	50	2100	1870	1550	1320
	60	2020	1770	1480	1250
	70	1930	1670	1390	1160
	80	1820	1550	1290	1080
	90	1690	1440	1200	990
	100	1560	1310	1090	890
	110	1420	1190	980	770

	120	1280	1060	860	-
	130	1140	930	-	-
	140	990	780	-	-
	150	830	-	-	-

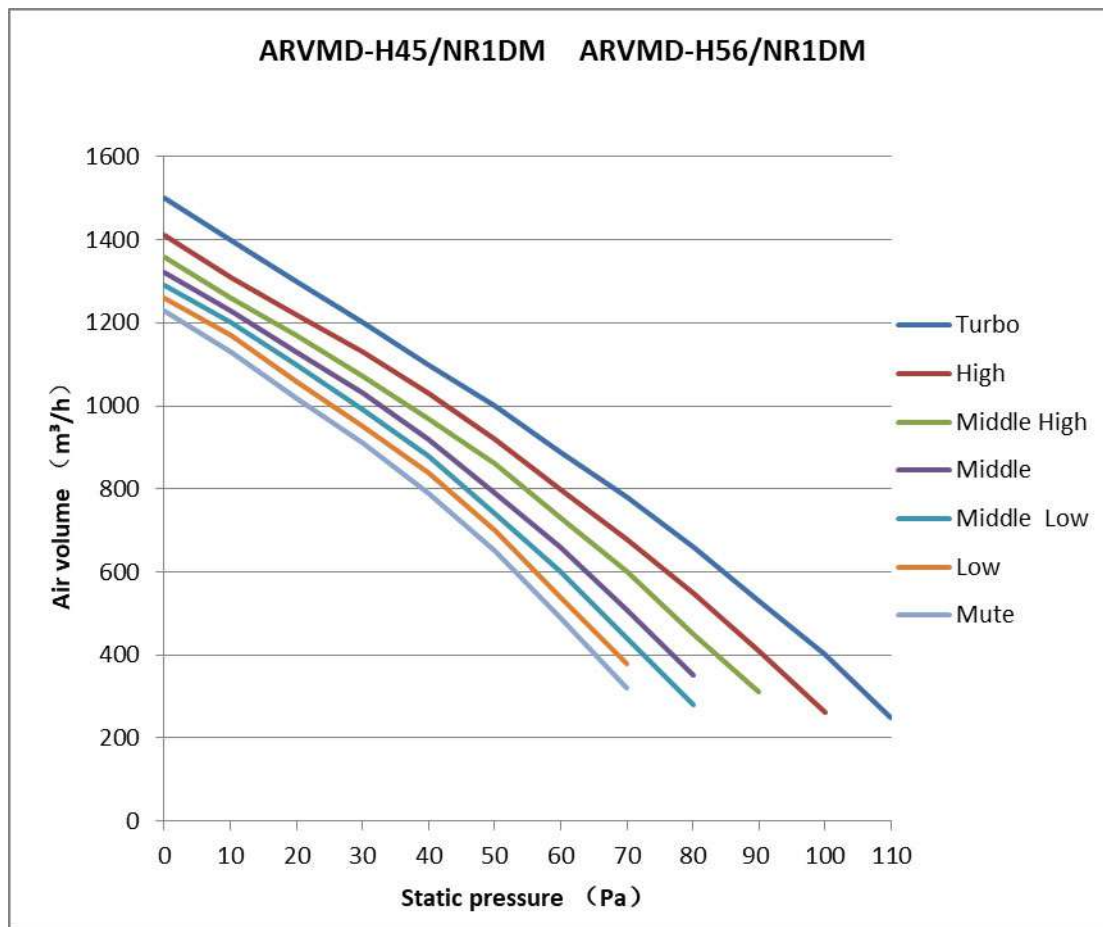


■ 50&60HZ M Series

ARVMD-H45/NR1DM; ARVMD-H56/NR1DM;

Duct models	ESP (Pa)	Air volume (m ³ /h)						
		Turbo speed	High speed	Middle High	Middle speed	Middle Low	Low speed	Mute
ARVMD-H45/NR1DM; ARVMD-H56/NR1DM; Default (50Pa)	0	1500	1410	1360	1320	1290	1260	1230
	10	1400	1310	1260	1230	1200	1170	1130
	20	1300	1220	1170	1130	1100	1060	1020
	30	1200	1130	1070	1030	990	950	910
	40	1100	1030	970	920	880	840	790
	50	1000	920	860	790	740	700	650
	60	890	800	730	660	600	540	490
	70	780	680	600	510	440	380	320
	80	660	550	450	350	280	-	-
90	530	410	310	-	-	-	-	

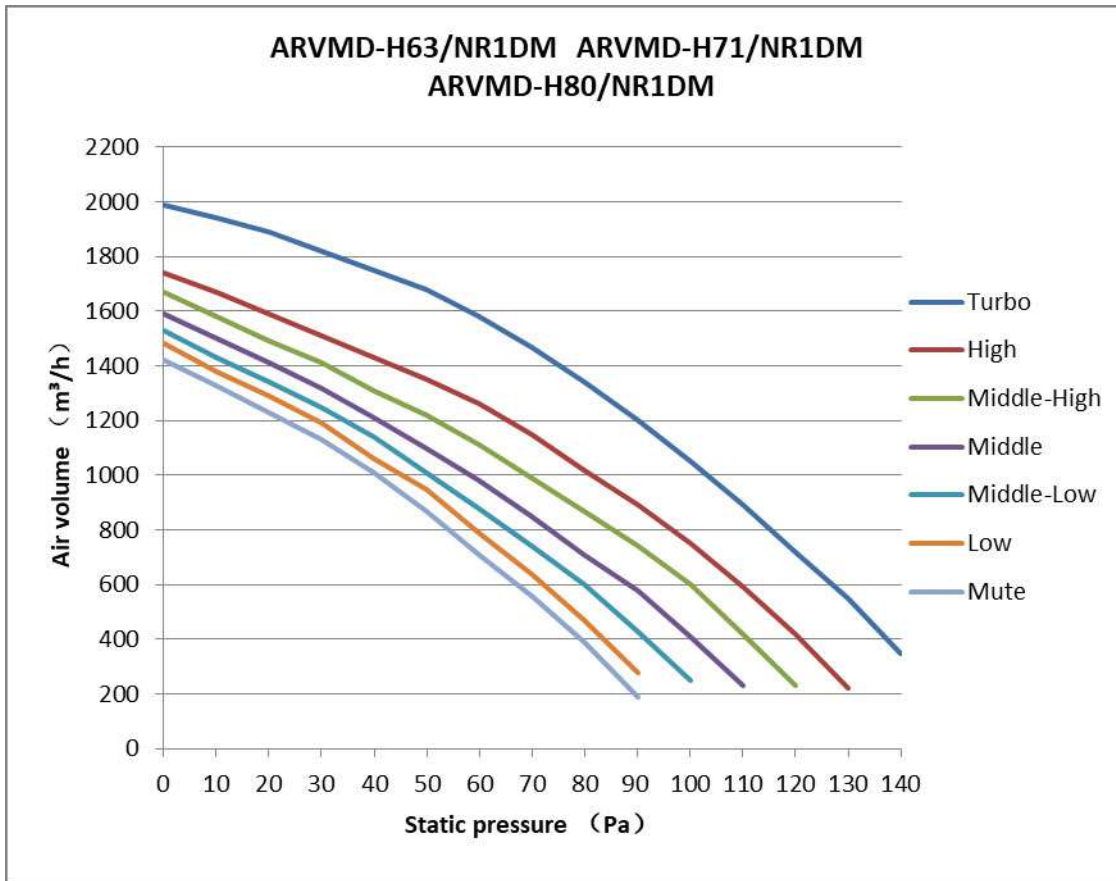
	100	400	260	-	-	-	-	-
	110	250	-	-	-	-	-	-



ARVMD-H63/NR1DM; ARVMD-H71/NR1DM; ARVMD-H80/NR1DM;

Duct models	ESP (Pa)	Air volume (m ³ /h)						
		Turbo speed	High speed	Middle High	Middle speed	Middle Low	Low speed	Mute
ARVMD-H63/NR1DM; ARVMD-H71/NR1DM; ARVMD-H80/NR1DM; Default (50Pa)	0	1990	1740	1670	1590	1530	1480	1420
	10	1940	1670	1580	1500	1430	1380	1330
	20	1870	1590	1490	1410	1340	1290	1230
	30	1800	1510	1410	1320	1250	1190	1130
	40	1730	1430	1310	1210	1140	1060	1010
	50	1680	1350	1220	1100	1010	950	870
	60	1560	1260	1110	980	880	790	710
	70	1450	1150	990	850	740	640	560
	80	1330	1020	870	710	600	470	390
	90	1200	890	740	580	430	280	190
100	1050	750	600	410	250	-	-	

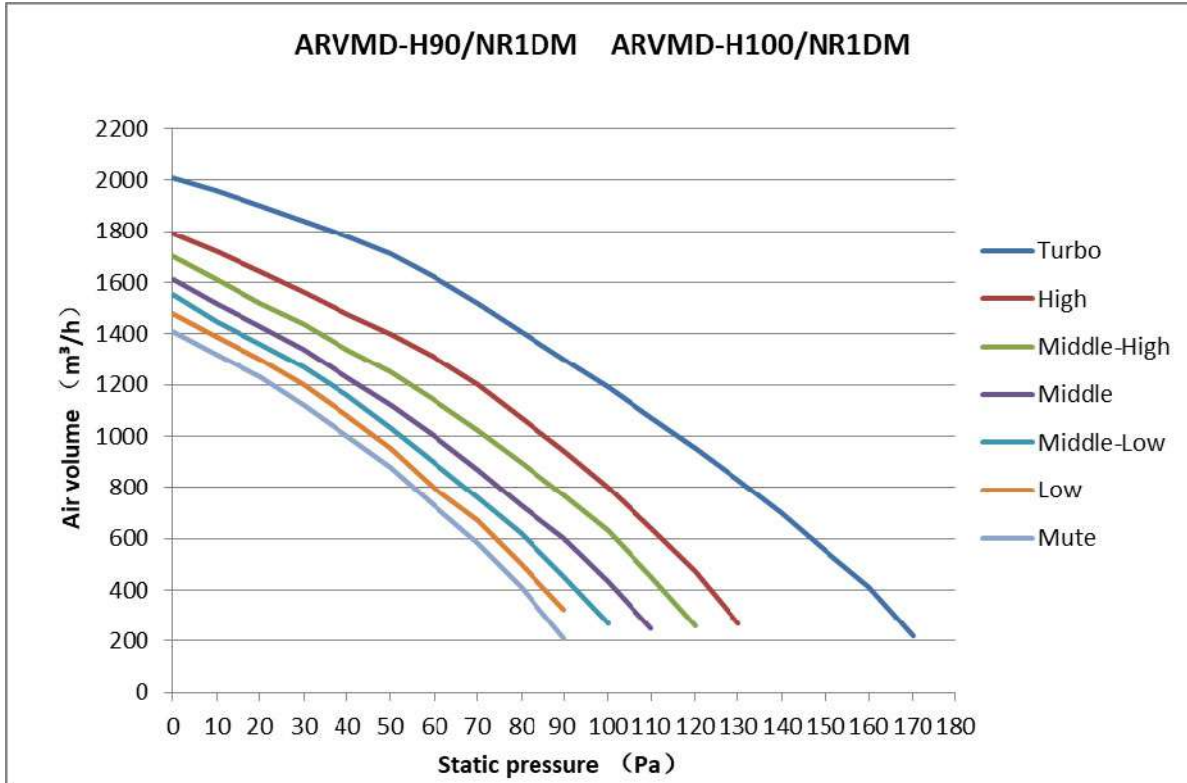
	110	890	590	420.0	230	-	-	-
	120	720	420	230.0	-	-	-	-
	130	550	220	-	-	-	-	-
	140	350	-	-	-	-	-	-



ARVMD-H90/NR1DM; ARVMD-H100/NR1DM;

Duct models	ESP (Pa)	Air volume (m ³ /h)						
		Turbo speed	High speed	Middle High	Middle speed	Middle Low	Low speed	Mute
ARVMD-H90/NR1DM; ARVMD-H100/NR1DM Default (50Pa)	0	2010	1790	1700	1610	1550	1480	1410
	10	1960	1720	1610	1520	1450	1390	1320
	20	1900	1640	1520	1430	1360	1300	1230
	30	1840	1560	1440	1340	1270	1200	1120
	40	1780	1480	1340	1230	1160	1080	1000
	50	1710	1400	1250	1120	1030	950	880
	60	1620	1310	1140	1000	900	800	730
	70	1520	1200	1020	870	760	670	580
80	1410	1070	900	730	620	500	410	

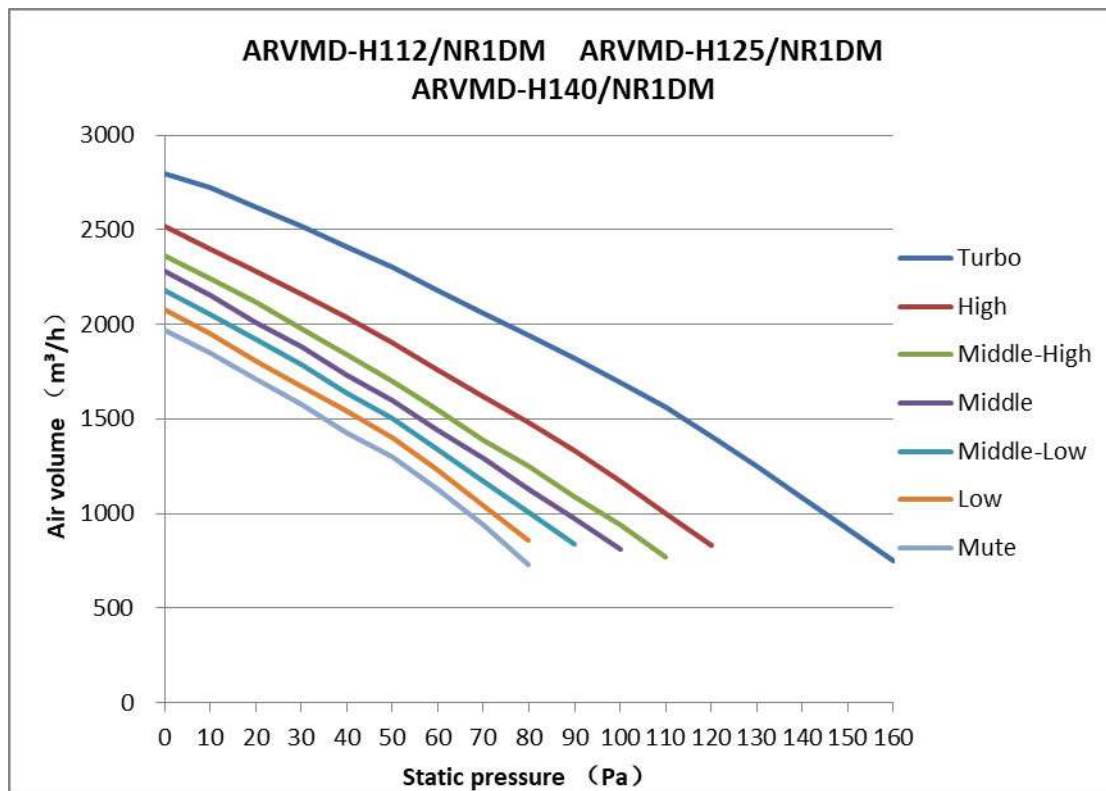
	90	1300	940	770	600	450	320	210
	100	1190	800	630	430	270	-	-
	110	1070	640	450	250	-	-	-
	120	950	470	260	-	-	-	-
	130	830	270	-	-	-	-	-
	140	700	-	-	-	-	-	-



ARVMD-H112/NR1DM ; ARVMD-H125/NR1DM; ARVMD-H140/NR1DM

Duct models	ESP (Pa)	Air volume (m ³ /h)						
		Turbo speed	High speed	Middle High	Middle speed	Middle Low	Low speed	Mute
ARVMD-H112/NR1DM ARVMD-H125/NR1DM ARVMD-H140/NR1DM Default (50Pa)	0	2800	2520	2360	2280	2180	2080	1970
	10	2720	2400	2240	2150	2050	1950	1850
	20	2620	2280	2120	2010	1920	1810	1710
	30	2520	2160	1980	1880	1790	1670	1580
	40	2410	2040	1840	1730	1640	1540	1430
	50	2300	1900	1700	1600	1500	1400	1300
	60	2180	1760	1550	1440	1340	1230	1130
	70	2060	1620	1390	1290	1170	1040	940
	80	1940	1480	1250	1130	1010	860	730

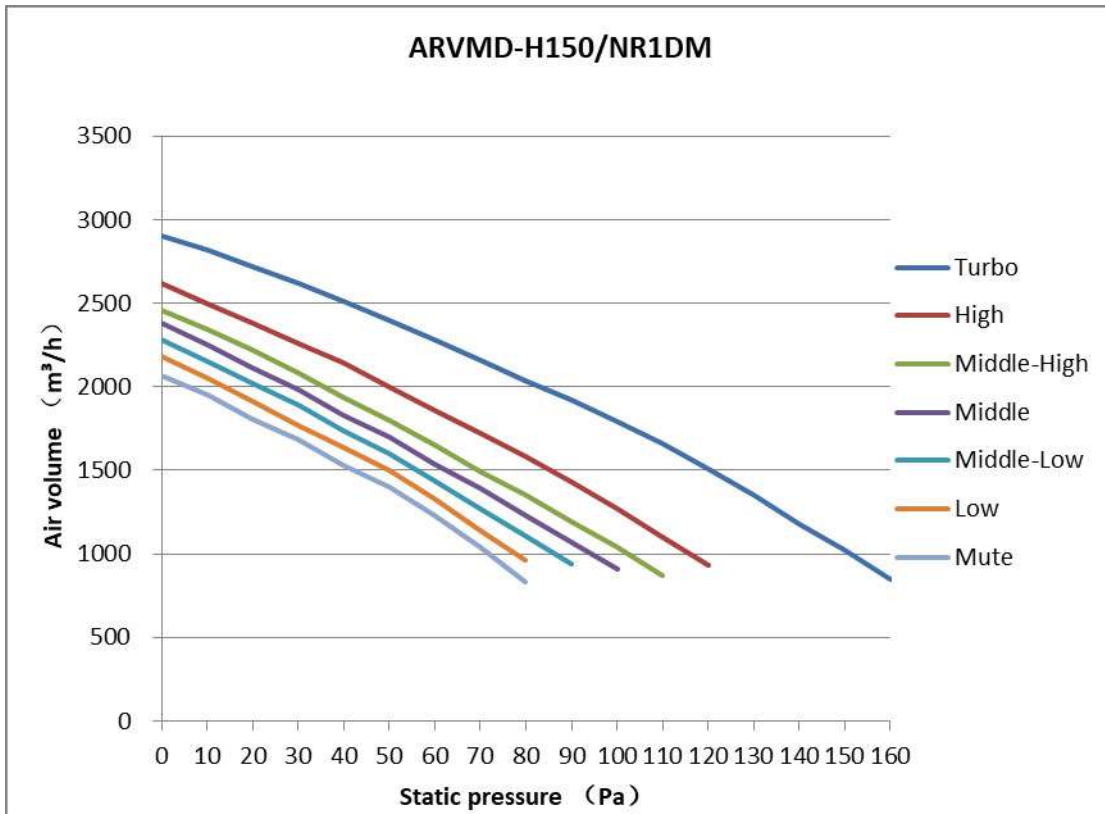
	90	1820	1330	1090	970	840	-	-
	100	1690	1170	940	810	-	-	-
	110	1560	1000	770	-	-	-	-
	120	1410	830	-	-	-	-	-
	130	1250	-	-	-	-	-	-
	140	1080	-	-	-	-	-	-



ARVMD-H150/NR1DM

Duct models	ESP (Pa)	Air volume (m ³ /h)						
		Turbo speed	High speed	Middle High	Middle speed	Middle Low	Low speed	Mute
ARVMD-H150/NR1DM Default (50Pa)	0	2900	2620	2460	2380	2280	2180	2070
	10	2820	2500	2340	2250	2150	2050	1950
	20	2720	2380	2220	2110	2020	1910	1810
	30	2620	2260	2080	1980	1890	1770	1680
	40	2510	2140	1940	1830	1740	1640	1530
	50	2400	2000	1800	1700	1600	1500	1400
	60	2280	1860	1650	1540	1440	1330	1230
	70	2160	1720	1490	1390	1270	1140	1040
	80	2040	1580	1350	1230	1110	960	830
	90	1920	1430	1190	1070	940	-	-

	100	1790	1270	1040	910	-	-	-
	110	1660	1100	870	-	-	-	-
	120	1510	930	-	-	-	-	-
	130	1350	-	-	-	-	-	-
	140	1180	-	-	-	-	-	-



6. Capacity table

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

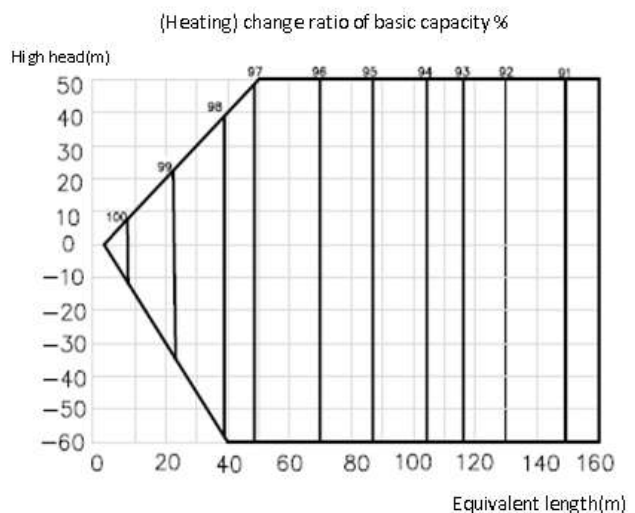
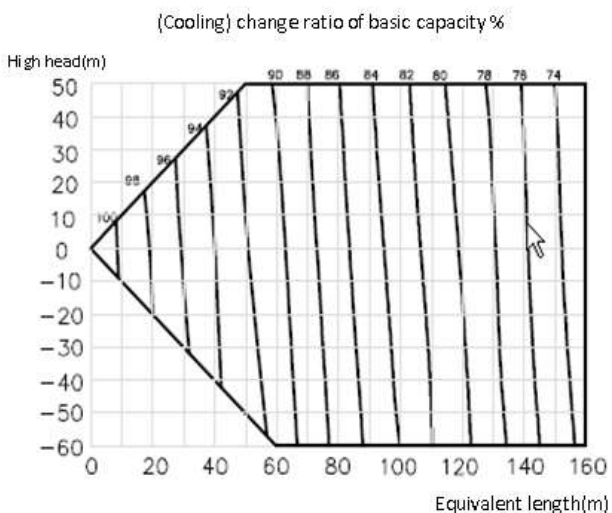
ODU dry bulb temperature [°C]	Correction coefficient	Indoor dry/wet bulb temperature [°C]				
		22/15	24/17	27/19	29/21	32/23
-15 ~ 20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	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.

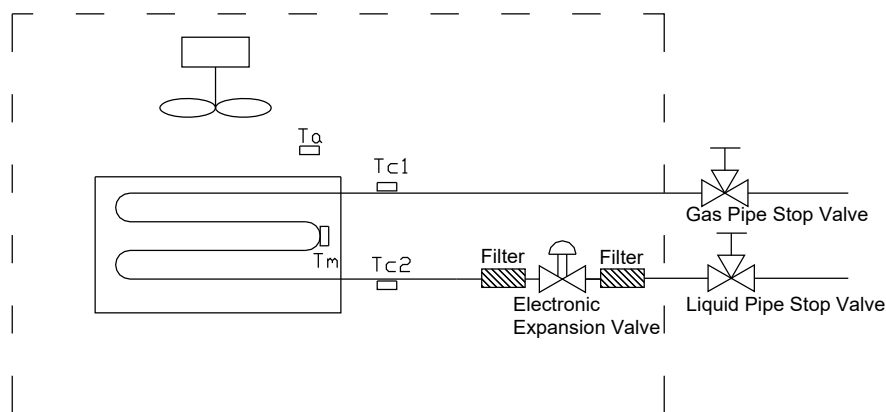
Outdoor ambient temperature of dry/wet bulb [°C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [°C]		
		15	20	25
-20/-21	Heating capacity	0.58	0.53	0.49
	Power	0.50	0.56	0.62
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	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)

7. Refrigerant piping diagram



Refrigerant pipe connection port diameters (mm)

Series	Models	Gas (mm)	Liquid(mm)
50&60HZ E Series ESP 80Pa	ARVMD-H045/R1X	Φ12.7	Φ6.35
	ARVMD-H056/R1X		
	ARVMD-H071/R1X		
	ARVMD-H080/R1X	Φ15.88	Φ9.52
	ARVMD-H090/R1X		
	ARVMD-H100/R1X		
	ARVMD-H112/R1X	Φ19.05	Φ9.52
	ARVMD-H125/R1X		

	ARVMD-H140/R1X		
	ARVMD-H150/R1X		
50HZ S3 Series ESP 80Pa	ARVMD-H045/4R1A	Φ12.7	Φ6.35
	ARVMD-H056/4R1A		
	ARVMD-H071/4R1A		
	ARVMD-H080/4R1A	Φ15.88	Φ9.52
	ARVMD-H090/4R1A		
	ARVMD-H100/4R1A		
	ARVMD-H112/4R1A		
	ARVMD-H125/4R1A	Φ19.05	Φ9.52
	ARVMD-H140/4R1A		
	ARVMD-H150/4R1A		
60HZ S3 Series ESP 80Pa	ARVMD-H045/2R1A	Φ12.7	Φ6.35
	ARVMD-H056/2R1A		
	ARVMD-H071/2R1A		
	ARVMD-H080/2R1A	Φ15.88	Φ9.52
	ARVMD-H090/2R1A		
	ARVMD-H100/2R1A		
	ARVMD-H112/2R1A		
	ARVMD-H125/2R1A	Φ19.05	Φ9.52
	ARVMD-H140/2R1A		
	ARVMD-H150/2R1A		

M series

Series	Models	Gas (mm)	Liquid(mm)
50&60HZ M Series ESP 50Pa	ARVMD-H45/NR1DM	Φ15.88	Φ9.52
	ARVMD-H56/NR1DM		
	ARVMD-H63/NR1DM		
	ARVMD-H71/NR1DM		
	ARVMD-H80/NR1DM		
	ARVMD-H90/NR1DM		
	ARVMD-H100/NR1DM		
	ARVMD-H112/NR1DM		
	ARVMD-H125/NR1DM		
	ARVMD-H140/NR1DM		
ARVMD-H150/NR1DM			
50HZ M Series ESP 50Pa	ARVMD-H45/4R1M	Φ15.88	Φ9.52
	ARVMD-H56/4R1M		
	ARVMD-H63/4R1M		
	ARVMD-H71/4R1M		
	ARVMD-H80/4R1M		
	ARVMD-H90/4R1M		
	ARVMD-H100/4R1M		
	ARVMD-H112/4R1M		
	ARVMD-H125/4R1M		
	ARVMD-H140/4R1M		

	ARVMD-H150/4R1M		
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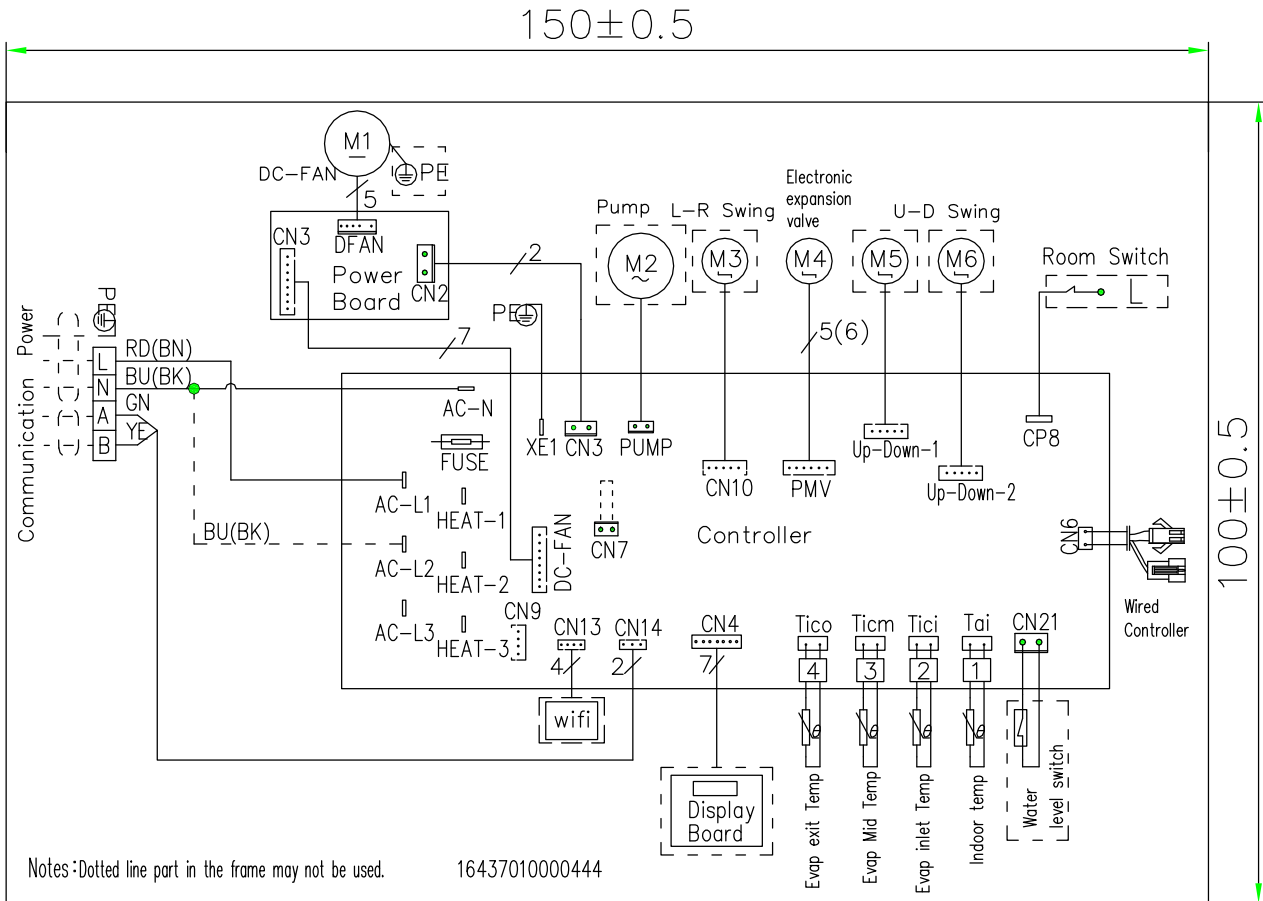
8. Wiring diagram

■ E series DC

ARVMD-H045/R1X , ARVMD-H056/R1X , ARVMD-H071/R1X

ARVMD-H080/R1X , ARVMD-H090/R1X , ARVMD-H100/R1X

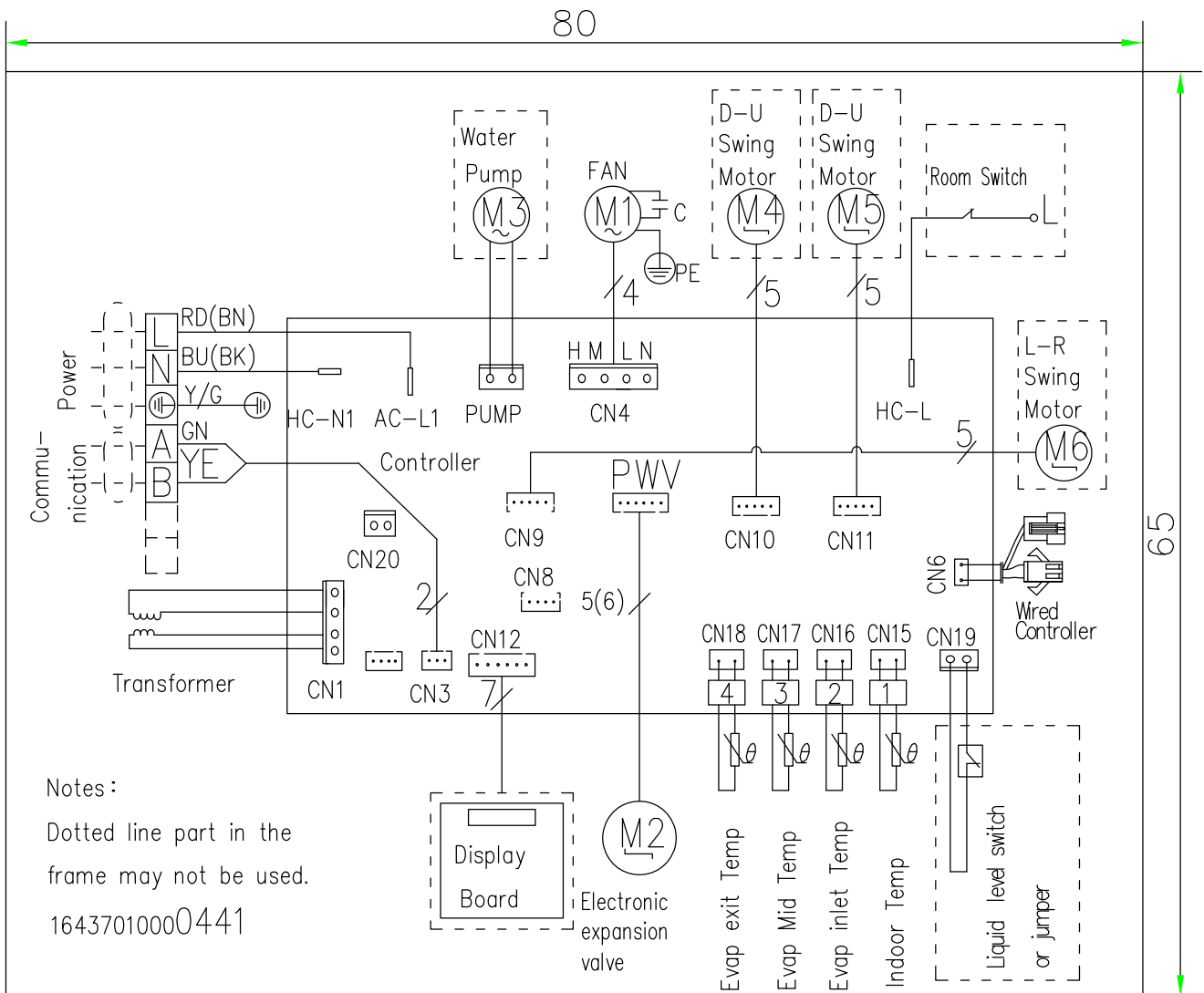
ARVMD-H112/R1X , ARVMD-H125/R1X , ARVMD-H140/R1X , ARVMD-H150/R1X



■ S series AC

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

ARVMD-H045/2R1A , ARVMD-H056/2R1A , ARVMD-H071/2R1A, ARVMD-H080/2R1A ,
 ARVMD-H090/2R1A , ARVMD-H100/2R1A, ARVMD-H112/2R1A, ARVMD-H125/2R1A ,
 ARVMD-H140/2R1A, ARVMD-H150/2R1A



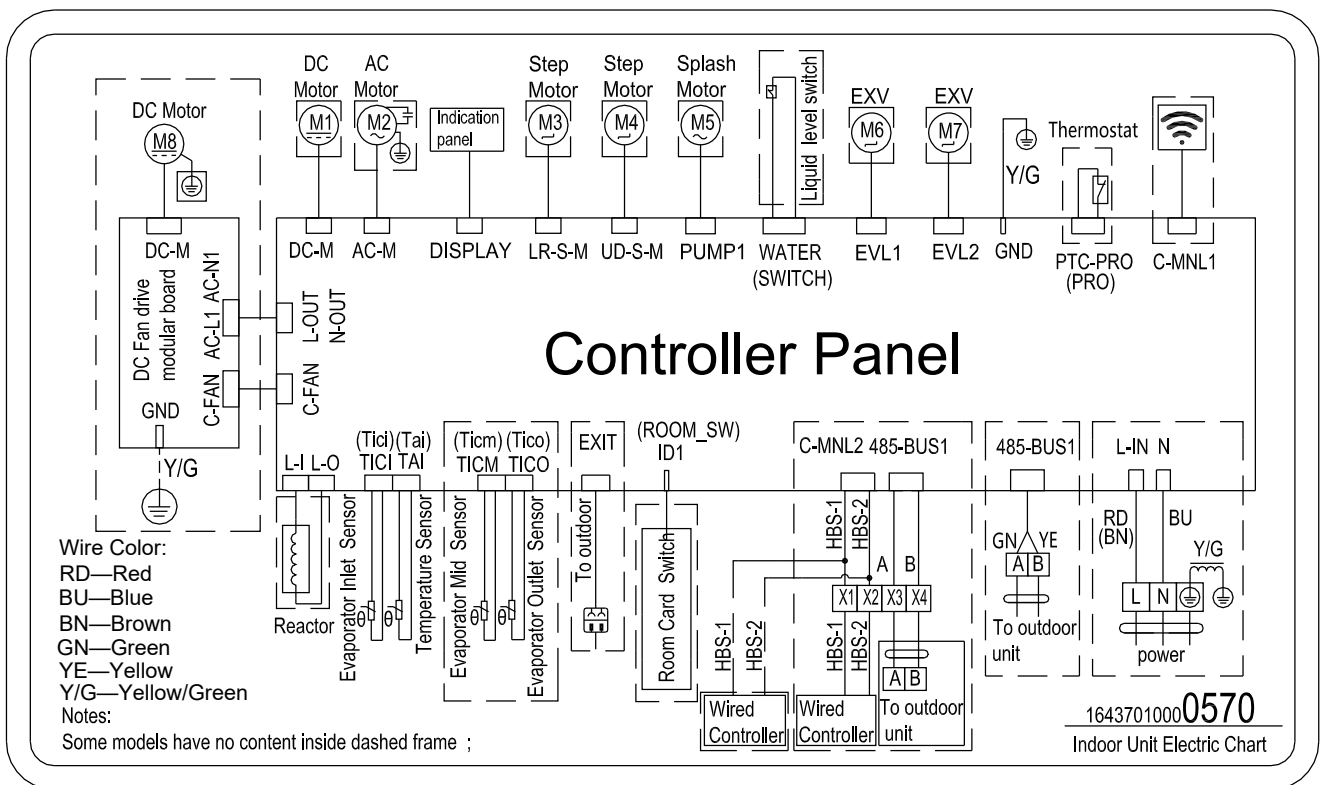
M Series Type

50&60HZ M Series

ARVMD-H45/NR1DM; ARVMD-H56/NR1DM; ARVMD-H63/NR1DM; ARVMD-H71/NR1DM
 ARVMD-H80/NR1DM; ARVMD-H90/NR1DM; ARVMD-H100/NR1DM; ARVMD-H112/NR1DM
 ARVMD-H125/NR1DM; ARVMD-H140/NR1DM; ARVMD-H150/NR1DM

50HZ M Series

ARVMD-H45/4R1M; ARVMD-H56/4R1M; ARVMD-H63/4R1M; ARVMD-H71/4R1M
 ARVMD-H80/4R1M; ARVMD-H90/4R1M; ARVMD-H100/4R1M; ARVMD-H112/4R1M
 ARVMD-H125/4R1M; ARVMD-H140/4R1M; ARVMD-H150/4R1M;



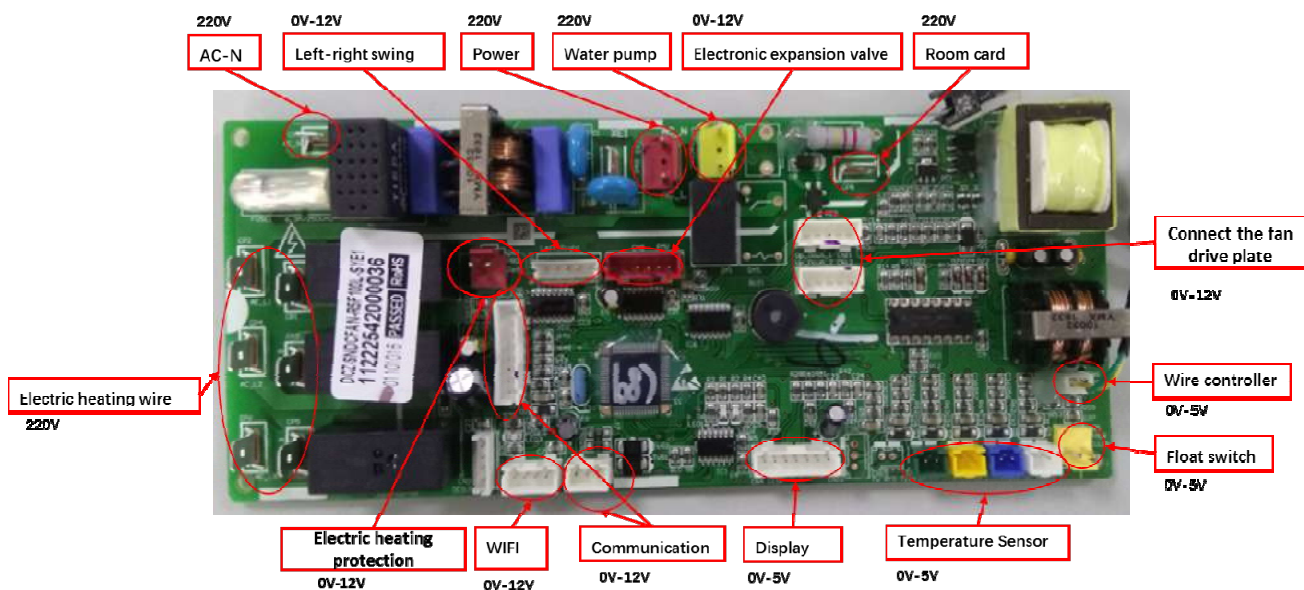
9. PCB Port Introduction

■ E series DC

ARVMD-H045/R1X , ARVMD-H056/R1X , ARVMD-H071/R1X
 ARVMD-H080/R1X , ARVMD-H090/R1X , ARVMD-H100/R1X
 ARVMD-H112/R1X , ARVMD-H125/R1X , ARVMD-H140/R1X , ARVMD-H150/R1X

Main board

11222542000036 **CJ 控制板 DCZ-SNDCFAN-R5F100L-SYE1**



Fan board

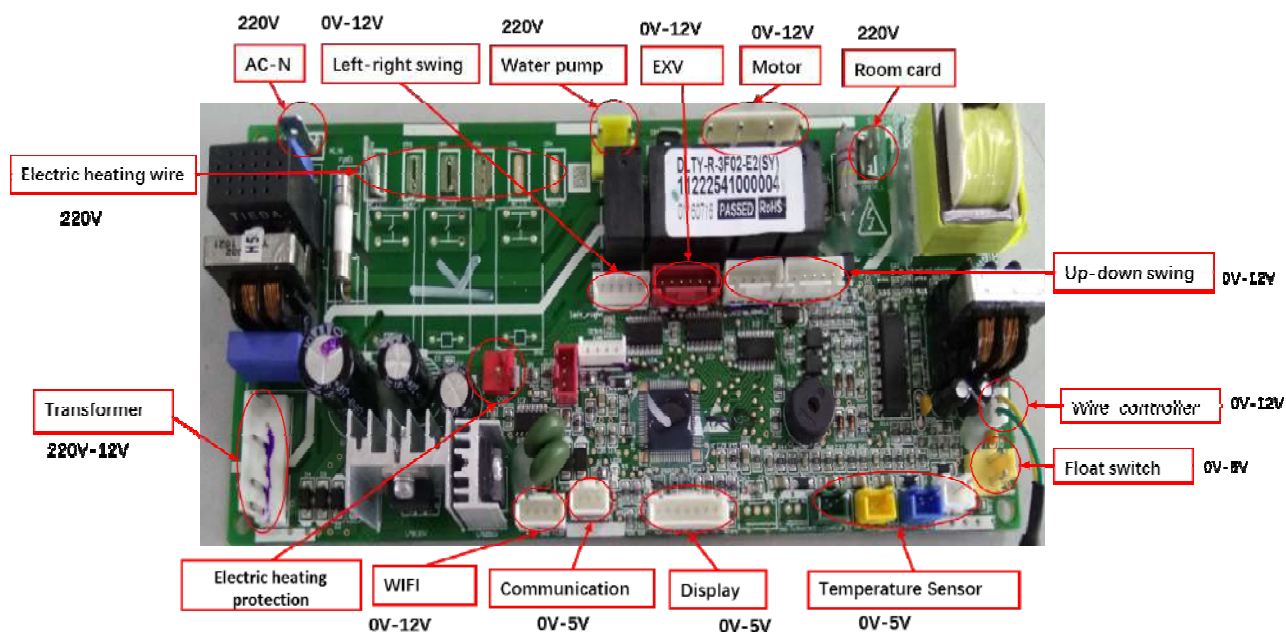
11222542000059 **控制板 CJ-F-SYEDCZ-SNPOWER-1**



■ S series AC

ARVMD-H045/4R1A , ARVMD-H056/4R1A , ARVMD-H071/4R1A; ARVMD-H080/4R1A ,
 ARVMD-H090/4R1A , ARVMD-H100/4R1A, ARVMD-H112/4R1A , ARVMD-H125/4R1A ,
 ARVMD-H140/4R1A, ARVMD-H150/4R1A
 ARVMD-H045/2R1A , ARVMD-H056/2R1A , ARVMD-H071/2R1A, ARVMD-H080/2R1A ,
 ARVMD-H090/2R1A , ARVMD-H100/2R1A, ARVMD-H112/2R1A, ARVMD-H125/2R1A ,
 ARVMD-H140/2R1A, ARVMD-H150/2R1A

Main board-- 11222541000047 CJ 控制板 DLTY-R-3F02-E3(SY)



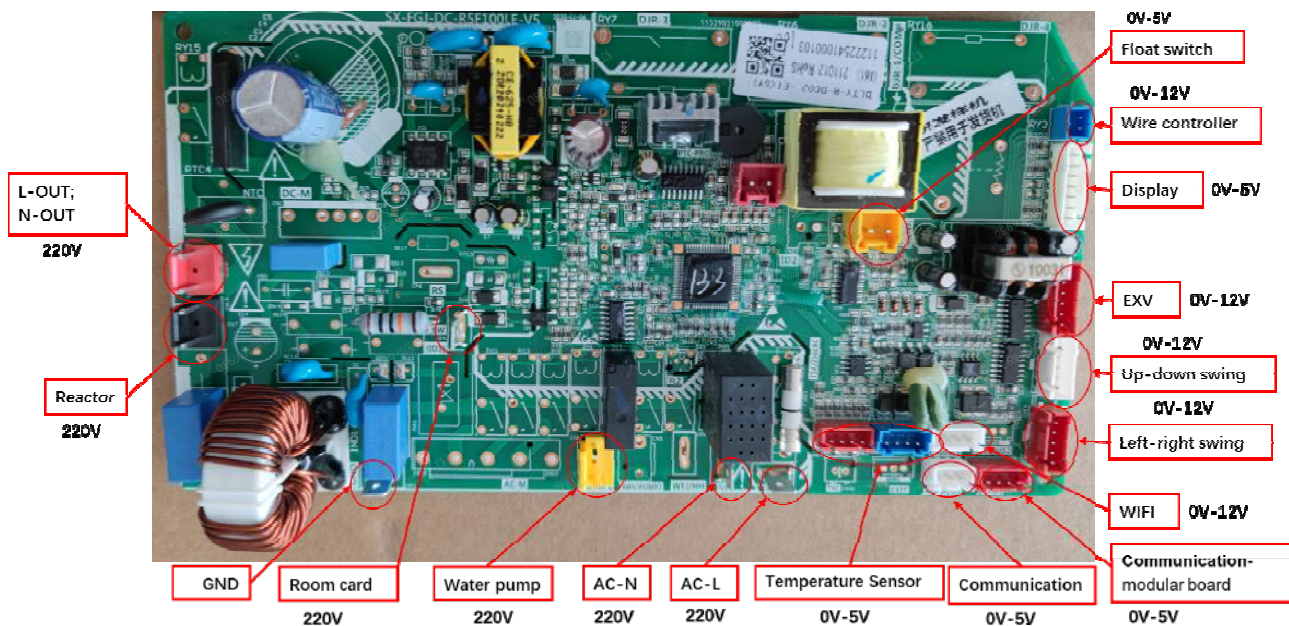
■ M Series Type

50&60HZ M Series

ARVMD-H45/NR1DM; ARVMD-H56/NR1DM; ARVMD-H63/NR1DM; ARVMD-H71/NR1DM
 ARVMD-H80/NR1DM; ARVMD-H90/NR1DM; ARVMD-H100/NR1DM; ARVMD-H112/NR1DM
 ARVMD-H125/NR1DM; ARVMD-H140/NR1DM; ARVMD-H150/NR1DM

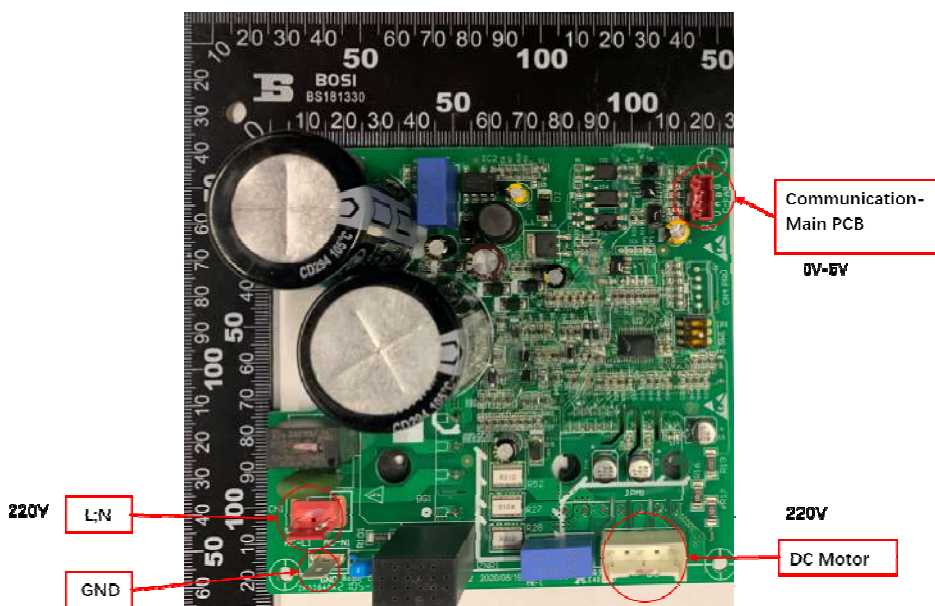
Main board

11222541000103 CJ 控制板 DLTY-R-DC02(外驱直流)-E1(SY)



Fan motor modular board

11222543000056 CJ 模块板 QD-12121F560W 直流风机(7 档风)-1(SY)

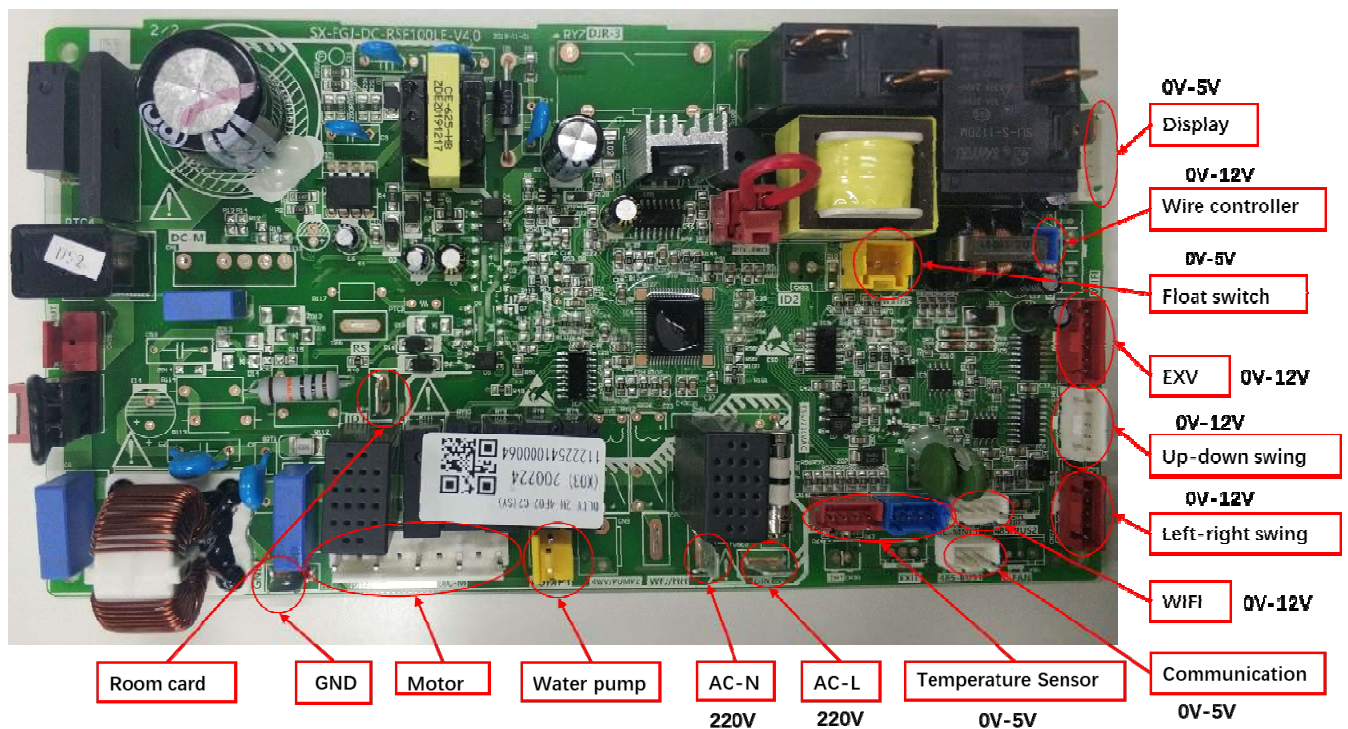


M Series Type

50HZ M Series



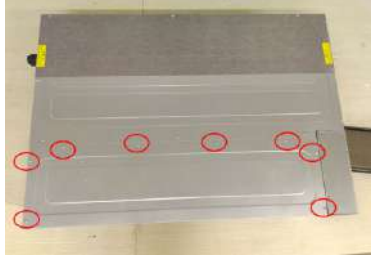
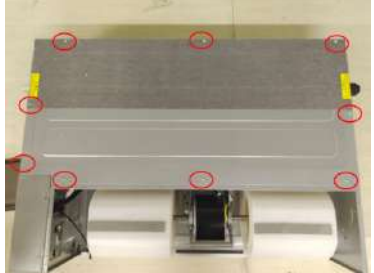

ARVMD-H45/4R1M; ARVMD-H56/4R1M; ARVMD-H63/4R1M; ARVMD-H71/4R1M
 ARVMD-H80/4R1M; ARVMD-H90/4R1M; ARVMD-H100/4R1M; ARVMD-H112/4R1M
 ARVMD-H125/4R1M; ARVMD-H140/4R1M; ARVMD-H150/4R1M;




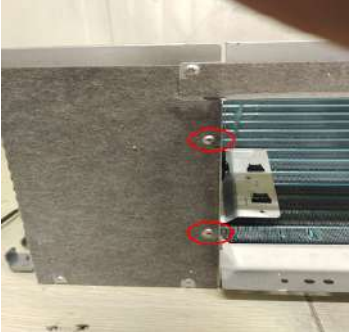

Main board-- 11222541000093 CJ 控制板 DLTY-R-4F02-E1(SY)

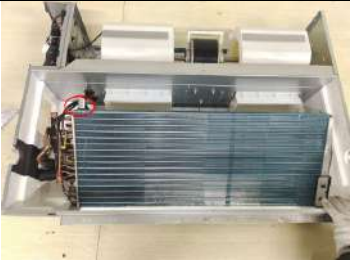



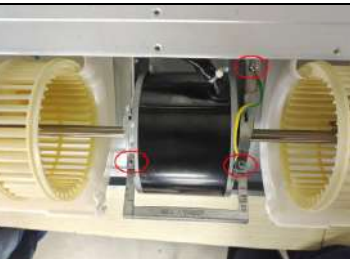



10. Disassembly and reassembly




EXAMPLE: 50&60HZ M Series

No	Parts	Procedure	Remark Photos
1	Filter	1) Pull out the filter screen according to the direction shown in the figure ;	
1	Filter	2) Remove 6 fixing screws and remove the return air flange ;	
1	Filter	3)Remove 10 fixing screws and remove chassis ;	
1	Filter	4) Remove 9 fixing screws and remove chassis ;	
1	Filter	5) Remove the water tray.	

No	Parts	Procedure	Remark Photos
2	Control box	1)Remove 10 fixing screws and remove the cover plate of the electric control box ;	
2	Control box	2) Remove the electric control board terminal and remove the electric control board.	
3	Evaporator	1)Remove the two fixing screws on the right side of the evaporator ;	
3	Evaporator	2) Remove 4 fixing screws and remove the left support plate of evaporator ;	
3	Evaporator		

No	Parts	Procedure	Remark Photos
3	Evaporator	3) Remove 2 fixing screws to separate the evaporator from the bracket ;	
3	Evaporator	4) Remove 4 fixing screws and remove the valve plate ;	
3	Evaporator	5) Remove the temperature sensing package and remove the evaporator.	
4	Fan motor and fan wheel	1) Open the latch between the upper and lower volute and remove the upper volute ;	
4	Fan motor and fan wheel	2) Remove one grounding screw and two fixing screws, and remove the clamp ;	
4	Fan motor and fan wheel	3) According to the position shown in the figure, unscrew the fixing nut with No. 5 I-wrench and remove the wind wheel.	

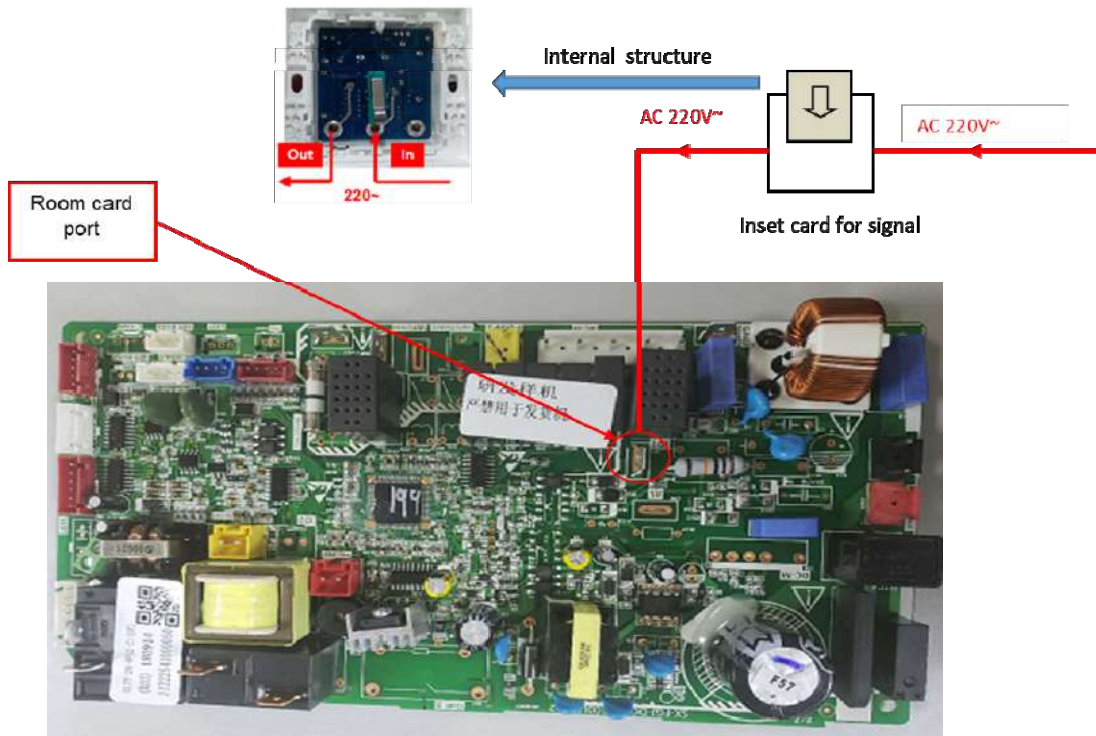
11. Split controller

Split Controller			
IDU Type	Standard	Optional	
	XK-02	L type	T type
ARVMD-H*** /R1X ***(045,056,071,080,090, 100,112,125.140.150)			
ARVMD-H*** /4R1A ***(045,056,071,080,090, 100,112,125.140.150)			
ARVMD-H*** /2R1A ***(045,056,071,080,090, 100,112,125.140.150)			
ARVMD-H*** /NR1DM ***(45,56,71,80,90, 100,112,125.140.150)			
ARVMD-H*** /4R1M ***(45,56,71,80,90, 100,112,125.140.150)			

12.Room card function

Parameter	Function	Insert key card	Remove key card
0901	Valid	Standby, IDU can be controlled	Standby, IDU can't be controlled

Wiring diagram



13.Parameter setting

3.1 Parameter setting table

Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVMD-H045/R1X	24	16	00	01
ARVMD-H056/R1X	24	18	00	01
ARVMD-H071/R1X	24	24	00	01
ARVMD-H080/R1X	24	30	00	01
ARVMD-H090/R1X	24	30	00	01
ARVMD-H100/R1X	24	36	00	01
ARVMD-H112/R1X	24	36	00	01
ARVMD-H125/R1X	24	42	00	01
ARVMD-H140/R1X	24	48	00	01
ARVMD-H150/R1X	24	60	00	01
ARVMD-H045/4R1A	24	16	00	01
ARVMD-H056/4R1A	24	18	00	01
ARVMD-H071/4R1A	24	24	00	01
ARVMD-H080/4R1A	24	30	00	01
ARVMD-H090/4R1A	24	30	00	01
ARVMD-H100/4R1A	24	36	00	01
ARVMD-H112/4R1A	24	36	00	01
ARVMD-H125/4R1A	24	42	00	01
ARVMD-H140/4R1A	24	48	00	01
ARVMD-H150/4R1A	24	60	00	01
ARVMD-H045/2R1A	24	16	00	01
ARVMD-H056/2R1A	24	18	00	01
ARVMD-H071/2R1A	24	24	00	01
ARVMD-H080/2R1A	24	30	00	01
ARVMD-H090/2R1A	24	30	00	01
ARVMD-H100/2R1A	24	36	00	01
ARVMD-H112/2R1A	24	36	00	01
ARVMD-H125/2R1A	24	42	00	01
ARVMD-H140/2R1A	24	48	00	01
ARVMD-H150/2R1A	24	60	00	01

- 0442 means built in water pump , 0444 means no water pump
- 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,
- 0900 means room card function invalid, 0901 means valid
- 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value

Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVMD-H45/NR1DM	12(39)	16	00	01
ARVMD-H56/NR1DM	12(39)	20	00	01
ARVMD-H63/NR1DM	12(39)	23	00	01
ARVMD-H71/NR1DM	12(39)	25	00	01
ARVMD-H80/NR1DM	12(39)	29	00	01
ARVMD-H90/NR1DM	12(39)	32	00	01
ARVMD-H100/NR1DM	12(39)	36	00	01
ARVMD-H112/NR1DM	12(39)	40	00	01
ARVMD-H125/NR1DM	12(39)	45	00	01
ARVMD-H140/NR1DM	12(39)	50	00	01
ARVMD-H150/NR1DM	12(39)	55	00	01
ARVMD-H45/4R1M	12(39)	16	00	01
ARVMD-H56/4R1M	12(39)	20	00	01
ARVMD-H63/4R1M	12(39)	23	00	01
ARVMD-H71/4R1M	12(39)	25	00	01
ARVMD-H80/4R1M	12(39)	29	00	01
ARVMD-H90/4R1M	12(39)	32	00	01
ARVMD-H100/4R1M	12(39)	36	00	01
ARVMD-H112/4R1M	12(39)	40	00	01
ARVMD-H125/4R1M	12(39)	45	00	01
ARVMD-H140/4R1M	12(39)	50	00	01
ARVMD-H150/4R1M	12(39)	55	00	01


1. 0439 means built in water pump , 0412 means no water pump

3.2 Parameter setting method

E.g.: set the parameter for 2.2kw IDU. (Parameter: 0508)


Wired controller

Step1



Press **FUNCTION** for more than 10s, enter parameter setting

Step2






1. Press **▲** to change 01 to **05**

2. Press **FUNCTION** for more than 5s, then **01** will flicker

3. then press **▲** to change 00 to **08**

4. Press **FUNCTION** 5s to send the order




14.Group control

Group control			
IDU type	Centralized controller	BMS-MODBUS control	Monitoring control
	Max.256 IDUs	Quantity no limit	one refrigerant system
ARVMD-H ^{***} /R1X ***(045,056,071,080,090, 100,112,125.140.150)			
ARVMD-H ^{***} /4R1A ***(045,056,071,080,090, 100,112,125.140.150)			
ARVMD-H ^{***} /2R1A ***(045,056,071,080,090, 100,112,125.140.150)			
ARVMD-H ^{***} /NR1DM ***(45,56,71,80,90, 100,112,125.140.150)			
ARVMD-H ^{***} /4R1M ***(45,56,71,80,90, 100,112,125.140.150)			

Note: More details about connection wiring , function introduce Please check the <Control system technical manual>

Part8 High Static Pressure Duct

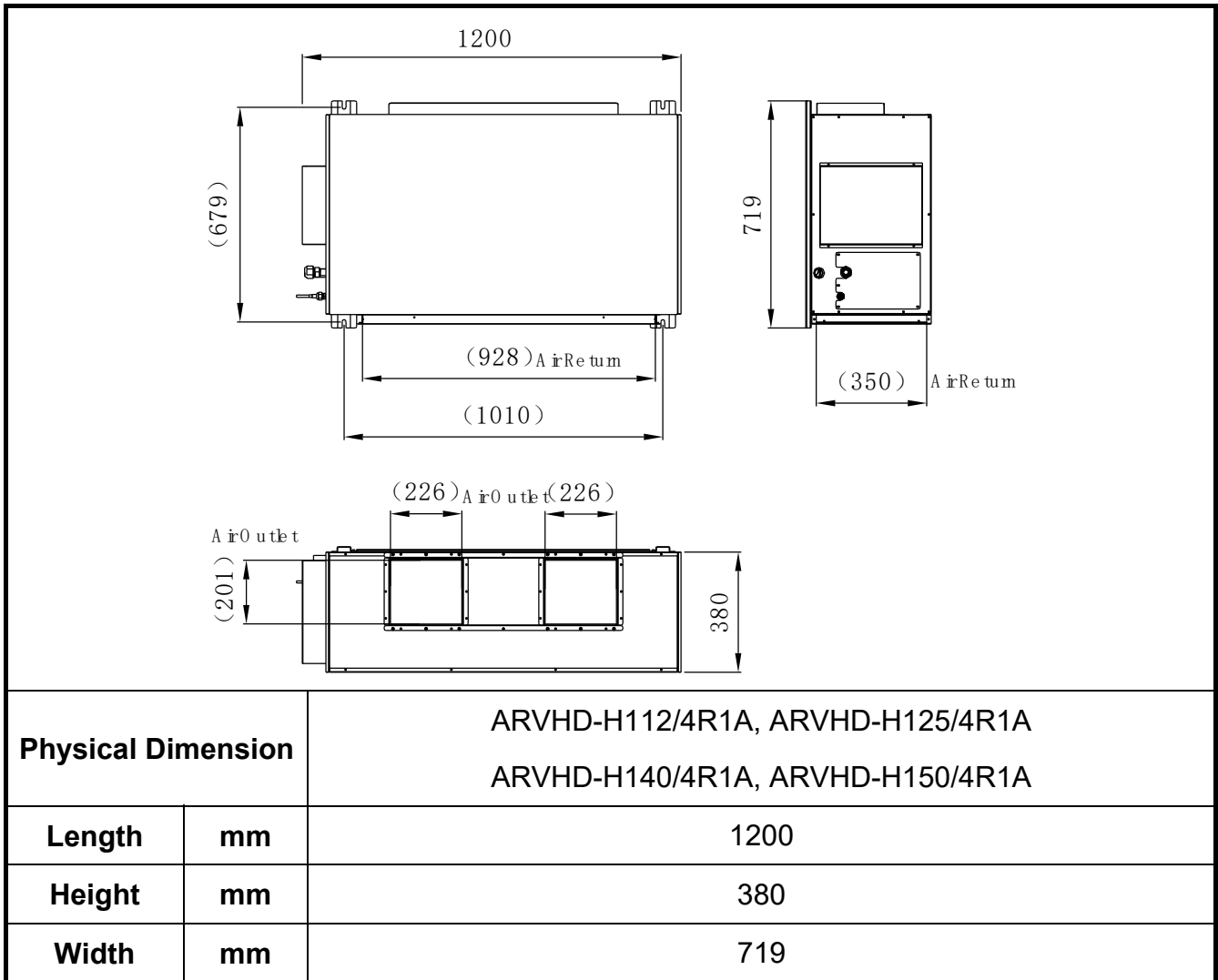
1. Product Line-up

Series	Models	Photos
50&60HZ Y Series 170Pa(30-250Pa)	ARVHD-H220NR1DC	
	ARVHD-H280NR1DC	
50HZ E Series 220Pa	ARVHD-H220/4R1B	
	ARVHD-H280/4R1B	
50HZ B Series 196Pa	ARVHD-H112/4R1A	
	ARVHD-H125/4R1A	
	ARVHD-H140/4R1A	
	ARVHD-H150/4R1A	

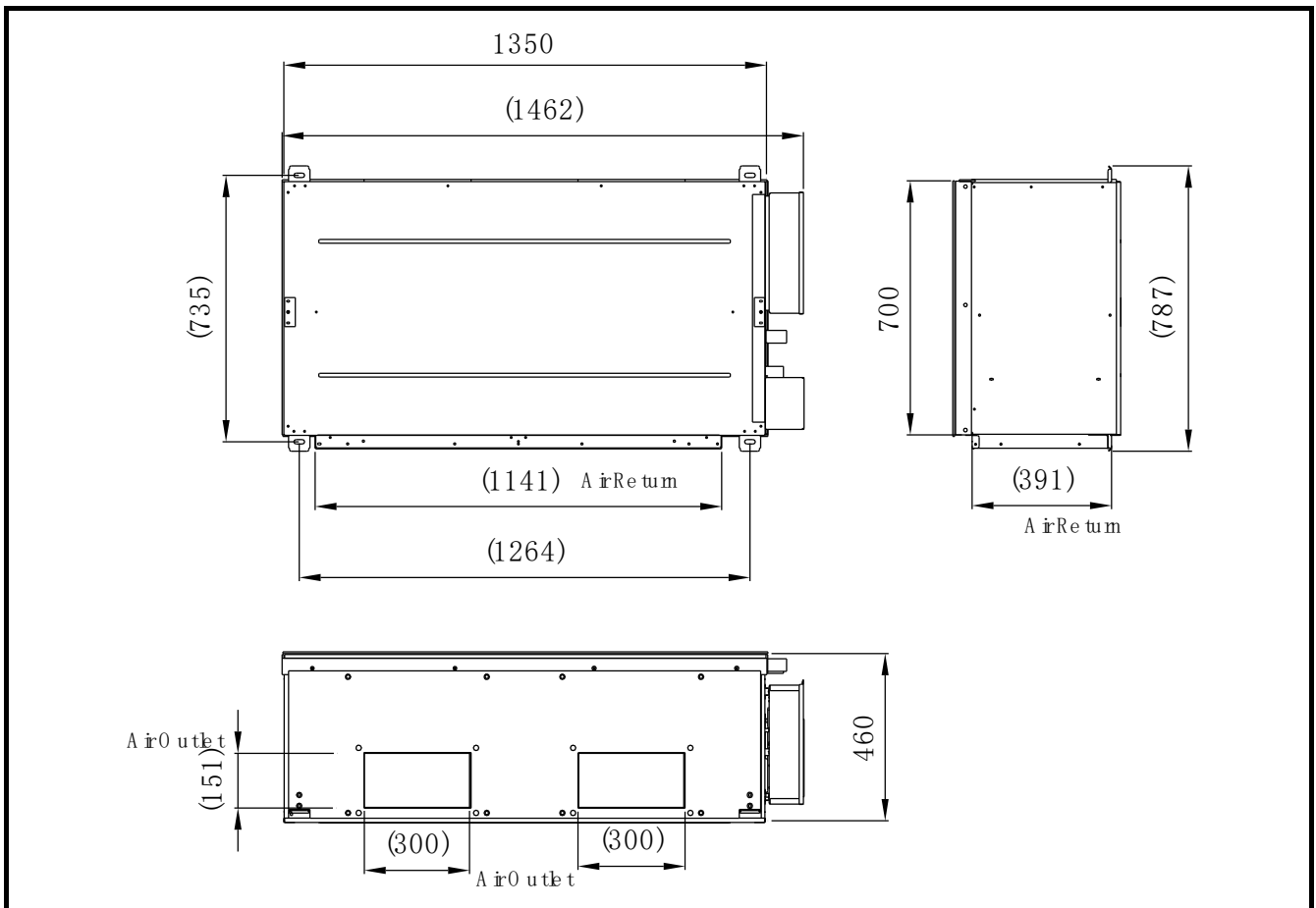
Remark: **Old Series, discontinued** : 50HZ E Series 220Pa

2. Dimension

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

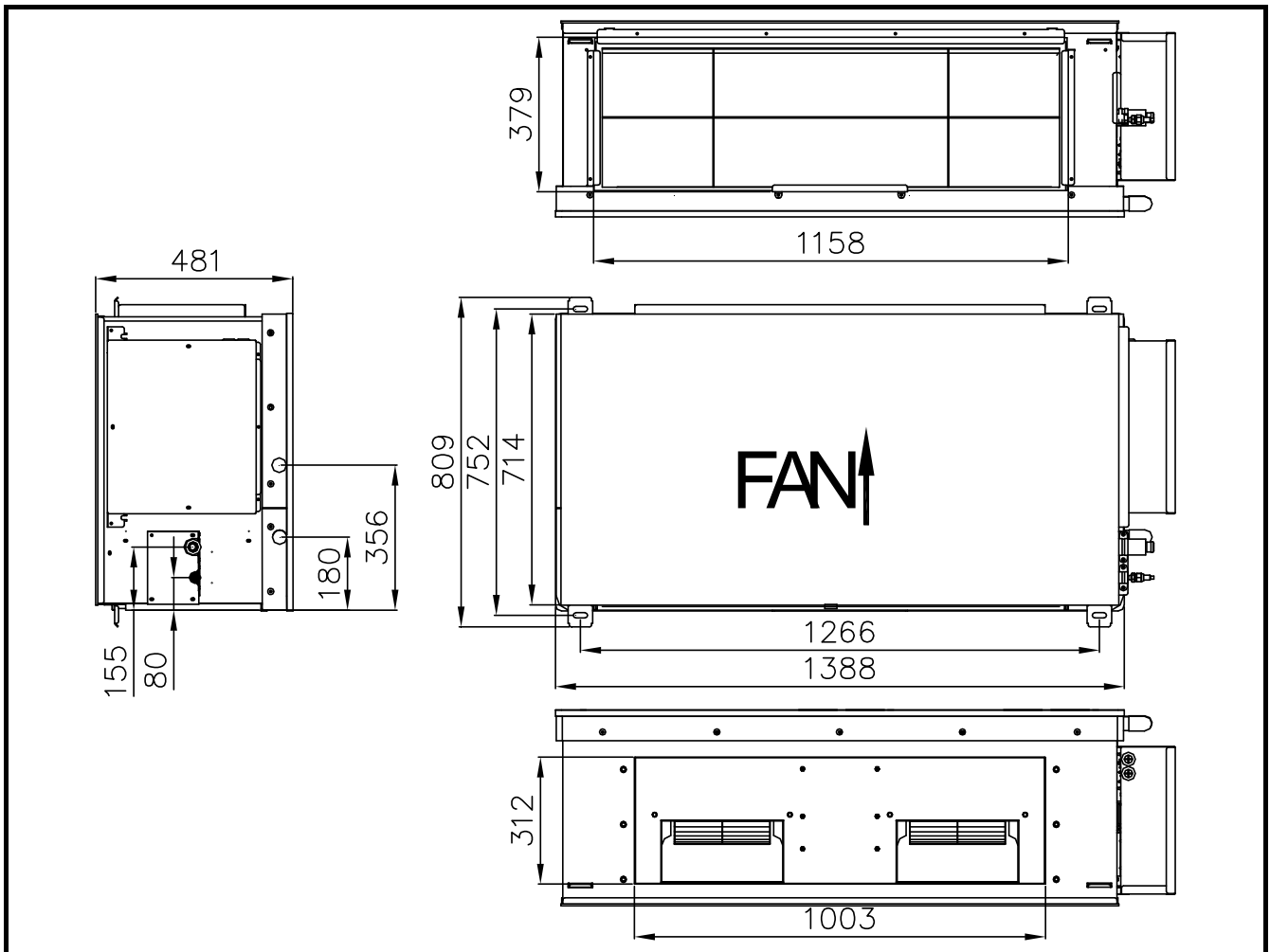


ARVHD-H220/4R1B, ARVHD-H280/4R1B



Physical Dimension		ARVHD-H220/4R1B, ARVHD-H280/4R1B	
Length	mm	1350	
Height	mm	460	
Width	mm	700	

ARVHD-H220NR1DC, ARVHD-H280NR1DC



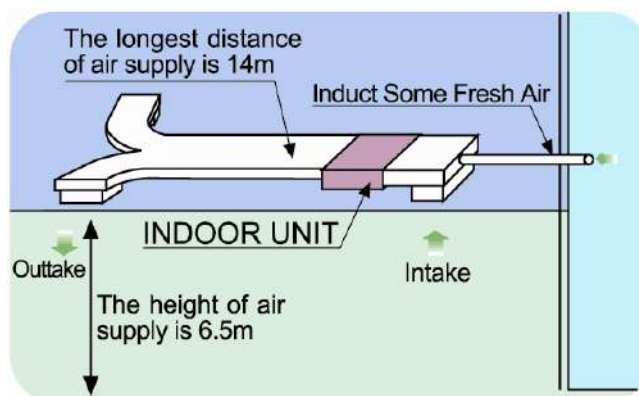
Physical Dimension		ARVHD-H220NR1DC, ARVHD-H280NR1DC	
Length	mm	1388	
Height	mm	480	
Width	mm	715	

3. Features

High Static Pressure Duct Series(B Type & E Type)

(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

(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

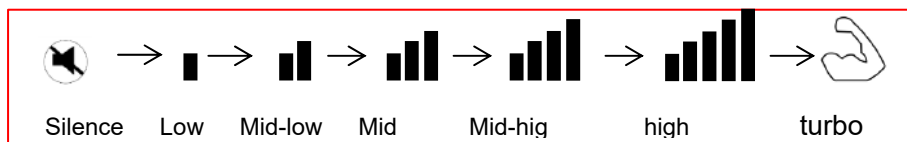
(12) It is suitable be used for office, hospital, commercial place and home, the air conditioner will create the comfortable and elegance environment for you.

High Static Pressure Duct Series(Y Type)

(1) 7 fan speed

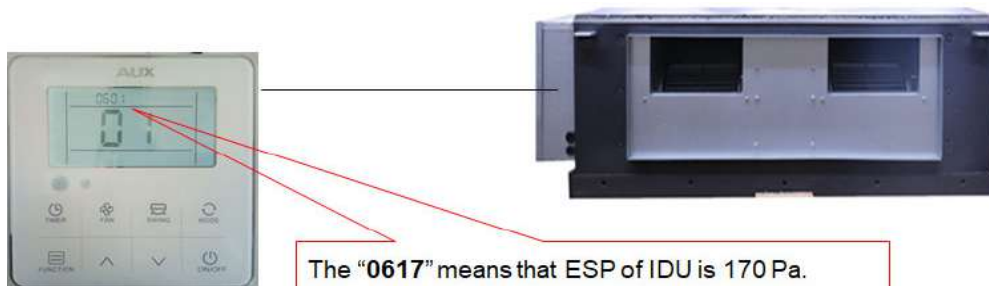
DC fan motor 7 fan speed meet customer requirement

※ Silence should be set by YK-T remote controller



(2) Changeable ESP

Through wired controller to change parameter, so can achieve different ESP
 Default ESP is 170 Pa, parameter is [0617]

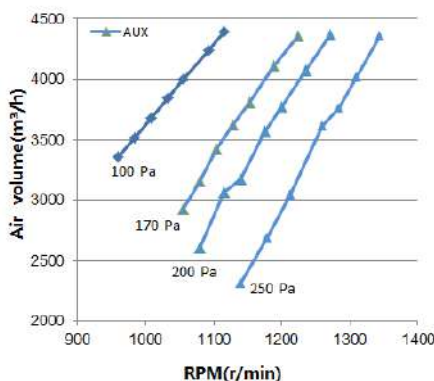


The "0617" means that ESP of IDU is 170 Pa.
 parameter set range 0603~0625 means 30 Pa ,40 Pa... .. 250 Pa

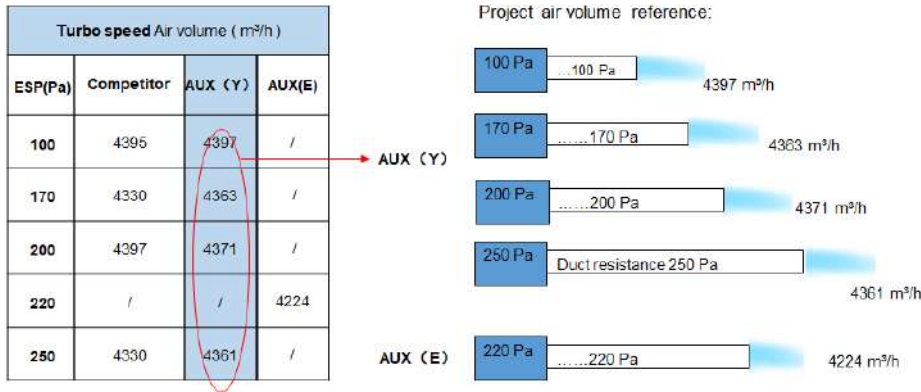
(3) Large air volume

Turbo fan speed can up to **4300 m³/h**, wide application range (factory, exhibition...)

Turbo speed Air volume (m³/h)		
ESP(Pa)	Competitor	AUX (Y)
100	4395	4397
170	4330	4363
200	4397	4371
220	/	/
250	4330	4361

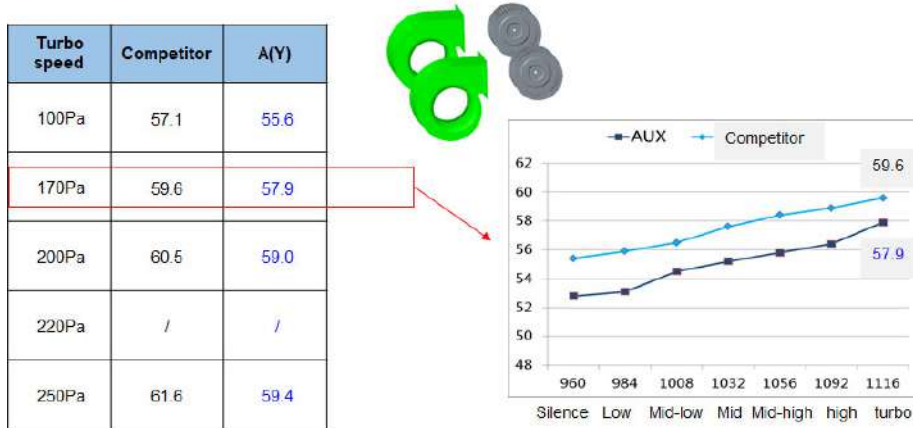


Turbo fan speed can up to **4300 m³/h**, wide application range (factory, exhibition...)



(4) Low noise

Optimized fan wheel and upper and lower volute design, ensure low noise



(5) Double drainage pan

Easy for drainage



(6) Strong anti-interference

Adopts reactor and filter board, strong anti-interference, Ensure reliable operation



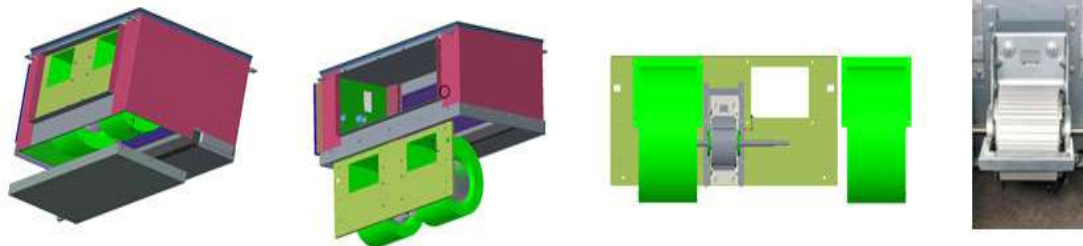
(7) Anti-condensation

Body covered cotton insulation, Good anti-condensation effect



(8) Easy for maintenance

New design (double drainage pan, fan assembly integration), Remove and repair from the bottom, high efficiency



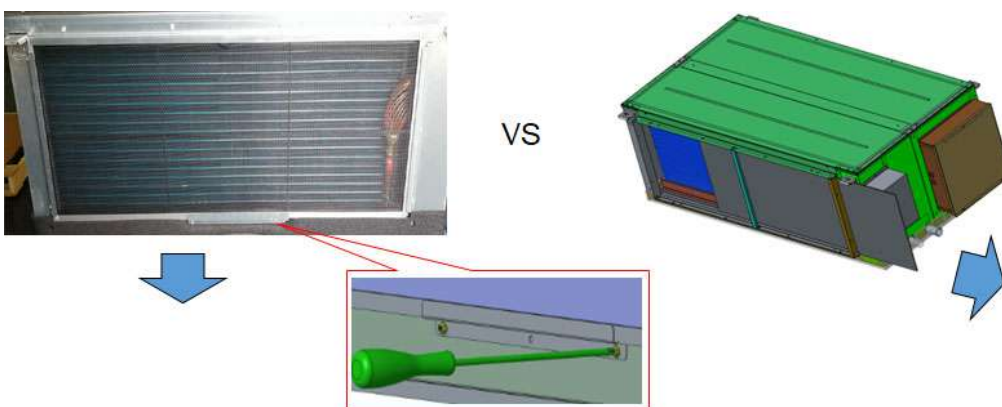
Remove the drainage pan

Remove the fan assembly

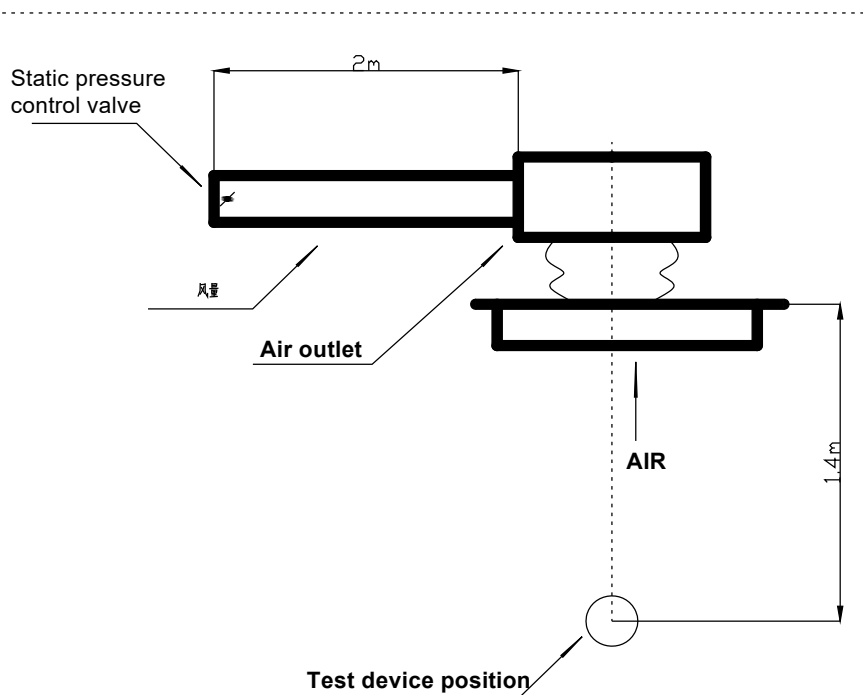
Remove the fan wheel

Remove the fan motor

(9) Easy to remove air filter



4. Sound level

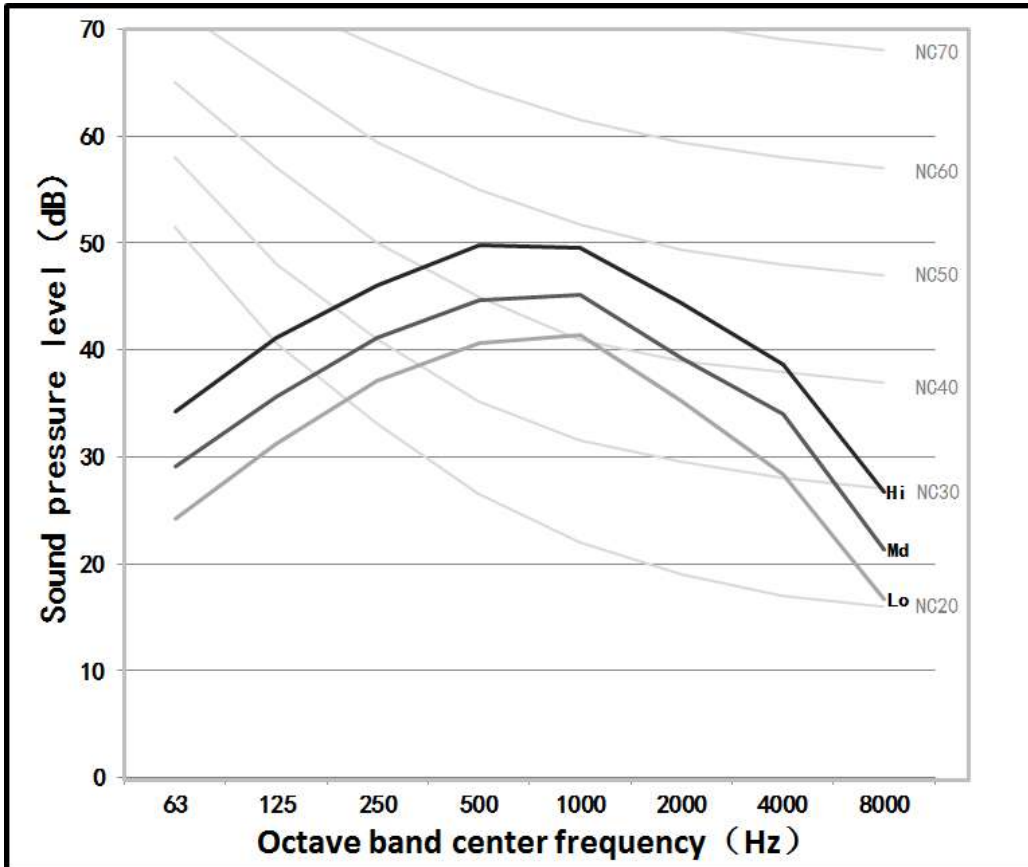


4.1 Test value

Model	220~240V 50Hz		
	H	M	L
ARVHD-H112/4R1A	60	57	51
ARVHD-H125/4R1A			
ARVHD-H140/4R1A			
ARVHD-H150/4R1A	60	55	53
ARVHD-H220/4R1B			
ARVHD-H280/4R1B			
ARVHD-H220NR1DC	57	53	49
ARVHD-H280NR1DC	57	53	49

4.2 NC curves

ARVHD-H220/NR1DC、ARVHD-H280/NR1DC

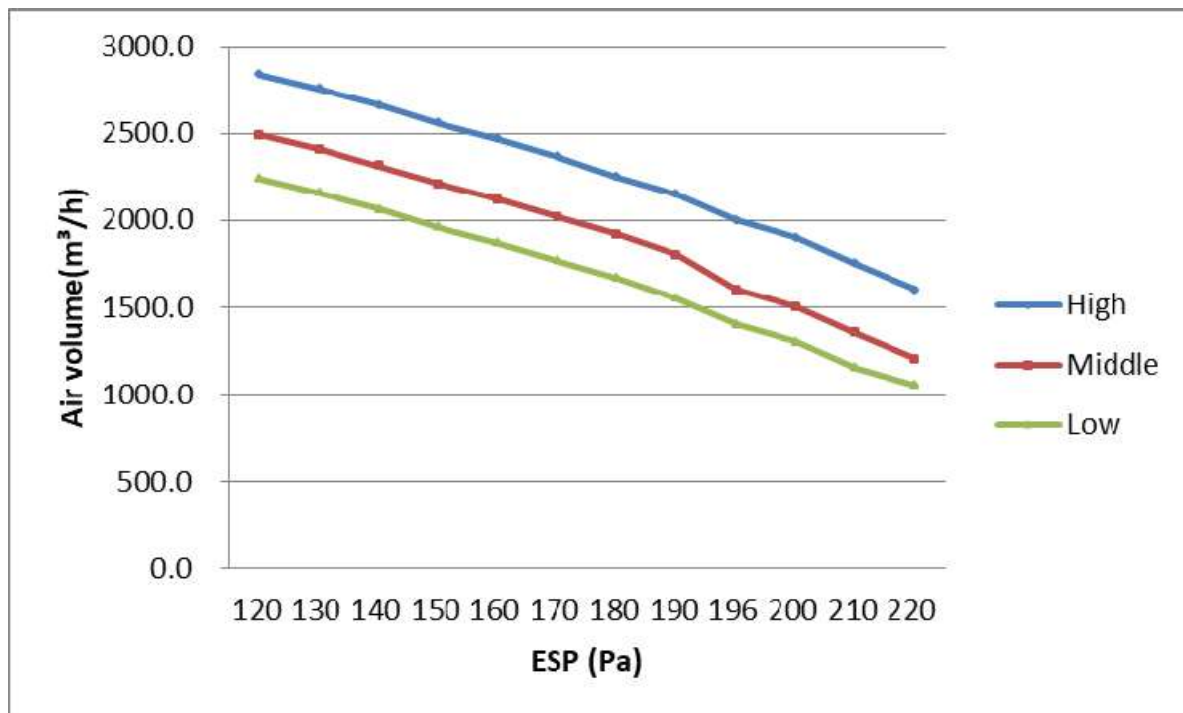


5. Fan performance

50HZ E Series

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

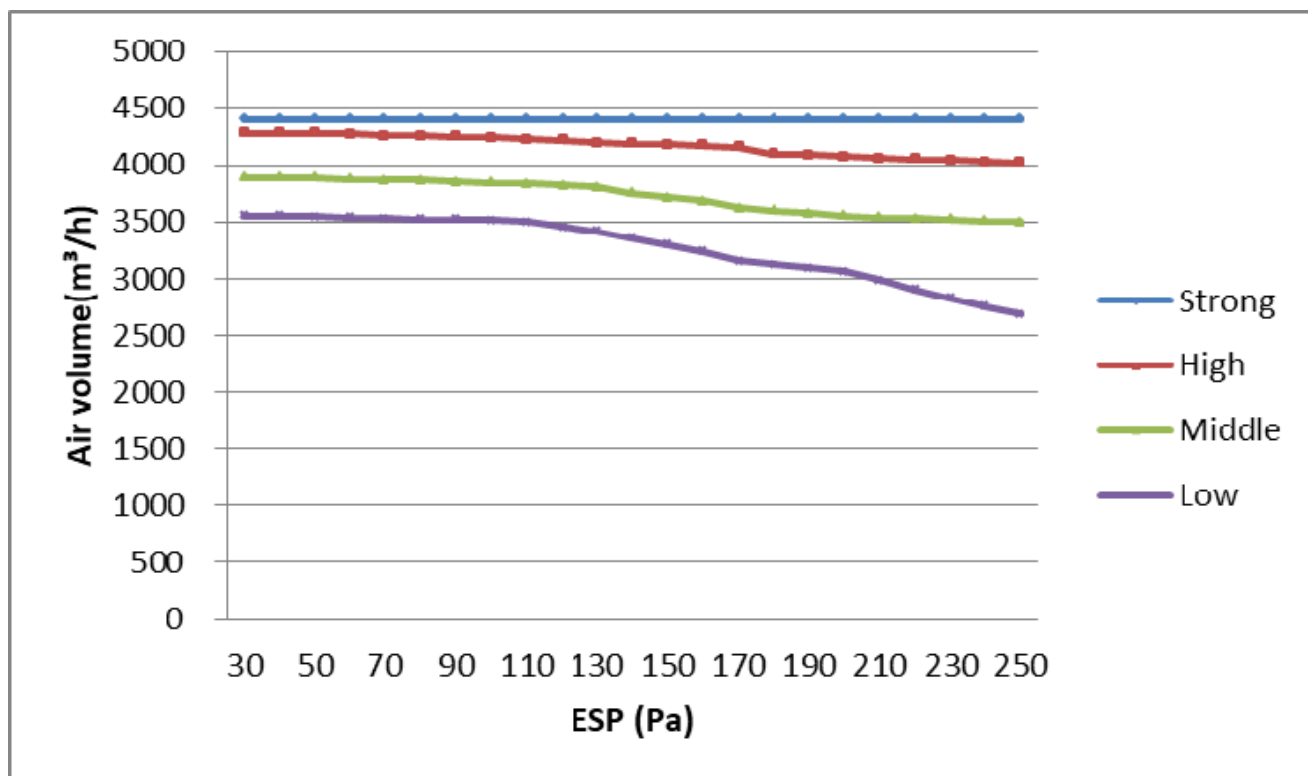
Duct models	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
ARVHD-H112/4R1A; ARVHD-H125/4R1A; ARVHD-H140/4R1A; ARVHD-H150/4R1A; Default (196Pa)	120	2840.0	2490.0	2240.0
	130	2760.0	2410.0	2160.0
	140	2665.0	2315.0	2065.0
	150	2560.0	2210.0	1960.0
	160	2470.0	2120.0	1870.0
	170	2370.0	2020.0	1770.0
	180	2250.0	1920.0	1670.0
	190	2150.0	1800.0	1550.0
	196	2000.0	1600.0	1400.0
	200	1900.0	1500.0	1300.0
	210	1750.0	1350.0	1150.0
	220	1600.0	1200.0	1050.0



50&60HZ YSeries

Series	Models	Default ESP		Optional ESP	
		Value	Remark	Value	Remark
50&60HZ Y Series	ARVHD-H220/NR1DC	170	Parameter 0617	30~250Pa	Parameter set to 0603~0625
	ARVHD-H280/NR1DC	170	Parameter 0617	30~250Pa	Parameter set to 0603~0625

ARVHD-H220/NR1DC; ARVHD-H280/NR1DC;



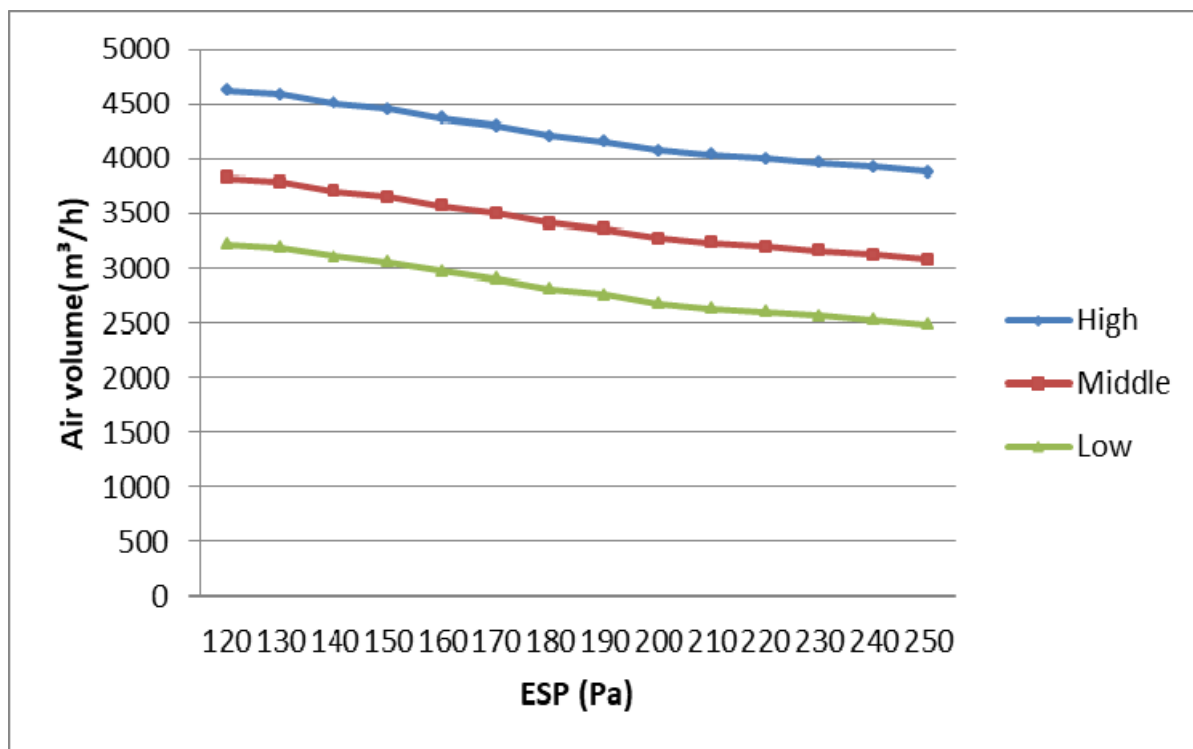
ARVHD-H220/NR1DC; ARVHD-H280/NR1DC;

Duct models	ESP (Pa)		Air volume(m ³ /h)			
	value	Parameter setting	Strong fan speed	High fan speed	Middle fan speed	Low fan speed
ARVMD-H220/ NR1DC; ARVMD-H280/ NR1DC; Default (170Pa)	30	set to 0603	4400	4280	3890	3550
	40	set to 0604	4400	4280	3890	3550
	50	set to 0605	4400	4280	3890	3545
	60	set to 0606	4400	4270	3870	3540
	70	set to 0607	4400	4260	3865	3530
	80	set to 0608	4400	4260	3860	3525
	90	set to 0609	4400	4250	3850	3520
	100	set to 0610	4400	4241	3841	3518
	110	set to 0611	4400	4230	3830	3497
	120	set to 0612	4400	4220	3820	3457
	130	set to 0613	4400	4200	3800	3417
	140	set to 0614	4400	4190	3750	3357
	150	set to 0615	4400	4180	3710	3297
	160	set to 0616	4400	4170	3680	3237
	170	set to 0617	4400	4160	3621	3154
	180	set to 0618	4400	4100	3600	3124
	190	set to 0619	4400	4090	3575	3090
	200	set to 0620	4400	4076	3550	3062
	210	set to 0621	4400	4062	3540	2987
	220	set to 0622	4400	4052	3530	2900
	230	set to 0623	4400	4042	3520	2825
	240	set to 0624	4400	4032	3510	2750
	250	set to 0625	4400	4022	3500	2685

50HZ BSeries

ARVHD-H220/4R1B; ARVHD-H280/4R1B;

Remark	ESP (Pa)	Air volume(m ³ /h)		
		High fan speed	Middle fan speed	Low fan speed
Default (220Pa)	120	4624	3824	3224
	130	4591	3791	3191
	140	4507	3707	3107
	150	4453	3653	3053
	160	4368	3568	2968
	170	4304	3504	2904
	180	4211	3411	2811
	190	4158	3358	2758
	200	4076	3276	2676
	210	4034	3234	2634
	220	4000	3200	2600
	230	3962	3162	2562
	240	3921	3121	2521
	250	3876	3076	2476



6. Capacity table

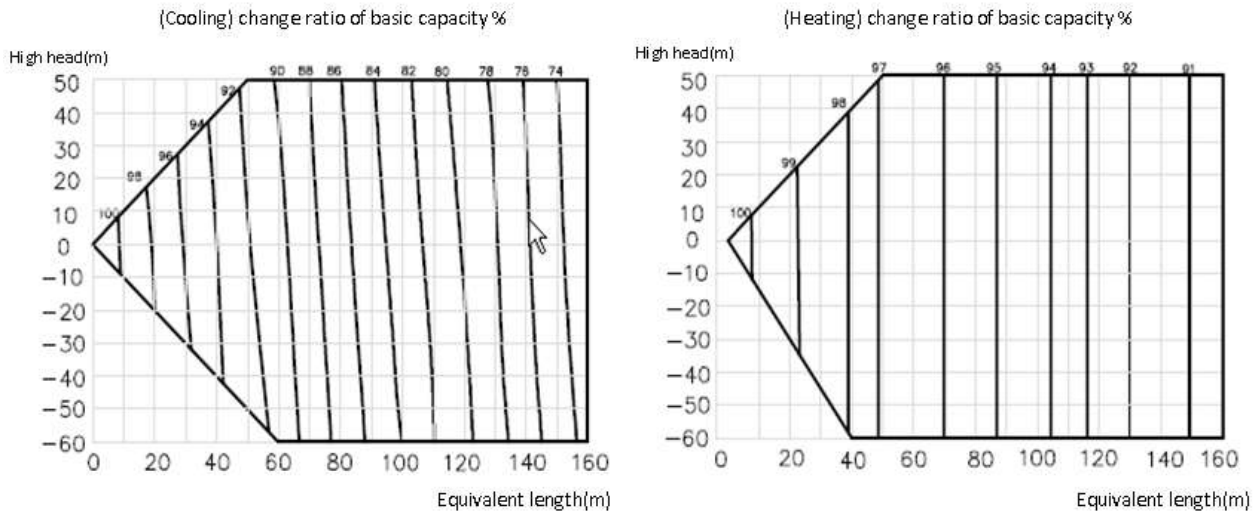
Cooling Capacity of Outdoor Dry Bulb Temperature and Indoor Dry/Wet Bulb Temperature or Power Consumption Correction Coefficient

ODU dry bulb temperature [°C]	Correction coefficient	Indoor dry/wet bulb temperature [°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.

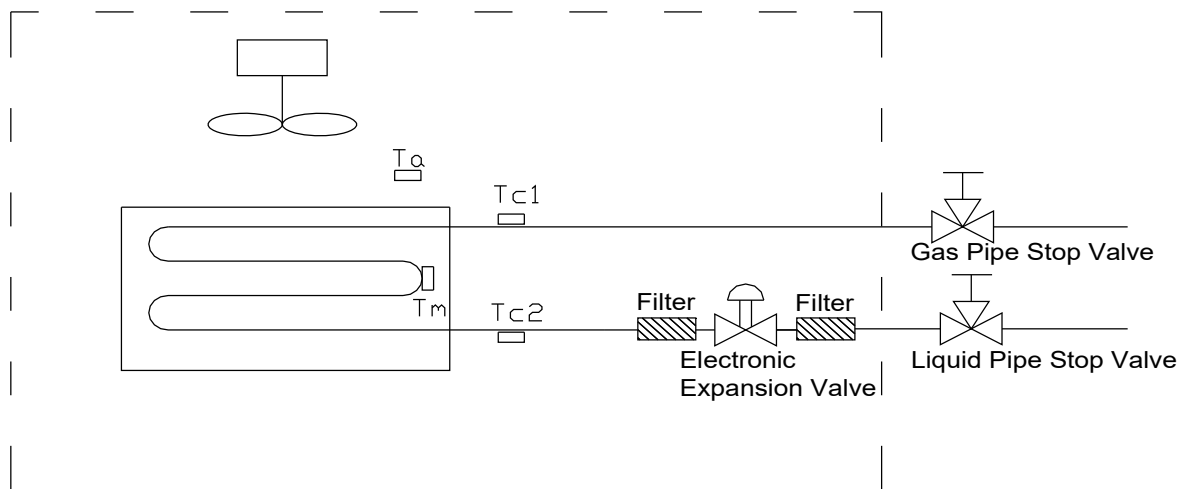
Outdoor ambient temperature of dry/wet bulb [°C]	capacity/power correction coefficient	Indoor back temperature of dry bulb [°C]		
		15	20	25
-20/-21	Heating capacity	0.58	0.53	0.49
	Power	0.50	0.56	0.62
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	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)

7. Refrigerant piping diagram



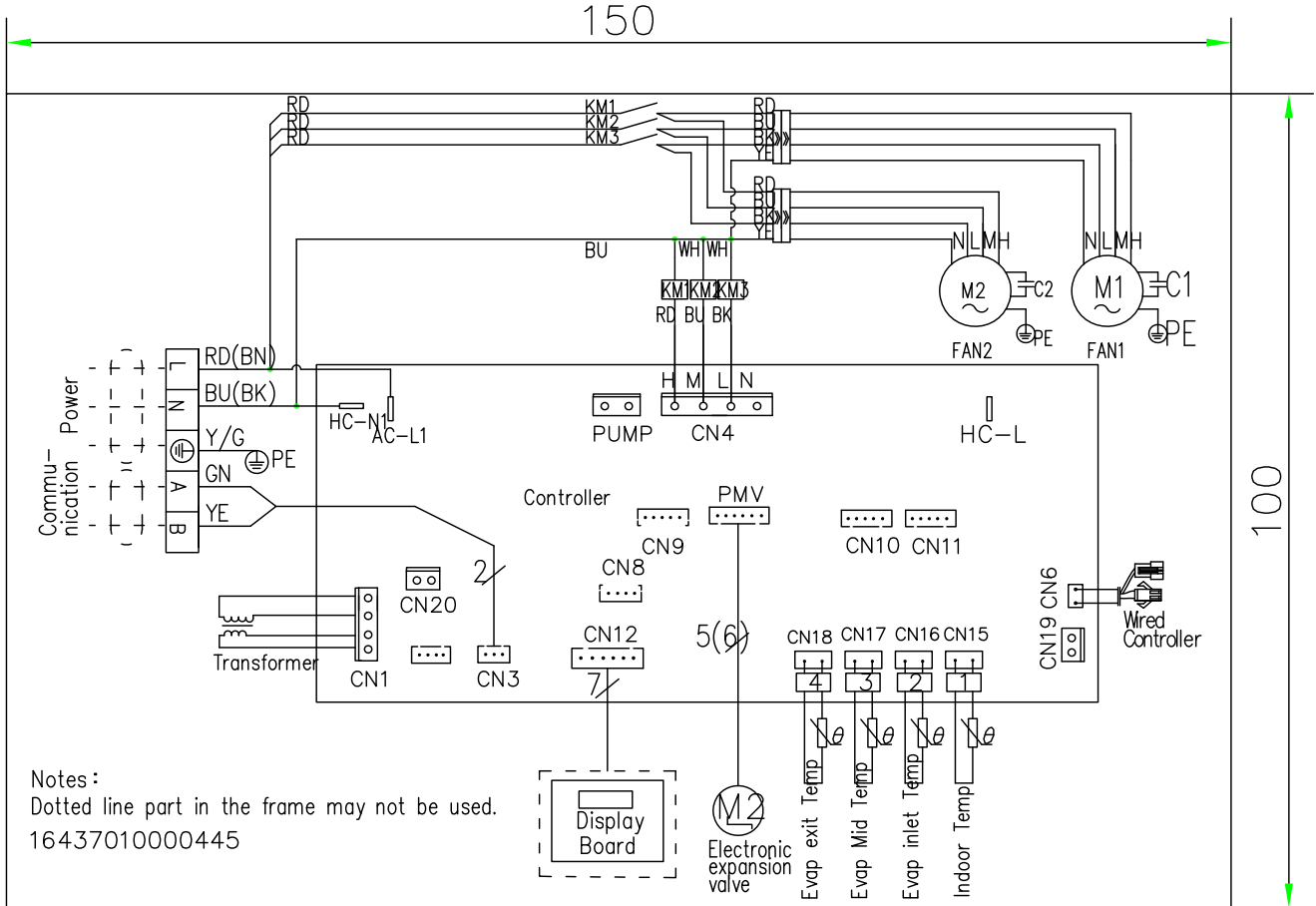
Refrigerant pipe connection port diameters

(mm)

model	Gas	Liquid
ARVHD-H112/4R1A ARVHD-H125/4R1A ARVHD-H140/4R1A ARVHD-H150/4R1A	$\Phi 19.05$	$\Phi 9.52$
ARVHD-H220/280/4R1B ARVHD-H220/280/4R1B	$\Phi 22.2$	$\Phi 12.7$
ARVHD-H220/NR1DC ARVHD-H280/NR1DC	$\Phi 22.2$	$\Phi 12.7$

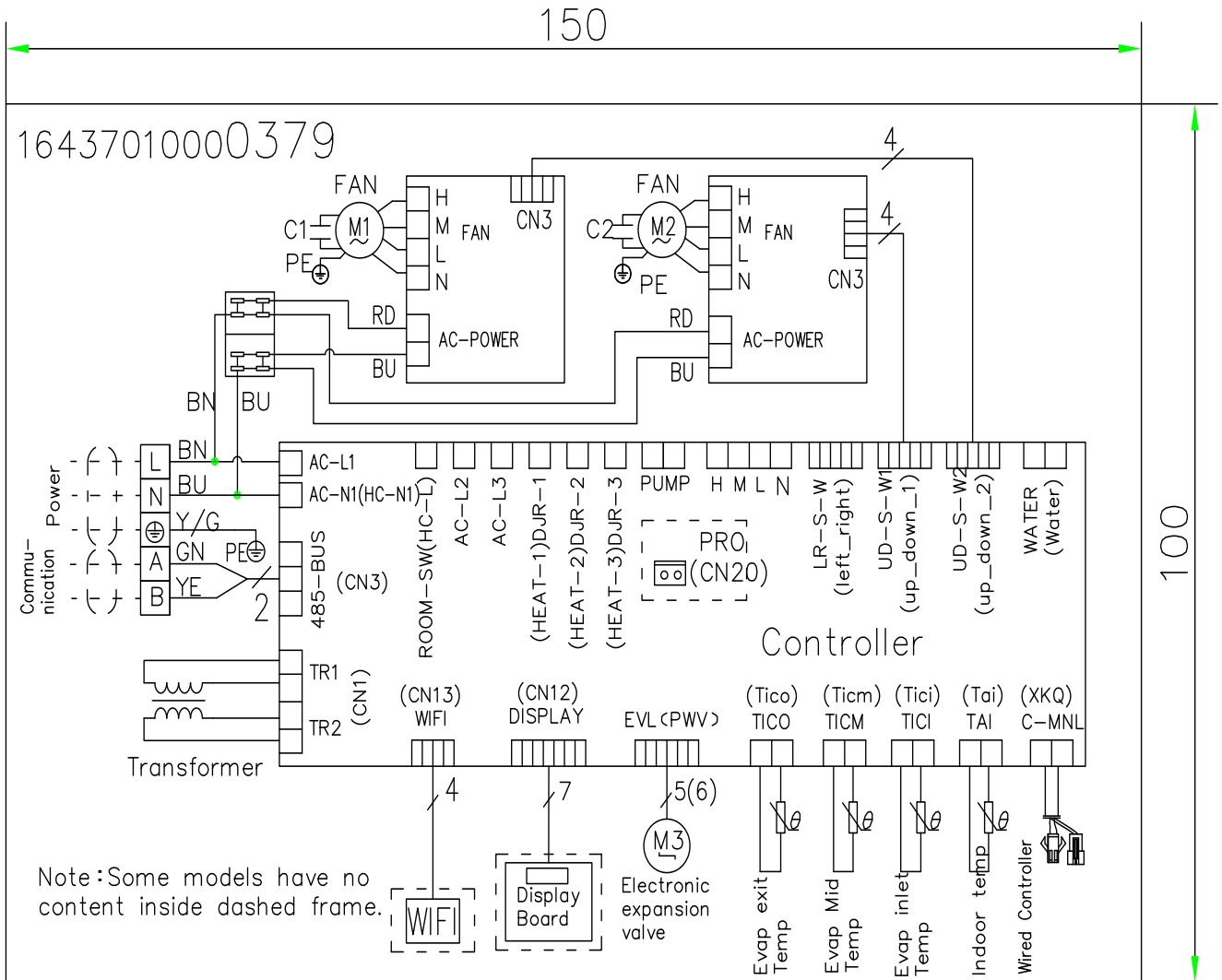
8. Wiring diagram

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

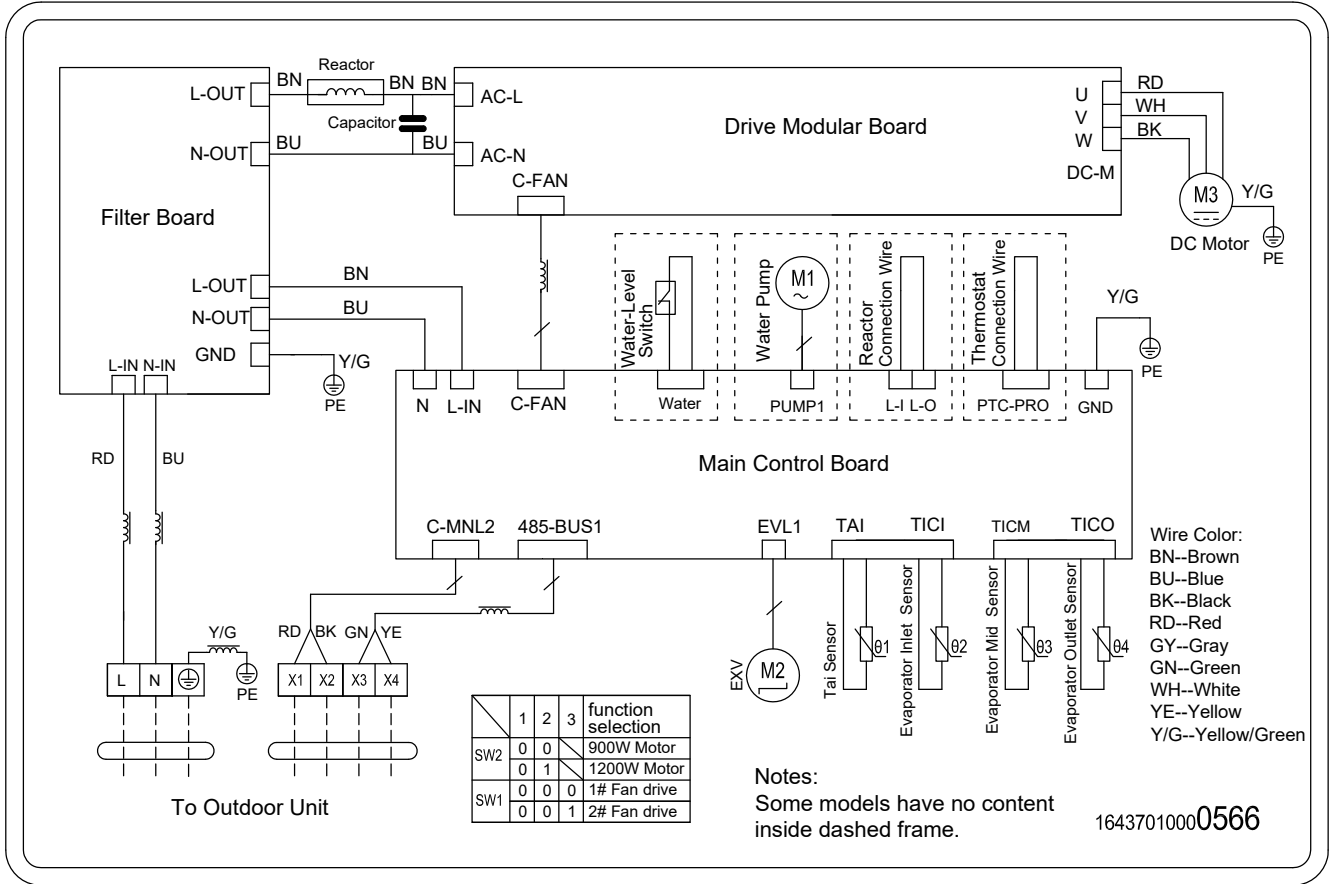


Notes:
 Dotted line part in the frame may not be used.
 16437010000445

ARVHD-H220/4R1B , ARVHD-H280/4R1B



ARVHD-H220NR1DC , ARVHD-H280NR1DC

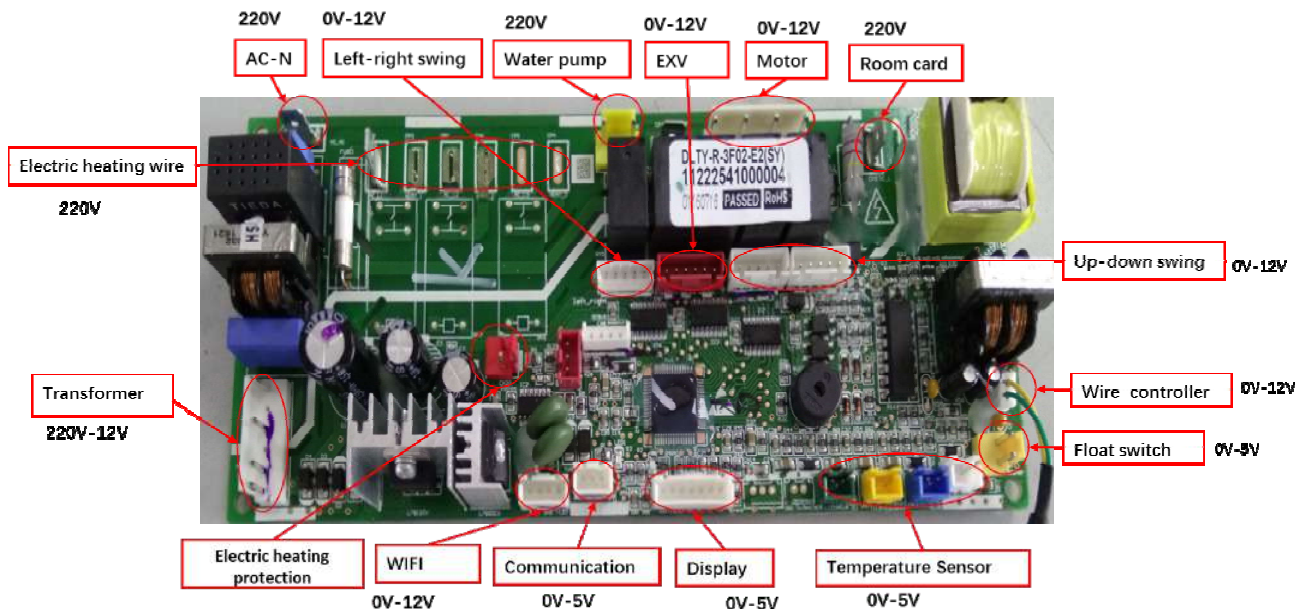


9. PCB Port Introduction

50HZ B Series 196Pa

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

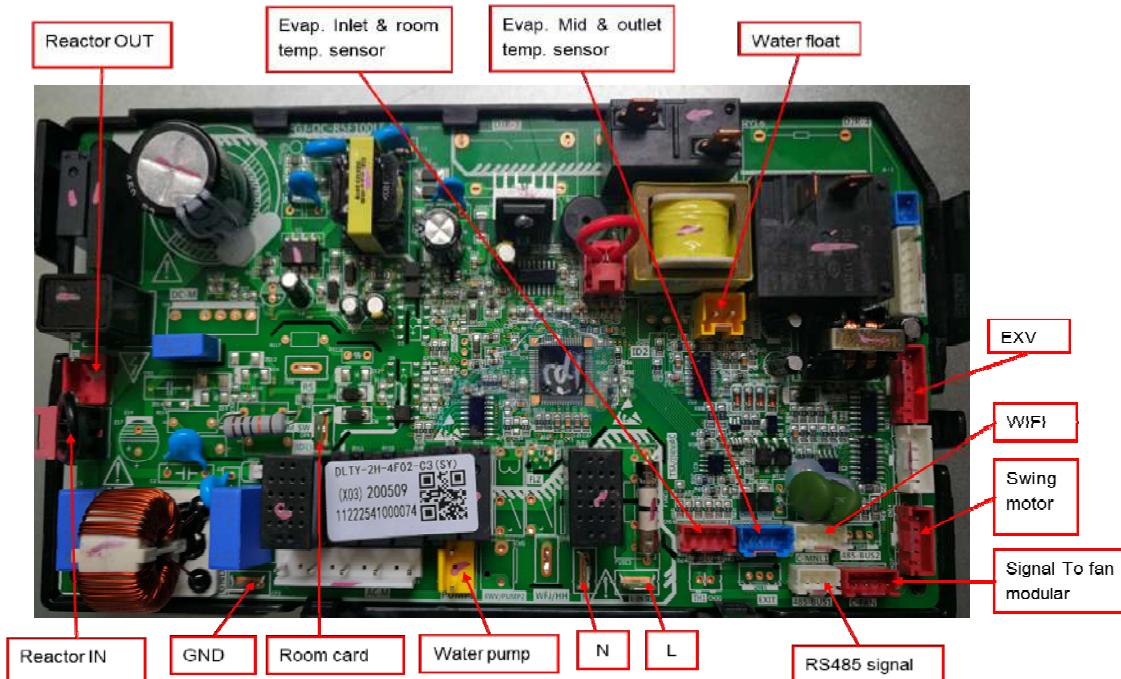
Main board-- 11222541000047 CJ 控制板 DLTY-R-3F02-E3(SY)



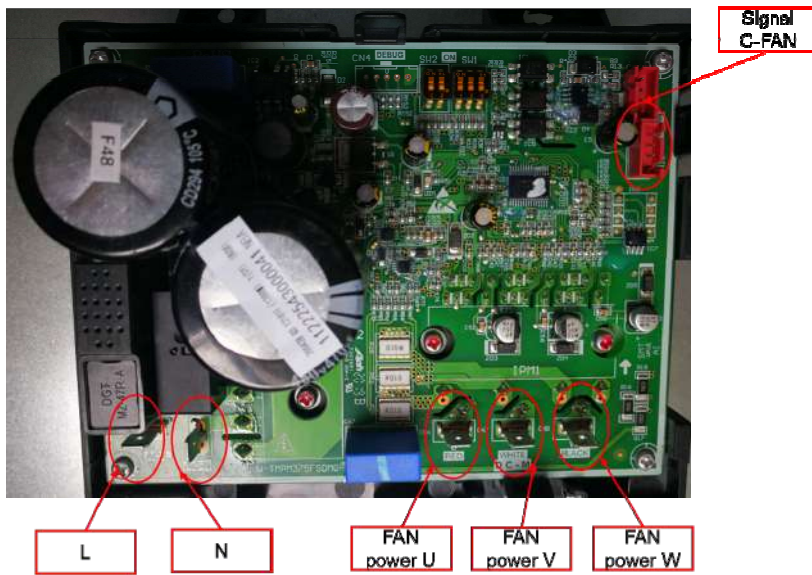
50&60HZ Y Series 170Pa (30-250Pa)

ARVHD-H220NR1DC, ARVHD-H220NR1DC

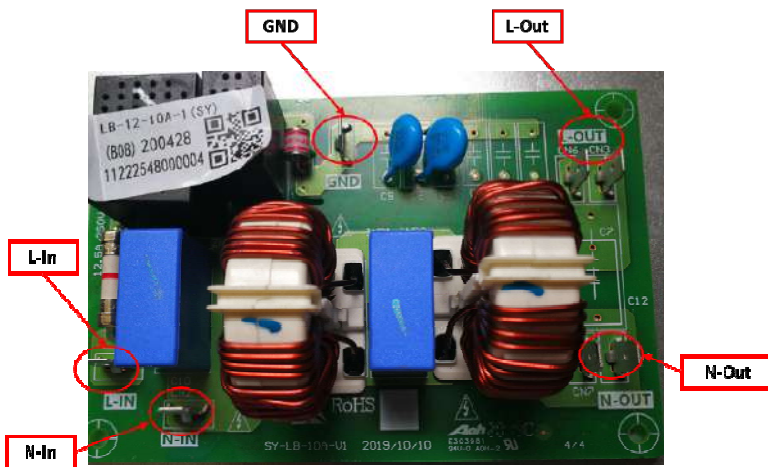
Main board-- 11222541000074 CJ 控制板 DLTY-2H-4F02-C3(SY)



Fan modular board --- 11222543000041 CJ 模块板 QD-12101F (1200W 电机) -1(SY)



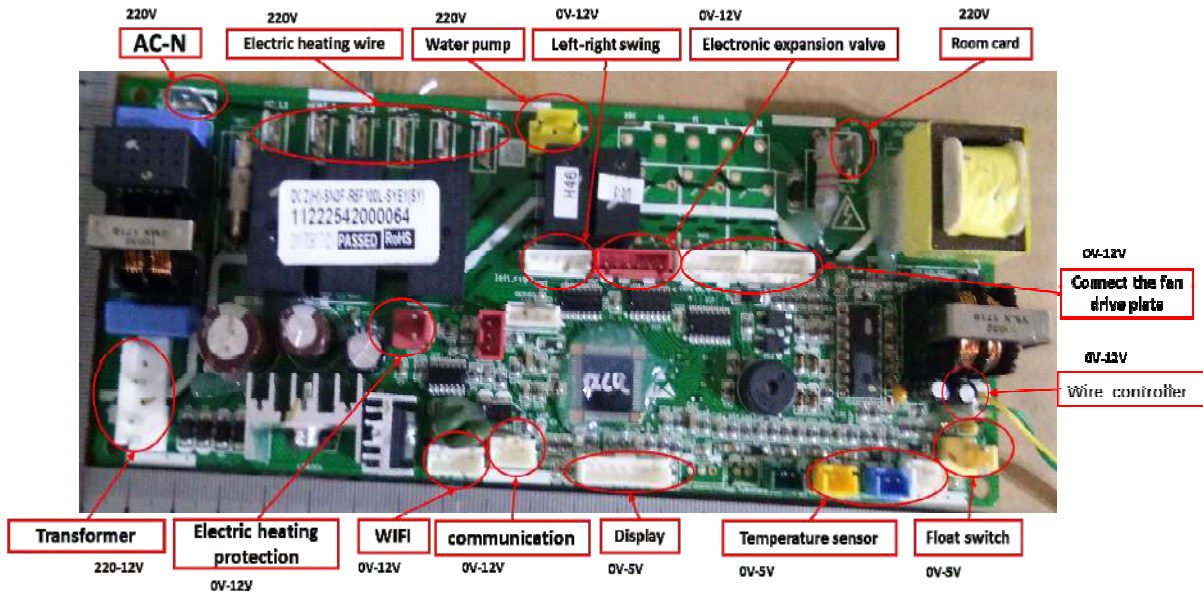
Filter board-- 11222548000004 CJ 滤波板 LB-12-10A-1(SY)



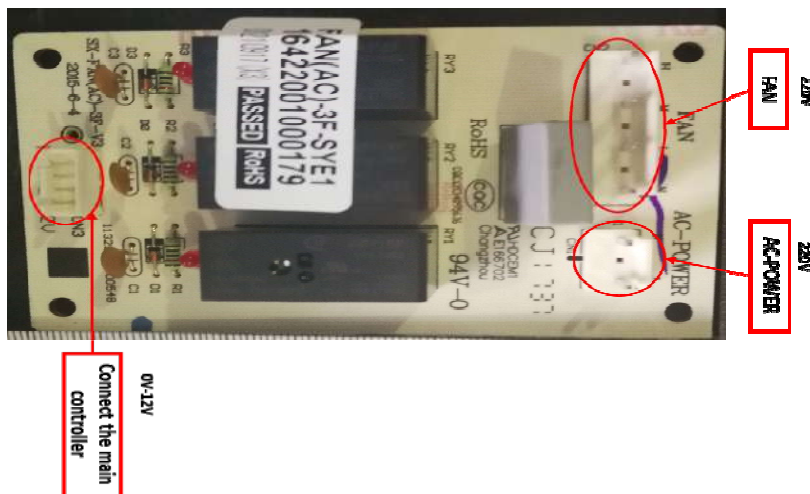
50HZ E Seriesm220Pa

ARVHD-H220/4R1B, ARVHD-H280/4R1B




Main board --- 11222542000064 CJ 控制板 DCZ(H)-SN3F-R5F100L-SYE1(SY)



Fan modular board --- 16422001000179 CJ 控制板 FAN(AC)-3F-SYE1



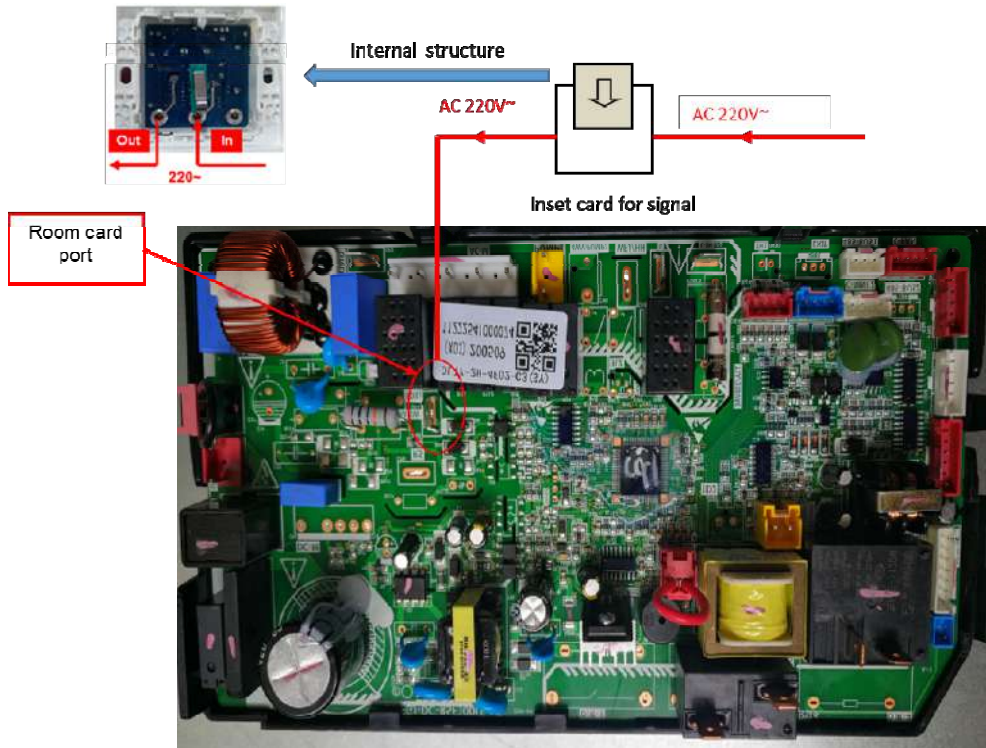
10. Split controller

Split Controller			
IDU Type	Standard	Optional	
	XK-02	L type	T type
<p>ARVHD-H220NR1DC ARVHD-H280NR1DC</p> <p>ARVHD-H220/4R1B ARVHD-H280/4R1B</p> <p>ARVHD-H112/4R1A ARVHD-H125/4R1A ARVHD-H140/4R1A ARVHD-H150/4R1A</p>			

11.Room card function

Parameter	Function	Insert key card	Remove key card
0901	Valid	Standby, IDU can be controlled	Standby, IDU can't be controlled

Wiring diagram



12.Parameter setting

1. Parameter setting table

Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVHD-H220NR1DC	35	80	00	01
ARVHD-H280NR1DC	35	100	00	01
ARVHD-H220/4R1B	35	80	00	01
ARVHD-H280/4R1B	35	100	00	01
ARVHD-H112/4R1A	2	36	00	01
ARVHD-H125/4R1A	2	45	00	01
ARVHD-H140/4R1A	2	50	00	01
ARVHD-H150/4R1A	2	60	00	01

- 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,
- 0900 means room card function invalid, 0901 means valid
- 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value


Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

2. Parameter setting method

E.g.: set the parameter for 2.2kw IDU. (Parameter: 0508)


Wired controller

Step1



Press **FUNCTION** for more than 10s, enter parameter setting

Step2








1. Press **▲** to change 01 to **05**

2. Press **FUNCTION** for more than 5s, then **01** will flicker

3. then press **▲** to change 00 to **08**

4. Press **FUNCTION** 5s to send the order




13.Group control

Group control			
IDU type	Centralized controller	BMS-MODBUS control	Monitoring control
	Max.256 IDUs	Quantity no limit	one refrigerant system
<p>ARVHD-H220NR1DC ARVHD-H280NR1DC</p> <p>ARVHD-H220/4R1B ARVHD-H280/4R1B</p> <p>ARVHD-H112/4R1A ARVHD-H125/4R1A ARVHD-H140/4R1A ARVHD-H150/4R1A</p>	 		 

Note: More details about connection wiring , function introduce Please check the <Control system technical manual>

Part9 Fresh Air Processing Unit

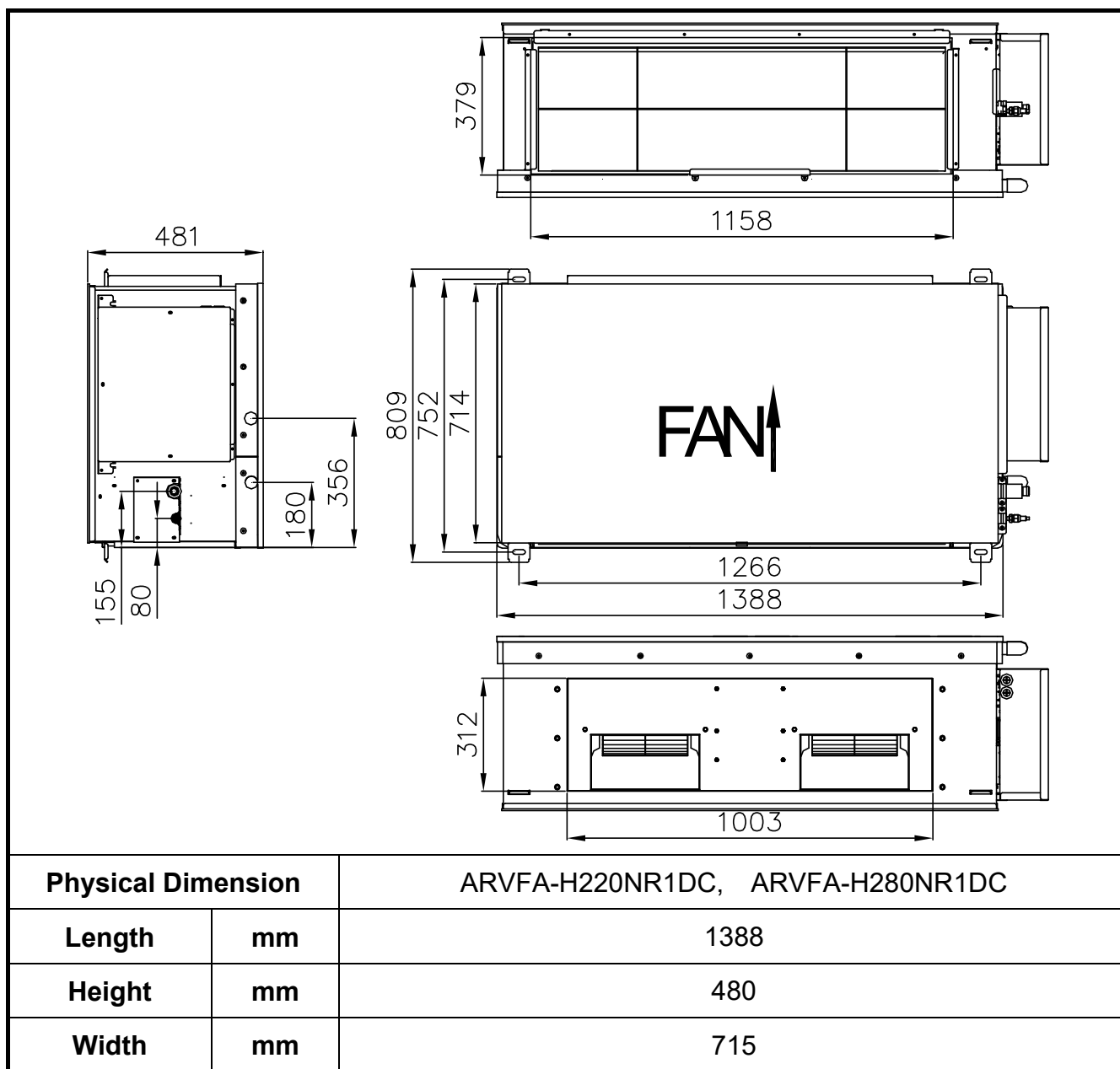
1. Product Line-up

Series	Models	Photos
50HZ Y Series 170Pa	ARVFA-H220NR1DC	
	ARVFA-H280NR1DC	
50HZ E Series 220Pa	ARVFA-H220/4R1B	
	ARVFA-H280/4R1B	
50HZ E Series 220Pa	ARVFA-H450/4R1A	
	ARVFA-H560/4R1A	

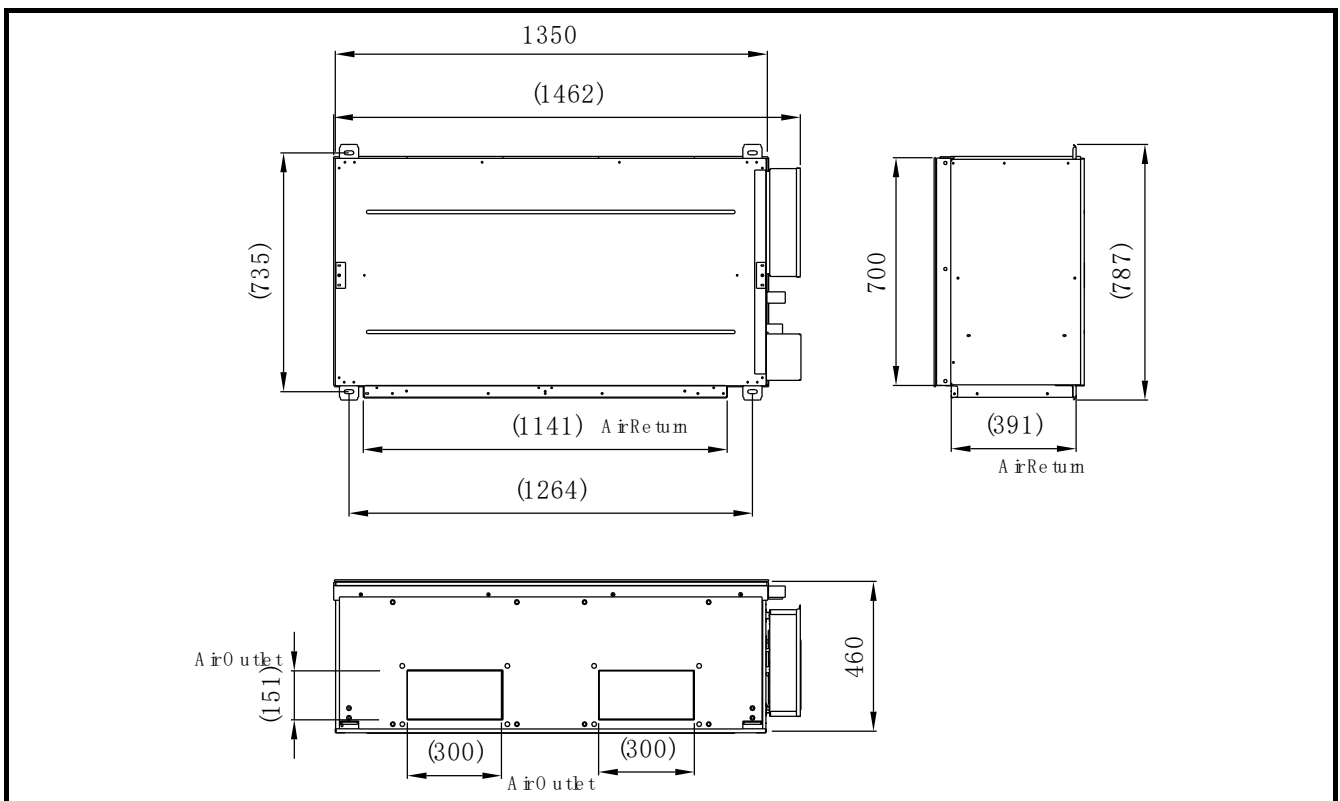
Remark: **Old Series, discontinued** : 50HZ E Series 220Pa(220,280)

2. Dimension

ARVFA-H220NR1DC, ARVFA-H280NR1DC

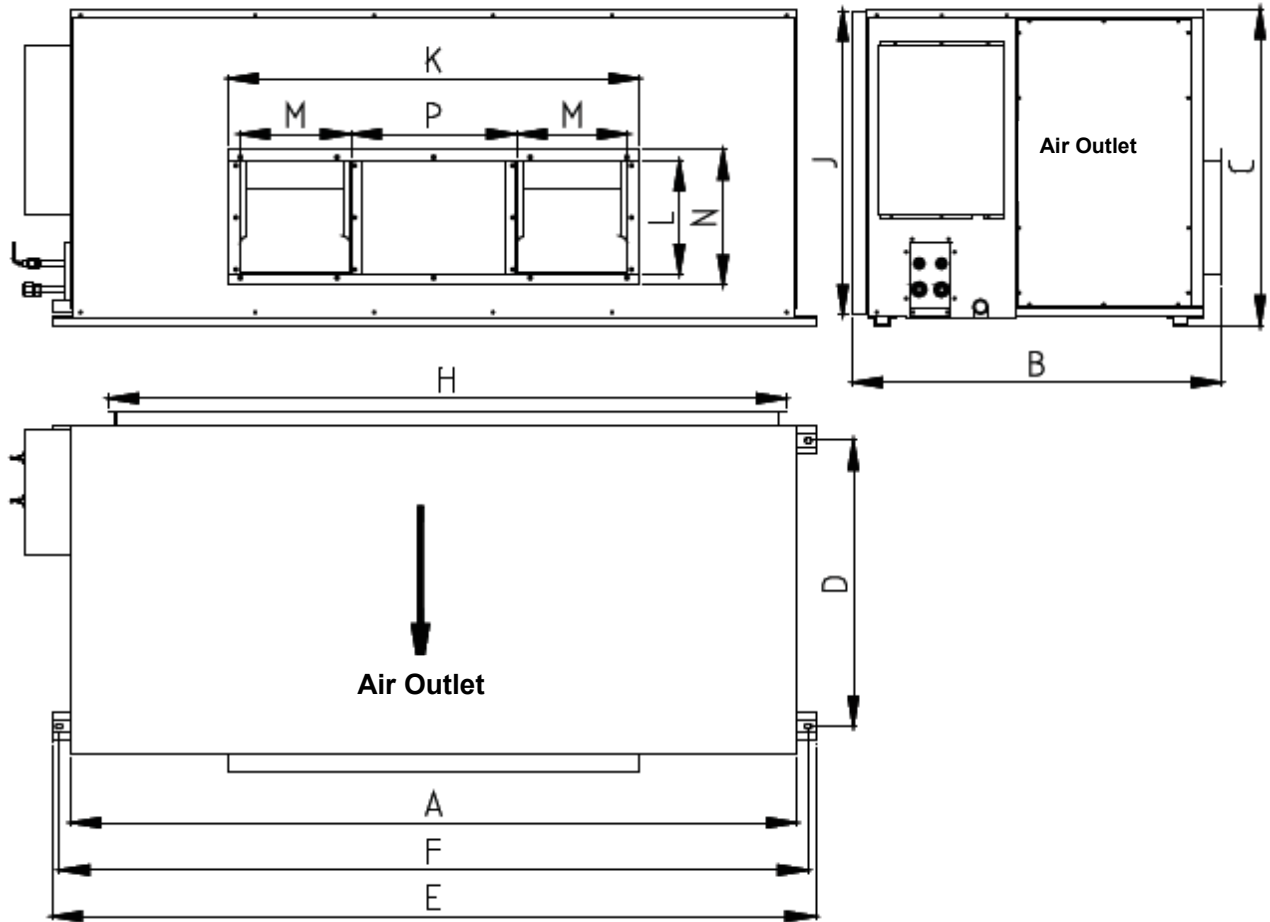


ARVFA-H220/4R1B, ARVFA-H280/4R1B



Physical Dimension		ARVFA-H220/4R1B, ARVFA-H280/4R1B	
Length	mm	1350	
Height	mm	460	
Width	mm	700	

ARVFA-H450/4R1A, ARVFA-H560/4R1A

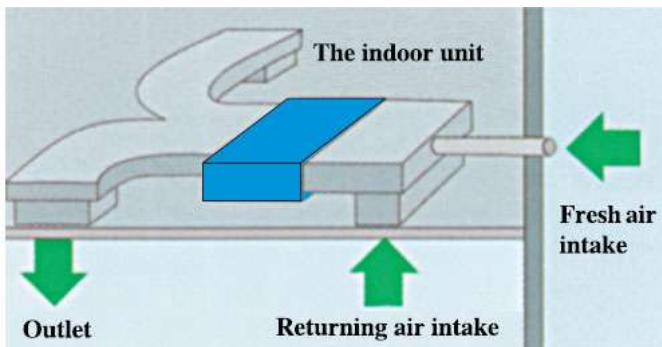


Model	A	B	C	D	E	F	H	J	K	L	M	N	P
ARVFA-H450/4R1A	1710	990	855	770	1820	1780	1610	830	1200	265	350	325	440
ARVFA-H560/4R1A	2020	990	855	770	2120	2080	1910	830	1260	310	350	370	440

3. Features

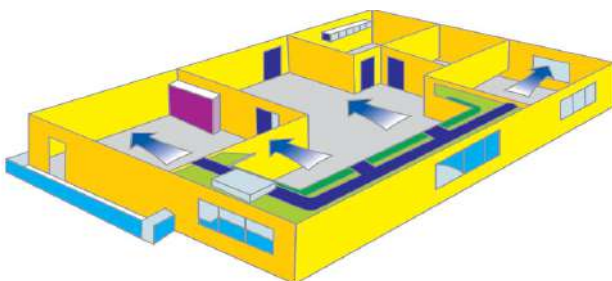
(1) 100% Fresh air processing units

Indoor units and fresh air units can be connected to the same ARV system, increase design flexibility and greatly reduce total system costs.



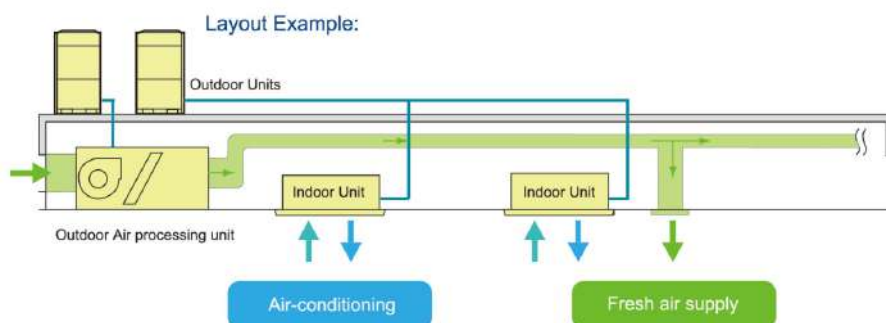
(2) High External Static Pressure

External static pressure of indoor Unit can be up to 220Pa, 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 16m; 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) Setting or Auto two operation modes

Multi speed wind makes you feel more comfortable;

(4) Wired controller and remote controller and central controller can be available**(5) Special insulation design**

Achieves high heat insulation efficiency and no condensation on shell

(6) With low ambient temperature cooling function

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

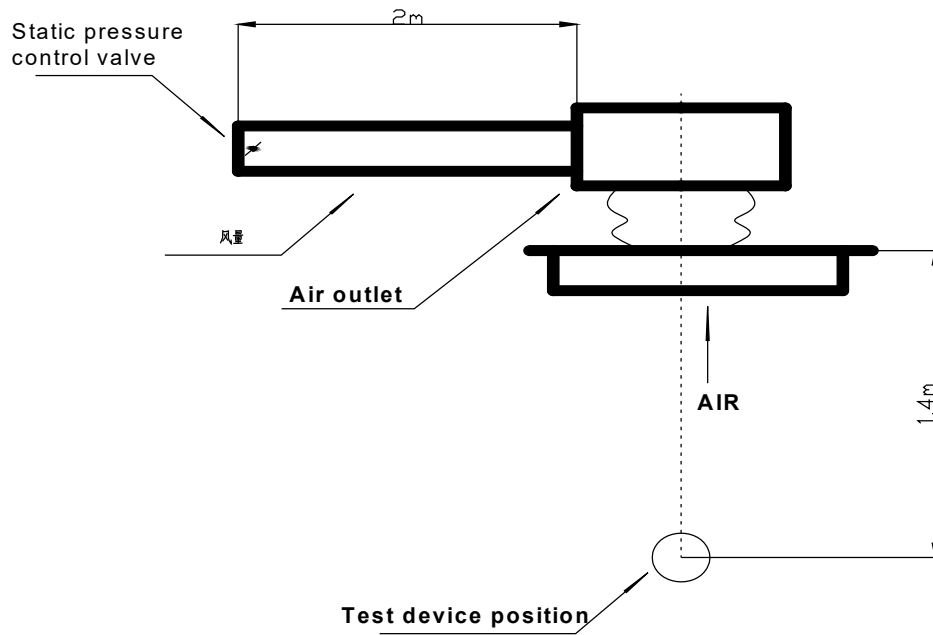
**(7) Failure automatic detection**

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.

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

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

4. Sound level



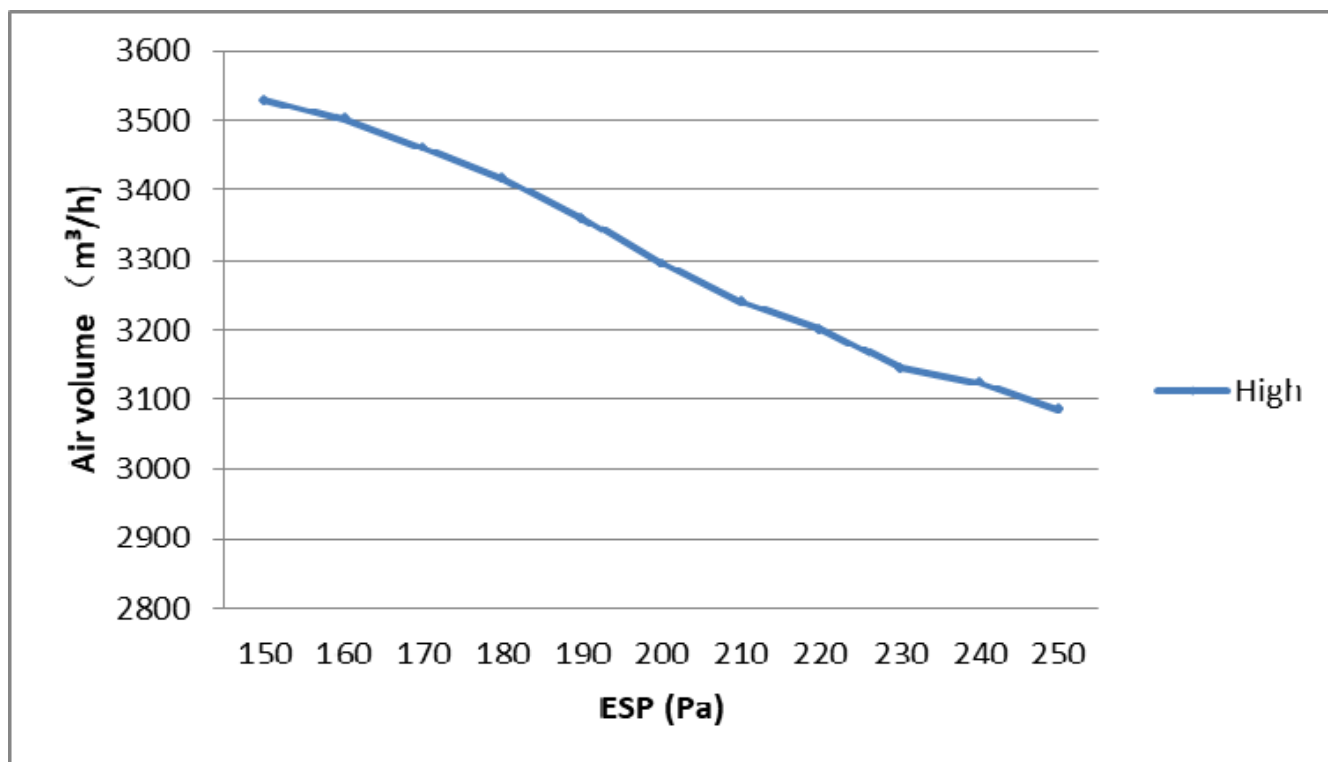
Model	220~240V 50Hz
ARVFA-H220/4R1B	44
ARVFA-H280/4R1B	45
ARVFA-H220NR1DC	55
ARVFA-H280NR1DC	55
ARVFA-H450/4R1A	57
ARVFA-H560/4R1A	59

5. Fan performance

50HZ YSeries

ARVFA-H220/NR1DC; ARVFA-H280/NR1DC;

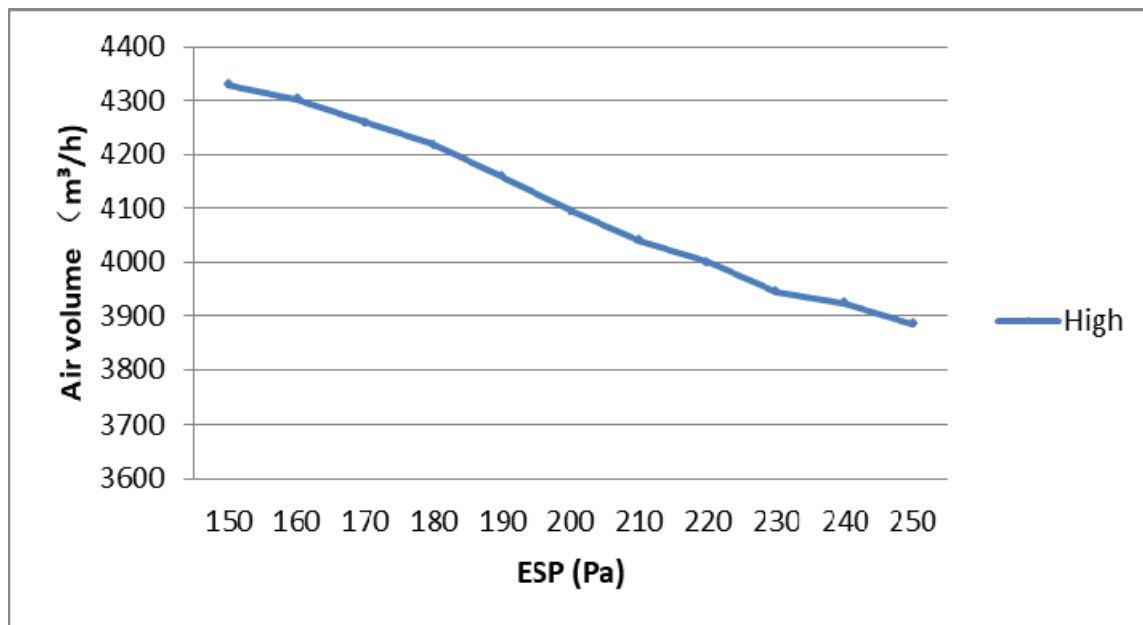
Duct models	ESP (Pa)	Air volume(m ³ /h)
		High fan speed
ARVFA-H220/NR1DC; ARVFA-H280/NR1DC; Default (220Pa)	150	3530
	160	3502
	170	3460
	180	3417
	190	3360
	200	3295
	210	3240
	220	3200
	230	3145
	240	3124
	250	3085



50HZ B Series

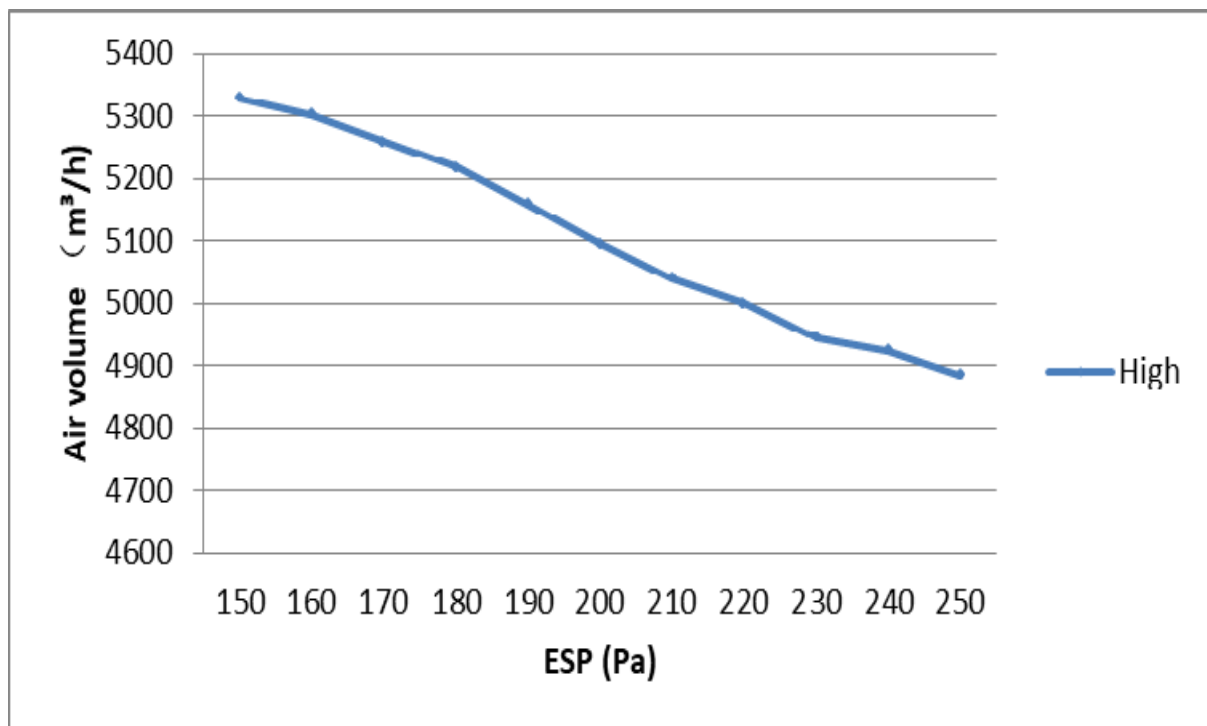
ARVFA-H220/4R1B, ARVFA-H280/4R1B, ARVFA-H450/4R1A

Duct models	ESP (Pa)	Air volume(m ³ /h)
		High fan speed
ARVFA-H220/4R1B, ARVFA-H280/4R1B ARVFA-H450/4R1A Default (220Pa)	150	4330
	160	4302
	170	4260
	180	4217
	190	4160
	200	4095
	210	4040
	220	4000
	230	3945
	240	3924
250	3885	



ARVFA-H560/4R1A

Duct models	ESP (Pa)	Air volume(m ³ /h)
		High fan speed
ARVFA-H560/4R1A Default (220Pa)	150	5330
	160	5302
	170	5260
	180	5217
	190	5160
	200	5095
	210	5040
	220	5000
	230	4945
	240	4924
	250	4885



6. Capacity table

Fresh Air Processing Unit

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

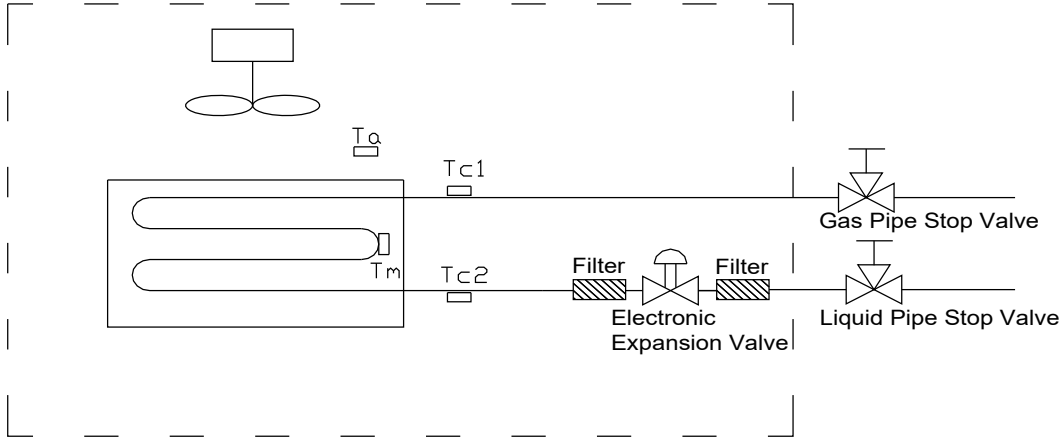
Outdoor dry bulb temperature [°C]	Correction coefficient	Indoor dry/wet bulb temperature [°C]				
		22/15	24/17	27/19	29/21	32/23
-15~20	Cooling capacity	80 - 110 % of nominal				
	Power	25 - 50 % of nominal				
25	Cooling capacity	0.97	1.03	1.10	1.16	1.22
	Power	0.78	0.79	0.81	0.82	0.84
30	Cooling capacity	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	0.83	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

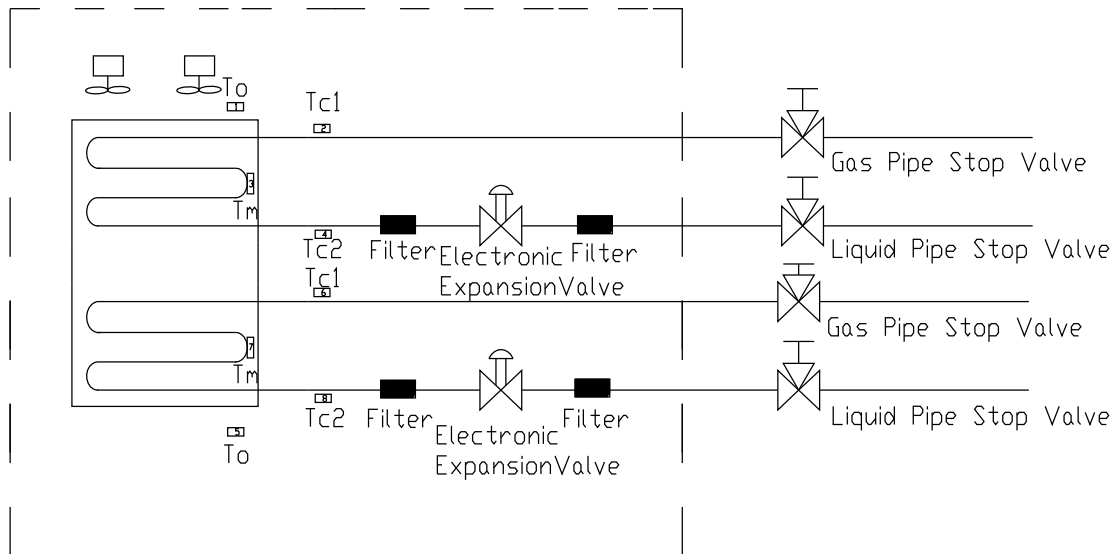
Outdoor ambient temperature of dry/wet bulb [°C]	capacity/power correction	Indoor back temperature of dry bulb [°C]		
		15	20	25
-20/-21	Heating capacity	0.58	0.53	0.49
	Power	0.50	0.56	0.62
-15/-16	Heating capacity	0.64	0.59	0.55
	Power	0.60	0.66	0.72
-10/-12	Heating capacity	0.71	0.66	0.62
	Power	0.72	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

7. Refrigerant piping diagram

ARVFA-H220/4R1B, ARVFA-H280/4R1B
 ARVFA-H220NR1DC, ARVFA-H280NR1DC



ARVFA-H450/4R1A, ARVFA-H560/4R1A

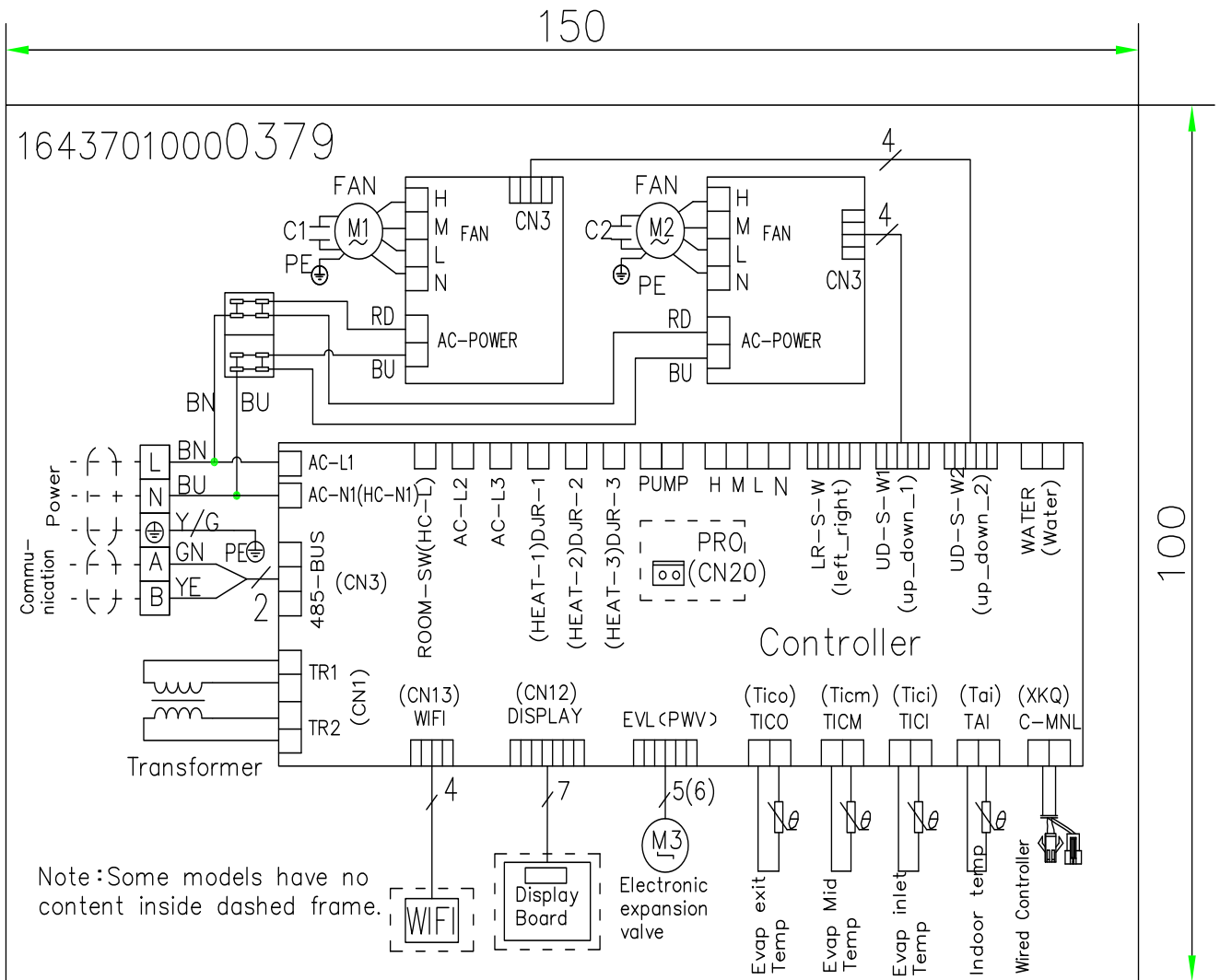


Refrigerant pipe connection port diameters (mm)

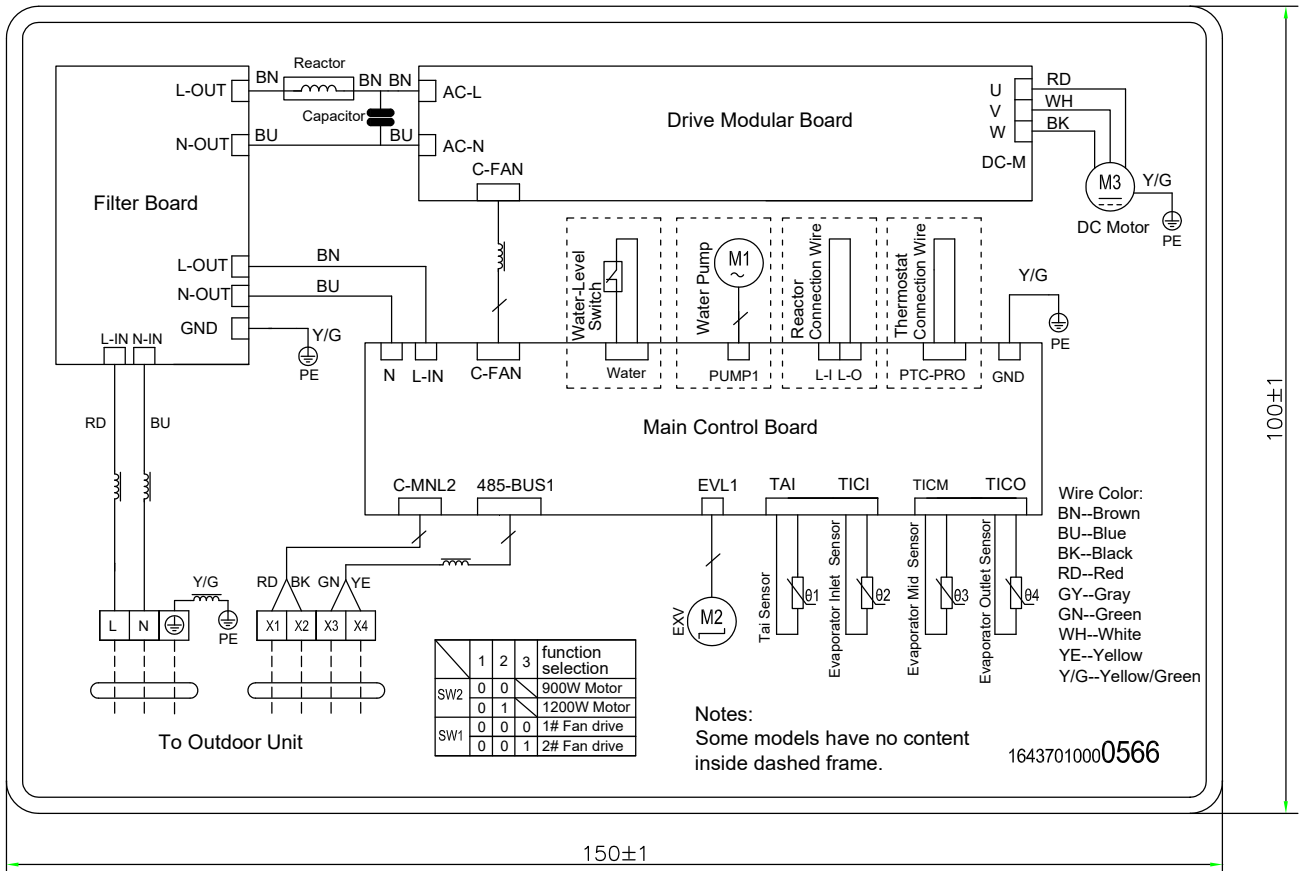
model	Gas	Liquid
ARVFA-H220/4R1B, ARVFA-H280/4R1B	Φ22.2	Φ12.7
ARVFA-H220NR1DC, ARVFA-H280NR1DC	Φ22.2	Φ12.7
ARVFA-H450/4R1A, ARVFA-H560/4R1A	2×Φ22.2	2×Φ12.7

8. Wiring diagram

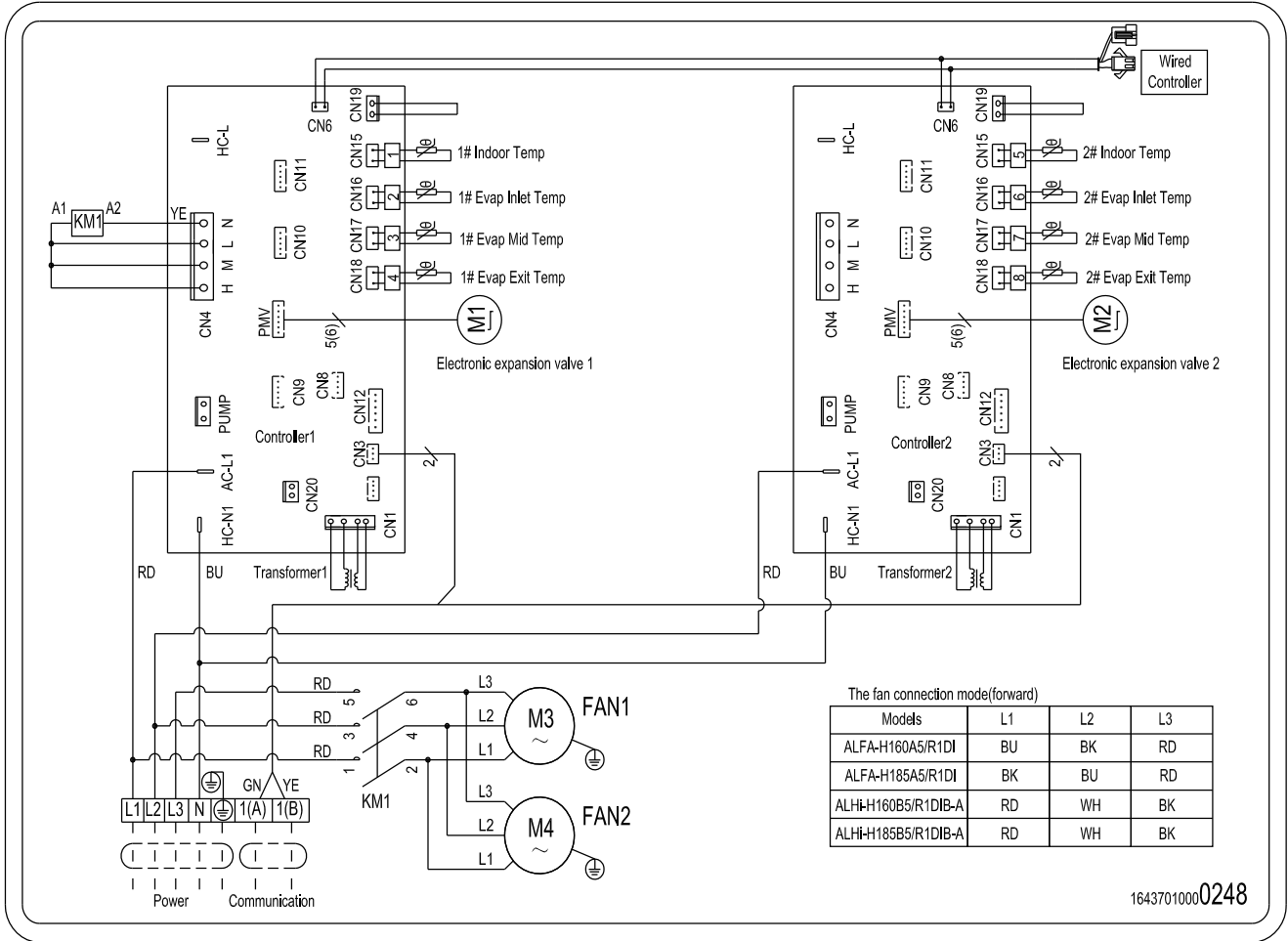
ARVFA-H220/4R1B, ARVFA-H280/4R1B



ARVFA-H220NR1DC, ARVFA-H280NR1DC



ARVFA-H450/4R1A, ARVFA-H560/4R1A

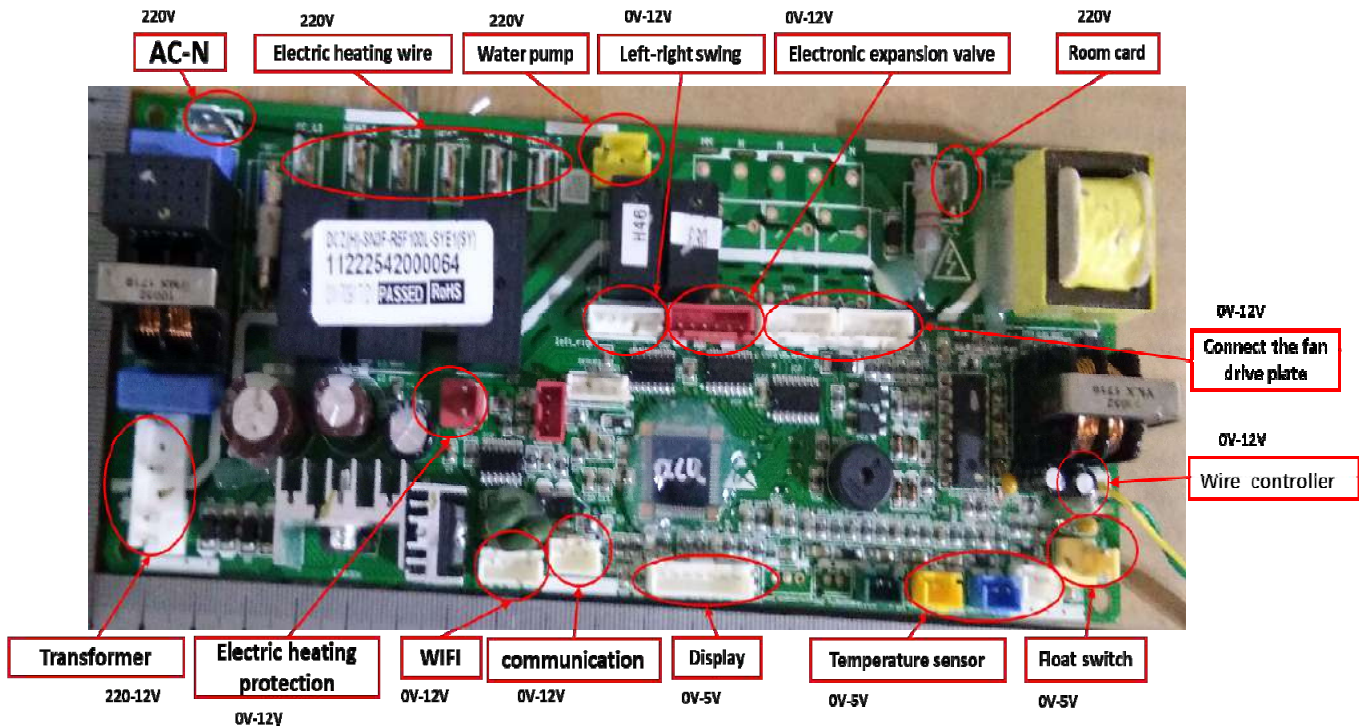


9. PCB Port Introduction

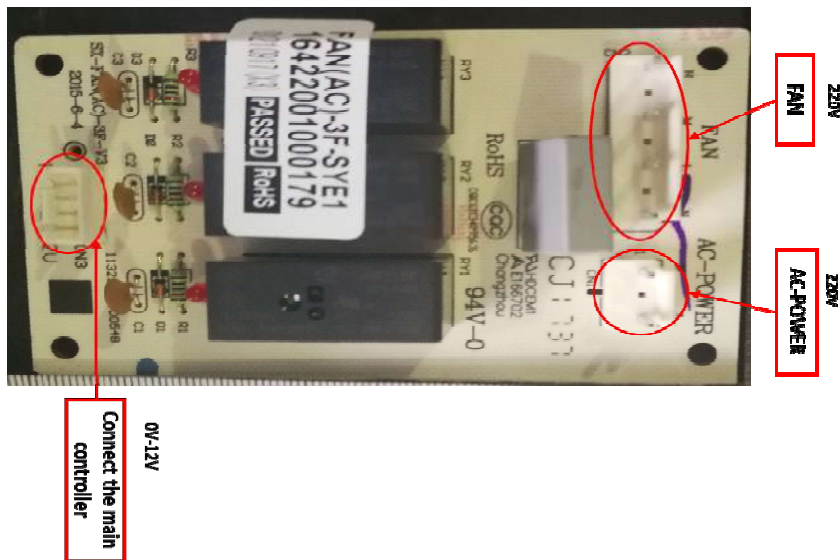
50HZ E Series 220Pa

ARVFA-H220/4R1B; ARVFA-H280/4R1B

Main board-- 11222542000064 CJ 控制板 DCZ(H)-SN3F-R5F100L-SYE1(SY)



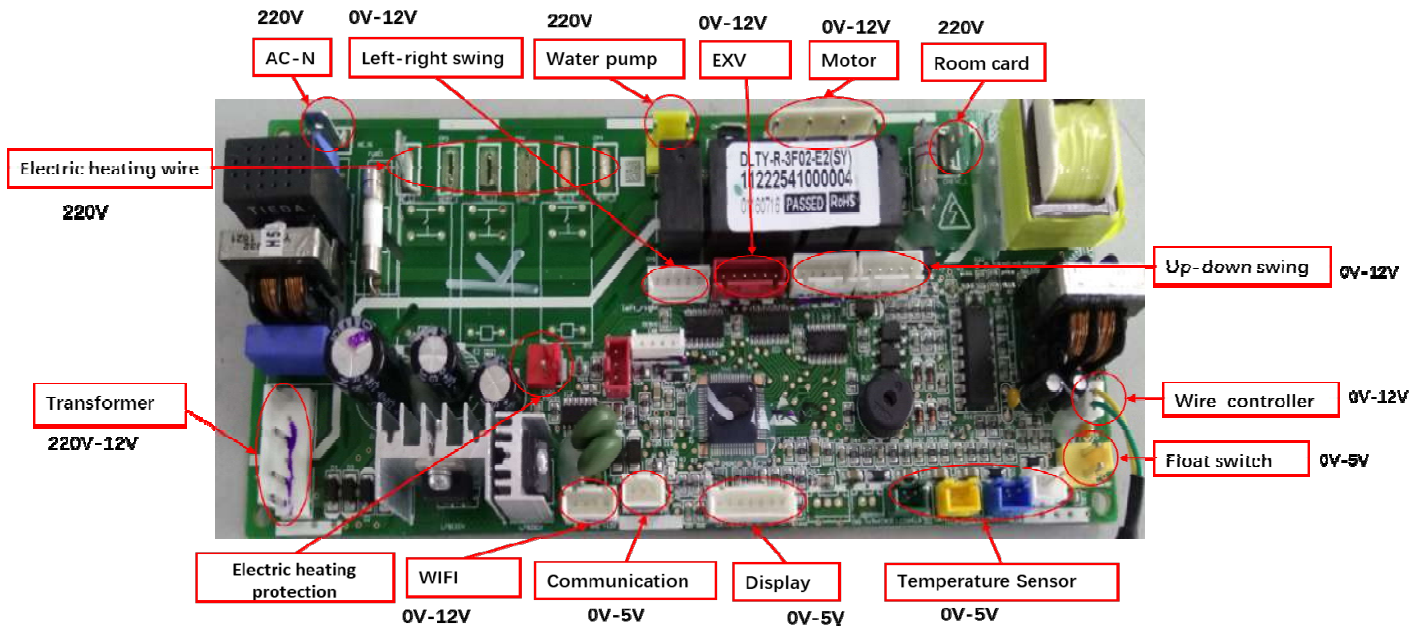
Fan modular PCB-- 16422001000179 CJ 控制板 FAN(AC)-3F-SYE1



50HZ E Series 220Pa

ARVFA-H450/4R1A; ARVFA-H450/4R1A

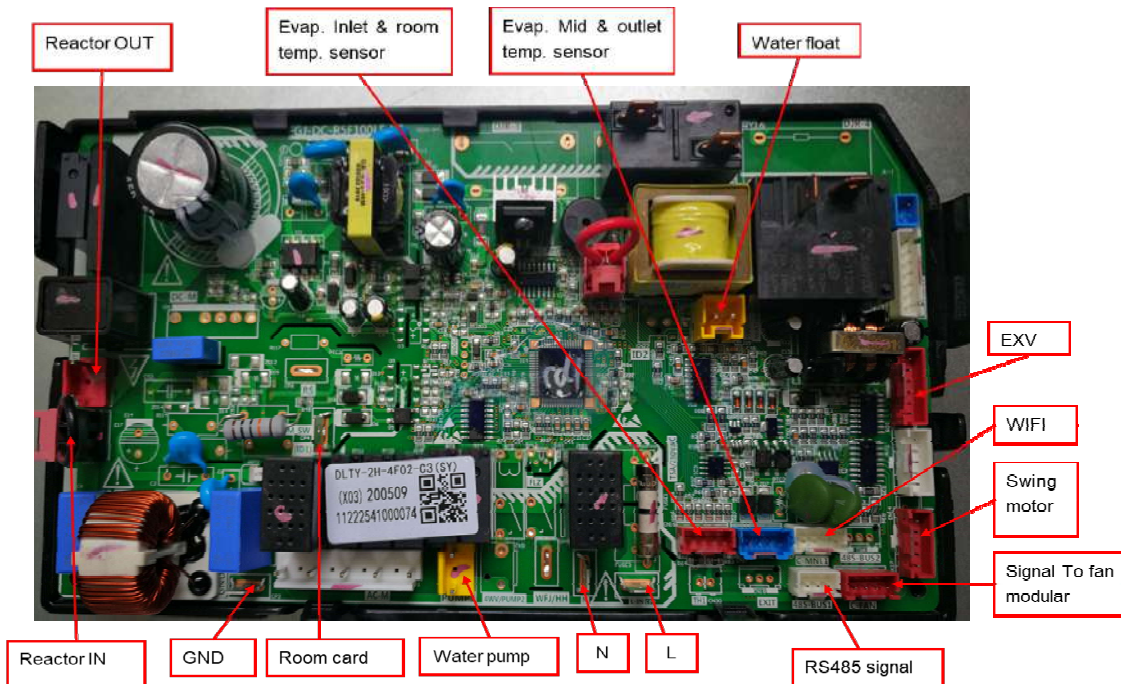
Main board-- 11222541000047 CJ 控制板 DLTY-R-3F02-E3(SY)



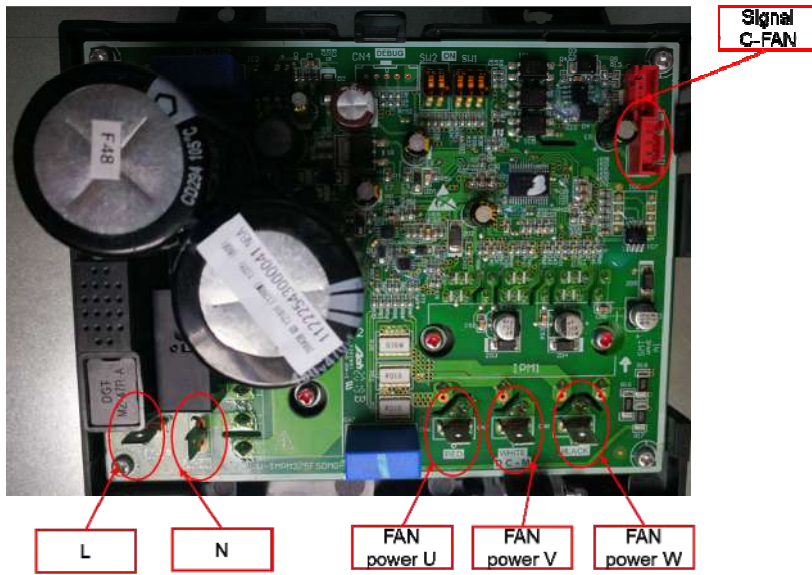
50HZ Y Series 170Pa

ARVFA-H220NR1DC, ARVFA-H280NR1DC

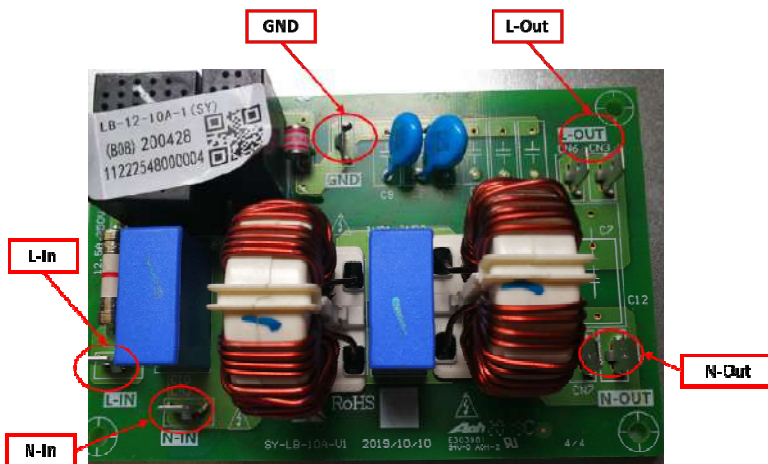
Main board-- 11222541000074 CJ 控制板 DLTY-2H-4F02-C3(SY)






Fan modular board --- 11222543000041 CJ 模块板 QD-12101F (1200W 电机) -1(SY)



Filter board-- 11222548000004 CJ 滤波板 LB-12-10A-1(SY)



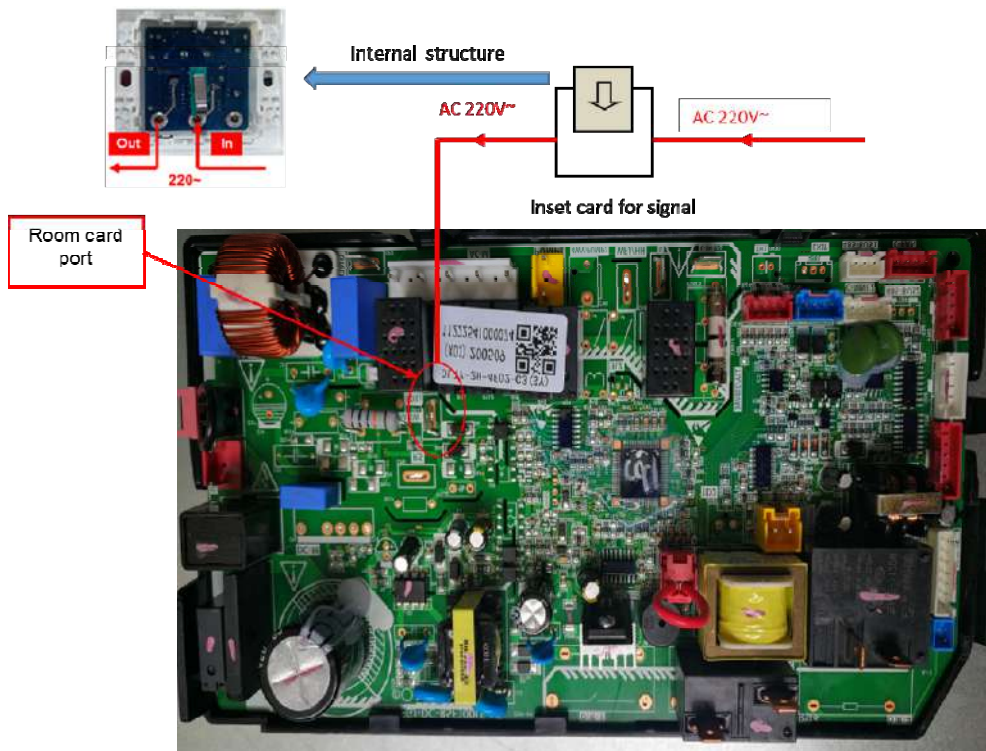
10. Split controller

Split Controller			
IDU Type	Standard	Optional	
	XK-02	L type	T type
<p>ARVFA-H220NR1DC ARVFA-H280NR1DC</p> <p>ARVFA-H220/4R1B ARVFA-H280/4R1B ARVFA-H450/4R1A ARVFA-H560/4R1A</p>			

11.Room card function

Parameter	Function	Insert key card	Remove key card
0901	Valid	Standby, IDU can be controlled	Standby, IDU can't be controlled

Wiring diagram



12.Parameter setting

1. Parameter setting table

Model	Parameter No. & definition			
	IDU type	Capacity Parameter	Room card	Room sensor selection
	04	05	09	15
ARVFA-H220NR1DC	34	80	00	00
ARVFA-H280NR1DC	34	100	00	00
ARVFA-H220/4R1B	34	99	00	00
ARVFA-H280/4R1B	34	99	00	00
ARVFA-H450/4R1A	34	80	00	00
ARVFA-H560/4R1A	34	95	00	00

- 0508 means capacity is 8 kbtu/h , 0524 means capacity is 24 kbtu/h ,
- 0900 means room card function invalid, 0901 means valid
- 1501 means choose wired controller built in temperature sensor as the detect temperature value
1500 means choose return air temperature sensor as the detect temperature value


Note: Once PCB be replaced , please recheck the parameter value ,ensure keep same as default parameter value

2. Parameter setting method

E.g.: set the parameter for 2.2kw IDU. (Parameter: 0508)


Wired controller

Step1



Press **FUNCTION** for more than 10s, enter parameter setting

Step2






1. Press **▲** to change 01 to **05**

2. Press **FUNCTION** for more than 5s, then **01** will flicker

3. then press **▲** to change 00 to **08**

4. Press **FUNCTION** 5s to send the order

13.Group control

Group control			
IDU type	Centralized controller	BMS-MODBUS control	Monitoring control
	Max.256 IDUs	Quantity no limit	one refrigerant system
<p>ARVFA-H220NR1DC ARVFA-H280NR1DC</p> <p>ARVFA-H220/4R1B ARVFA-H280/4R1B ARVFA-H450/4R1A ARVFA-H560/4R1A</p>			

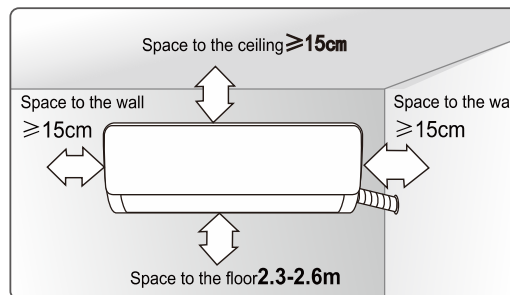
Note: More details about connection wiring , function introduce Please check the <Control system technical manual>

Part10 Installation

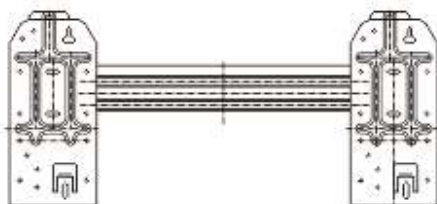
1. Wall Mounted

Select installation site

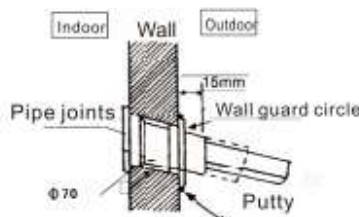
1. There should be no source of heat or gas near the position for future installation;
2. There should be nothing that will block the air circulation;
3. Good air circulation inside the room should be ensured;
4. Easy to avoid noise;
5. Choose connection tube can be derived. The position of outdoor convenient
6. Don't install the product near the porch;
7. Allow maintenance and installation space;
8. To ensure the distance between the product and the wall, the ceiling and other decorations as illustrated in the picture;
9. The distance between the product and the floor should be about **2.3-2.6 m**.



★ Installation



Note: this is just an illustration for reference.



1. Fix the hanging board on the wall with 4 “+” type bolts.

Ensure that the board is well positioned both horizontally and vertically.

The wall should be hard enough to avoid vibration.

2. Drill a hole on the bottom left or right of the board of 70mm in diameter.

Note that the hole should lean outwards a bit.

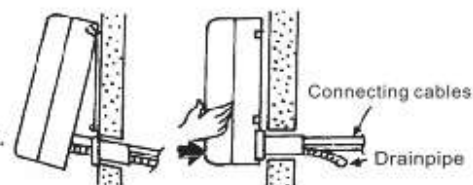
3. Hang the indoor unit on the board; Ensure that the clasps on the indoor unit are in the right slots on the board.

4. There is a stand for the anti-bacterial net on the wind intake.

Open the lid on the top of the stand and put the net in. Close the lid.

5. Pushing the machine towards the left down and right down side of the

installation board until the hangers enter tightly the grooves (it produces “click” sound)



■ Drainage checking

1.Take down the grid from the indoor unit.

The grid should be taken down during maintenance as follows:

(1)take off the two bolts on the two sides of the front grid as illustrated in the picture;

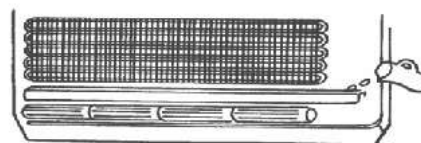
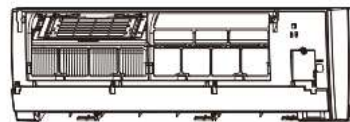
(2)hold the bottom of the grid and pull it towards yourself ;

Repeat the above operations from ② to ① and you can put back the grid.Please ensure that the grid is installed properly after that.(There is slight difference in grid installation among different models)

2.drainage checking

(1) pour a cup of water into the plastic drainage slot;

(2)confirm that the water runs through the drainage hole of the indoor unit.



★Connection method

1. Connection method of indoor unit

Open the cover of terminal box cover. Connect the cables according to the electric connection diagram.

Note: Line on the wiring terminal must be pressed, not any shake.

2. Connection method of outdoor unit

Open the right front plate outdoor unit to connect the cables. Be sure to lead the connecting line through the pressing plates and connect them according to the circuit diagram. Cable end must be pressed firmly on the terminals, and should not get loose. Earth wire must be connected at the specified location.

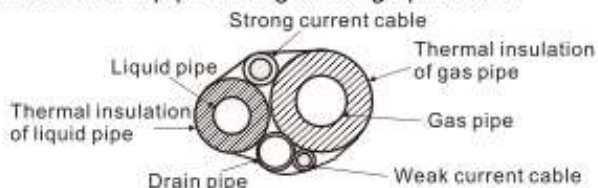
Note: The PC board of outdoor unit whose power supply is 380V-415V has phase sequence protection.

Please pay attentions to it while connecting power cable.

After cables are connected correctly, bind connecting tubing, connecting line and drain pipes with binding tapes.

The cross section is as shown in the figure below after binding:

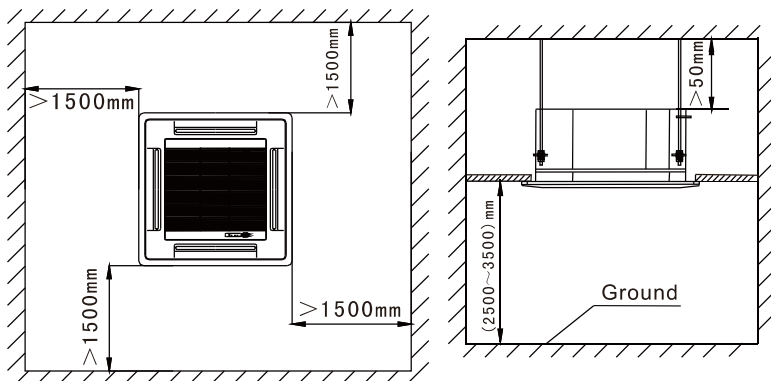
Caution: never squash the drain pipe during binding operation!



2. Cassette unit

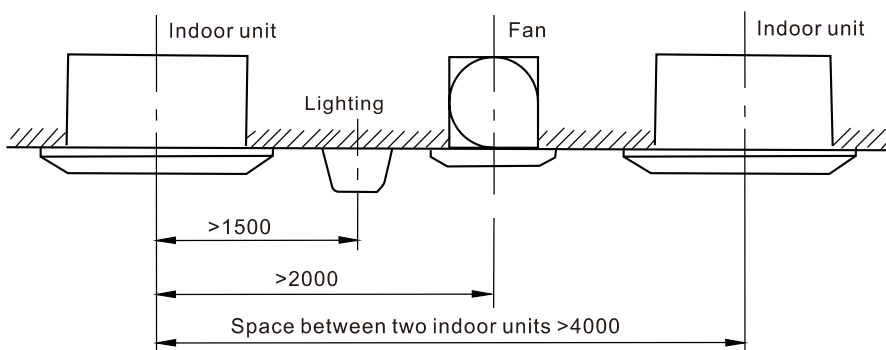
Select installation site

To ensure ease of maintenance please allow the space shown below for access to the unit



※ Ensure the following conditions are satisfied and confirm the position with the customer.

1. There are no obstacles to hinder air circulation. The air should be able to reach every part of the room.
2. The distance away from the ceiling and obstacles is shown in the below drawing. (Four-way Cassette)



3. The installation site should be convenient for water draining (See "Installation of drainage pipe" for details.)

Warning	4. Ensure the installation position is able to take four times of the unit weight. There should be no increase in noise and vibration.
----------------	--

5. The indoor unit must be away from source of heat or steam. It should be some distance from the entrance to the room.
6. It should be close to the dedicated power supply designated for its use.
7. It should be as close as possible to the outdoor unit
8. It should not be exposed to direct sunlight and away from sources of moisture
9. The height of the unit above the ceiling should allow for correct drainage from the unit
10. Do not install the unit in a washing or drying room risk of electric shock.

■ The dimension of indoor unit (Four-way Cassette)

E series built in ceiling cassette split air conditioner unit

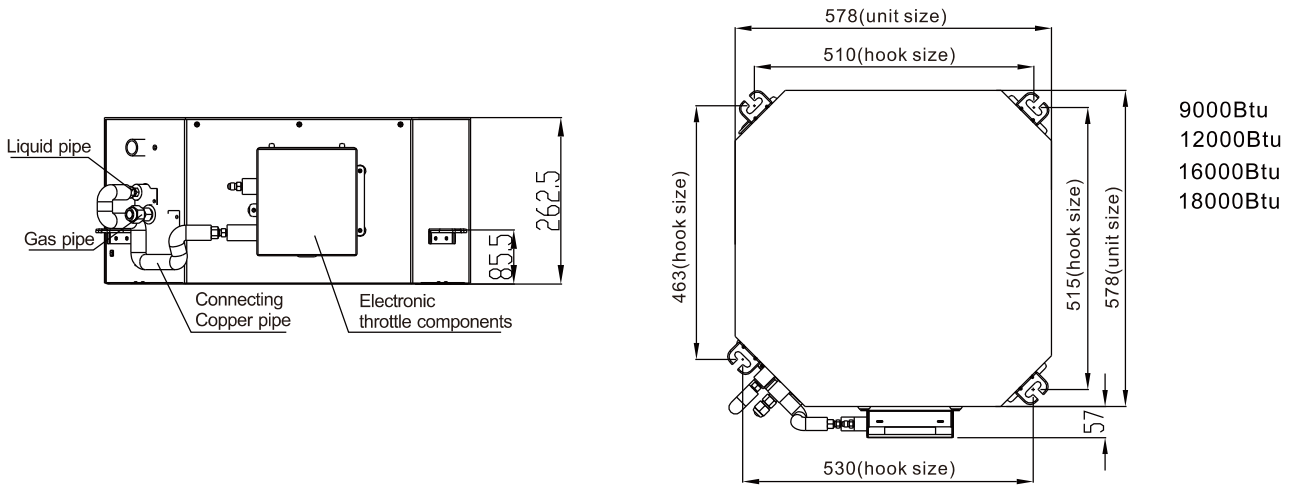


Fig A

Note: For 2.2Kw, 2.8Kw, 3.6Kw, 4.5Kw, 5.6Kw cassette unit, make sure do insulation work with insulation foam tube as the following picture showing before install the connecting copper pipe

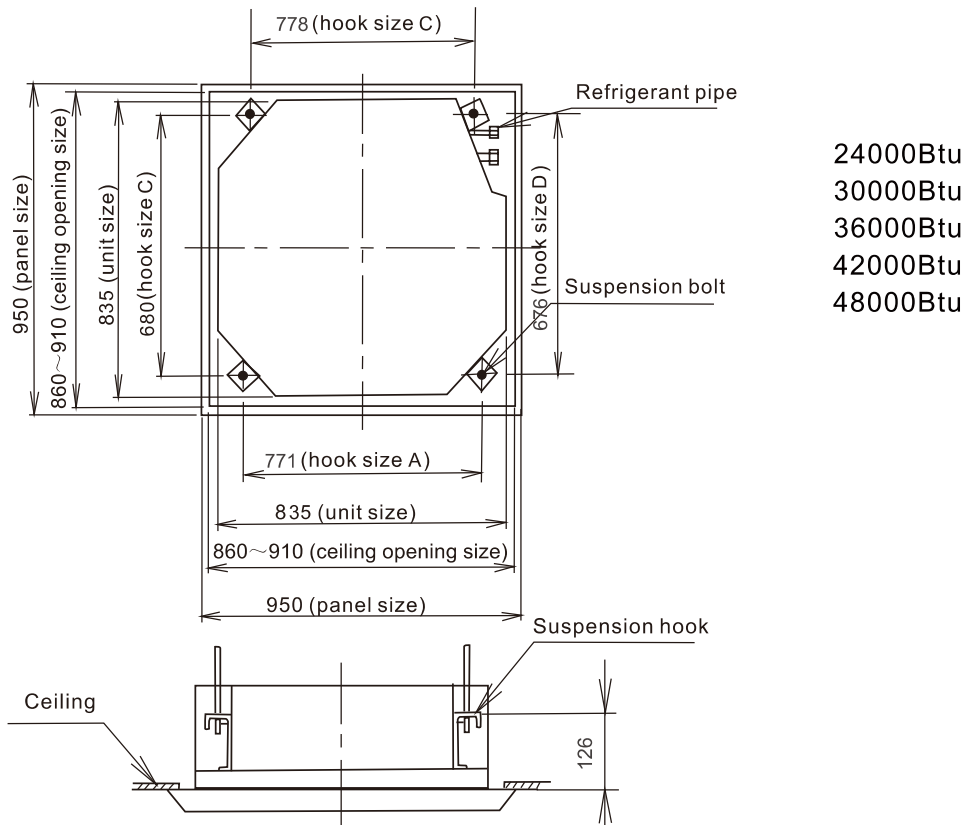
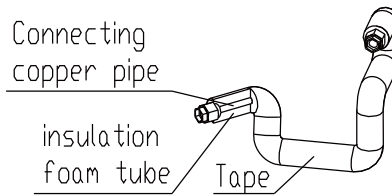


Fig B

Y series built in ceiling cassette split air conditioner unit

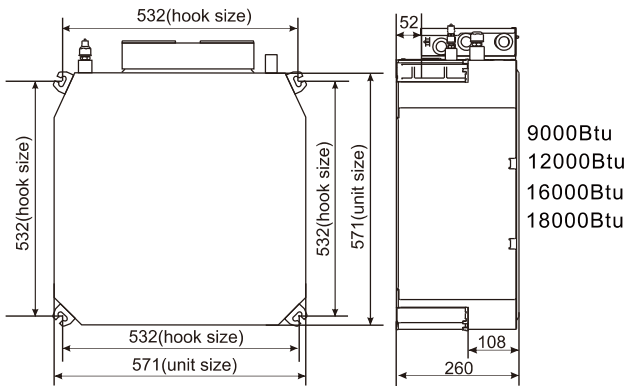
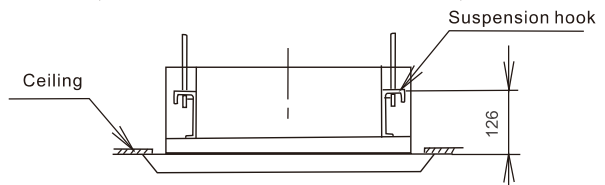
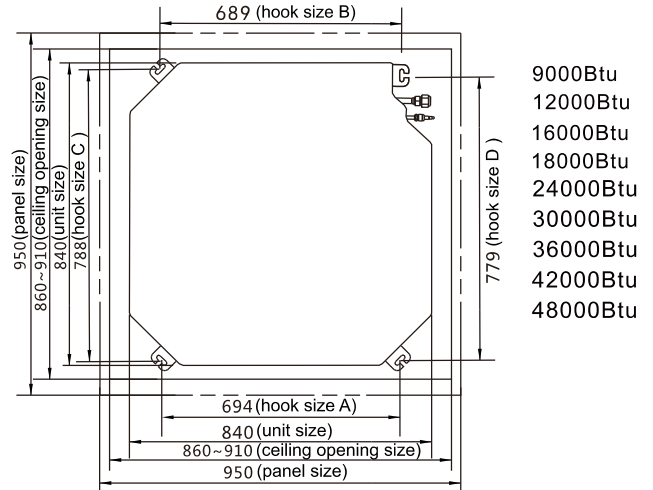


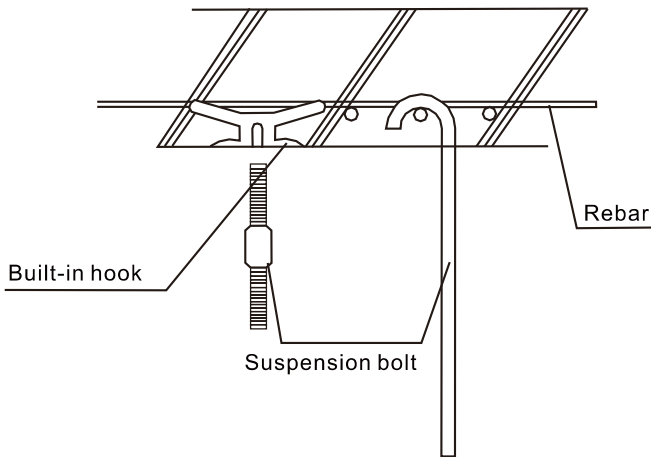
Fig A



■ Suspension foundation of the indoor unit

1. Select the suspension foundation

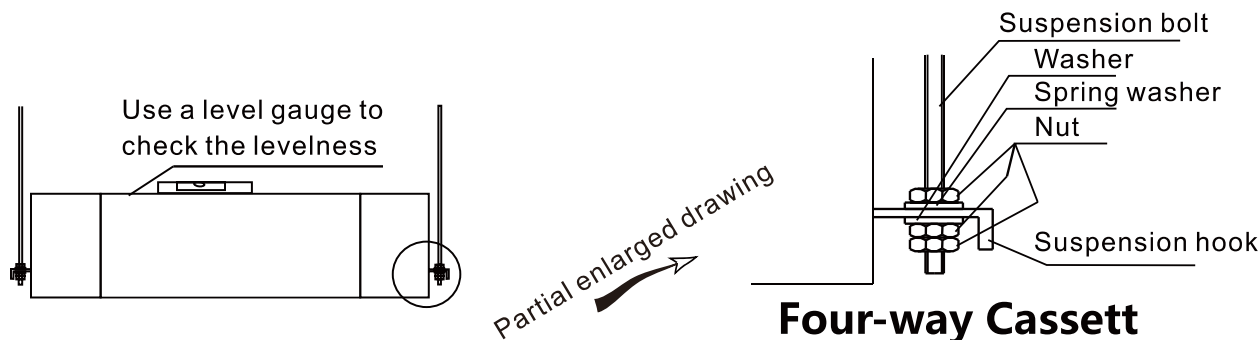
The suspension foundation is a structure of either wooden frame or reinforced concrete. It must be firm and reliable to bear the weight of more than 200kg and capable of bearing vibr



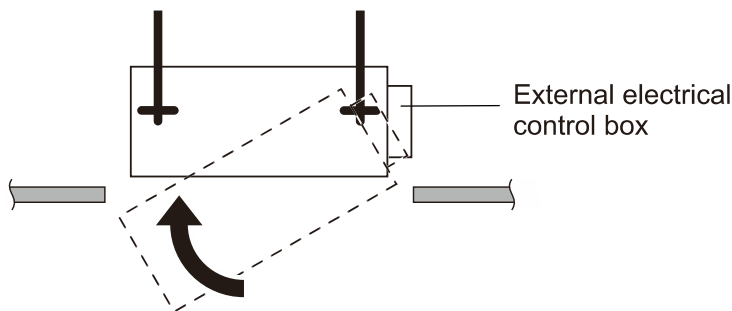
■ The suspension of indoor unit

The indoor unit should be suspended as shown in the below sketch:

1. Adjust the relative position of the suspension hook on the suspension bolt so that the unit can be in level position in all directions. Check with a level gauge after the installation is complete in order to ensure that the indoor unit is horizontal, otherwise it will cause water leakage, air leakage etc.
2. Tighten the bolt and ensure that four hooks are in close contact with the nuts and washers, and the unit is suspended firmly and reliably onto the hooks.
3. After the unit is installed ensure it is secure and does not shake or sway.
4. Ensure that the centre of the indoor unit is in alignment with the centre of the opening in the ceiling.



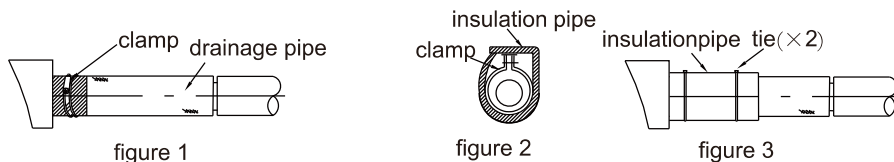
5. Cassette unit with external electrical control box, installation refers to figure.



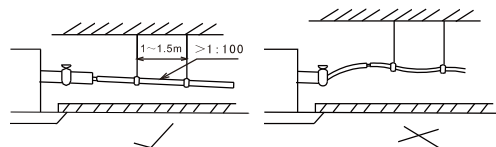
★ Installation of drainage pipe

1. Make sure do good insulation work on the drainage pipe as following steps:

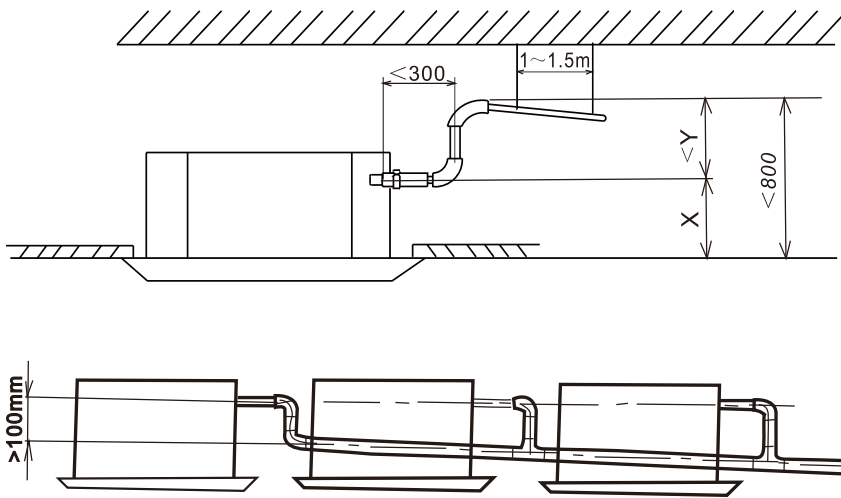
- (1) Use the clamp to fix the connector of the drainage pipe, as figure 1
- (2) Wrap the clamp with insulation pipe, as figure 2;
- (3) Use the 2 ties to fix the insulation pipe, as figure 3;



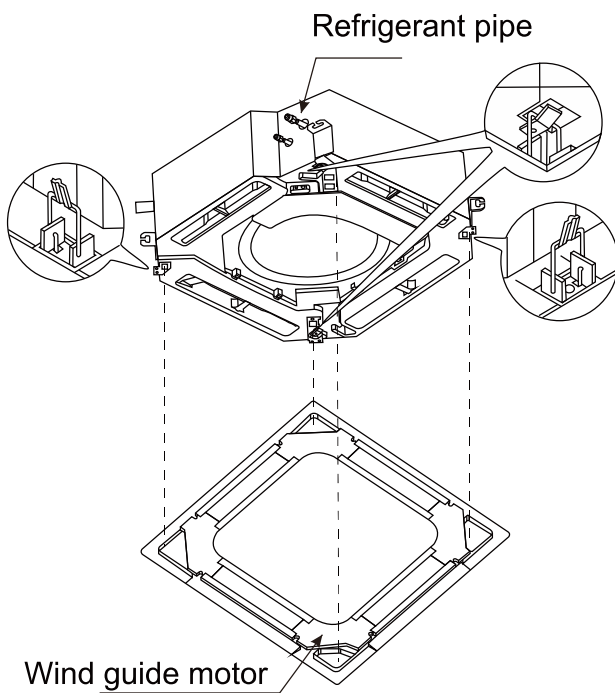
The drain pipe should be properly insulated to prevent the generation of condensation. It should be installed with a downward gradient.



2. The unit has a drain pump which will lift up to 1200mm. However after the pump stops the water still in the pipe will drain back and may overflow the drain tray causing a water leak. For this reason please install the drain pipe as shown on the right.
Unit: mm



★Grille Installation



3. Ceiling Floor

■ Selection of installation location

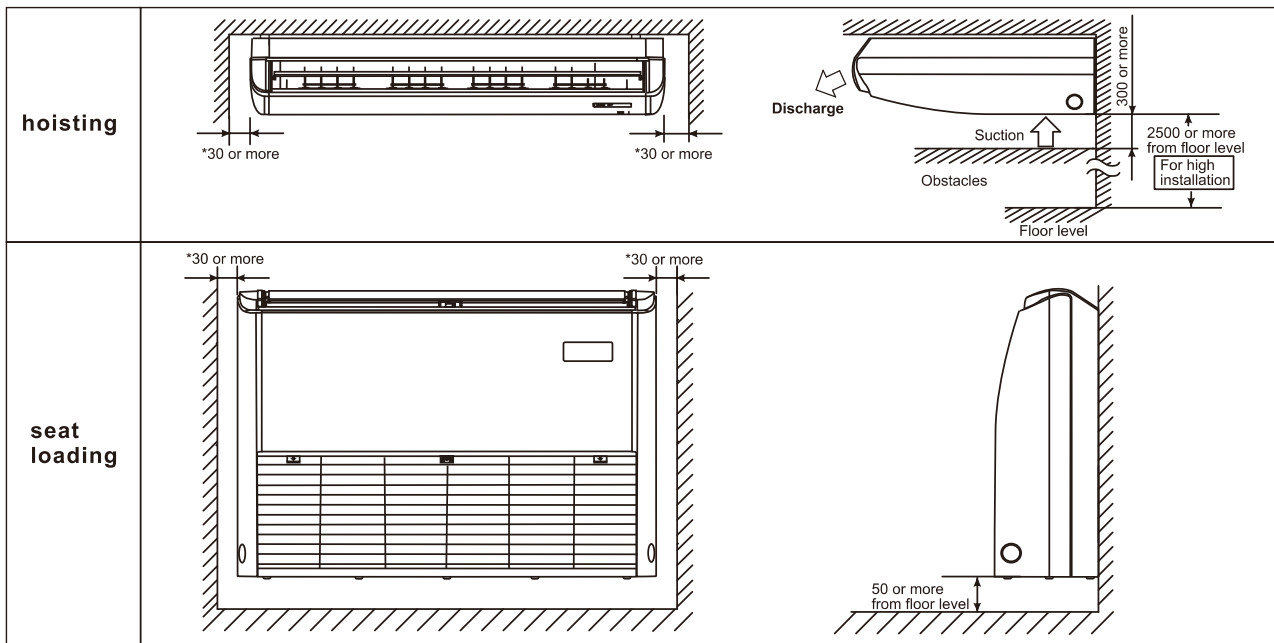
When unpacking and moving the indoor unit after unpacked, do not apply force to the piping (refrigerant and drain).

1. Select the installation location that meets the following conditions and get approval of the customer.

- Where the cool and warm air spreads evenly in the room.
- Where there is no obstacles in the air passage.
- Where drainage can be ensured.
- Where the ceiling lower surface is not inclined.
- Where there is sufficient strength to withstand the mass of the indoor unit (if the strength is insufficient, the indoor unit may vibrate and get in contact with the ceiling and generate unpleasant chattering noise).
- Where a space sufficient for installation and service can be ensured.
- Where the piping length between the indoor and the outdoor units is ensured within the allowable length. (Refer to the installation manual attached to the outdoor unit.)
- Where there is no risk of flammable gas leak.

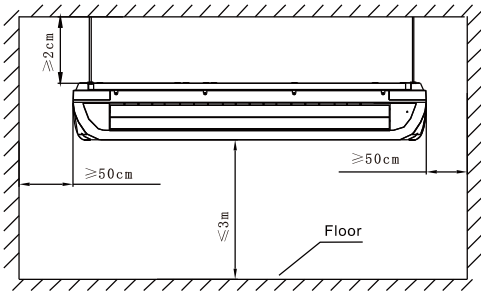
F type ceiling floor

Required installation space (mm)

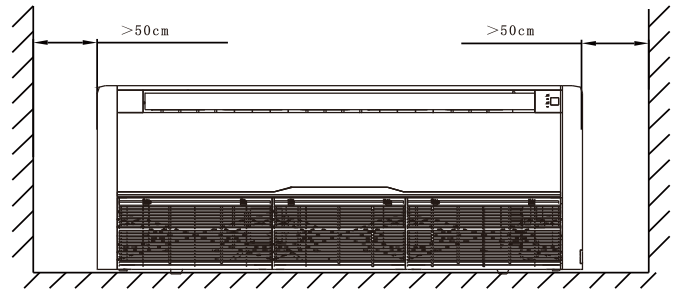


C5 type ceiling floor

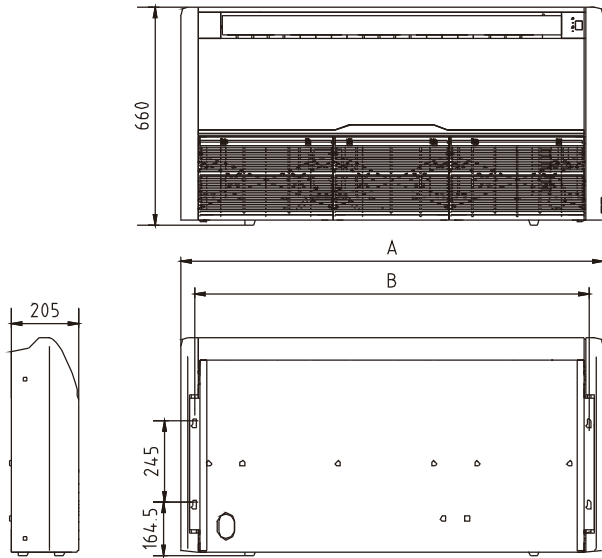
1.Floor



2.Ceiling



■ The dimension of indoor unit



Unit: mm

Type	A	B
9000BTU 12000BTU 16000BTU 18000BTU	929	841
24000BTU 30000BTU 36000BTU-10.0KW	1280	1192
36000BTU-11.2KW 42000BTU 48000BTU	1631	1543

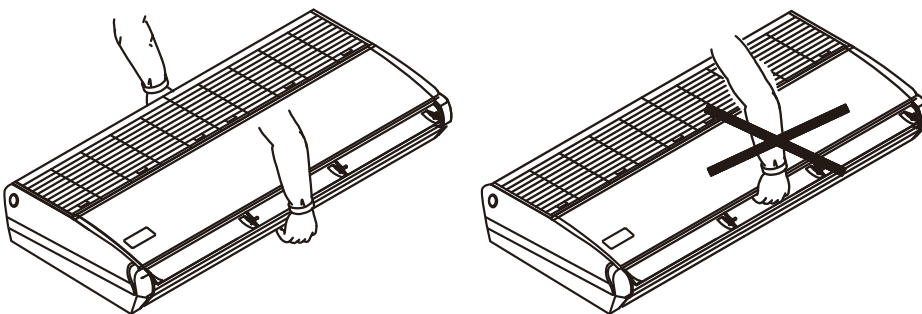
2.Use hanging bolts for installation

Investigate if the installation place can withstand the mass of the indoor unit and, if necessary, hang the indoor unit with bolts after it is reinforced by beams etc. (Refer to the installation pattern paper for the mounting pitch).

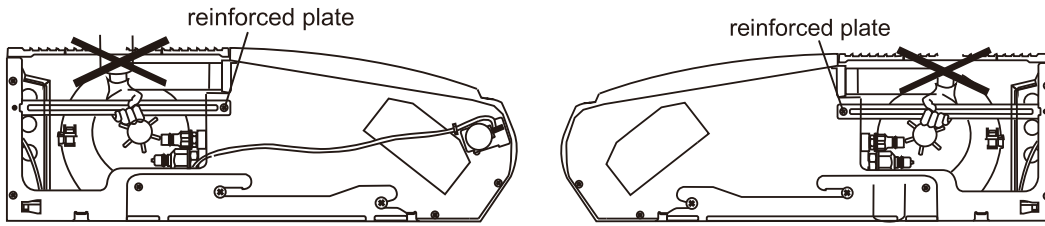
3.Ceiling height

This indoor unit can be installed up to 4.3m for packing size(1675*770*320mm) and up to 3.5m for other.

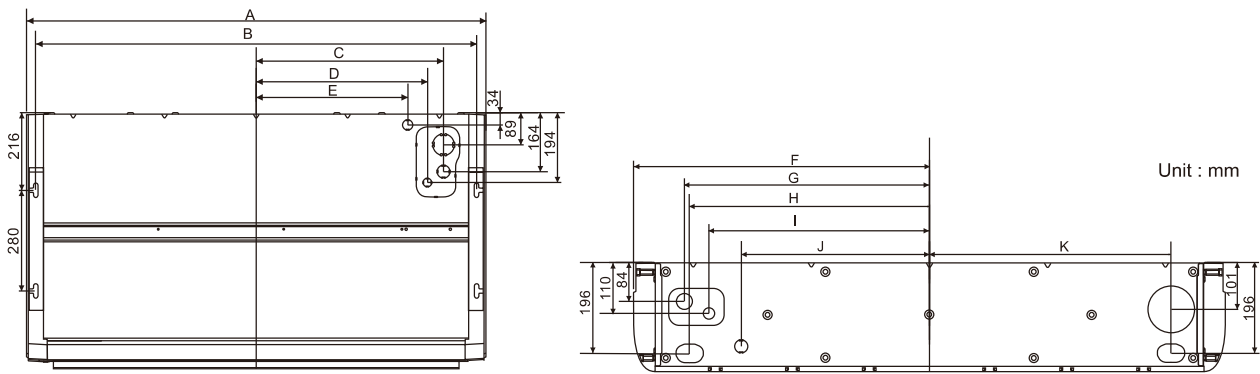
- Please do not take out the product and discharge horizontal blade and the air outlet.



- Please do not lift the product and do not pull it with the reinforced plate (right and left). When the reinforced plate bends, cause noise.



4.Preparation before installation or the locations of indoor unit hanging bolts, piping outlet holes, drain piping outlet hole, and ele

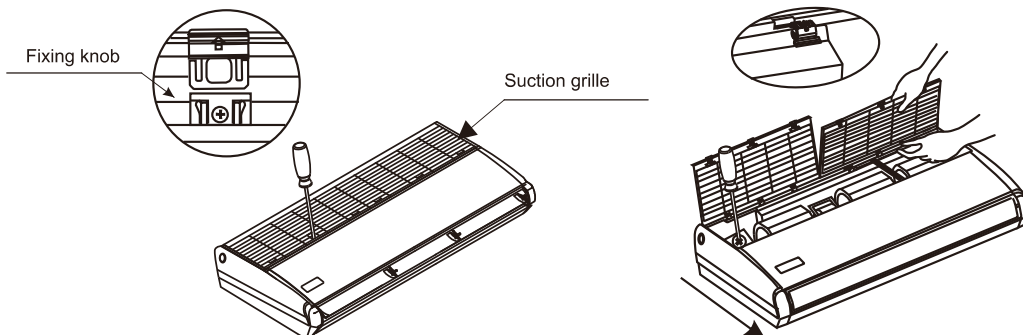


Packing Size (mm)	A	B	C	D	E	F	G	H	I	J	k
1080*770*325	1000	948	382	337	282	500	390	378	336	267	382
1360*770*325	1280	1228	522	477	422	640	530	518	476	407	522
1680*770*325	1600	1548	777	732	692	800	690	678	635	567	682

■ Remove the parts of indoor unit

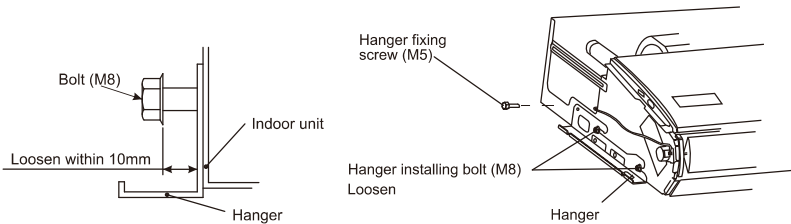
1.Remove the parts of the indoor unit.

- Remove the suction grille.
- Slide the suction grille fixing knobs toward backward direction (as shown by an arrow) to open the suction grille widely.
- Keeping the suction grille opened, hold the knob at the back of the suction grille and at the same time, pull the suction grille forward to remove.
- After removing the grille, screw in the lower cover screws as shown. Remove the end cover in the direction of arrow .(The left and right end covers are symmetrical.)



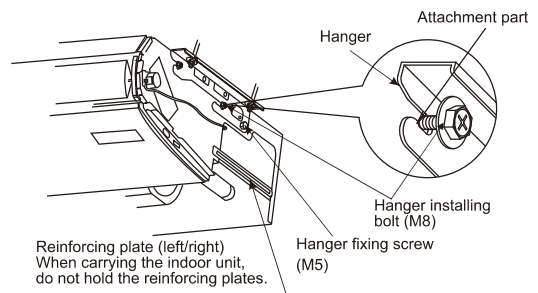
2.Remove the hanger

- Loosen 2 bolts for installing the hanger at both sides (M8) (4 places at left and right) within 10mm.
- Remove the fixture screw for hanger at the back side (M5), pull the hanger backward (the arrow direction) to remove.



3.Installation of the indoor unit

- Lift up the indoor unit, slide from the front and put the hanger installing bolt (M8) into the securely for temporary hanger.
- Tighten the hanger fixing screws (M5) at 2 places, which were removed, as they were before. It is necessary to prevent misalignment of the indoor unit.
- Tighten the hanger installing bolts (M8) at 4 places properly.



■ Ceiling installation

1.Select the suspension foundation

The suspension foundation is a structure of either wooden frame or reinforced concrete. It must be firm and reliable to bear the weight of more than 200kg and capable of bearing vibration for long periods.

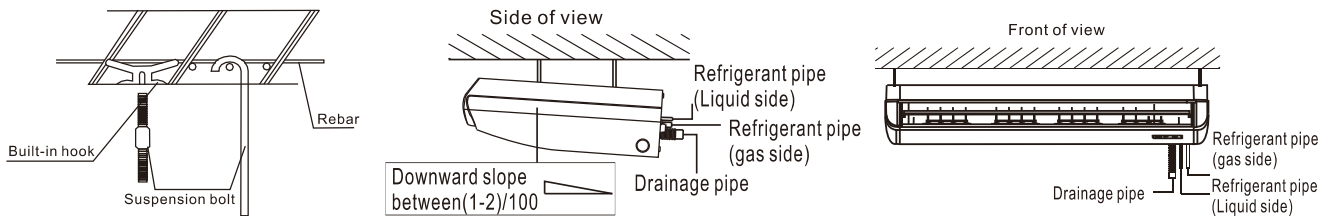
2.Fixing of suspension foundation

Fix the suspension foundation bolts either as shown on the right or by a steel or wooden bracket.

3.The suspension of indoor unit

the indoor unit should be suspension as shown below:

- Adjust the relative positions of the suspension hooks.
- Tighten the nuts and ensure that the hooks are tightly connected to the nuts and shims.
- After the unit is installed ensure it is secure and does not shake or sway



4.Installation of drainage pipe

- ①The drain pipe should be properly insulated to prevent the generation of condensation.
- ②Pipes it should be installed with a downward gradient to allow the water to drain away.
- ③The pipe should not rise at any point.



4. Low Static Pressure Duct

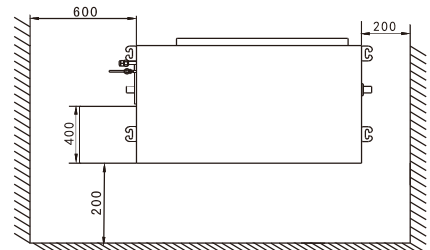
■ Select installation site

■ The location of hoisting bolt

For convenience of maintenance, please set a inspection port.

※After the installation site that meets the following conditions is selected and approved by customer, the installation can be carried on.

1. There are no obstacles which hinder the air circulation, so the cold air can be spread to all corners in the room.
2. The distance away from the wall and obstacles is shown in the below drawing.
3. The installation site should be convenient for water draining (See "Installation of drainage pipe" for details.)

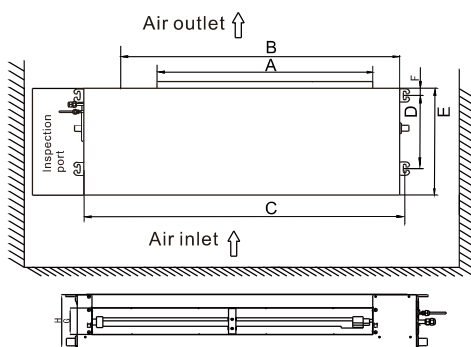


Warning	<p>4. For ducted type indoor unit, the suspension site should be able to support the weight 4 times more than the indoor unit. There should be no increase in noise and vibration. If it needs to be reinforced, the installation should be carried on after reinforcement (if reinforcement is poor, the indoor unit will fall and cause damage).</p>
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5. There should be no heat source and steam source near the installation site.
6. The place is near the power supply (special line).
7. The place should be easy to connect to the outdoor unit.
8. The place should keep away from direct sunlight and moisture.
9. The height inside the ceiling should reach the drainage requirements to ensure the installation of indoor unit.
10. The unit can't be installed in the washhouse (it will cause electric shock).
11. In the inlet and outlet of indoor unit, protective barriers should be installed to prevent finger from inserting or contacting the fan with high speed and metal fin.

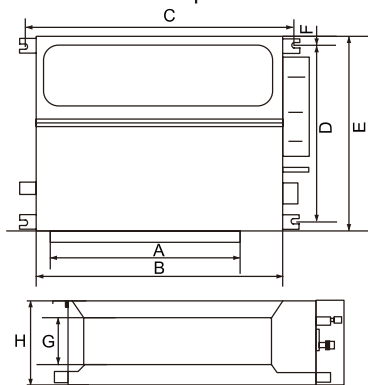
■ The location of hoisting bolt

E series low static pressure ducted air conditioner unit



Type	A	B	C	D	E	F	G	H
7000Btu~12000Btu	642	840	880	300	440	31	90	185
16000Btu~24000Btu	962	1160	1200	300	440	31	90	185

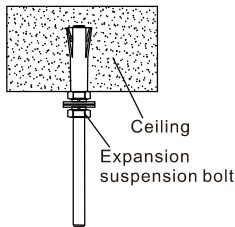
Y series low static pressure ducted air conditioner unit



Type	A	B	C	D	E	F	G	H
7000Btu~12000Btu	532	700	750	412	450	19	110	200
16000Btu~18000Btu	832	1000	1050	412	450	19	110	200
24000Btu	1142	1300	1360	412	450	19	110	200

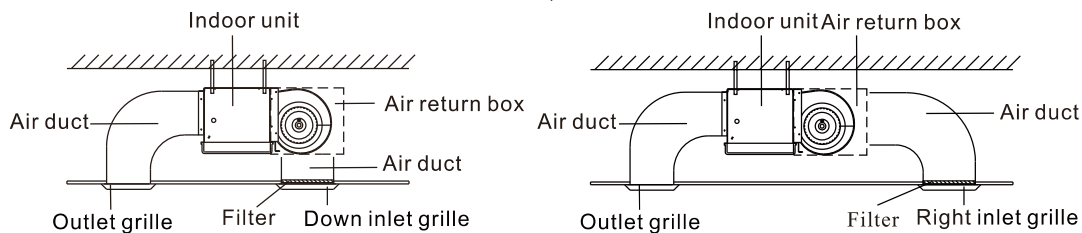
■ The suspension drawing of indoor unit

Warning Must seriously fasten bolts and nuts. The loosening would lead to air-conditioner falling and so on.



■ Duct and drain pipe installation

There are two installation methods of duct, as follows.



★ Installation of drainage pipe

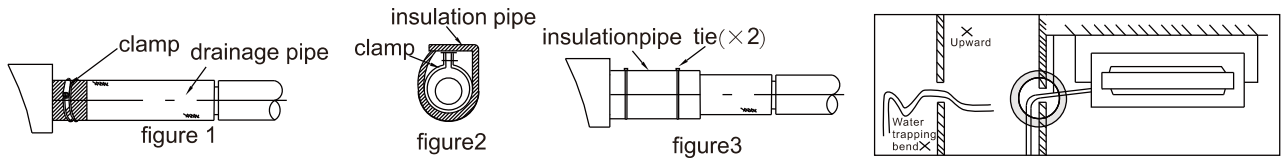
1. Make sure do good insulation work on the drainage pipe as following steps:

- (1) Use the clamp to fix the connector of the drainage pipe, as figure 1
- (2) Wrap the clamp with insulation pipe, as figure 2;
- (3) Use the 2 ties to fix the insulation pipe, as figure 3;

The drain pipe must have a downward gradient (1 / 50 ~ 1 / 100).

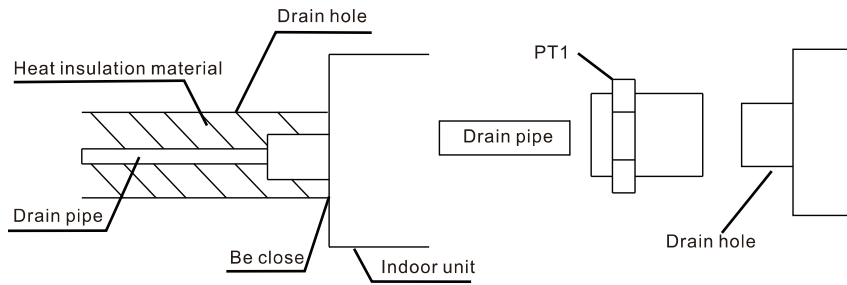
If the drain pipe is installed ups and downs or upward, it will lead to water backflow or leakage etc.

2. The external connection water pipe must use the soft connection water pipe or the transfer pipe use the soft connection water pipe
3. During pipe connection, do not use too much force to the drain joint of indoor unit.
4. The joint is PT1.
5. There is a drain hole on each side of indoor unit; unused drain pipe must be closed.



Note: The drain pipe must be wrapped heat insulation material, otherwise it will cause condensation or water drops.

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



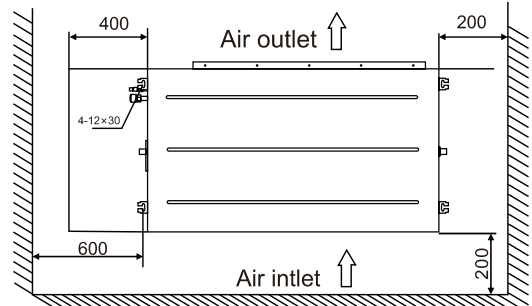
5. Medium Static Pressure Duct

■ Select installation site

For convenience of maintenance, please reserve a service port.

※Ensure the following conditions are satisfied and confirm the position with the customer.

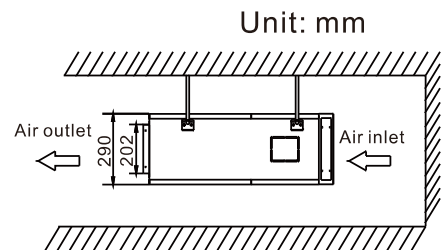
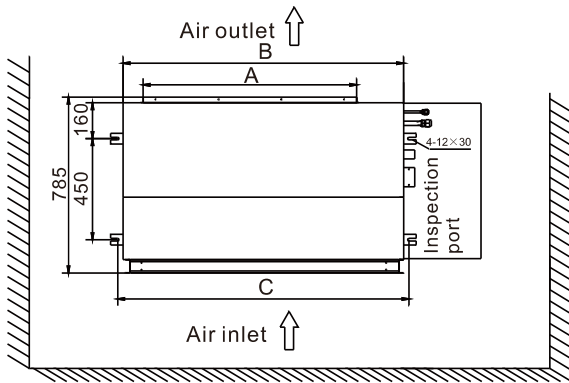
1. The position must allow the air to not be obstructed.
2. The distance away from the wall and obstacles is shown in the below drawing.
3. The installation site should be convenient for water draining (See "Installation of drainage pipe" for details.)



★ Installation

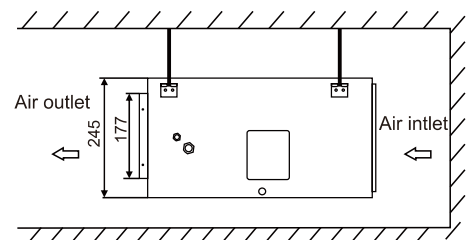
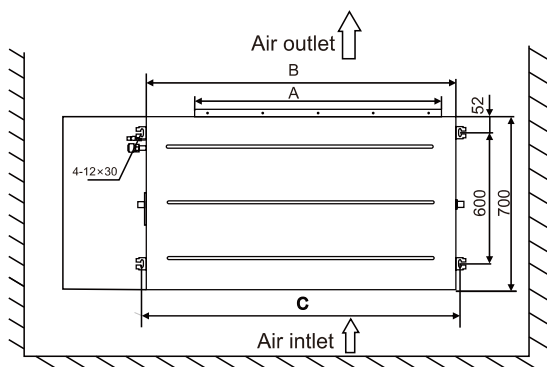
■ The location of hoisting bolt

S3/E series middle static pressure ducted air conditioner unit



Type	A	B	C
16000Btu~36000Btu(10kW)	590	890	940
42000Btu~60000Btu	950	1250	1300

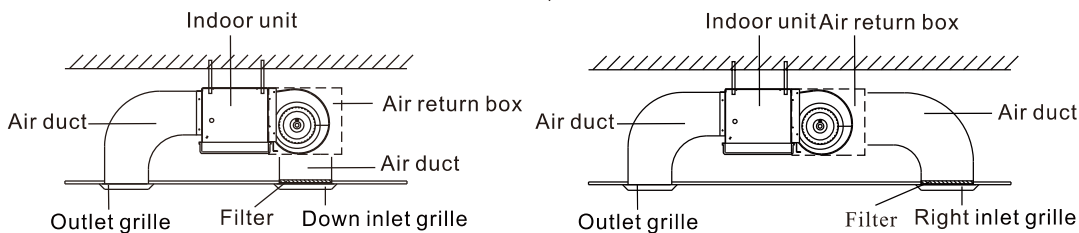
M series middle static pressure ducted air conditioner unit



Type	A	B	C
16000Btu~36000Btu(10KW)	812	1000	1039
36000Btu(11.2KW)~60000Btu	1212	1400	1439

■ Duct and drain pipe installation

There are two installation methods of duct, as follows.



★ Installation of drainage pipe

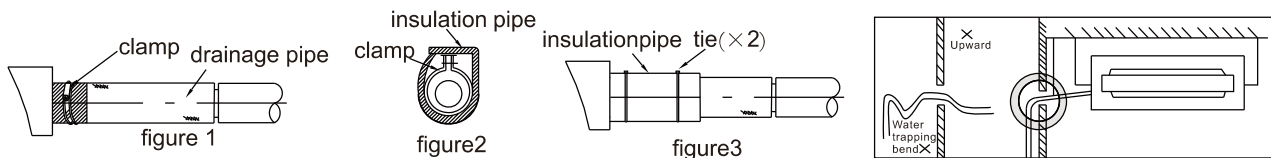
1. Make sure do good insulation work on the drainage pipe as following steps:

- (1) Use the clamp to fix the connector of the drainage pipe, as figure 1
- (2) Wrap the clamp with insulation pipe, as figure 2;
- (3) Use the 2 ties to fix the insulation pipe, as figure 3;

The drain pipe must have a downward gradient (1 / 50 ~ 1 / 100).

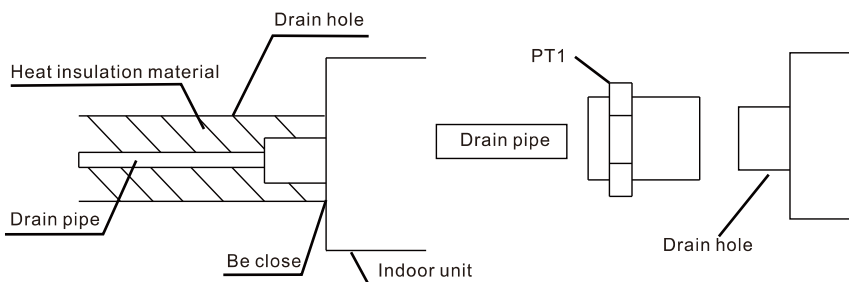
If the drain pipe is installed ups and downs or upward, it will lead to water backflow or leakage etc.

- 2. The external connection water pipe must use the soft connection water pipe or the transfer pipe use the soft connection water pipe
- 3. During pipe connection, do not use too much force to the drain joint of indoor unit.
- 4. The joint is PT1.
- 5. There is a drain hole on each side of indoor unit; unused drain pipe must be closed.



Note: The drain pipe must be wrapped heat insulation material, otherwise it will cause condensation or water drops.

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

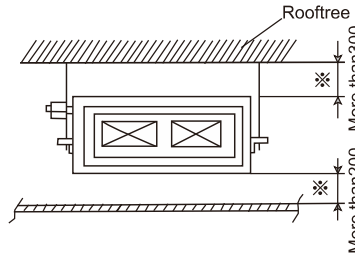
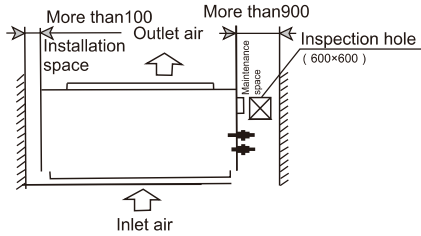


6. High Static Pressure Duct

■ Select installation site

1. The machine should be installed in the place which shows in below chart, and satisfies the follow conditions.

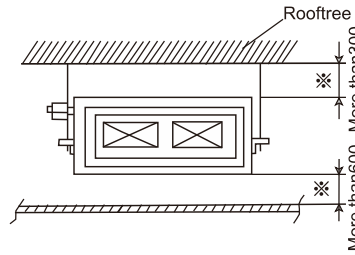
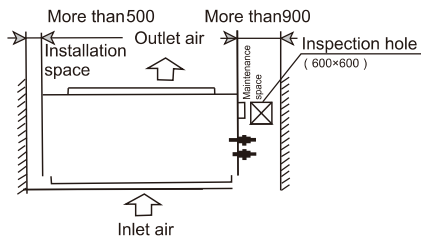
Unit: mm



※ Reserve obligatory space for install the flange.

For 8000BTU, 10000BTU(Y Series)

Unit: mm



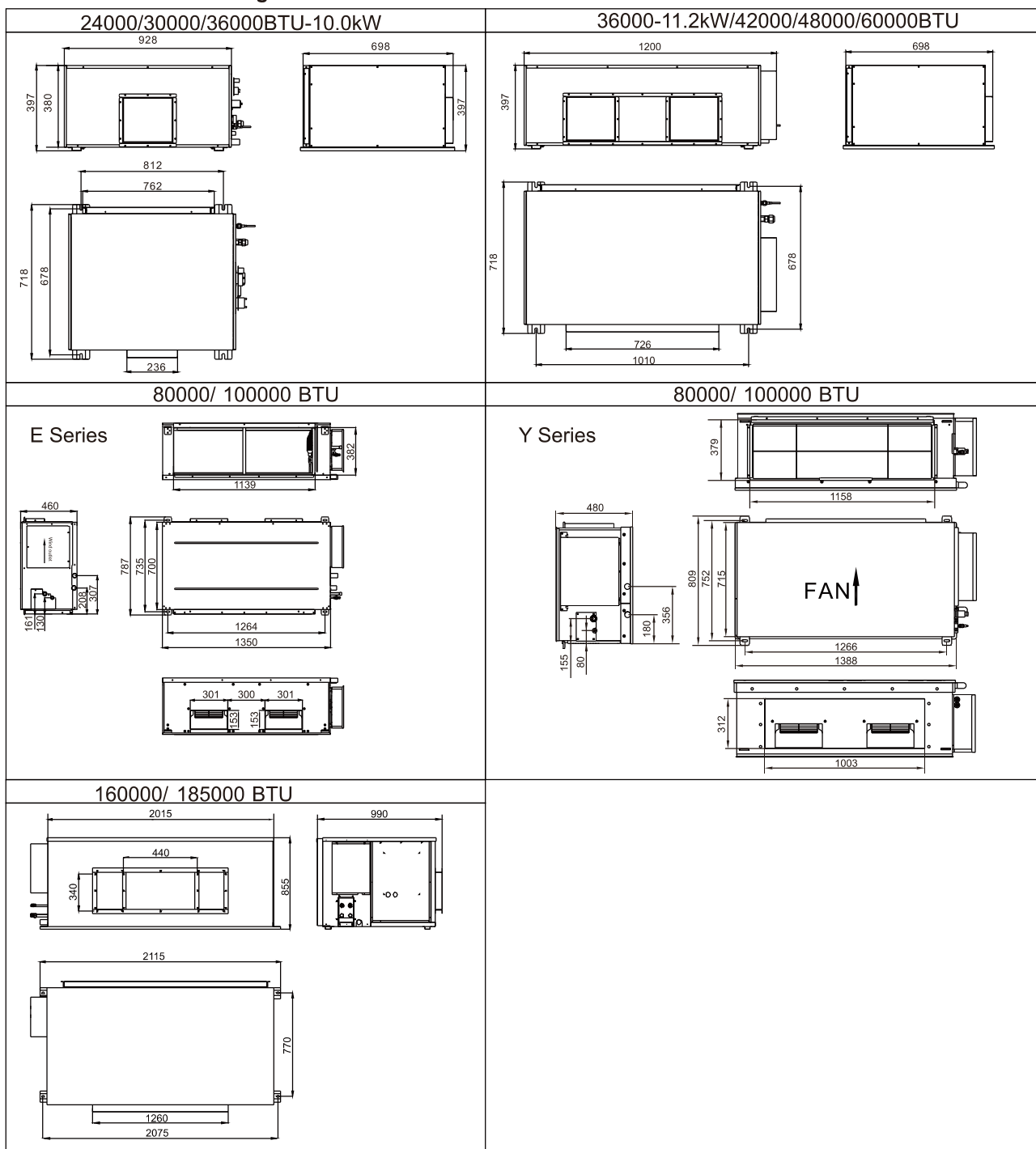
※ Reserve obligatory space for install the flange.

2. The install place should have good drain and enough draining water gradient.
3. Select the place where the air inlet and outlet are not blocked and strong wind cannot blow.
4. Select the place where the environment dew-point temperature is lower than 28 °C and relative humidity is lower than 80%.
(When the install place has higher humidity, please pay attention to the heat insulation of the machine to prevent condensation.)
5. Please do not install in the place where there is many greasy dirt or vapor.
If select the install place like this, it will cause the performance reduction, the corrosion of the heat interchanger or the damage of the synthetic resin.
6. Please do not install in the place which may produce the corrosive gas (for example sulfuric acid gas, combustible gas, diluent, gasoline and so on).
If select the install place like this, it will cause the corrosion of the heat interchanger or the damage of the synthetic resin.
7. Please do not install near the place which can produce the electromagnetic wave or high-frequency wave equipment.
The sound of the equipment may cause the failure of the controller.


★ Installation

■ The location of hoisting bolt

Unit: mm

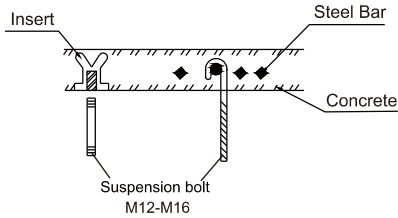


■ The suspension drawing of indoor unit

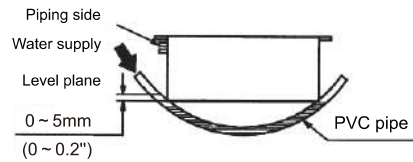
 Warning	Must seriously fasten bolts and nuts. The loosening would lead to air-conditioner falling and so on.
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★ Installation notes

1. Fixed method of suspension bolt



2. Leveling

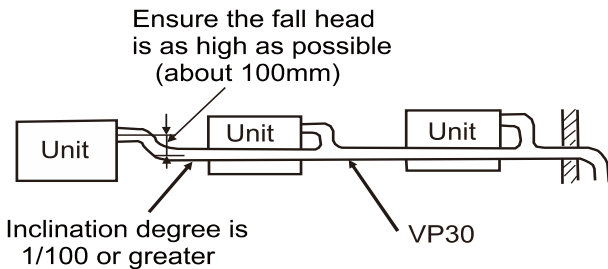


※In order to adjust levelness, can use the gradienter or defer to the method which the left chart shows to adjust.

Adjust piping side to lower position.

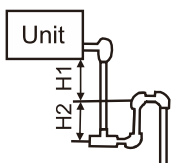
3. Drain piping

- ① Drain piping should always be mounted at an amount of inclination ($1/50 \sim 1/100$), and avoid convex or water bending.
- ② When connecting drain pipe with the equipment, never apply too great force on the piping on equipment side, and the piping should be fixed as near to the equipment as possible.
- ③ It is possible to purchase ordinary hardened PVC pipe from local sources, for use as drain piping.
- ④ If the draining piping is used for several equipments, the common piping should be laid at about 100mm below draining outlet of each equipment, as shown in the figure.
In this case, pipe with thicker walls should be used.
- ⑤ The hard PVC pipe laid in rooms must be coated with insulation coating.
- ⑥ Must not have the air vent.
- ⑦ Do not position the draining piping outlet in the area where there is stimulating gas.
Do not insert draining pipe directly into the sewage, where sulfur bearing gas exists.



4. Elbow installation

- (1) Because the discharge pipe outlet position is easy to produce negative pressure, therefore an elbow must be installed (during pipeline installation) to avoid the water leakage due to the rise of the water surface in the drain pan. The elbow should be convenient to clean. It is best to use T joint shown below. In addition, the elbow size also should use the size shown below. Please install the elbow near the unit.

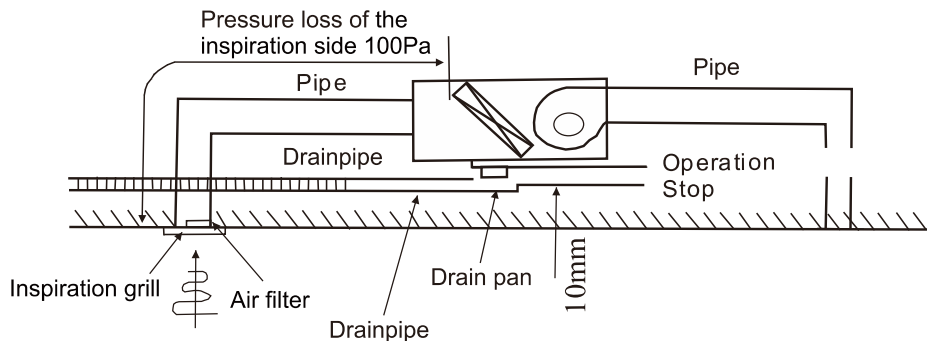


H1=100mm or static press of blower

H2=1/2H1 or 50 ~ 100mm

(2) If the pipeline installation is complete and the blower is working, then the unit interior is at the negative pressure condition relative to the atmospheric pressure.

Example: If the pressure of the inspiration side loses to reach 100Pa due to the inspiration grill, air filter and the pipeline, then the drainage water level is high than 10mm when running as when stopping.



5. Drainage test

After completing the pipeline installation, check the pipeline is correctly or not.

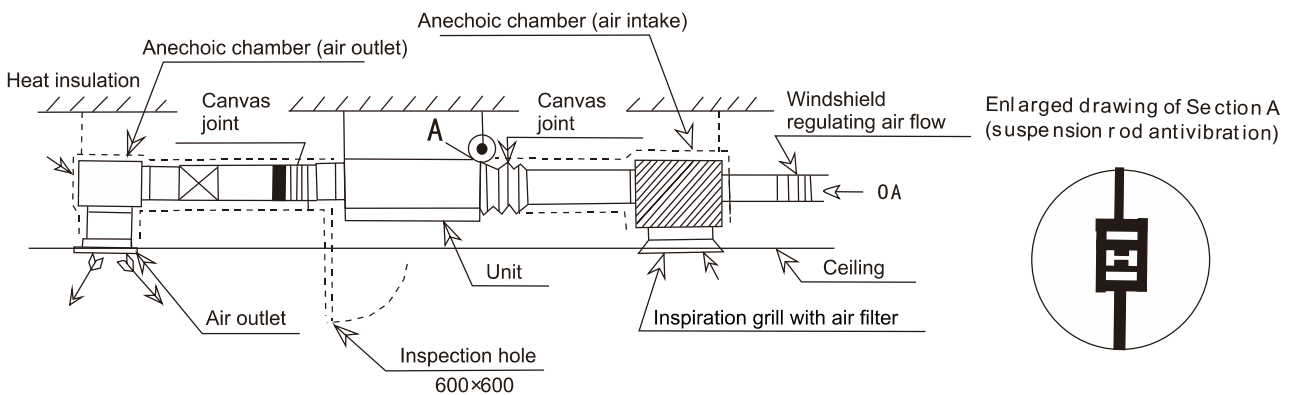
Remove the side plate, inject 1000cc water slowly, and confirm whether the drainage is smooth and there is water leakage.

6. Pipeline installation

(1) The air-conditioner indoor unit has the air filter. Please install it in the inspiration grill which is easy to clean.

(2) Please install the anechoic chamber in accordance with the permissible Noise level. For the place with the request of special low noise, additional silencer must be installed.

(The office, the conference room must install the silencer.)



(3) Please use the canvas joint in the pipeline or use antivibration rubber insert on the air conditioner indoor unit and so on antivibration measure, in order to avoid the vibration of the air-conditioner indoor unit transmits to the ceiling or the plate.

(4) The windshield regulating air flow should be installed in the OA pipeline joint so that it is easy to regulate air flow after the install is complete.

(5) Select the position and mode of the supply-air outlet properly in order to the air can flow to every corner of room. Besides the equipment regulating air flow should be installed.

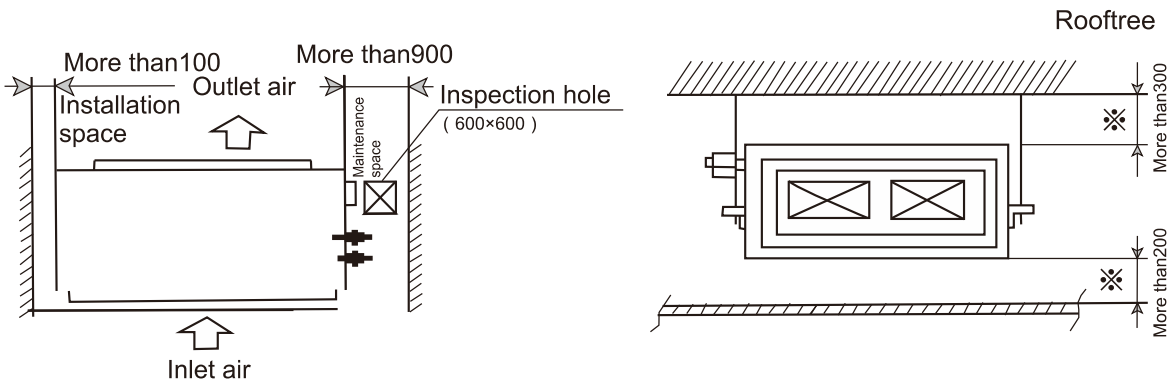
(6) Be sure to install an inspection hole on the ceiling. It is necessary to maintain the electrical equipment, the electric motor, the function part service and clean the heat exchanger.

(7) The heat insulation measures must be adopted to the pipeline, in order to prevent the pipeline condensation.

7. Fresh Air Processing Unit

■ Installation

1. The distance between indoor unit and obstacle



2. Suspension unit

◇ Select the suspension foundation

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

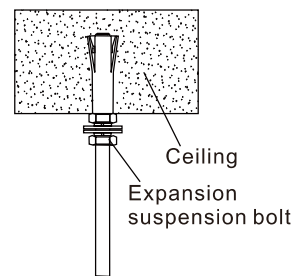
◇ Fixing of suspension foundation

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

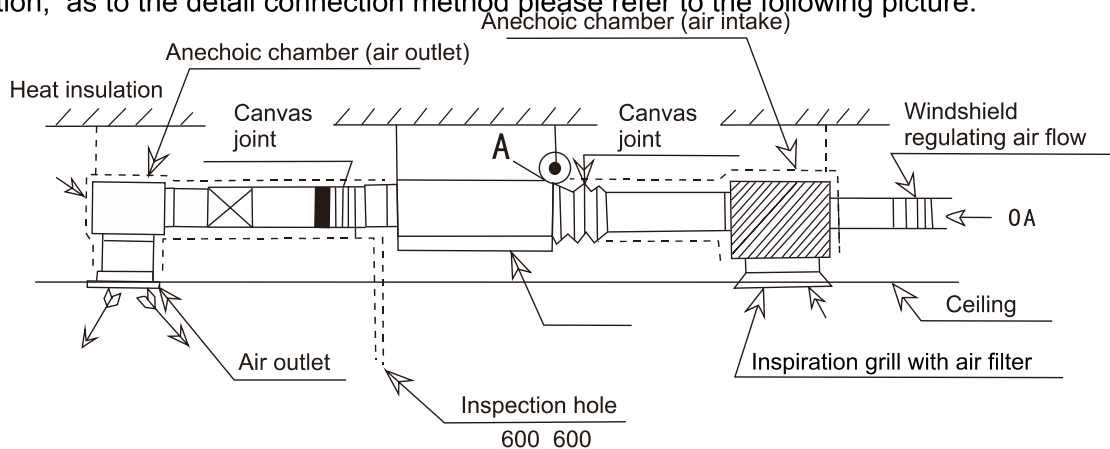
◇ After the unit is installed ensure it is secure and does not shake or sway



3. Duct pipeline installation

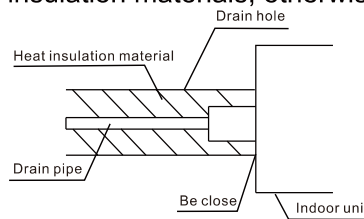
3. Duct pipeline installation

◇ 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.



4. Drainage pipe installation

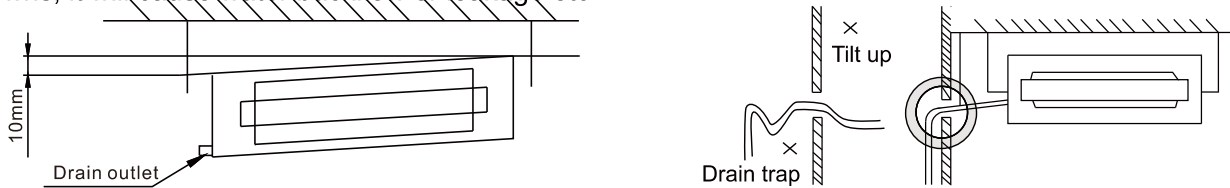
- ◇ Drainage pipes must be wrapped with heat insulation materials, otherwise it will cause frost or droplets, see picture as follows



Notice:

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

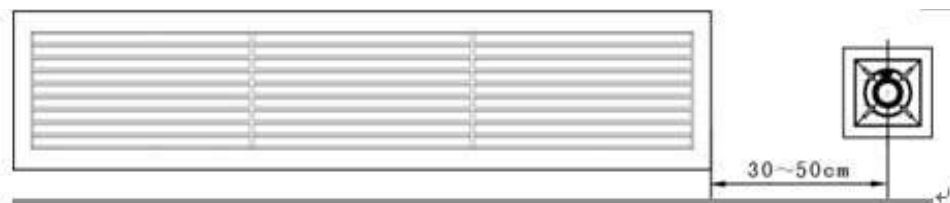
- ◇ Drainage pipe must have a downward gradient (1/50--1/100). If the drain pipe is installed ups and downs, it will cause water backflow or leakage etc



- ◇ 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.

5. 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:

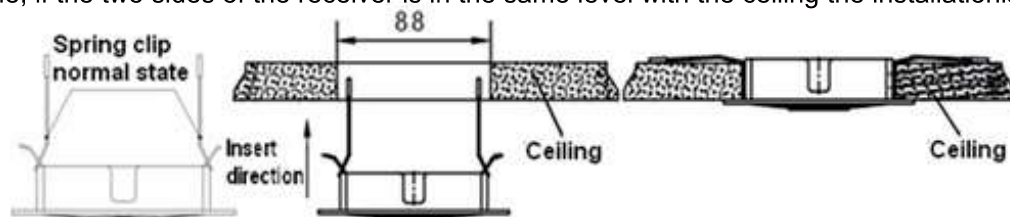


Notes:

The remote control signal effectively work 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.

8. Connection Wiring Diagram

★Connection method

1. Connection method of indoor unit

Open the cover of terminal box cover. Connect the cables according to the electric connection diagram.

Note: Line on the wiring terminal must be pressed, not any shake.

2. Connection method of outdoor unit

Open the right front plate outdoor unit to connect the cables. Be sure to lead the connecting line through the pressing plates and connect them according to the circuit diagram. Cable end must be pressed firmly on the terminals, and should not get loose. Earth wire must be connected at the specified location.

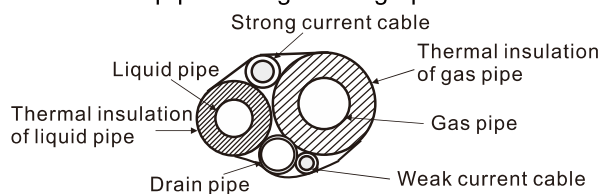
Note: The PC board of outdoor unit whose power supply is 380V-415V has phase sequence protection.

Please pay attentions to it while connecting power cable.

After cables are connected correctly, bind connecting tubing, connecting line and drain pipes with binding tapes.

The cross section is as shown in the figure below after binding:

Caution: never squash the drain pipe during binding operation!



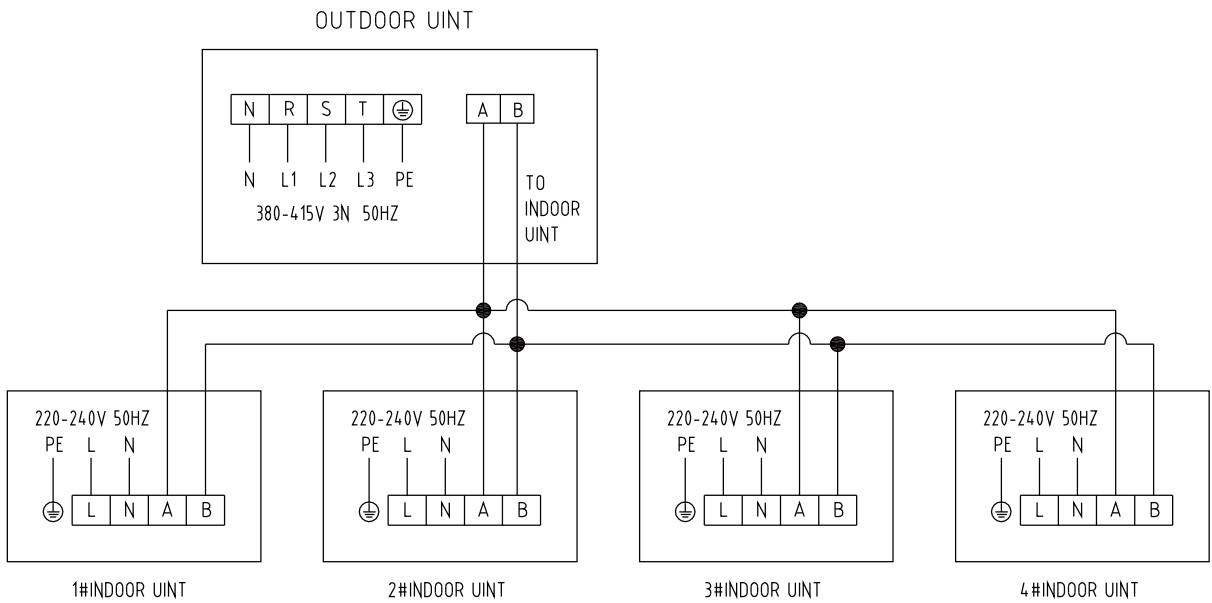
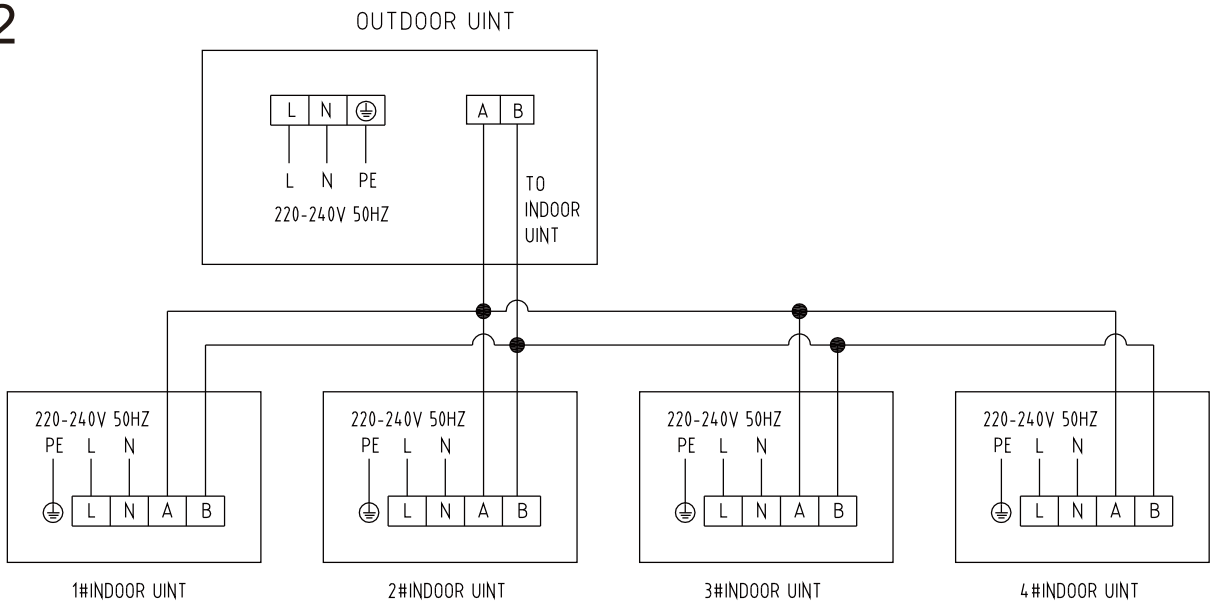
3.9 Commissioning

1. Turn on the Power Supply and select cooling operation as shown in the remote controller section of this manual.
2. After the 3 minute compressor protection delay, check the indoor unit louver is operating correctly and both the indoor and outdoor units are operating correctly without abnormal noise. Check that cold air is produced after a short time.
3. Select heating operation on the controller and wait for 5 minutes. Check that the indoor fan starts correctly and that hot air is produced after a short time.
4. Select Fan operation on the controller. Check that the fan operates correctly in all fan speeds.
5. Test the other functions on your controller as shown in the controller section of this manual.
6. Select Cooling operation, and check the drain pump operates correctly.
7. After confirming the unit operates correctly, turn the unit off and disconnect the power supply.

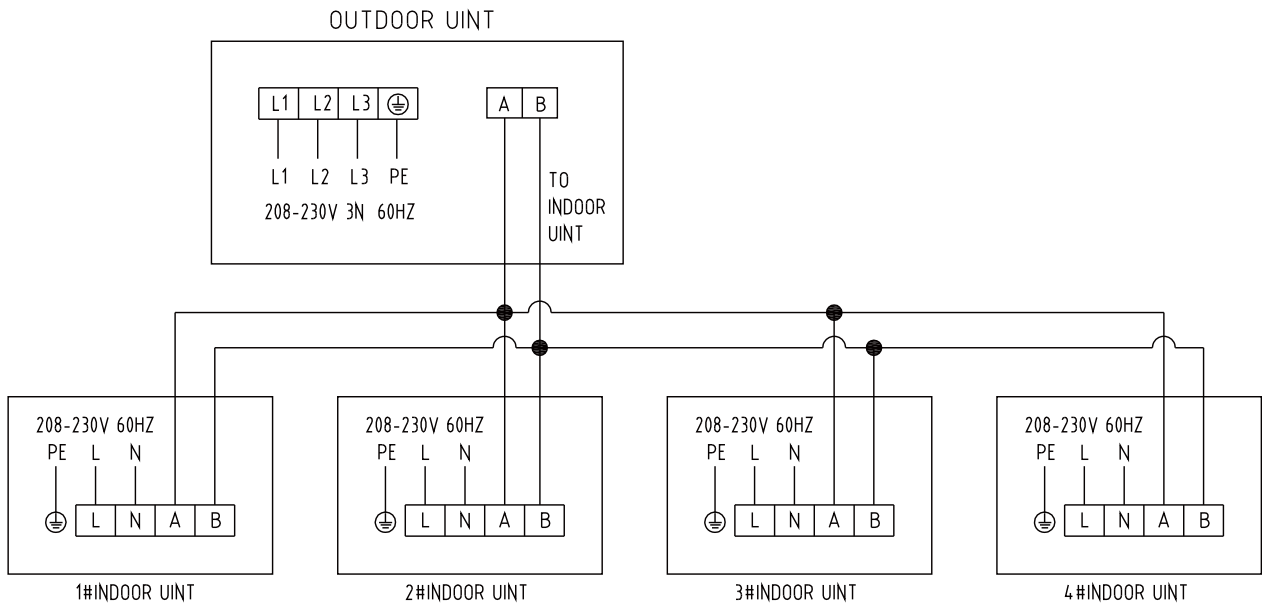
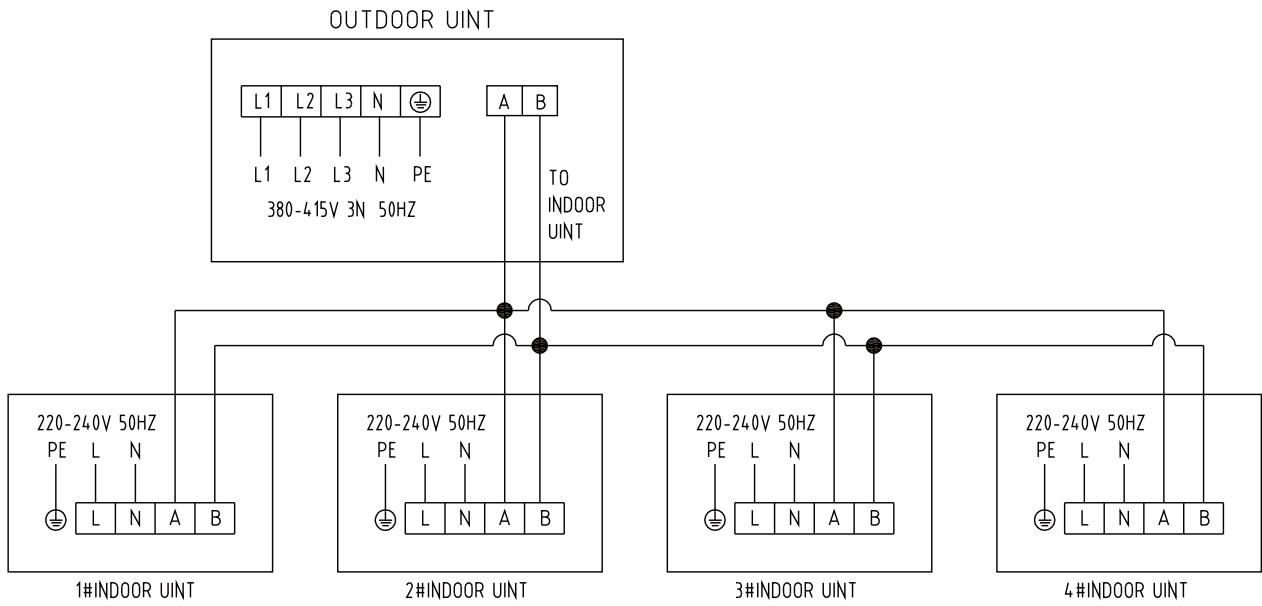
★Wiring diagram

1.Min VRF Outdoor Units(single-phase & three-phase)(AC & DC)

1.2



2.Modular VRF Outdoor Units(50Hz & 60Hz)(AC & DC)



★Cable Specifications

Note:

- 1.The yellow cable and the green wire should be connected with the terminal signed with “⊕” .
- 2.Please check the number on the terminal board of outdoor and indoor unit ,while connecting the indoor unit cable to the outdoor unit.
The terminals that have the same number should bi connected by a cable.
- 3.Some electrical equipments may not work well, if there are incorrect cable connecting.
- 4.Power cable connecting as X connecting, if power cable is destroyed, it is necessary to change cables by qualified technicians.
- 5.Specifications of the power cable is H05VV-F cable, power connecting cables of indoor unit and outdoor unit is H05RN-F.
- 6.The air circuit breaker model is 6A.

AC:

Type	Power Specifications	Power into Line way	Power
7000Btu	220V-240V ~50HZ (220V-240V ~/60HZ)	Inside the machine into the line	3×1 mm ²
9000Btu			
12000Btu			
16000Btu			
18000Btu			
24000Btu			
30000Btu			
36000Btu			
42000Btu			
48000Btu			
60000Btu			
80000Btu			
100000Btu	380V~415V 3N~/50HZ		3×2mm ²
160000Btu			
185000Btu			

DC:

Type	Power Specifications	Power into Line way	Power
7000Btu	220V-240V ~ /50/60Hz	Inside the machine into the line	3×1 mm ²
9000Btu			
12000Btu			
16000Btu			
18000Btu			
24000Btu			
30000Btu			
36000Btu			
42000Btu			
48000Btu			
60000Btu			
80000Btu			
100000Btu			
160000Btu			
185000Btu			

Part11 Trouble shooting

1. IDU Error code table (No.18)

1.1 Temperature sensor failure (4)

Code	Definition	Possible reason for error code
A1	Indoor ambient temperature	1. Indoor unit's PCB failure 2. The fuse of indoor PCB is broken 3. Temperature sensor failure , or exceed test limit
A2	Evaporator mid temperature sensor	
A3	Evaporator inlet temperature sensor	
A4	Evaporator outlet temperature sensor	

1.2 Communication failure (2)


Code	Definition	Possible reason for error code
A9	The communication between indoor unit and outdoor unit failed	1. The communication wire between indoor unit and outdoor unit is broken. 2. Indoor unit power failure 3. Indoor PCB failure
AA	The communication between indoor unit and wire controller failed	1. The communication wire between indoor unit and outdoor unit is broken. 2. Indoor unit power failure 3. Indoor PCB failure 4. Wire controller is broken

1.3 Others failure (12)

Code	Definition	Possible reason for error code
A5	Indoor water pump failure	<ol style="list-style-type: none"> 1. Water pump no power 2. Water pump switch short-circuit or unconnected 3. Water pump is broken 4. Drain pipe block or up lean 5. Indoor PCB is broken
A6	Failure of indoor PG fan	<ol style="list-style-type: none"> 1. Fan motor failure 2. Fan motor block 3. The connection between PCB and fan motor failure 4. Indoor fan block
A7	Failure of reversible synchronous motor	<ol style="list-style-type: none"> 1. Step motor failure 2. The connection between PCB and step motor failure.
A8	Indoor unit ERRPROM module failure	<ol style="list-style-type: none"> 1. Indoor unit PCB is broken 2. Error module is broken
AC	More than 2 indoor units' central control system address repeated	The central control address setting incorrect
AE	Operation mode conflict	The operation mode setting incorrect
AH	Two or more indoor unit refrigerant system address repeated	System address setting incorrect
AJ	Indoor unit total capacity exceeded	Stop some indoor units
AF	The EXV leakage	<ol style="list-style-type: none"> 1. EXV is blocked 2. Evaporator inlet sensor failure. 3. Indoor unit's temp. sensor failure
A0	The EXV open failure	

2. Indoor unit error code display

2.1 Error code display by YK-05A

	<p>Press “Function” & “Up” button at the same time to enter the error code check</p>
	<p>“E0A1” means the first error code “A1”, through the “2.1 IDU Fault code table” to check error code definition, “E2A3” means the second error code is “A3”</p>

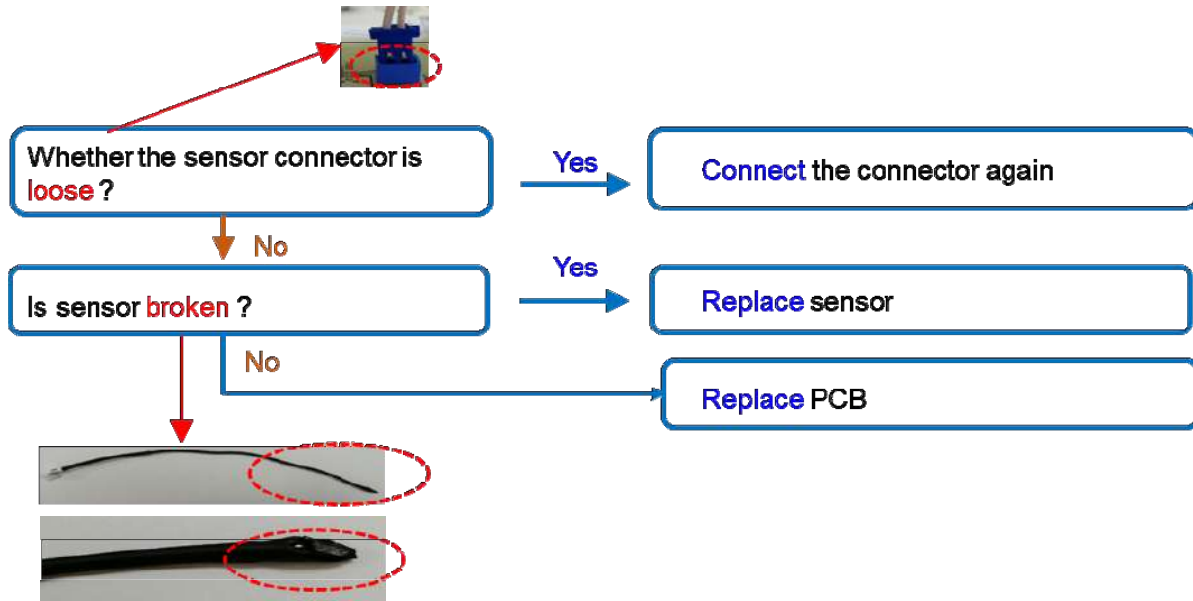
2.2 Error code display by display panel

“E0” error code

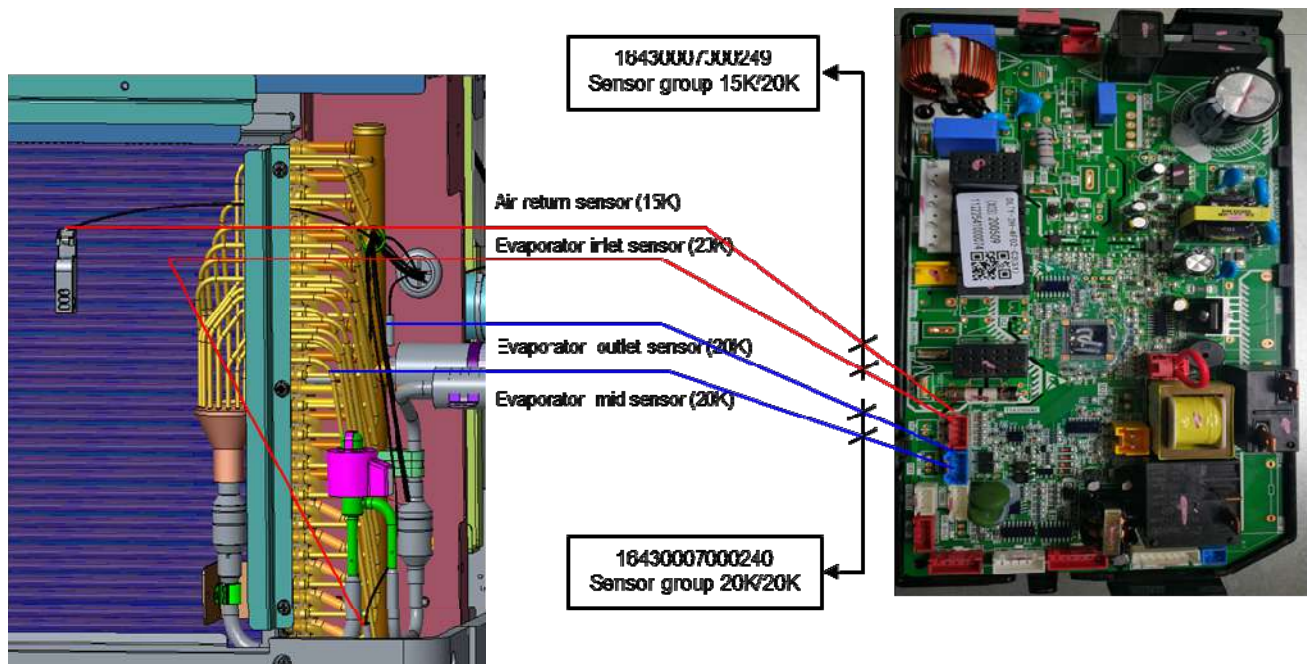


3. Trouble shooting

3.1 A1,A2,A3,A4 Error Code



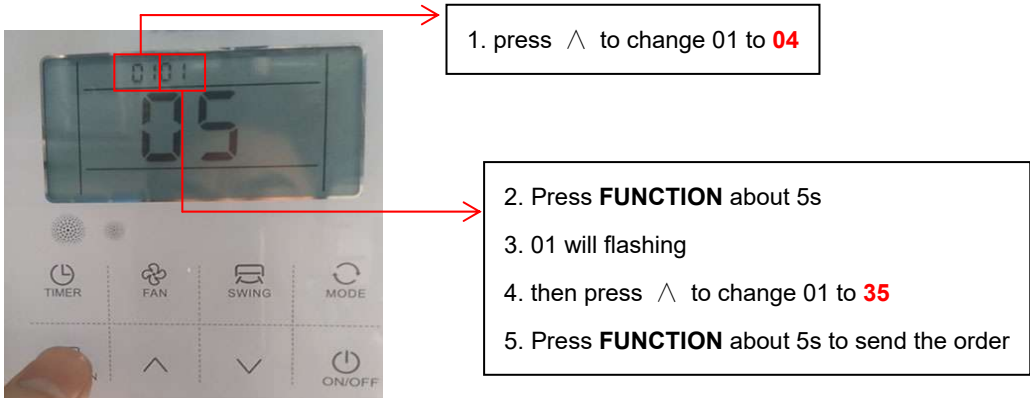
※ Where these sensors , take high ESP duct Y series as a example



※ Temperature sensor resistance see attached table

3.2 A5 Error Code

For normal situation, there will no A5 error on this unit, due to no optional water pump to this unit

/	A5 Error Appear	
Possible situation	After changed a new Main PCB	New machine or after someone changed the parameter
Cause analysis	New spare PCB parameter setting (machine type information) not match the unit	Abnormal setting during factory assembly Parameter be changed by someone
Solutions	<p>Check parameter setting and reset; Example 0435</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>1. press \wedge to change 01 to 04</p> <p>2. Press FUNCTION about 5s</p> <p>3. 01 will flashing</p> <p>4. then press \wedge to change 01 to 35</p> <p>5. Press FUNCTION about 5s to send the order</p> </div> </div>	

3.3 AE Error Code

AE just appear on the indoor unit which be turned on different mode,

Eg: ODU running cooling, one unit turn on to heating mode, then the unit will appear AE,

Solution: after change to cooling mode, the AE will disappear

3.4 AH(AB) Error Code

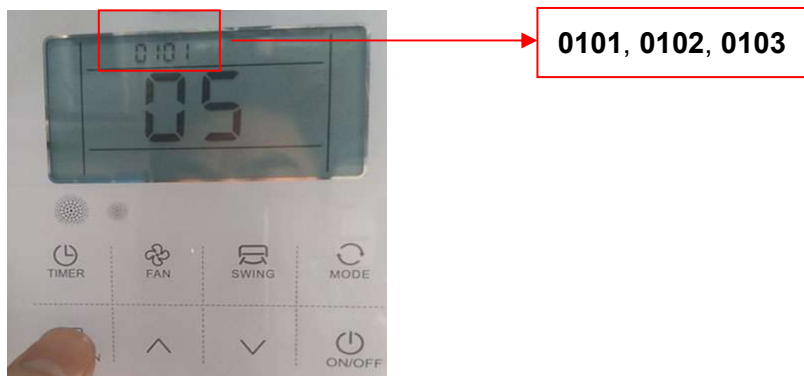
Solution 1:

Through auto address function, restart ODU and commissioning again, choose auto address

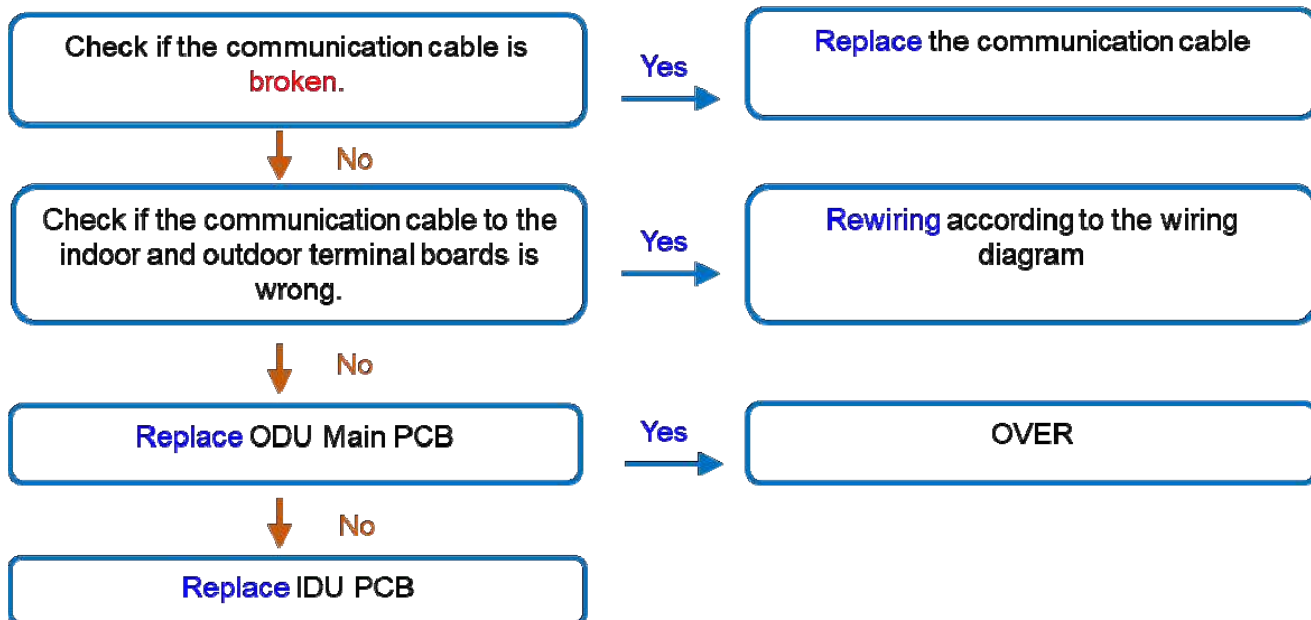
Solution 2:

Through wired controller to reset address, ensure the ID address of each unit not repeat

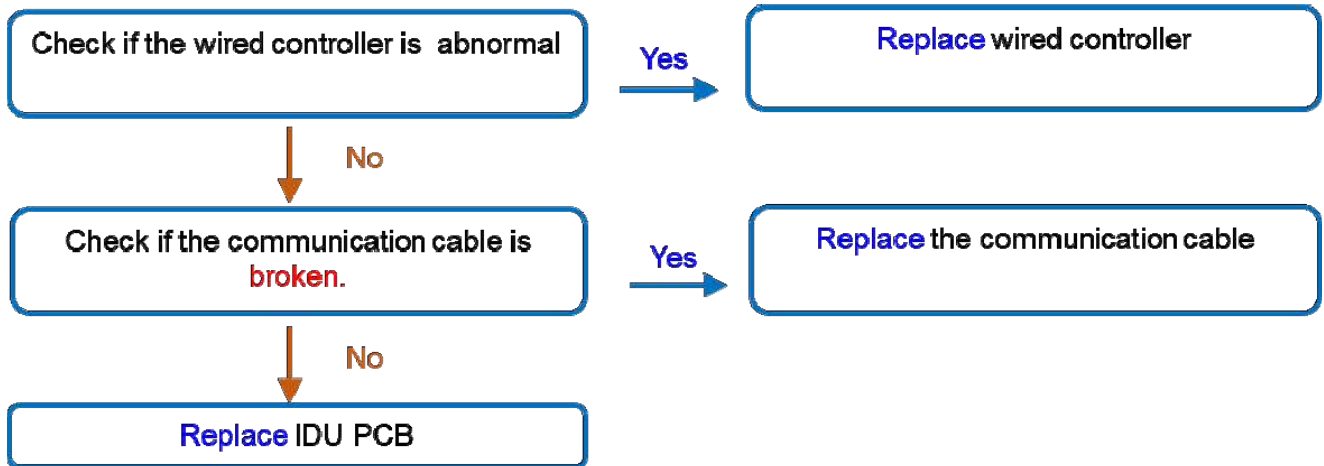
Eg: IDUs address be set to **0101, 0102, 0103**



3.5 A9 Error Code




3.6 AA Error Code




3.7 A6 Error Code

Take high ESP duct Y series as a example


2. Check parameter 07#, and 12# setting, Wired controller parameter should be



0701
1213



1. Check fan motor wiring whether abnormal



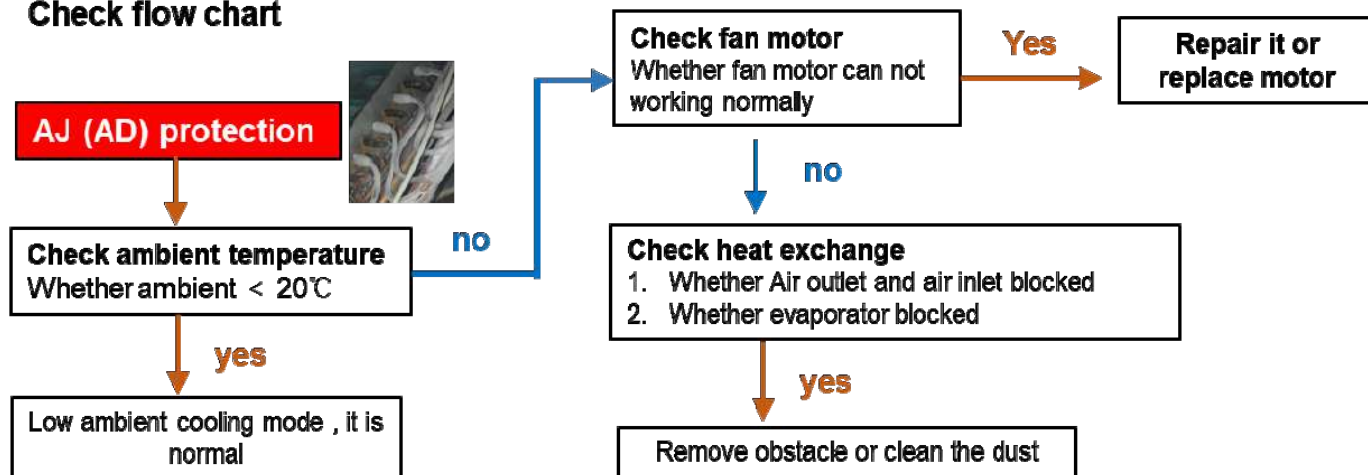
3. If parameter no problem, wiring no problem
Try to change fan driver PCB or fan motor

3.8 AJ (AD) Error Code

Error logic

During cooling mode, detect the evaporator temperature lower than the protection value, fan keep Previous status and compressor frequency decrease until evaporator temperature increase

Check flow chart



Attached table 1:

Temperature sensor R-T analysis table (15K)									
Sensor standard resistance : 15K Ω \pm 3% B:B(25/50)=3950K \pm 2% Reference temperature : 25 ($^{\circ}$ C)									
MCU_A/D exchange \pm 3LSB (at10bit)									
Series (sampling) resistor : 10 (K Ω) \pm 1% (except disk sensor)									
Single chip (A/D reference voltage) supply voltage : 5V									
Temp ($^{\circ}$ C)	Resistance (K Ω)			MCU Input voltage (V)			A/D Exchange value		
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
-25.0	183.4	199.1	216.0	0.219	0.239	0.261	42	49	56
-24.0	172.8	187.4	203.0	0.233	0.253	0.276	45	52	60
-23.0	162.9	176.5	190.9	0.247	0.268	0.292	47	55	63
-22.0	153.7	166.2	179.6	0.261	0.284	0.308	50	58	66
-21.0	145.0	156.7	169.1	0.277	0.300	0.326	54	61	70
-20.0	136.9	147.7	159.2	0.293	0.317	0.344	57	65	73
-19.0	129.2	139.3	150.0	0.310	0.335	0.363	60	69	77
-18.0	122.1	131.4	141.4	0.327	0.354	0.382	64	72	81
-17.0	115.4	124.1	133.3	0.346	0.373	0.402	68	76	85
-16.0	109.1	117.2	125.7	0.365	0.393	0.424	72	81	90
-15.0	103.1	110.7	118.6	0.385	0.414	0.446	76	85	94
-14.0	97.59	104.6	112.0	0.406	0.436	0.469	80	89	99
-13.0	92.37	98.88	105.8	0.428	0.459	0.493	85	94	104
-12.0	87.45	93.52	99.92	0.451	0.483	0.518	89	99	109
-11.0	82.83	88.48	94.43	0.474	0.508	0.543	94	104	114
-10.0	78.48	83.74	89.27	0.499	0.533	0.570	99	109	120
-9.0	74.39	79.29	84.43	0.525	0.560	0.598	104	115	125
-8.0	70.54	75.10	79.88	0.551	0.588	0.626	110	120	131
-7.0	66.90	71.15	75.61	0.579	0.616	0.656	116	126	137
-6.0	63.48	67.44	71.59	0.607	0.646	0.686	121	132	144
-5.0	60.25	63.95	67.80	0.637	0.676	0.718	127	138	150
-4.0	57.21	60.65	64.24	0.668	0.708	0.750	134	145	157
-3.0	54.34	57.55	60.89	0.699	0.740	0.784	140	152	163
-2.0	51.63	54.62	57.73	0.732	0.774	0.818	147	158	171
-1.0	49.07	51.86	54.76	0.766	0.808	0.853	154	166	178
0.0	46.65	49.25	51.95	0.800	0.844	0.890	161	173	185
1.0	44.37	46.79	49.31	0.836	0.880	0.927	168	180	193
2.0	42.21	44.47	46.81	0.873	0.918	0.965	176	188	201
3.0	40.17	42.28	44.46	0.911	0.956	1.005	183	196	209
4.0	38.24	40.20	42.24	0.949	0.996	1.045	191	204	217
5.0	36.41	38.25	40.14	0.989	1.036	1.086	200	212	225
6.0	34.68	36.39	38.16	1.030	1.078	1.128	208	221	234
7.0	33.05	34.64	36.29	1.072	1.120	1.170	216	229	243
8.0	31.50	32.99	34.52	1.114	1.163	1.214	225	238	252
9.0	30.03	31.42	32.84	1.158	1.207	1.258	234	247	261
10.0	28.64	29.94	31.26	1.203	1.252	1.304	243	256	270
11.0	27.32	28.53	29.77	1.248	1.298	1.350	253	266	279

12.0	26.07	27.20	28.35	1.294	1.344	1.396	262	275	289
13.0	24.89	25.94	27.01	1.341	1.391	1.443	272	285	299
14.0	23.76	24.74	25.74	1.389	1.439	1.491	281	295	308
15.0	22.69	23.61	24.54	1.437	1.488	1.540	291	305	318
16.0	21.68	22.53	23.40	1.486	1.537	1.589	301	315	328
17.0	20.72	21.51	22.32	1.536	1.587	1.639	312	325	339
18.0	19.80	20.55	21.30	1.587	1.637	1.689	322	335	349
19.0	18.94	19.63	20.33	1.637	1.687	1.739	332	346	359
20.0	18.11	18.75	19.40	1.689	1.739	1.790	343	356	370
21.0	17.33	17.93	18.53	1.741	1.790	1.841	354	367	380
22.0	16.58	17.14	17.70	1.793	1.842	1.893	364	377	391
23.0	15.87	16.39	16.91	1.846	1.895	1.945	375	388	401
24.0	15.19	15.68	16.16	1.899	1.947	1.997	386	399	412
25.0	14.55	15.00	15.45	1.953	2.000	2.049	397	410	423
26.0	13.91	14.36	14.80	2.004	2.053	2.103	407	420	434
27.0	13.31	13.74	14.18	2.056	2.106	2.157	418	431	445
28.0	12.73	13.16	13.59	2.107	2.159	2.212	429	442	456
29.0	12.18	12.60	13.03	2.159	2.212	2.267	439	453	467
30.0	11.66	12.08	12.49	2.211	2.264	2.321	450	464	478
31.0	11.17	11.57	11.98	2.262	2.318	2.374	460	475	489
32.0	10.69	11.09	11.49	2.314	2.371	2.429	471	486	500
33.0	10.24	10.63	11.03	2.365	2.424	2.483	481	496	511
34.0	9.816	10.20	10.59	2.416	2.475	2.536	492	507	522
35.0	9.408	9.782	10.16	2.468	2.528	2.589	502	518	533
36.0	9.019	9.385	9.758	2.518	2.579	2.641	513	528	544
37.0	8.648	9.007	9.372	2.568	2.631	2.694	523	539	555
38.0	8.294	8.645	9.003	2.619	2.682	2.745	533	549	565
39.0	7.957	8.300	8.651	2.668	2.732	2.797	543	560	576
40.0	7.635	7.971	8.315	2.718	2.782	2.847	554	570	586
41.0	7.328	7.657	7.993	2.766	2.832	2.898	564	580	596
42.0	7.034	7.356	7.686	2.815	2.881	2.947	573	590	607
43.0	6.755	7.069	7.391	2.863	2.929	2.996	583	600	617
44.0	6.487	6.795	7.110	2.910	2.977	3.045	593	610	627
45.0	6.232	6.532	6.841	2.957	3.024	3.092	603	619	636
46.0	5.988	6.282	6.584	3.003	3.071	3.139	612	629	646
47.0	5.755	6.042	6.337	3.049	3.117	3.185	621	638	655
48.0	5.532	5.812	6.101	3.094	3.162	3.231	631	648	665
49.0	5.319	5.593	5.875	3.138	3.207	3.275	640	657	674
50.0	5.115	5.382	5.659	3.181	3.251	3.319	649	666	683
51.0	4.919	5.180	5.450	3.225	3.294	3.362	657	675	692
52.0	4.732	4.987	5.251	3.267	3.336	3.405	666	683	700
53.0	4.553	4.802	5.060	3.309	3.378	3.446	675	692	709
54.0	4.382	4.625	4.877	3.350	3.419	3.487	683	700	717
55.0	4.219	4.457	4.703	3.390	3.459	3.527	691	708	725
56.0	4.061	4.293	4.534	3.429	3.498	3.566	699	716	733

57.0	3.911	4.137	4.373	3.468	3.537	3.604	707	724	741
58.0	3.767	3.988	4.218	3.506	3.574	3.642	715	732	749
59.0	3.630	3.845	4.070	3.543	3.611	3.678	723	740	756
60.0	3.498	3.708	3.927	3.580	3.648	3.714	730	747	764
61.0	3.371	3.577	3.791	3.616	3.683	3.749	737	754	771
62.0	3.250	3.450	3.660	3.650	3.717	3.783	745	761	778
63.0	3.134	3.329	3.534	3.685	3.751	3.816	752	768	785
64.0	3.022	3.213	3.413	3.718	3.784	3.848	758	775	791
65.0	2.915	3.102	3.297	3.751	3.816	3.880	765	782	798
66.0	2.813	2.995	3.185	3.783	3.848	3.911	772	788	804
67.0	2.714	2.892	3.078	3.814	3.878	3.941	778	794	810
68.0	2.620	2.793	2.975	3.845	3.908	3.970	784	800	816
69.0	2.529	2.698	2.876	3.874	3.938	3.999	790	806	822
70.0	2.442	2.607	2.781	3.903	3.966	4.026	796	812	828
71.0	2.358	2.519	2.689	3.932	3.994	4.054	802	818	833
72.0	2.278	2.435	2.601	3.960	4.021	4.080	808	823	839
73.0	2.200	2.354	2.516	3.987	4.047	4.106	813	829	844
74.0	2.126	2.276	2.435	4.013	4.073	4.131	819	834	849
75.0	2.055	2.201	2.356	4.039	4.098	4.155	824	839	854
76.0	1.986	2.129	2.280	4.064	4.122	4.178	829	844	859
77.0	1.920	2.060	2.208	4.088	4.146	4.201	834	849	863
78.0	1.857	1.993	2.138	4.112	4.169	4.223	839	854	868
79.0	1.796	1.929	2.070	4.135	4.191	4.245	844	858	872
80.0	1.737	1.867	2.005	4.158	4.213	4.266	849	863	877
81.0	1.681	1.808	1.942	4.180	4.234	4.287	853	867	881
82.0	1.626	1.750	1.882	4.201	4.255	4.307	857	871	885
83.0	1.574	1.695	1.824	4.222	4.275	4.326	862	876	889
84.0	1.524	1.642	1.767	4.243	4.295	4.344	866	880	893
85.0	1.475	1.590	1.713	4.262	4.314	4.363	870	884	897
86.0	1.428	1.541	1.661	4.282	4.332	4.381	874	887	900
87.0	1.383	1.493	1.611	4.300	4.350	4.398	878	891	904
88.0	1.340	1.447	1.562	4.319	4.368	4.414	881	895	907
89.0	1.298	1.403	1.515	4.336	4.385	4.431	885	898	910
90.0	1.258	1.360	1.470	4.354	4.401	4.446	889	901	914
91.0	1.219	1.319	1.426	4.370	4.417	4.462	892	905	917
92.0	1.181	1.279	1.384	4.387	4.433	4.477	895	908	920
93.0	1.145	1.241	1.343	4.403	4.448	4.491	899	911	923
94.0	1.110	1.204	1.304	4.418	4.463	4.505	902	914	926
95.0	1.077	1.168	1.266	4.433	4.477	4.518	905	917	928
96.0	1.044	1.134	1.229	4.448	4.491	4.532	908	920	931
97.0	1.013	1.100	1.194	4.462	4.505	4.544	911	923	934
98.0	0.9826	1.068	1.160	4.476	4.518	4.557	914	925	936
99.0	0.9535	1.037	1.127	4.489	4.530	4.569	916	928	939
100.0	0.9252	1.007	1.095	4.502	4.543	4.580	919	930	941
101.0	0.8981	0.9778	1.064	4.515	4.555	4.592	922	933	943

102.0	0.8717	0.9497	1.034	4.527	4.566	4.603	924	935	946
103.0	0.8463	0.9225	1.005	4.539	4.578	4.613	927	938	948
104.0	0.8218	0.8963	0.9767	4.551	4.589	4.624	929	940	950
105.0	0.7981	0.8710	0.9497	4.562	4.599	4.634	931	942	952

Attached table 2:

Temperature sensor R-T analysis table (20K)									
Sensor standard resistance : 20K Ω \pm 3% B:B(25/50)=3950K \pm 2% reference temperature : 25 ($^{\circ}$ C)									
MCU_A/D exchange \pm 3LSB (at10bit)									
Series (sampling) resistor : 10 (K Ω) \pm 1%									
Single chip (A/D reference voltage) supply voltage : 5V									
Temp ($^{\circ}$ C)	Resistance (K Ω)			MCU Input voltage (V)			A/D Exchange value		
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
-30	318.3	347.0	377.6	0.128	0.140	0.154	23	29	34
-29	299.6	326.2	354.6	0.136	0.149	0.163	25	30	36
-28	282.2	306.9	333.4	0.144	0.158	0.173	27	32	38
-27	265.9	289.0	313.5	0.153	0.167	0.183	28	34	40
-26	250.8	272.2	295.1	0.162	0.177	0.194	30	36	43
-25	236.6	256.5	277.9	0.172	0.188	0.205	32	38	45
-24	223.3	241.9	261.8	0.182	0.198	0.216	34	41	47
-23	210.9	228.2	246.7	0.193	0.210	0.229	37	43	50
-22	199.2	215.3	232.6	0.204	0.222	0.241	39	45	52
-21	188.3	203.3	219.4	0.216	0.234	0.255	41	48	55
-20	178.0	192.0	207.0	0.228	0.248	0.268	44	51	58
-19	168.3	181.4	195.4	0.241	0.261	0.283	46	54	61
-18	159.2	171.4	184.4	0.255	0.276	0.298	49	56	64
-17	150.7	162.0	174.2	0.269	0.291	0.314	52	60	67
-16	142.6	153.2	164.6	0.284	0.306	0.331	55	63	71
-15	135.0	144.9	155.5	0.299	0.323	0.348	58	66	74
-14	127.9	137.1	147.0	0.315	0.340	0.366	62	70	78
-13	121.2	129.8	138.9	0.333	0.358	0.385	65	73	82
-12	114.9	122.9	131.4	0.350	0.376	0.404	69	77	86
-11	108.9	116.4	124.3	0.369	0.396	0.424	73	81	90
-10	103.3	110.3	117.7	0.388	0.416	0.445	76	85	94
-9	98.00	104.5	111.4	0.408	0.437	0.467	81	89	99
-8	93.01	99.10	105.6	0.429	0.458	0.490	85	94	103
-7	88.29	93.98	100.0	0.450	0.481	0.513	89	98	108
-6	83.84	89.15	94.78	0.473	0.504	0.538	94	103	113
-5	79.63	84.60	89.85	0.496	0.529	0.563	99	108	118
-4	75.67	80.30	85.12	0.521	0.554	0.589	104	113	124
-3	71.91	76.24	80.75	0.546	0.580	0.616	109	119	129
-2	68.37	72.41	76.62	0.572	0.607	0.644	114	124	135
-1	65.02	68.79	72.72	0.599	0.635	0.672	120	130	141
0	61.85	65.37	69.04	0.627	0.663	0.702	125	136	147
1	58.85	62.14	65.56	0.656	0.693	0.732	131	142	153
2	56.01	59.08	62.28	0.686	0.724	0.764	137	148	159
3	53.33	56.20	59.18	0.717	0.755	0.796	144	155	166
4	50.79	53.46	56.25	0.748	0.788	0.829	150	161	173
5	48.38	50.88	53.43	0.782	0.821	0.864	157	168	180
6	46.10	48.43	50.81	0.815	0.856	0.899	164	175	187

7	43.94	46.12	48.34	0.850	0.891	0.934	171	182	194
8	41.90	43.92	45.99	0.886	0.927	0.971	178	190	202
9	39.95	41.85	43.78	0.922	0.964	1.009	186	198	210
10	38.11	39.88	41.68	0.960	1.002	1.047	194	205	218
11	36.37	38.02	39.69	0.998	1.041	1.087	201	213	226
12	34.71	36.25	37.81	1.038	1.081	1.127	209	221	234
13	33.14	34.57	36.03	1.078	1.122	1.168	218	230	242
14	31.65	32.98	34.34	1.119	1.163	1.210	226	238	251
15	30.23	31.47	32.74	1.161	1.206	1.252	235	247	259
16	28.88	30.04	31.22	1.204	1.249	1.295	244	256	268
17	27.61	28.69	29.78	1.248	1.292	1.339	252	265	277
18	26.39	27.40	28.41	1.292	1.337	1.384	262	274	286
19	25.24	26.17	27.12	1.337	1.382	1.429	271	283	296
20	24.14	25.01	25.89	1.383	1.428	1.475	280	293	305
21	23.09	23.90	24.72	1.430	1.475	1.521	290	302	315
22	22.10	22.85	23.61	1.477	1.522	1.568	300	312	324
23	21.16	21.85	22.55	1.525	1.570	1.616	309	321	334
24	20.26	20.90	21.55	1.574	1.618	1.664	319	331	344
25	19.40	20.00	20.60	1.623	1.667	1.712	329	341	354
26	18.55	19.14	19.73	1.670	1.716	1.763	339	351	364
27	17.74	18.32	18.91	1.718	1.765	1.814	349	362	375
28	16.97	17.55	18.12	1.766	1.815	1.866	359	372	385
29	16.24	16.80	17.37	1.815	1.865	1.917	369	382	396
30	15.54	16.10	16.66	1.864	1.916	1.970	379	392	406
31	14.88	15.43	15.98	1.913	1.966	2.022	389	403	417
32	14.25	14.79	15.33	1.962	2.017	2.074	399	413	428
33	13.65	14.18	14.71	2.011	2.068	2.127	409	424	439
34	13.08	13.59	14.12	2.061	2.119	2.179	419	434	449
35	12.53	13.04	13.55	2.111	2.170	2.231	429	444	460
36	12.01	12.51	13.01	2.160	2.221	2.284	439	455	471
37	11.52	12.00	12.50	2.210	2.272	2.336	450	465	481
38	11.05	11.52	12.01	2.260	2.323	2.388	460	476	492
39	10.60	11.06	11.54	2.309	2.374	2.440	470	486	503
40	10.17	10.62	11.09	2.358	2.425	2.492	480	497	513
41	9.757	10.20	10.66	2.408	2.475	2.543	490	507	524
42	9.367	9.803	10.25	2.457	2.525	2.594	500	517	534
43	8.994	9.420	9.856	2.506	2.575	2.645	510	527	545
44	8.638	9.054	9.480	2.554	2.624	2.695	520	537	555
45	8.298	8.705	9.121	2.602	2.673	2.745	530	547	565
46	7.973	8.371	8.778	2.650	2.722	2.794	540	557	575
47	7.663	8.051	8.449	2.698	2.770	2.843	549	567	585
48	7.367	7.745	8.134	2.745	2.818	2.891	559	577	595
49	7.083	7.453	7.832	2.792	2.865	2.939	569	587	605
50	6.812	7.176	7.543	2.838	2.911	2.986	578	596	615
51	6.553	6.905	7.267	2.883	2.958	3.032	588	606	624
52	6.305	6.649	7.002	2.929	3.003	3.078	597	615	633
53	6.068	6.403	6.747	2.974	3.048	3.123	606	624	643
54	5.841	6.168	6.504	3.018	3.093	3.168	615	633	652

55	5.623	5.942	6.270	3.061	3.136	3.212	624	642	661
56	5.415	5.726	6.046	3.104	3.179	3.255	633	651	670
57	5.216	5.519	5.831	3.147	3.222	3.297	641	660	678
58	5.025	5.321	5.625	3.188	3.263	3.339	650	668	687
59	4.842	5.131	5.428	3.229	3.304	3.380	658	677	695
60	4.667	4.948	5.238	3.270	3.345	3.420	667	685	703
61	4.499	4.773	5.055	3.310	3.385	3.459	675	693	711
62	4.338	4.605	4.880	3.349	3.423	3.498	683	701	719
63	4.183	4.444	4.712	3.388	3.462	3.536	691	709	727
64	4.035	4.289	4.551	3.425	3.499	3.573	699	717	735
65	3.893	4.140	4.396	3.463	3.536	3.609	706	724	742
66	3.756	3.998	4.247	3.499	3.572	3.645	714	732	749
67	3.625	3.861	4.103	3.535	3.607	3.679	721	739	757
68	3.500	3.729	3.966	3.570	3.642	3.713	728	746	763
69	3.379	3.603	3.833	3.604	3.676	3.747	735	753	770
70	3.263	3.481	3.706	3.638	3.709	3.779	742	760	777
71	3.152	3.364	3.583	3.671	3.741	3.811	749	766	783
72	3.045	3.252	3.466	3.703	3.773	3.842	755	773	790
73	2.942	3.144	3.352	3.735	3.804	3.872	762	779	796
74	2.843	3.040	3.243	3.766	3.834	3.902	768	785	802
75	2.748	2.940	3.138	3.797	3.864	3.931	775	791	808
76	2.657	2.844	3.037	3.826	3.893	3.959	781	797	814
77	2.569	2.751	2.940	3.855	3.921	3.986	787	803	819
78	2.485	2.662	2.846	3.884	3.949	4.013	792	809	825
79	2.403	2.577	2.756	3.911	3.976	4.039	798	814	830
80	2.325	2.494	2.669	3.938	4.002	4.064	804	820	835
81	2.250	2.415	2.585	3.965	4.027	4.089	809	825	840
82	2.178	2.338	2.504	3.991	4.053	4.113	814	830	845
83	2.108	2.264	2.426	4.016	4.077	4.137	819	835	850
84	2.041	2.193	2.351	4.040	4.101	4.159	824	840	855
85	1.976	2.125	2.279	4.064	4.124	4.182	829	845	859
86	1.914	2.059	2.209	4.088	4.146	4.203	834	849	864
87	1.854	1.995	2.142	4.111	4.168	4.225	839	854	868
88	1.796	1.934	2.077	4.133	4.190	4.245	843	858	872
89	1.740	1.875	2.014	4.155	4.211	4.265	848	862	877
90	1.687	1.818	1.954	4.176	4.231	4.284	852	866	880
91	1.635	1.763	1.895	4.197	4.251	4.303	856	871	884
92	1.585	1.710	1.839	4.217	4.270	4.322	861	874	888
93	1.537	1.659	1.785	4.236	4.289	4.340	865	878	892
94	1.490	1.609	1.732	4.256	4.307	4.357	869	882	895
95	1.446	1.561	1.681	4.274	4.325	4.374	872	886	899
96	1.402	1.515	1.632	4.292	4.342	4.391	876	889	902
97	1.360	1.471	1.585	4.310	4.359	4.407	880	893	905
98	1.320	1.428	1.539	4.327	4.375	4.422	883	896	909
99	1.281	1.386	1.495	4.344	4.391	4.437	887	899	912
100	1.243	1.346	1.452	4.360	4.407	4.452	890	903	915
101	1.207	1.307	1.411	4.376	4.422	4.466	893	906	918
102	1.172	1.270	1.371	4.392	4.437	4.480	896	909	921

103	1.137	1.233	1.332	4.407	4.451	4.494	900	912	923
104	1.104	1.198	1.295	4.422	4.465	4.507	903	914	926
105	1.070	1.164	1.258	4.436	4.479	4.521	906	917	929

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Final specifications please refer to latest
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History

Version	Modification	Date	Remark
1.0	New content	2022/01/24	