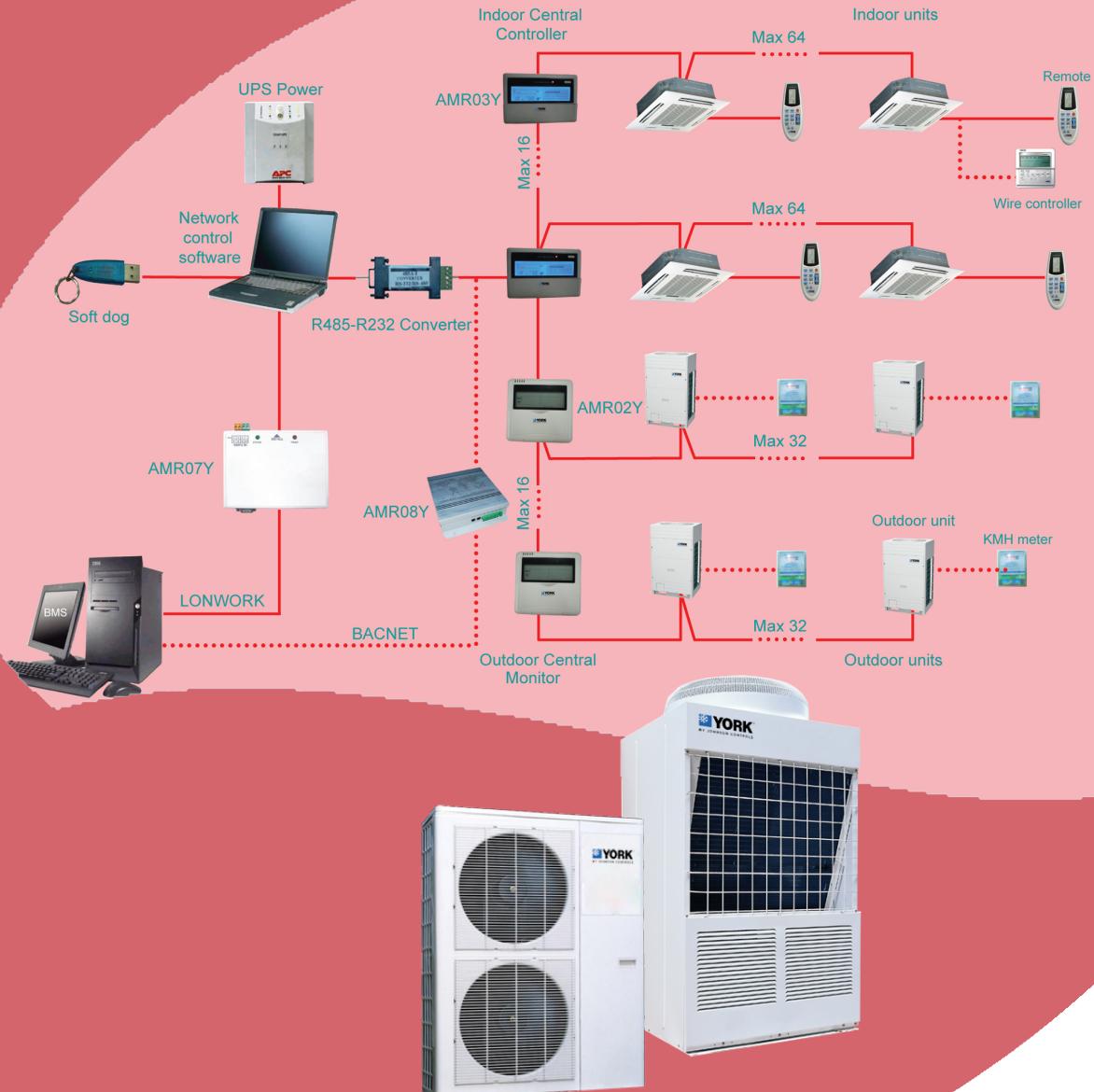


TECHNICAL SERVICE MANUAL



VARIABLE REFRIGERANT FLOW A/C SYSTEM NONE MODULAR DIGITAL SCROLL R-410A 50 HZ



Read this manual before installation and operation
Make sure that it is well kept for later reference

YDS None Modular Digital scroll

Contents

Part 1 General Information.....	4
1. YDS system series.....	6
What is YDS.....	6
Features of YDS	6
2. Nomenclatures.....	15
 Part 2 Units selection base on cooling load.....	16
 Part 3 Outdoor Units.....	26
1. Specifications.....	28
2. Capacity table.....	29
3. Dimensions and required installation space.....	49
4. Piping diagram.....	53
5. Noise level.....	57
6. Outdoor wiring diagram.....	59
7. Trouble shooting	61
8. Explode view and spare part list.....	64
 Part 4 Indoor Units.....	78
1. Introduction.....	70
2. Four-way cassette type.....	71
3. Wall mounted type.....	102
4. Ceiling &Floor type.....	125
5. Medium static pressure type.....	151
6. Expose and conceal floor standing.....	183
7. Hi ESP duct.....	220
 Part 5 Installation.....	239
1. Summarize of Installation.....	241
2. Installation of outdoor unit	245
3. Installation of indoor unit	246
4. Installation of refrigerant pipe	247
5. Processing & installation of drainage pipe.....	268
6. Insulation work.....	271
7. Pipeline installation.....	274
8. Electric installation.....	278

Part 6 Control System	288
1. Control system.....	290
2. Indoor unit central control monitor system	301
3. Outdoor unit central monitor system.....	319
4. 3rd intelligent network control & monitor system.....	325
5. Remote controller.....	364
6. Receiver display.....	381

Part I General Information

Contents

1. YDS system series.....	6
What is YDS.....	6
Features of YDS	6
2. Nomenclatures.....	15

1. YDS system series

1.1 What is YDS

The YDS (YORK Digital Scroll Air Conditioner) air conditioning system is operated by a variable-capacity compressor and is accommodated by multiple evaporators (indoor units). It is considered as the next-generation modular system with high efficiency air conditioning in the world.

It has undoubtedly changed the face of cooling associated with high-storied buildings. It provides a broad range of different applications for settings such as offices, hotels and schools. With the advantage of easy installation and simple controlling system and so on, the YDS system can meet the demands of the air conditioning market better.

1.2 Features of YDS

(1) Variable compressor

The world's first PWM (Pulse Width Modulation) compressor controls the cooling and heating capacity automatically according to the load.

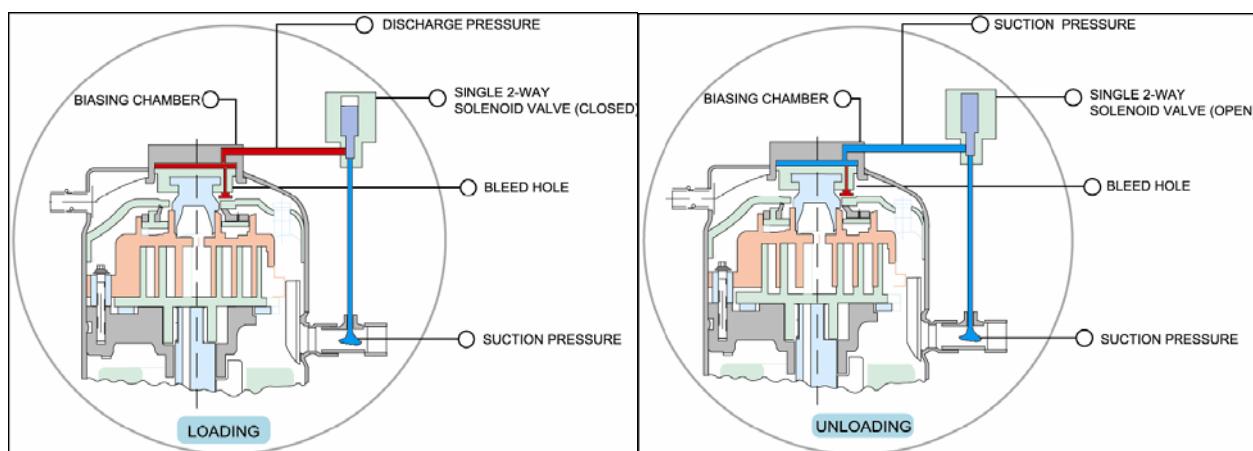
Principle of the digital scroll compressor:

[1] Composition

The solenoid valve is installed for the compressor's loading/ unloading between the upper part of the fixed scroll and the suction pipe.

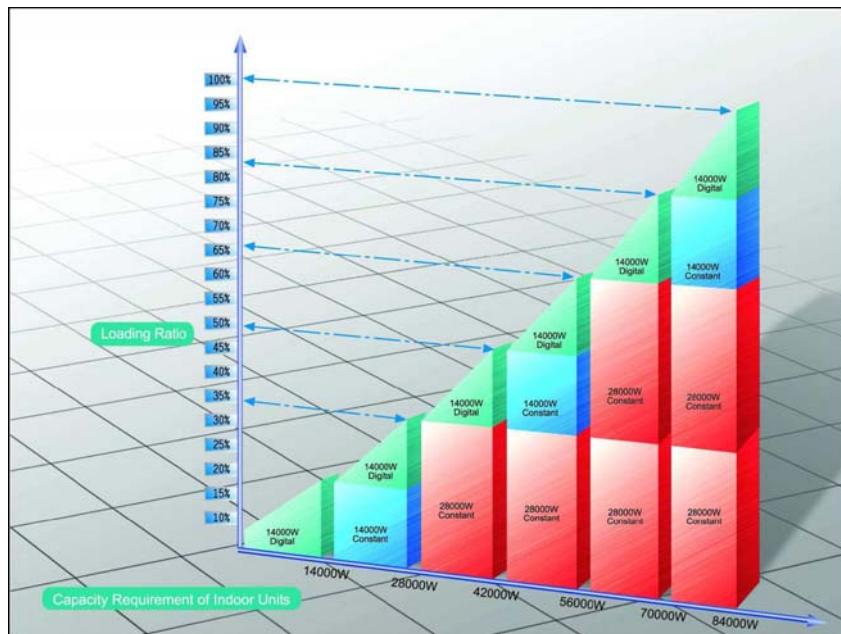
[2] Mechanism

- a. When the solenoid valve is turned off, the fixed scroll is close to the orbiting (Loading).
- b. When the solenoid valve is turned on, the fixed scroll is separated from the orbiting scroll. (Unloading)



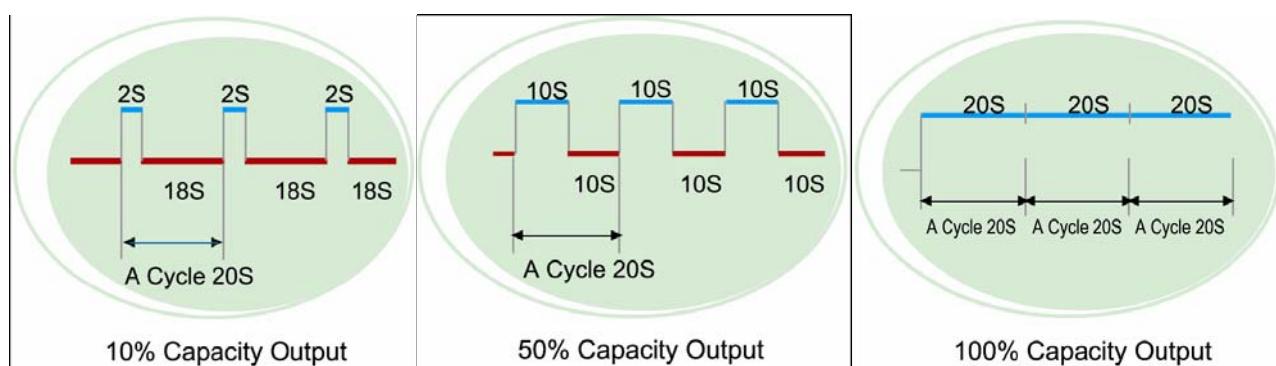
c. This process controls the On/Off time of the valve and the rotating refrigerants in the circle thus adjusting the capacity.

d. The cooling capacity of the outdoor units is adjusted automatically, according to the number of operating indoor unit(s).



[3] PWM (Pulse Width Modulation) Valve

PWM valve is the valve to take away the fixed scroll by lifting up through the difference of pressure after the digital scroll compressor being connected to the outlet and inlet of suction. Therefore, the capacity of compressor is controlled automatically according to the operation status such as loading when the valve is closed or unloading when the valve is opened. PWM means the ON/OFF signal to the valve for loading /unloading.



(2) Multi matching with several indoor units

Outdoor units

Appearance	Power supply	Capacity(kW)	Refrigerant	Max. connectible indoor units
	1 Ph-220-240V-50Hz	10/14	R-410A	6/8
	3 Ph-380-415V-50Hz	10/14		
	3 Ph-380-415V-50Hz	28	R-410A	16

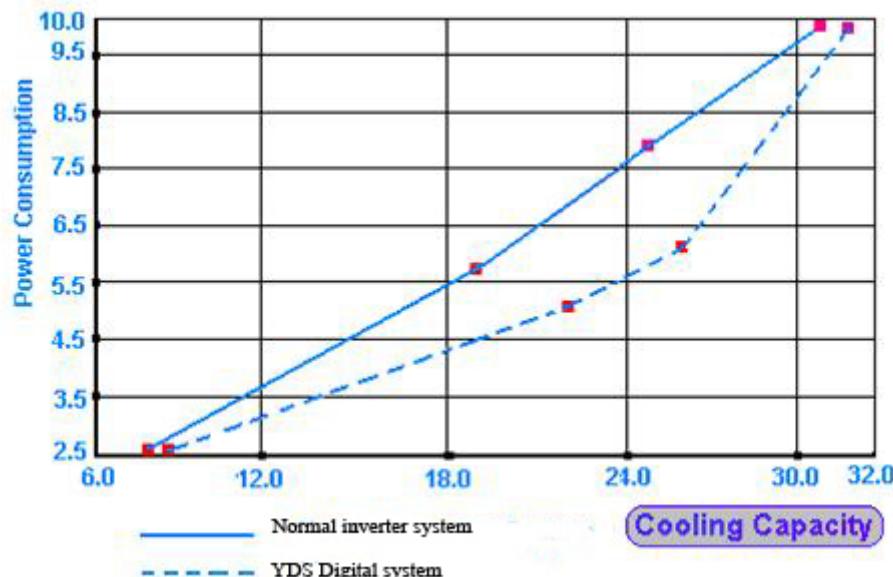
Indoor Units

YDS Product	Capacity	2.2 kW	2.8 kW	3.6 kW	4.5 kW	5.6 kW	7.1 kW	8.0 kW	9.0 kW	11.2 kW	14.0 kW	28.0 kW
	Refrigerant											
Four-way Cassette (Compact)	R-410A 50 Hz	●	●	●	●	●						
Four-way Cassette			●	●	●	●	●	●	●	●	●	●
Wall mount		●	●	●	●	●						
Wall mount (EXV Integrated)		●	●	●	●	●						
Floor ceiling				●	●	●	●	●	●	●	●	●
Medium static Duct		●	●	●	●	●	●	●	●	●	●	●
Expose Floor standing		●	●	●	●	●	●	●				
Conceal Floor standing		●	●	●	●	●	●	●				

Remark: This capacity table shows different refrigerant and different indoor units that are available now.

(3) High efficiency

EER is up to 3.2.

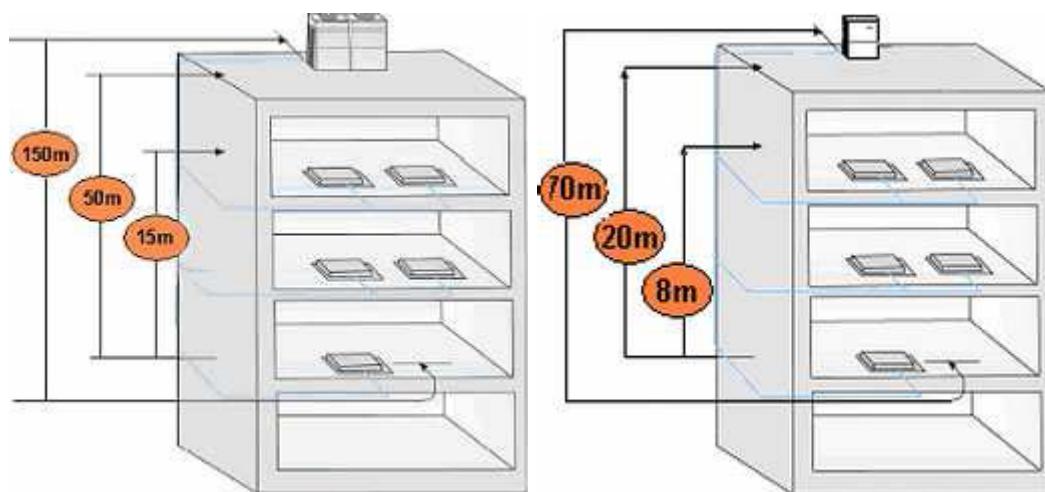


(4) Long & single piping system

Digital scroll system is the only system that is free of oil separator and oil recycling equipment. In the loading state, the speed of the refrigerant is enough to move oil back to the compressor.

For 28Kw system, the maximum Pipe length between indoor unit and outdoor unit is 150m, the max. Height difference between indoor unit and outdoor unit is 50m, the max. Height difference between indoor units is 15m.

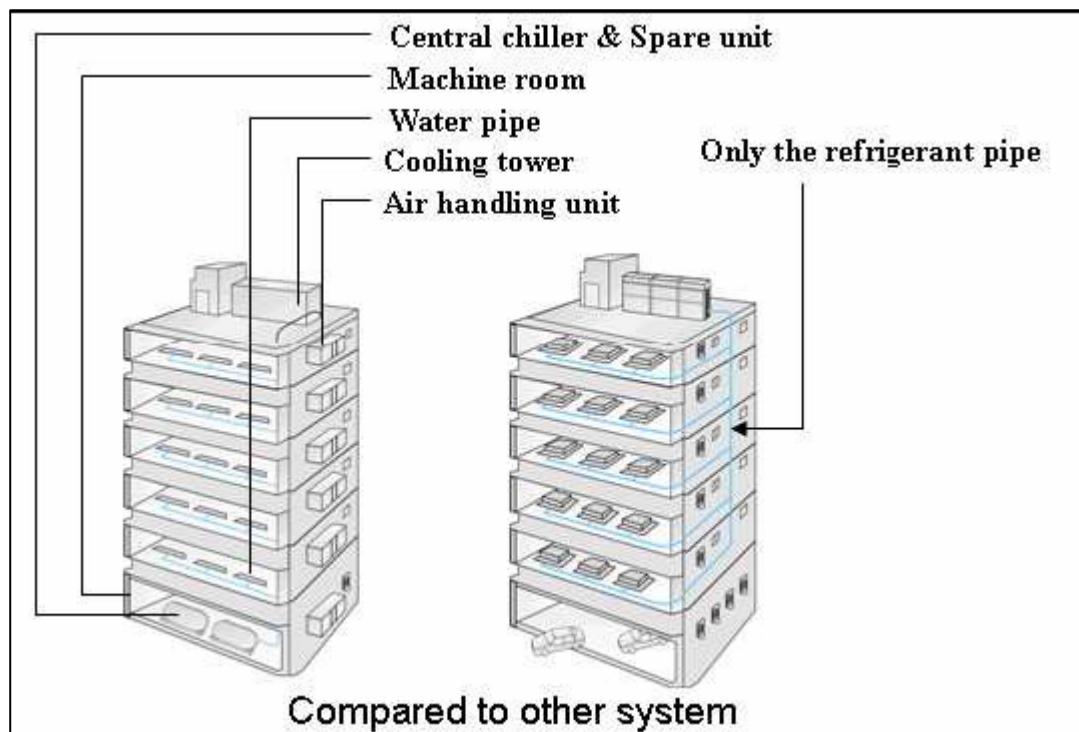
For 10kw, 14kw system, the maximum Pipe length between indoor unit and outdoor unit is 70m, the max. Height difference between indoor unit and outdoor unit is 20m, the max. Height difference between indoor units is 8m.



(5) Advanced oil return technology.

Combining the electronic control and the mechanical control, the oil level controller keeps appropriate oil level in the compressor crankcase. Equipped with oil balance pipe and low-pressure accumulator, it is applicable to both low-pressure & high-pressure oil cycling system. Besides, with the innovative design of one-way valve and capillary, the system can meet the continual oil level change of digital compressor and protect the compressor in whole hog. The digital Scroll Compressor is in the state of loading or unloading. In the loading state, the full speed operation of the compressor motor ensures the refrigerant has enough power to bring the oil back to the compressor. In the unloading state, there is no oil moving out of since there is no refrigerant output, the inertia of the refrigerant can also bring some oil back to the compressor.

(6) Space saving



(7) Simple installation and easy maintenance.

Easy installation

The structure of the YDS system and the piping work are simple, thus the installation is easy.

Indoor units installation: Whole series indoor units have the same gas/liquid connection size for R-410A ,and by flare nut connection, it is easy to connect and decrease your installation cost up to 30%.

Independent system

The YDS system can be installed by stages and the owners can install their system at their convenient time. Thus the system has less installation time limit.

- Installation by stages can avoid the non installment for the new project.
- Convenient installation is realized for the rebuilt project.

No need special maintenance work

Simple refrigerant piping system without any complicated maintenance work

Compared with the water-cooled system:

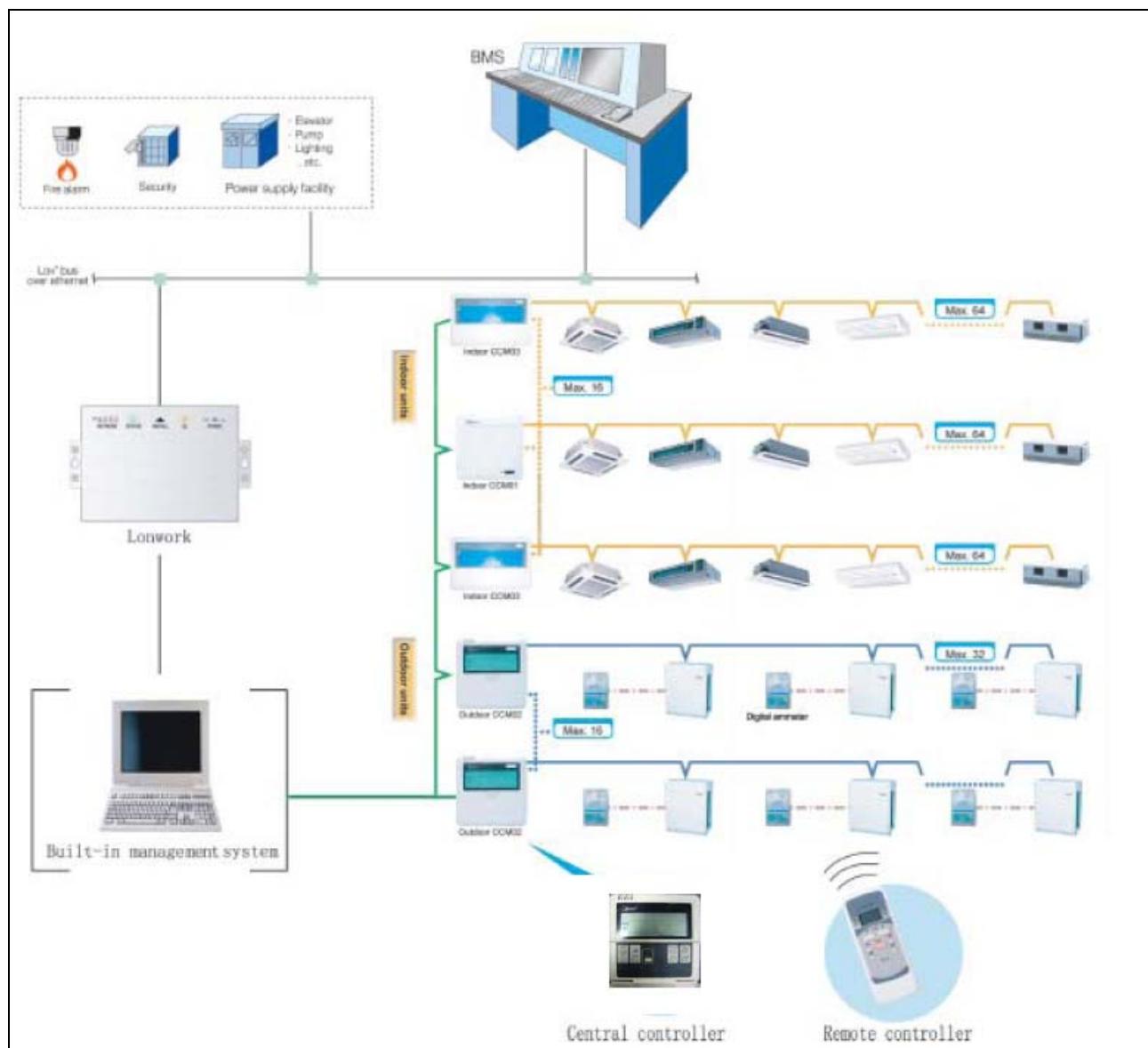
Without water-cooled system, there is no need to clean the water pipe

No full-time person is needed to do the maintenance work

Module construction enables the system to be free from large-scale repair regularly.

(8) Flexible control system

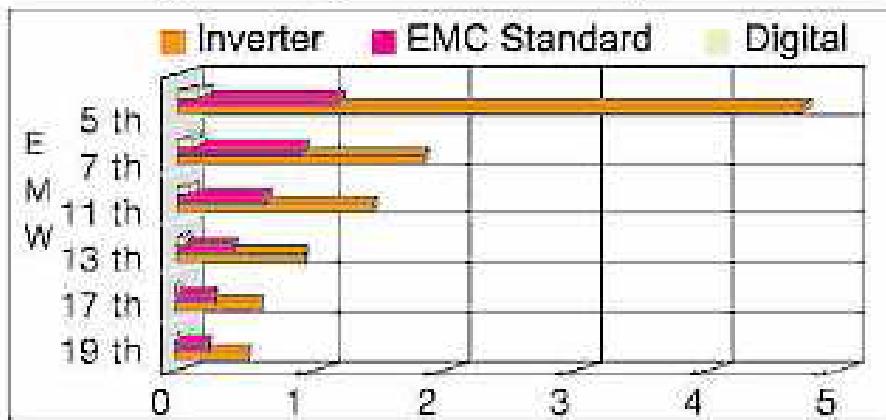
- Wireless remote control
- Wired remote control
- Individual indoor unit control
- Individual indoor unit control & group indoor units control
- Central control monitor Realize group control of multi-indoor units (Max:64 indoor units)
- Intelligent Net-work Air-conditioner control& monitor System Realize intelligent network control via
- PC monitoring system (Max: 16 CCM, 1024 indoor units)



(9) No electromagnetic disturbance.

YDS Digital Scroll II System causes no electromagnetic disturbance, since the loading and unloading of compressor are merely mechanical movement. This special feature makes the Digital Scroll System applicable to telecommunication companies, power stations, and all kinds of precise science labs.

Electromagnetic Comparison Between Digital And Inverter



2. Nomenclature

1	Configuration	2	Capacity	3	Type	4	Fluid	5	Power phase
YDS	YORK Digital Scroll	-	XX	x 100 W	W	Outdoor	A	R22	1 220-240V-1-50Hz / 208-230V-1-60Hz
YDV	YORK AC/DC Inverter	-		E	High wall Everest	B	R407C	2	220-240V-3-50Hz / 200-230V-3-60Hz
				H	High wall EXV Integrated	C	R410A	3	380-415V-3-50Hz / 460V-3-60Hz
				F	Floor Ceiling			4	115V-1-60Hz
				G	4-Way Cassette Compact				
				K	4-Way Cassette				
				Q	1-Way Cassette				
				R	Conceal Floor standing				
				S	Expose Floor standing				
				T	Hi ESP Ducted				
				U	Me ESP Ducted				
				V	Low ESP Ducted				
				W	Slim Me ESP Ducted				

Example

YDS-280WC35A - York Digital Scroll Outdoor unit 28 kW, R-410A, 3 Ph 50 Hz, 1st generation
YDS-22KC15IA - York Digital Scroll Cassette type 2.2 kW, R-410A, 1 Ph 50 Hz, EXV. fixed on unit, 1st generation

Part 2 Unit selection base on cooling load

Contents

1. Introduction	18
2. Unit Selection (with cooling load).....	18

1. Introduction

Refrigerant	Power supply	Model	Capacity (kW)
R-410A	1 Ph-220-240V-50Hz	YDS-100WC15A	10
		YDS-140WC35A	14
		YDS-100WC35A	10
	3 Ph-380-415V-50Hz	YDS-140WC35A	14
		YDS-280WC35A	28

2. Unit selection (Based on Cooling Load)

2.1) Indoor unit selection

1. After calculated the heat load of rooms, according to the local weather parameter and area, cubage, structure of rooms, selecting the nearest load capacity indoor units with given load.

2. Selecting the proper indoor units should include the type of indoor units (Such as the four-way cassette, duct and so on).

3. Pay attention to the requirements of customers and local corresponding design standards.

CAUTION: The described capacity may be different from each indoor unit according to combination. So the real capacity should be calculated with outdoor unit capacity table.

2.2) Outdoor unit selection

The allowable combination is described on the indoor combination total capacity index table.

For the standard of the indoor unit and outdoor unit combination, select the nearest value that the total indoor unit capacity index is less than 130% outdoor unit capacity index.

Indoor unit combination total capacity index.

Outdoor Units

Outdoor Unit	Indoor unit combination						
	130%	100%	90%	80%	70%	60%	50%
YDS-100WC15A	13	10(ISO)	9	8	7	6	5
YDS-140WA15A	18.2	14(ISO)	12.6	11.2	9.8	8.4	7
YDS-100WC35A	13	10(ISO)	9	8	7	6	5
YDS-140WC15A	18.2	14(ISO)	12.6	11.2	9.8	8.4	7
YDS-280WC35A	36.4	28(ISO)	25.2	22.4	19.6	16.8	14

Indoor units

Unit size	22	28	36	45	56	71	80	90	112	140	280
Capacity index (kW)	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	28.0

2.3) Real function data

(1) Select the exact table according to outdoor unit model and combination rate using outdoor unit capacity table. According to given indoor and outdoor temperature, find outdoor unit capacity and power input using the table. Each indoor unit capacity (Power input) is calculated as follows.

$$IUC = OUC \times INX/TNX$$

IUC: Each indoor unit capacity

OUC: Outdoors unit capacity

INX: Each indoor unit capacity index

TNX: Total capacity index

(2) According to different pipe lengths and height difference, the indoor unit capacity will change accordingly. If the changed capacity is smaller than load, replace it with a larger capacity indoor unit and repeat the selecting progress.

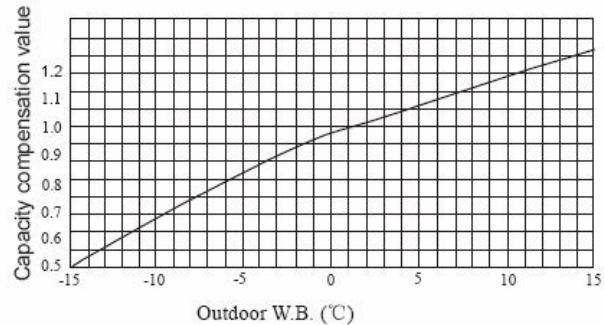
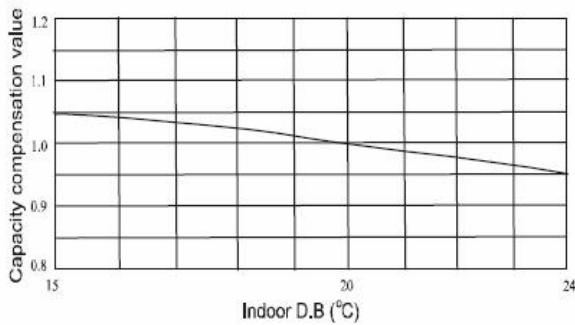
2.4) Variation in capacity in accordance with the length of refrigerant piping.

(1) Cooling capacity modification

$$\begin{aligned} \text{Effectual cooling capacity} &= \text{Rated cooling capacity} \times \text{Modification coefficient} \\ &= ([1] \times [2] \times [3] \times [4]) \end{aligned}$$

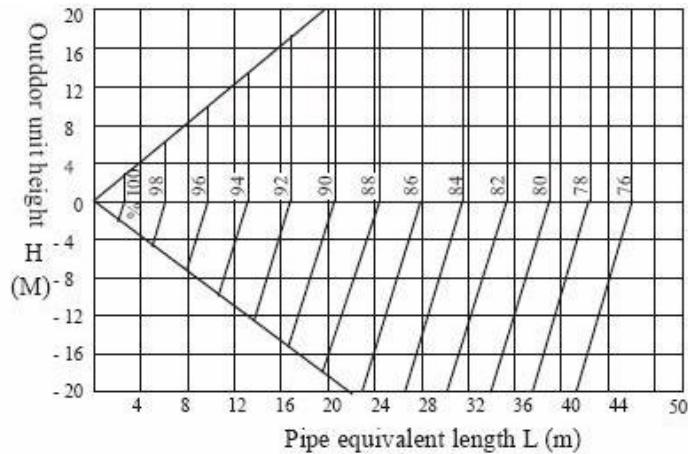
[1] Modification coefficient of indoor W.B. temperature.

[2] Modification coefficient of outdoor D.B. temperature.

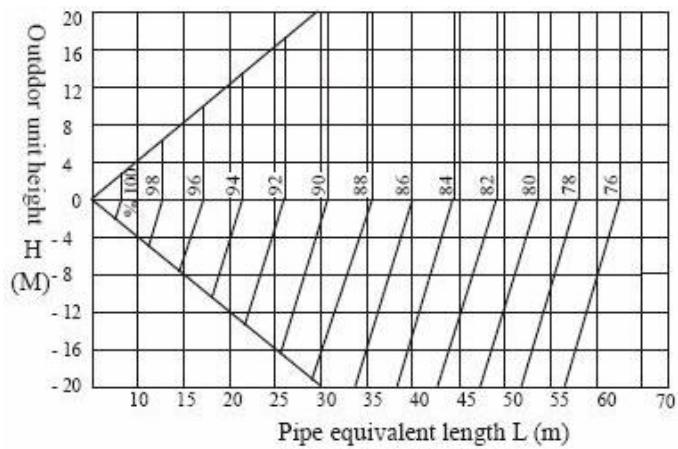


[3] Coefficient of the length and high difference of refrigerant pipe.

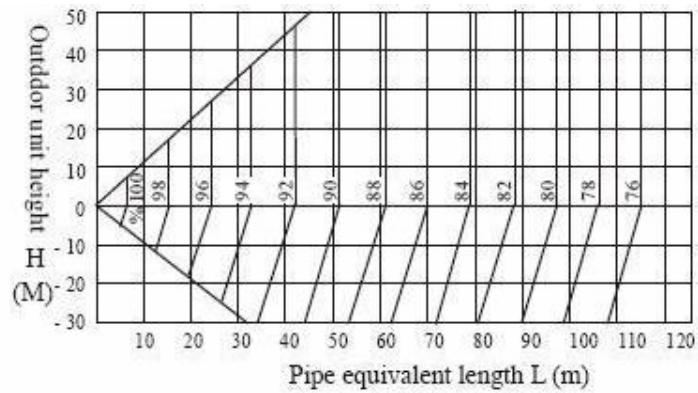
Outdoor unit 10 kW



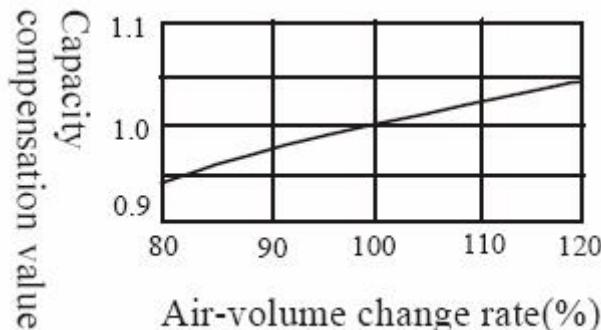
Outdoor unit 14 kW



Outdoor unit 28 kW



[4] Modification coefficient of indoor air

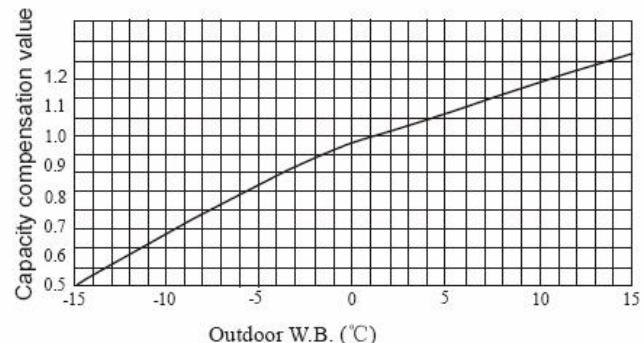
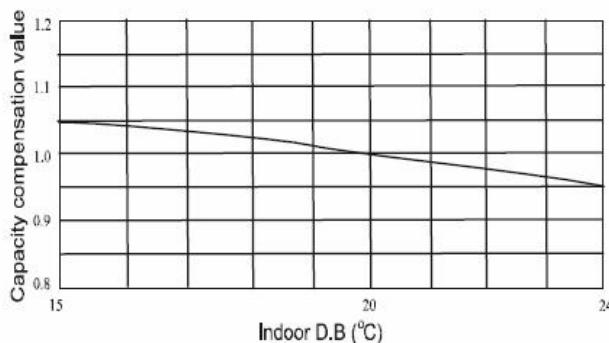


(2) Heating capacity modification

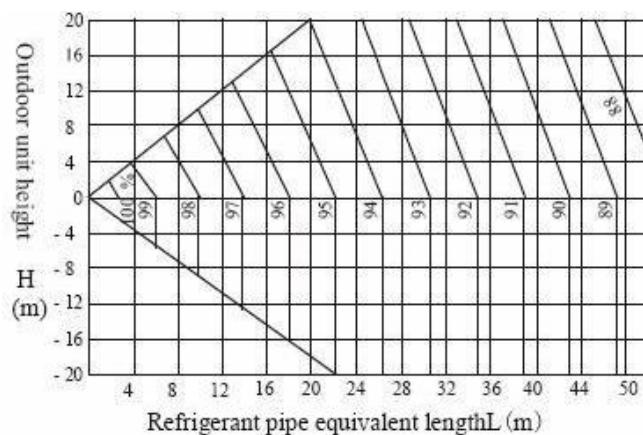
$$\begin{aligned} \text{Effectual heating capacity} &= \text{Rated heating capacity} \times \text{Modification coefficient} \\ &= ([1] \times [2] \times [3] \times [4]) \end{aligned}$$

[1] Modification coefficient of indoor W.B. temperature

[2] Modification coefficient of outdoor D.B. temperature

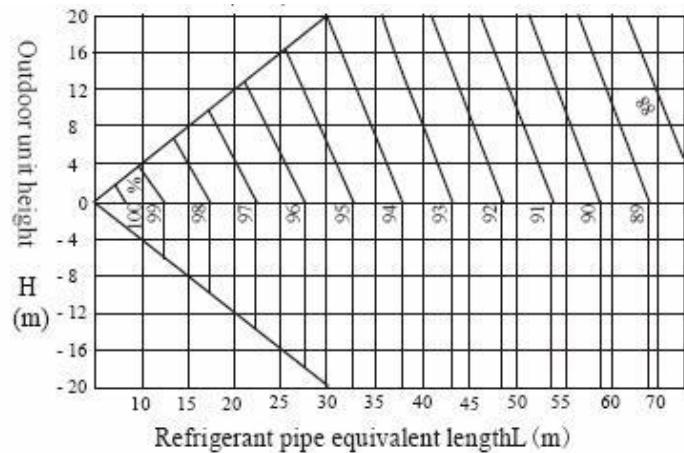


[3] Modification coefficient of the length and high difference of refrigerant pipe
Outdoor unit 10 kW

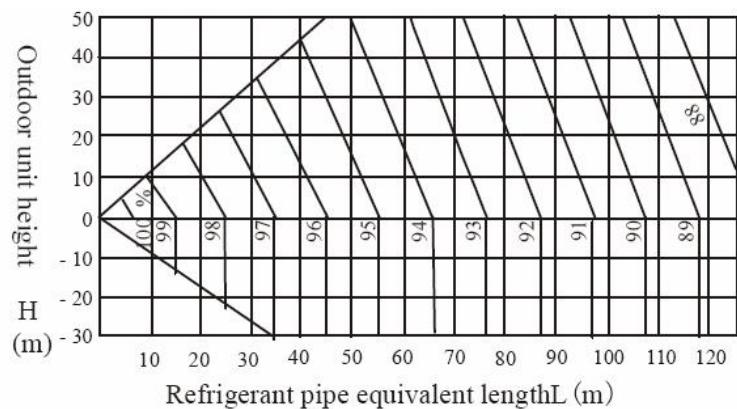


Unit selection base on cooling load

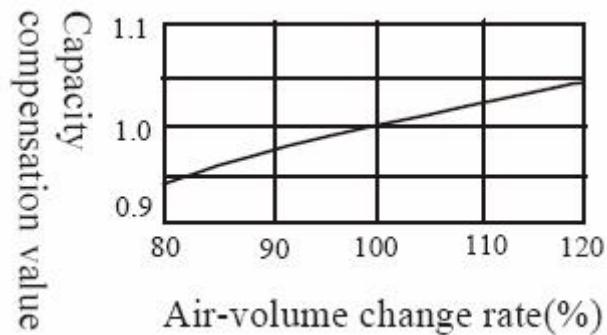
Outdoor unit 14 kW



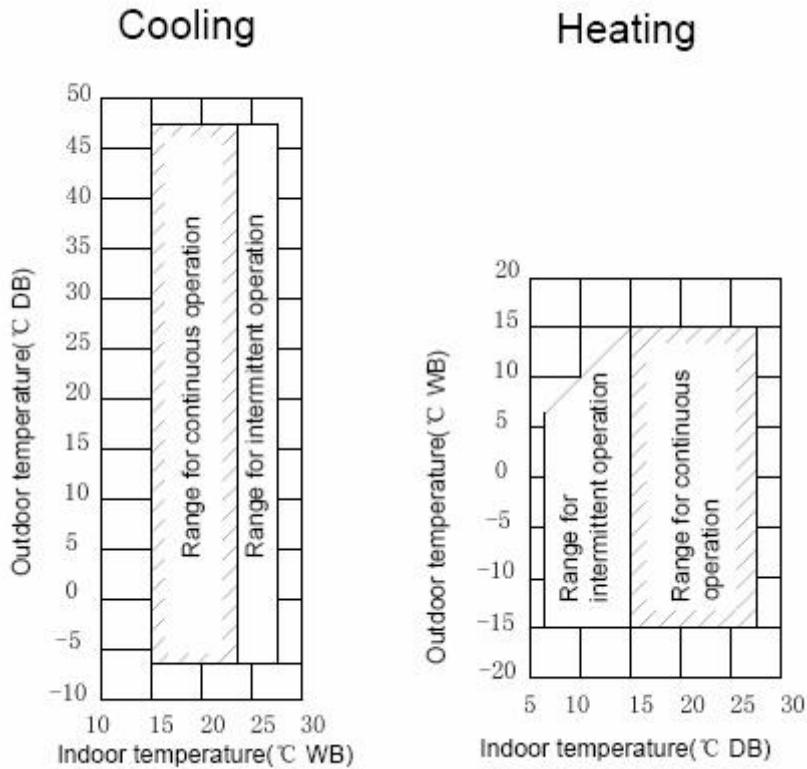
Outdoor unit 28 kW



[4] Modification coefficient of indoor air-volume changing rate



2.5) Temperature range of operation



Notes: These figures assume the following operation conditions (Indoor and outdoor units):

1. Equivalent pipe length: 10 m
2. Height difference: 0 m

2.6) Example for unit selection with cooling load

1) Given condition

- [1] Design condition (Cooling: Indoor 20°C (WB), Outdoor 35°C (DB))
- [2] Cooling load

Location	Room A	Room B	Room C	Room D	Room E	Room F
Load (Kw)	2.1	2.8	3.5	4.6	5.8	7.2

- [3] Power supply unit: 3 Faze 380V 50Hz

- [4] Pipe length: 50m

- [5] Height difference: 30m

2) Indoor unit selection

Select the suitable capacity for condition of 'Indoor 20°C (WB), Outdoor 35°C (DB)' using indoor unit capacity table. The selected result is as follows. (Assuming the indoor unit type is duct)

Location	Room A	Room B	Room C	Room D	Room E	Room F
Load (KW)	2.1	2.8	3.5	4.6	5.8	7.2
Unit size	22	28	36	45	56	71
Capacity (KW)	2.5	3.1	3.9	4.9	6.0	7.6

3) Outdoor unit selection

[1] Assume the indoor unit and outdoor unit combination as follows

Outdoor unit: YDS-280WC35A

Indoor unit: YDS -22UC15EA × 1, YDS -28UC15EA × 1, YDS -36UC15EA × 1, YDS -45UC15EA × 1, YDS -56UC15EA × 1, YDS -71UC15EA × 1,

Indoor unit combination total capacity index

$$22 \times 1 + 28 \times 1 + 36 \times 1 + 45 \times 1 + 56 \times 1 + 71 \times 1 = 258, (258 / 280) \times 100\% = 92\%$$

[2] Result: Because it is within 50 ~ 130%, it is a "Right" selection.

[3] Real function data with indoor unit combination

a . For the 92% combination, calculate the cooling capacity of outdoor unit (YDS - 280WA35A).

26.41KW ← 90% (Indoor temperature: WB 20°C, Outdoor temperature: DB 35°C)

29.33KW ← 100% (Indoor temperature: WB 20°C, Outdoor temperature: DB 35°C)

Then calculated the outdoor capacity in 92% combination index:

Therefore: $26.41 + \{(29.33 - 26.41) / 10\} \times 2 = 27.00$;

b. Outdoor unit (YDS-280WC35A) cooling temperature: DB 35°C

c. Capacity change factor with pipe length (50m) and height difference (30m): 0.905

d. Each cooling capacity

YDS -22UC15EA: $27.00 \times 22/258 \times 0.905 = 2.08$ (KW)

YDS -28UC15EA: $27.00 \times 28/258 \times 0.905 = 2.65$ (KW)

YDS -36UC15EA: $27.00 \times 36/258 \times 0.905 = 3.41$ (KW)

YDS -45UC15EA: $27.00 \times 45/258 \times 0.905 = 4.26$ (KW)

YDS -56UC15EA: $27.00 \times 56/258 \times 0.905 = 5.30$ (KW)

YDS -71UC15EA: $27.00 \times 71/258 \times 0.905 = 6.70$ (KW)

Location	Room A	Room B	Room C	Room D	Room E	Room F
Load (KW)	2.1	2.8	3.5	4.6	5.8	7.2
Unit size	22	28	36	45	56	71
Capacity (KW)	2.08	2.65	3.41	4.26	5.30	6.70

[4] Conclusion: Generally, we think this result is acceptable, so we can think we have accomplished the calculation. But if you think this result is not acceptable, you can repeat the over process.

Remark: In these samples, we don't consider the other capacity modification index and assume them is 1.

Part 3 Outdoor

Contents

1. Specifications.....	28
2. Capacity table.....	29
3. Dimensions and required installation space.....	49
4. Piping diagram.....	53
5. Noise level.....	57
6. Outdoor wiring diagram.....	59
7. Trouble shooting	91
8. Explode view and spare part list.....	64

1. Specification

Outdoor YDS-100-840 WA15/35A R-22 50Hz

Model			YDS-100WC15A	YDS-140WC15A	YDS-100WC35A	YDS-140WC35A	YDS-280WC35A		
Power supply		Ph-V-Hz	1Ph-220-240 V-50 Hz		3 Ph-220-240 V-50 Hz				
Nominal capacity									
Cooling	Capacity	kW	10.0	14.0	10.0	14.0	29.0		
	Input	kW	3.6	4.2	3.5	4.5	8.9		
Heating	Capacity	kW	12.0	16.0	12.0	16.0	30.0		
	Input	kW	3.5	3.9	3.4	4.4	8.7		
Electrical parameter									
Max. input consumption		kW	6.23	6.39	6.78	7.75	12.5		
Max. current		A	28	30	10	12	21		
Starting current		A	142	156	64	64	64		
Compressor									
Capacity	Btu/h		50500	14	14	32.2			
Rated current (RLA)	A		31.4	8.5	8.5	18.5			
Thermal protector	Inner			Internal					
Refrigerant oil	ml		1890	1800		3600			
Motor									
Input	W		158×2	138*2		700/450			
Capacitor	uF		5×2	3.5×2		10			
Speed	r/min		890/590	800		670/450			
Coil									
a. Number of rows				2	2.5				
b. Tube pitch(a)× row pitch(b)	mm			25.4×22					
c. Fin spacing	mm			1.8					
d. Fin type (code)				Hydrophilic aluminum					
e. Tube outside dia.and type	mm			φ9.53					
				Inner grove copper tube					
f. Coil length x height x width	mm			715x1220x44		870x980x60			
g. Number of circuits				8	10x2				
Performance									
Air flow	m³/h			6000	10000				
Noise level	dB			55	68				
Piping connection									
Liquid side/ Gas side	mm			φ9.53/φ19	φ12.7/φ28.6				
Max. Refrigerant pipe length	m	50	70	50	70	175			
Max. Difference in level	m	8	8	8	8	15			
Refrigerant charge	kg	4.6	4.6	4.1	4.1	11			
Containerization									
Dimensions	Unit (WxHxD)	mm	940x1245x340			997x1830x880			
	Packing (WxHxD)	mm	1058x1300x435			1105x2020x1034			
	Net/Gross weight	kg	112/125	117/126		245/260			
Qty per 20'/40'/40'HQ	Pieces		50/100/100			10/20/20			

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature: 35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Capacities are net, not including a deduction for cooling (an addition for heating) for indoor fan motor heat

2. Capacity table

YDS-100WC15A COOLING

Combination, %(Capacity index)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)												TC Total capacity	PI Power input		
		14		16		18		19		20		22					
		TC	PI	TC	PI	TC	PI	TC	PI	TC	PI	TC	PI				
100%	10.00	6.68	2.05	7.88	2.56	9.09	3.06	9.65	3.32	10.19	3.58	10.42	3.59	10.64	3.63		
	12.00	6.69	2.06	7.89	2.56	9.10	3.07	9.66	3.33	10.21	3.59	10.43	3.60	10.65	3.63		
	14.00	6.69	2.06	7.90	2.56	9.11	3.07	9.67	3.33	10.22	3.59	10.44	3.60	10.67	3.64		
	16.00	6.70	2.06	7.91	2.57	9.12	3.08	9.68	3.34	10.23	3.60	10.46	3.61	10.68	3.65		
	18.00	6.71	2.07	7.92	2.58	9.13	3.09	9.69	3.35	10.24	3.61	10.47	3.62	10.69	3.66		
	19.00	6.72	2.08	7.94	2.59	9.15	3.10	9.71	3.37	10.26	3.63	10.49	3.64	10.71	3.67		
	21.00	6.74	2.08	7.96	2.60	9.18	3.11	9.74	3.37	10.29	3.64	10.52	3.65	10.75	3.68		
	23.00	7.27	2.09	8.59	2.61	9.90	3.12	10.51	3.38	11.10	3.65	11.35	3.66	11.59	3.69		
	25.00	7.27	2.10	8.58	2.62	9.89	3.14	10.49	3.40	11.09	3.67	11.34	3.68	11.58	3.71		
	27.00	7.25	2.11	8.55	2.63	9.86	3.15	10.46	3.42	11.06	3.69	11.31	3.70	11.55	3.73		
	29.00	7.24	2.12	8.55	2.65	9.85	3.17	10.45	3.44	11.05	3.71	11.29	3.72	11.54	3.75		
	31.00	7.23	2.14	8.54	2.66	9.84	3.19	10.44	3.46	11.04	3.73	11.28	3.74	11.52	3.77		
	33.00	7.22	2.15	8.52	2.67	9.82	3.20	10.42	3.47	11.02	3.74	11.26	3.76	11.50	3.79		
	35.00	7.17	2.22	8.47	2.77	9.76	3.32	10.36	3.60	10.95	3.88	11.19	3.89	11.43	3.93		
	37.00	7.10	2.37	8.38	2.95	9.67	3.53	10.26	3.83	10.84	4.13	11.08	4.14	11.32	4.18		
	39.00	6.96	2.38	8.22	2.96	9.47	3.55	10.05	3.85	10.62	4.15	10.86	4.16	11.09	4.20		
	41.00	6.89	2.39	8.13	2.97	9.37	3.56	9.95	3.86	10.51	4.16	10.75	4.18	10.97	4.22		
	43.00	6.82	2.40	8.05	2.99	9.28	3.58	9.84	3.88	10.40	4.18	10.63	4.20	10.86	4.24		
90%	10.00	6.01	1.78	7.10	2.21	8.18	2.65	8.68	2.87	9.18	3.10	9.38	3.11	9.58	3.14		
	12.00	6.02	1.78	7.10	2.21	8.19	2.65	8.69	2.88	9.19	3.10	9.39	3.11	9.59	3.14		
	14.00	6.02	1.78	7.11	2.22	8.20	2.65	8.70	2.88	9.20	3.10	9.40	3.11	9.60	3.14		
	16.00	6.03	1.78	7.12	2.22	8.21	2.66	8.71	2.89	9.21	3.11	9.41	3.12	9.61	3.15		
	18.00	6.04	1.79	7.13	2.23	8.22	2.67	8.72	2.89	9.21	3.12	9.42	3.13	9.62	3.16		
	19.00	6.05	1.80	7.14	2.24	8.23	2.68	8.74	2.91	9.23	3.14	9.44	3.15	9.64	3.18		
	21.00	6.07	1.80	7.17	2.25	8.26	2.69	8.76	2.92	9.26	3.14	9.47	3.15	9.67	3.18		
	23.00	6.55	1.81	7.73	2.25	8.91	2.70	9.45	2.93	9.99	3.15	10.22	3.16	10.43	3.19		
	25.00	6.54	1.82	7.72	2.26	8.90	2.71	9.45	2.94	9.98	3.17	10.21	3.18	10.42	3.21		
	27.00	6.52	1.83	7.70	2.28	8.88	2.73	9.42	2.96	9.95	3.19	10.18	3.20	10.39	3.23		
	29.00	6.51	1.84	7.69	2.29	8.87	2.74	9.41	2.97	9.94	3.20	10.17	3.21	10.38	3.24		
	31.00	6.51	1.85	7.68	2.30	8.86	2.75	9.40	2.99	9.93	3.22	10.16	3.23	10.37	3.26		
	33.00	6.50	1.86	7.67	2.31	8.84	2.77	9.38	3.00	9.91	3.24	10.14	3.25	10.35	3.28		
	35.00	6.46	1.92	7.62	2.40	8.79	2.87	9.32	3.11	9.86	3.35	10.07	3.37	10.29	3.40		
	37.00	6.39	2.05	7.55	2.55	8.70	3.05	9.23	3.31	9.76	3.57	9.97	3.58	10.19	3.61		
	39.00	6.26	2.05	7.39	2.56	8.52	3.07	9.04	3.32	9.56	3.58	9.77	3.59	9.98	3.63		
	41.00	6.20	2.06	7.32	2.57	8.44	3.08	8.95	3.34	9.46	3.60	9.67	3.61	9.88	3.65		
	43.00	6.13	2.07	7.24	2.58	8.35	3.09	8.86	3.35	9.36	3.62	9.57	3.63	9.77	3.66		
80%	10.00	5.34	1.52	6.31	1.89	7.27	2.26	7.72	2.45	8.16	2.65	8.34	2.65	8.51	2.68		
	12.00	5.35	1.52	6.31	1.89	7.28	2.26	7.72	2.46	8.16	2.65	8.35	2.66	8.52	2.68		
	14.00	5.35	1.52	6.32	1.89	7.29	2.27	7.73	2.46	8.17	2.65	8.36	2.66	8.53	2.68		
	16.00	5.36	1.52	6.33	1.90	7.30	2.27	7.74	2.47	8.18	2.66	8.36	2.67	8.54	2.69		
	18.00	5.37	1.53	6.34	1.90	7.30	2.28	7.75	2.47	8.19	2.67	8.37	2.67	8.55	2.70		
	19.00	5.38	1.54	6.35	1.91	7.32	2.29	7.77	2.49	8.21	2.68	8.39	2.69	8.57	2.71		
	21.00	5.40	1.54	6.37	1.92	7.34	2.30	7.79	2.49	8.23	2.69	8.42	2.69	8.60	2.72		
	23.00	5.82	1.54	6.87	1.92	7.92	2.30	8.40	2.50	8.88	2.69	9.08	2.70	9.27	2.73		
	25.00	5.81	1.55	6.86	1.93	7.91	2.32	8.40	2.51	8.87	2.71	9.07	2.72	9.26	2.74		
	27.00	5.80	1.56	6.84	1.94	7.89	2.33	8.37	2.53	8.85	2.72	9.04	2.73	9.24	2.76		
	29.00	5.79	1.57	6.84	1.95	7.88	2.34	8.36	2.54	8.84	2.74	9.04	2.75	9.23	2.77		
	31.00	5.79	1.58	6.83	1.97	7.87	2.35	8.35	2.55	8.83	2.75	9.03	2.76	9.22	2.79		
	33.00	5.77	1.59	6.82	1.98	7.86	2.37	8.34	2.57	8.81	2.77	9.01	2.77	9.20	2.80		
	35.00	5.74	1.64	6.78	2.05	7.81	2.45	8.29	2.66	8.76	2.87	8.96	2.87	9.15	2.90		
	37.00	5.68	1.75	6.71	2.18	7.73	2.61	8.21	2.83	8.67	3.05	8.87	3.06	9.05	3.09		
	39.00	5.57	1.75	6.57	2.19	7.58	2.62	8.04	2.84	8.50	3.06	8.69	3.07	8.87	3.10		
	41.00	5.51	1.76	6.50	2.20	7.50	2.63	7.96	2.85	8.41	3.07	8.60	3.08	8.78	3.11		
	43.00	5.45	1.77	6.44	2.21	7.42	2.64	7.87	2.87	8.32	3.09	8.51	3.10	8.69	3.13		

	10.00	4.68	1.28	5.52	1.59	6.36	1.91	6.75	2.07	7.14	2.23	7.30	2.23	7.45	2.26
	12.00	4.68	1.28	5.53	1.59	6.37	1.91	6.76	2.07	7.14	2.23	7.30	2.24	7.46	2.26
	14.00	4.69	1.28	5.53	1.59	6.38	1.91	6.77	2.07	7.15	2.23	7.31	2.24	7.47	2.26
	16.00	4.69	1.28	5.54	1.60	6.38	1.92	6.77	2.08	7.16	2.24	7.32	2.25	7.47	2.27
	18.00	4.70	1.29	5.54	1.60	6.39	1.92	6.78	2.08	7.17	2.24	7.33	2.25	7.48	2.27
	19.00	4.71	1.29	5.56	1.61	6.40	1.93	6.80	2.09	7.18	2.26	7.34	2.26	7.50	2.29
	21.00	4.72	1.30	5.57	1.62	6.42	1.93	6.82	2.10	7.21	2.26	7.37	2.27	7.52	2.29
	23.00	5.09	1.30	6.01	1.62	6.93	1.94	7.35	2.10	7.77	2.27	7.95	2.28	8.11	2.30
70%	25.00	5.09	1.31	6.01	1.63	6.92	1.95	7.35	2.12	7.77	2.28	7.94	2.29	8.11	2.31
	27.00	5.07	1.31	5.99	1.64	6.90	1.96	7.32	2.13	7.74	2.29	7.91	2.30	8.08	2.32
	29.00	5.07	1.32	5.98	1.65	6.90	1.97	7.32	2.14	7.73	2.30	7.91	2.31	8.07	2.33
	31.00	5.06	1.33	5.98	1.65	6.89	1.98	7.31	2.15	7.73	2.32	7.90	2.32	8.07	2.35
	33.00	5.05	1.34	5.96	1.66	6.88	1.99	7.30	2.16	7.71	2.33	7.88	2.34	8.05	2.36
	35.00	5.02	1.38	5.93	1.72	6.84	2.06	7.25	2.24	7.67	2.41	7.84	2.42	8.00	2.44
	37.00	4.97	1.47	5.87	1.83	6.77	2.20	7.18	2.38	7.59	2.57	7.76	2.57	7.92	2.60
	39.00	4.87	1.48	5.75	1.84	6.63	2.20	7.03	2.39	7.44	2.58	7.60	2.59	7.76	2.61
	41.00	4.82	1.48	5.69	1.85	6.56	2.21	6.96	2.40	7.36	2.59	7.52	2.60	7.68	2.62
	43.00	4.77	1.49	5.63	1.86	6.49	2.23	6.89	2.41	7.28	2.60	7.44	2.61	7.60	2.63
	10.00	4.01	1.06	4.73	1.32	5.45	1.58	5.79	1.71	6.12	1.84	6.25	1.85	6.39	1.87
	12.00	4.01	1.06	4.74	1.32	5.46	1.58	5.79	1.71	6.12	1.85	6.26	1.85	6.39	1.87
	14.00	4.02	1.06	4.74	1.32	5.47	1.58	5.80	1.71	6.13	1.85	6.27	1.85	6.40	1.87
	16.00	4.02	1.06	4.75	1.32	5.47	1.59	5.81	1.72	6.14	1.85	6.27	1.86	6.41	1.88
	18.00	4.02	1.06	4.75	1.33	5.48	1.59	5.81	1.72	6.14	1.86	6.28	1.86	6.41	1.88
	19.00	4.03	1.07	4.76	1.33	5.49	1.60	5.82	1.73	6.16	1.87	6.29	1.87	6.43	1.89
60%	21.00	4.05	1.07	4.78	1.34	5.51	1.60	5.84	1.74	6.18	1.87	6.31	1.88	6.45	1.90
	23.00	4.36	1.08	5.15	1.34	5.94	1.61	6.30	1.74	6.66	1.88	6.81	1.88	6.96	1.90
	25.00	4.36	1.08	5.15	1.35	5.93	1.61	6.30	1.75	6.66	1.89	6.80	1.89	6.95	1.91
	27.00	4.35	1.09	5.13	1.36	5.92	1.62	6.28	1.76	6.64	1.90	6.78	1.90	6.93	1.92
	29.00	4.34	1.09	5.13	1.36	5.91	1.63	6.27	1.77	6.63	1.91	6.78	1.91	6.92	1.93
	31.00	4.34	1.10	5.12	1.37	5.91	1.64	6.27	1.78	6.62	1.92	6.77	1.92	6.91	1.94
	33.00	4.33	1.11	5.11	1.38	5.89	1.65	6.25	1.79	6.61	1.93	6.76	1.93	6.90	1.95
	35.00	4.30	1.15	5.08	1.43	5.86	1.71	6.22	1.85	6.57	2.00	6.72	2.00	6.86	2.02
	37.00	4.26	1.22	5.03	1.52	5.80	1.82	6.15	1.97	6.50	2.12	6.65	2.13	6.79	2.15
	39.00	4.18	1.22	4.93	1.52	5.68	1.82	6.03	1.98	6.37	2.13	6.51	2.14	6.65	2.16
	41.00	4.13	1.23	4.88	1.53	5.62	1.83	5.97	1.99	6.31	2.14	6.45	2.15	6.58	2.17
	43.00	4.09	1.23	4.83	1.54	5.57	1.84	5.91	2.00	6.24	2.15	6.38	2.16	6.52	2.18
	10.00	3.34	0.86	3.94	1.07	4.55	1.28	4.82	1.39	5.10	1.49	5.21	1.50	5.32	1.51
	12.00	3.34	0.86	3.95	1.07	4.55	1.28	4.83	1.39	5.10	1.50	5.22	1.50	5.33	1.51
	14.00	3.35	0.86	3.95	1.07	4.56	1.28	4.83	1.39	5.11	1.50	5.22	1.50	5.33	1.52
	16.00	3.35	0.86	3.96	1.07	4.56	1.28	4.84	1.39	5.11	1.50	5.23	1.51	5.34	1.52
	18.00	3.35	0.86	3.96	1.08	4.56	1.29	4.84	1.40	5.12	1.51	5.23	1.51	5.34	1.52
	19.00	3.36	0.87	3.97	1.08	4.57	1.29	4.85	1.40	5.13	1.51	5.24	1.52	5.36	1.53
	21.00	3.37	0.87	3.98	1.08	4.59	1.30	4.87	1.41	5.15	1.52	5.26	1.52	5.37	1.54
50%	23.00	3.64	0.87	4.29	1.09	4.95	1.30	5.25	1.41	5.55	1.52	5.68	1.53	5.80	1.54
	25.00	3.63	0.88	4.29	1.09	4.95	1.31	5.25	1.42	5.55	1.53	5.67	1.53	5.79	1.55
	27.00	3.62	0.88	4.28	1.10	4.93	1.31	5.23	1.43	5.53	1.54	5.65	1.54	5.77	1.56
	29.00	3.62	0.89	4.27	1.10	4.93	1.32	5.23	1.43	5.52	1.55	5.65	1.55	5.77	1.57
	31.00	3.62	0.89	4.27	1.11	4.92	1.33	5.22	1.44	5.52	1.55	5.64	1.56	5.76	1.57
	33.00	3.61	0.90	4.26	1.12	4.91	1.34	5.21	1.45	5.51	1.56	5.63	1.57	5.75	1.58
	35.00	3.59	0.93	4.23	1.16	4.88	1.38	5.18	1.50	5.48	1.62	5.60	1.62	5.72	1.64
	37.00	3.55	0.99	4.19	1.23	4.83	1.47	5.13	1.60	5.42	1.72	5.54	1.73	5.66	1.74
	39.00	3.48	0.99	4.11	1.23	4.74	1.48	5.02	1.60	5.31	1.73	5.43	1.73	5.54	1.75
	41.00	3.44	1.00	4.07	1.24	4.69	1.49	4.97	1.61	5.26	1.74	5.37	1.74	5.49	1.76
	43.00	3.41	1.00	4.02	1.25	4.64	1.49	4.92	1.62	5.20	1.74	5.32	1.75	5.43	1.77

YDS-100WC35A COOLING
TC Total capacity PI Power input

Combination, %(Capacity index)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14		16		18		19		20		22			
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW		
100%	10.00	6.44	2.00	7.60	2.49	8.77	2.98	9.30	3.23	9.83	3.48	10.05	3.49	10.26	3.53
	12.00	6.45	2.00	7.61	2.49	8.78	2.98	9.31	3.23	9.84	3.49	10.06	3.50	10.27	3.53
	14.00	6.45	2.00	7.62	2.49	8.78	2.98	9.32	3.24	9.85	3.49	10.07	3.50	10.29	3.53
	16.00	6.46	2.01	7.63	2.50	8.79	2.99	9.33	3.25	9.86	3.50	10.08	3.51	10.30	3.55
	18.00	6.47	2.01	7.64	2.51	8.80	3.00	9.34	3.26	9.87	3.51	10.09	3.52	10.31	3.55
	19.00	6.48	2.02	7.65	2.52	8.82	3.02	9.36	3.27	9.89	3.53	10.11	3.54	10.33	3.57
	21.00	6.50	2.03	7.68	2.53	8.85	3.02	9.39	3.28	9.93	3.54	10.15	3.55	10.36	3.58
	23.00	7.01	2.03	8.28	2.53	9.55	3.03	10.13	3.29	10.71	3.55	10.95	3.56	11.18	3.59
	25.00	7.01	2.04	8.27	2.55	9.54	3.05	10.12	3.31	10.70	3.57	10.93	3.58	11.17	3.61
	27.00	6.99	2.05	8.25	2.56	9.51	3.07	10.09	3.33	10.67	3.58	10.90	3.60	11.13	3.63
	29.00	6.98	2.07	8.24	2.57	9.50	3.08	10.08	3.34	10.65	3.60	10.89	3.61	11.12	3.65
	31.00	6.97	2.08	8.23	2.59	9.49	3.10	10.07	3.36	10.64	3.62	10.88	3.63	11.11	3.67
	33.00	6.96	2.09	8.22	2.60	9.47	3.11	10.05	3.38	10.62	3.64	10.86	3.65	11.09	3.69
	35.00	6.92	2.16	8.17	2.70	9.42	3.23	9.99	3.50	10.56	3.77	10.79	3.78	11.02	3.82
	37.00	6.85	2.30	8.09	2.87	9.32	3.43	9.89	3.72	10.45	4.01	10.69	4.03	10.91	4.06
	39.00	6.71	2.31	7.92	2.88	9.13	3.45	9.69	3.74	10.24	4.03	10.47	4.04	10.69	4.08
	41.00	6.64	2.32	7.84	2.89	9.04	3.46	9.59	3.76	10.14	4.05	10.36	4.06	10.58	4.10
	43.00	6.57	2.33	7.76	2.91	8.94	3.48	9.49	3.77	10.03	4.07	10.25	4.08	10.47	4.12
90%	10.00	5.80	1.73	6.84	2.15	7.89	2.57	8.37	2.79	8.85	3.01	9.04	3.02	9.24	3.05
	12.00	5.80	1.73	6.85	2.15	7.90	2.58	8.38	2.80	8.86	3.01	9.05	3.02	9.25	3.05
	14.00	5.81	1.73	6.86	2.16	7.91	2.58	8.39	2.80	8.87	3.02	9.06	3.03	9.26	3.06
	16.00	5.82	1.74	6.87	2.16	7.91	2.59	8.40	2.81	8.88	3.03	9.07	3.04	9.27	3.07
	18.00	5.82	1.74	6.87	2.17	7.92	2.59	8.41	2.81	8.89	3.03	9.08	3.04	9.28	3.07
	19.00	5.83	1.75	6.89	2.18	7.94	2.61	8.42	2.83	8.90	3.05	9.10	3.06	9.30	3.09
	21.00	5.85	1.75	6.91	2.18	7.97	2.61	8.45	2.84	8.93	3.06	9.13	3.07	9.33	3.10
	23.00	6.31	1.76	7.45	2.19	8.59	2.62	9.12	2.84	9.64	3.07	9.85	3.08	10.06	3.11
	25.00	6.31	1.77	7.45	2.20	8.58	2.64	9.11	2.86	9.63	3.08	9.84	3.09	10.05	3.12
	27.00	6.29	1.78	7.42	2.21	8.56	2.65	9.08	2.87	9.60	3.10	9.81	3.11	10.02	3.14
	29.00	6.28	1.79	7.42	2.22	8.55	2.66	9.07	2.89	9.59	3.11	9.80	3.12	10.01	3.15
	31.00	6.28	1.80	7.41	2.24	8.54	2.68	9.06	2.90	9.58	3.13	9.79	3.14	10.00	3.17
	33.00	6.26	1.80	7.39	2.25	8.52	2.69	9.04	2.92	9.56	3.15	9.77	3.16	9.98	3.19
	35.00	6.23	1.87	7.35	2.33	8.47	2.79	8.99	3.03	9.50	3.26	9.71	3.27	9.92	3.30
	37.00	6.16	1.99	7.28	2.48	8.39	2.97	8.90	3.22	9.41	3.47	9.62	3.48	9.82	3.51
	39.00	6.04	2.00	7.13	2.49	8.22	2.98	8.72	3.23	9.22	3.48	9.42	3.49	9.62	3.53
	41.00	5.98	2.01	7.06	2.50	8.14	2.99	8.63	3.25	9.12	3.50	9.33	3.51	9.52	3.54
	43.00	5.91	2.02	6.98	2.51	8.05	3.01	8.54	3.26	9.03	3.52	9.23	3.53	9.43	3.56
80%	10.00	5.15	1.47	6.08	1.84	7.01	2.20	7.44	2.39	7.86	2.57	8.04	2.58	8.21	2.60
	12.00	5.16	1.48	6.09	1.84	7.02	2.20	7.45	2.39	7.87	2.57	8.05	2.58	8.22	2.61
	14.00	5.16	1.48	6.10	1.84	7.03	2.20	7.46	2.39	7.88	2.58	8.06	2.59	8.23	2.61
	16.00	5.17	1.48	6.10	1.85	7.04	2.21	7.46	2.40	7.89	2.59	8.07	2.59	8.24	2.62
	18.00	5.17	1.49	6.11	1.85	7.04	2.22	7.47	2.40	7.90	2.59	8.07	2.60	8.25	2.62
	19.00	5.19	1.49	6.12	1.86	7.06	2.23	7.49	2.42	7.92	2.61	8.09	2.61	8.26	2.64
	21.00	5.20	1.50	6.14	1.86	7.08	2.23	7.51	2.42	7.94	2.61	8.12	2.62	8.29	2.64
	23.00	5.61	1.50	6.62	1.87	7.64	2.24	8.10	2.43	8.57	2.62	8.76	2.63	8.94	2.65
	25.00	5.61	1.51	6.62	1.88	7.63	2.25	8.10	2.44	8.56	2.63	8.75	2.64	8.93	2.67
	27.00	5.59	1.52	6.60	1.89	7.61	2.26	8.07	2.46	8.53	2.65	8.72	2.65	8.91	2.68
	29.00	5.58	1.53	6.59	1.90	7.60	2.28	8.06	2.47	8.52	2.66	8.71	2.67	8.90	2.69
	31.00	5.58	1.53	6.59	1.91	7.59	2.29	8.06	2.48	8.52	2.67	8.70	2.68	8.89	2.71
	33.00	5.57	1.54	6.57	1.92	7.58	2.30	8.04	2.49	8.50	2.69	8.69	2.70	8.87	2.72
	35.00	5.53	1.60	6.53	1.99	7.53	2.38	7.99	2.58	8.45	2.79	8.64	2.79	8.82	2.82
	37.00	5.48	1.70	6.47	2.12	7.46	2.53	7.91	2.75	8.36	2.96	8.55	2.97	8.73	3.00
	39.00	5.37	1.71	6.34	2.13	7.31	2.55	7.75	2.76	8.19	2.98	8.38	2.99	8.55	3.01
	41.00	5.31	1.71	6.27	2.14	7.23	2.56	7.67	2.77	8.11	2.99	8.29	3.00	8.47	3.03
	43.00	5.26	1.72	6.21	2.15	7.16	2.57	7.59	2.79	8.03	3.00	8.20	3.01	8.38	3.04

	10.00	4.51	1.24	5.32	1.55	6.14	1.85	6.51	2.01	6.88	2.17	7.03	2.17	7.18	2.19
	12.00	4.51	1.24	5.33	1.55	6.14	1.85	6.52	2.01	6.89	2.17	7.04	2.17	7.19	2.20
	14.00	4.52	1.24	5.33	1.55	6.15	1.86	6.52	2.01	6.90	2.17	7.05	2.18	7.20	2.20
	16.00	4.52	1.25	5.34	1.56	6.16	1.86	6.53	2.02	6.90	2.18	7.06	2.18	7.21	2.21
	18.00	4.53	1.25	5.35	1.56	6.16	1.87	6.54	2.02	6.91	2.18	7.06	2.19	7.22	2.21
	19.00	4.54	1.26	5.36	1.57	6.18	1.88	6.55	2.04	6.93	2.19	7.08	2.20	7.23	2.22
	21.00	4.55	1.26	5.37	1.57	6.20	1.88	6.57	2.04	6.95	2.20	7.10	2.21	7.25	2.23
	23.00	4.91	1.26	5.80	1.58	6.68	1.89	7.09	2.05	7.50	2.21	7.66	2.21	7.82	2.23
70%	25.00	4.91	1.27	5.79	1.58	6.68	1.90	7.08	2.06	7.49	2.22	7.65	2.22	7.82	2.25
	27.00	4.89	1.28	5.77	1.59	6.66	1.91	7.06	2.07	7.47	2.23	7.63	2.24	7.79	2.26
	29.00	4.89	1.28	5.77	1.60	6.65	1.92	7.06	2.08	7.46	2.24	7.62	2.25	7.79	2.27
	31.00	4.88	1.29	5.76	1.61	6.64	1.93	7.05	2.09	7.45	2.25	7.62	2.26	7.78	2.28
	33.00	4.87	1.30	5.75	1.62	6.63	1.94	7.03	2.10	7.44	2.26	7.60	2.27	7.76	2.29
	35.00	4.84	1.35	5.72	1.68	6.59	2.01	6.99	2.18	7.39	2.35	7.56	2.35	7.72	2.38
	37.00	4.79	1.43	5.66	1.78	6.52	2.13	6.92	2.31	7.32	2.50	7.48	2.50	7.64	2.53
	39.00	4.70	1.44	5.55	1.79	6.39	2.14	6.78	2.32	7.17	2.51	7.33	2.51	7.49	2.54
	41.00	4.65	1.44	5.49	1.80	6.33	2.15	6.71	2.34	7.10	2.52	7.25	2.53	7.41	2.55
	43.00	4.60	1.45	5.43	1.81	6.26	2.16	6.64	2.35	7.02	2.53	7.18	2.54	7.33	2.56
	10.00	3.86	1.03	4.56	1.28	5.26	1.53	5.58	1.66	5.90	1.79	6.03	1.80	6.16	1.82
	12.00	3.87	1.03	4.57	1.28	5.27	1.53	5.59	1.66	5.90	1.79	6.04	1.80	6.16	1.82
	14.00	3.87	1.03	4.57	1.28	5.27	1.54	5.59	1.67	5.91	1.80	6.04	1.80	6.17	1.82
	16.00	3.88	1.03	4.58	1.29	5.28	1.54	5.60	1.67	5.92	1.80	6.05	1.81	6.18	1.83
	18.00	3.88	1.04	4.58	1.29	5.28	1.54	5.60	1.68	5.92	1.81	6.06	1.81	6.18	1.83
	19.00	3.89	1.04	4.59	1.30	5.29	1.55	5.62	1.68	5.94	1.82	6.07	1.82	6.20	1.84
60%	21.00	3.90	1.04	4.61	1.30	5.31	1.56	5.63	1.69	5.96	1.82	6.09	1.83	6.22	1.84
	23.00	4.21	1.05	4.97	1.30	5.73	1.56	6.08	1.69	6.42	1.83	6.57	1.83	6.71	1.85
	25.00	4.20	1.05	4.96	1.31	5.72	1.57	6.07	1.70	6.42	1.84	6.56	1.84	6.70	1.86
	27.00	4.19	1.06	4.95	1.32	5.71	1.58	6.05	1.71	6.40	1.84	6.54	1.85	6.68	1.87
	29.00	4.19	1.06	4.94	1.32	5.70	1.59	6.05	1.72	6.39	1.85	6.53	1.86	6.67	1.88
	31.00	4.18	1.07	4.94	1.33	5.69	1.59	6.04	1.73	6.39	1.86	6.53	1.87	6.67	1.89
	33.00	4.18	1.07	4.93	1.34	5.68	1.60	6.03	1.74	6.37	1.87	6.52	1.88	6.65	1.90
	35.00	4.15	1.11	4.90	1.39	5.65	1.66	5.99	1.80	6.34	1.94	6.48	1.95	6.61	1.97
	37.00	4.11	1.18	4.85	1.48	5.59	1.77	5.93	1.92	6.27	2.07	6.41	2.07	6.55	2.09
	39.00	4.03	1.19	4.75	1.48	5.48	1.77	5.81	1.92	6.15	2.07	6.28	2.08	6.42	2.10
	41.00	3.98	1.19	4.70	1.49	5.42	1.78	5.75	1.93	6.08	2.08	6.22	2.09	6.35	2.11
	43.00	3.94	1.20	4.66	1.50	5.37	1.79	5.69	1.94	6.02	2.09	6.15	2.10	6.28	2.12
	10.00	3.22	0.83	3.80	1.04	4.38	1.24	4.65	1.35	4.92	1.45	5.02	1.46	5.13	1.47
	12.00	3.22	0.83	3.81	1.04	4.39	1.24	4.66	1.35	4.92	1.45	5.03	1.46	5.14	1.47
	14.00	3.23	0.83	3.81	1.04	4.39	1.24	4.66	1.35	4.93	1.46	5.04	1.46	5.14	1.47
	16.00	3.23	0.84	3.81	1.04	4.40	1.25	4.67	1.35	4.93	1.46	5.04	1.46	5.15	1.48
	18.00	3.23	0.84	3.82	1.05	4.40	1.25	4.67	1.36	4.94	1.46	5.05	1.47	5.15	1.48
	19.00	3.24	0.84	3.83	1.05	4.41	1.26	4.68	1.36	4.95	1.47	5.06	1.48	5.16	1.49
	21.00	3.25	0.85	3.84	1.05	4.43	1.26	4.70	1.37	4.96	1.47	5.07	1.48	5.18	1.49
50%	23.00	3.51	0.85	4.14	1.06	4.77	1.26	5.06	1.37	5.35	1.48	5.47	1.48	5.59	1.50
	25.00	3.50	0.85	4.14	1.06	4.77	1.27	5.06	1.38	5.35	1.49	5.47	1.49	5.58	1.51
	27.00	3.49	0.86	4.12	1.07	4.75	1.28	5.04	1.39	5.33	1.49	5.45	1.50	5.57	1.51
	29.00	3.49	0.86	4.12	1.07	4.75	1.29	5.04	1.39	5.33	1.50	5.45	1.51	5.56	1.52
	31.00	3.49	0.87	4.12	1.08	4.75	1.29	5.03	1.40	5.32	1.51	5.44	1.52	5.56	1.53
	33.00	3.48	0.87	4.11	1.08	4.74	1.30	5.02	1.41	5.31	1.52	5.43	1.52	5.55	1.54
	35.00	3.46	0.90	4.08	1.12	4.71	1.35	5.00	1.46	5.28	1.57	5.40	1.58	5.51	1.59
	37.00	3.42	0.96	4.04	1.20	4.66	1.43	4.95	1.55	5.23	1.67	5.34	1.68	5.46	1.69
	39.00	3.36	0.96	3.96	1.20	4.57	1.44	4.85	1.56	5.12	1.68	5.24	1.69	5.35	1.70
	41.00	3.32	0.97	3.92	1.21	4.52	1.44	4.80	1.57	5.07	1.69	5.18	1.69	5.29	1.71
	43.00	3.29	0.97	3.88	1.21	4.47	1.45	4.75	1.57	5.02	1.70	5.13	1.70	5.24	1.72

YDS-140WC15A COOLING
TC Total capacity PI Power input

Combination, %(Capacity index)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14		16		18		19		20		22		24	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
100%	10.00	9.06	2.41	10.70	3.01	12.34	3.60	13.09	3.90	13.84	4.21	14.14	4.22	14.44	4.26
	12.00	9.07	2.42	10.71	3.01	12.35	3.60	13.10	3.91	13.85	4.21	14.16	4.23	14.46	4.27
	14.00	9.08	2.42	10.72	3.01	12.36	3.61	13.12	3.91	13.87	4.22	14.17	4.23	14.48	4.27
	16.00	9.09	2.43	10.74	3.02	12.38	3.62	13.13	3.93	13.88	4.23	14.19	4.24	14.49	4.29
	18.00	9.10	2.43	10.75	3.03	12.39	3.63	13.15	3.93	13.90	4.24	14.20	4.25	14.51	4.30
	19.00	9.12	2.44	10.77	3.05	12.42	3.65	13.17	3.96	13.93	4.26	14.23	4.28	14.54	4.32
	21.00	9.15	2.45	10.80	3.05	12.46	3.65	13.22	3.96	13.97	4.27	14.28	4.29	14.58	4.33
	23.00	9.87	2.46	11.65	3.06	13.44	3.67	14.26	3.98	15.07	4.29	15.40	4.30	15.73	4.34
	25.00	9.86	2.47	11.64	3.08	13.42	3.69	14.24	4.00	15.05	4.31	15.39	4.32	15.72	4.36
	27.00	9.83	2.48	11.61	3.09	13.38	3.71	14.20	4.02	15.01	4.33	15.34	4.35	15.67	4.39
	29.00	9.82	2.50	11.60	3.11	13.37	3.72	14.19	4.04	15.00	4.35	15.33	4.37	15.65	4.41
	31.00	9.81	2.51	11.59	3.13	13.36	3.74	14.17	4.06	14.98	4.38	15.31	4.39	15.64	4.43
	33.00	9.79	2.52	11.56	3.14	13.33	3.76	14.14	4.08	14.95	4.40	15.28	4.41	15.61	4.46
	35.00	9.74	2.61	11.49	3.26	13.25	3.90	14.06	4.23	14.86	4.56	15.19	4.57	15.52	4.62
	37.00	9.64	2.78	11.38	3.46	13.12	4.15	13.92	4.50	14.71	4.85	15.04	4.86	15.36	4.91
	39.00	9.44	2.79	11.15	3.48	12.85	4.17	13.64	4.52	14.42	4.87	14.74	4.89	15.05	4.93
	41.00	9.35	2.80	11.03	3.49	12.72	4.18	13.50	4.54	14.27	4.89	14.58	4.91	14.89	4.96
	43.00	9.25	2.82	10.92	3.51	12.59	4.20	13.36	4.56	14.12	4.92	14.43	4.93	14.74	4.98
90%	10.00	8.16	2.09	9.63	2.60	11.10	3.11	11.78	3.38	12.45	3.64	12.73	3.65	13.00	3.69
	12.00	8.17	2.09	9.64	2.60	11.12	3.12	11.79	3.38	12.47	3.64	12.74	3.65	13.01	3.69
	14.00	8.18	2.09	9.65	2.60	11.13	3.12	11.81	3.38	12.48	3.65	12.76	3.66	13.03	3.69
	16.00	8.18	2.10	9.66	2.61	11.14	3.13	11.82	3.39	12.49	3.66	12.77	3.67	13.04	3.71
	18.00	8.19	2.10	9.67	2.62	11.15	3.14	11.83	3.40	12.51	3.67	12.78	3.68	13.06	3.71
	19.00	8.21	2.11	9.69	2.63	11.18	3.15	11.86	3.42	12.53	3.69	12.81	3.70	13.08	3.73
	21.00	8.24	2.12	9.72	2.64	11.21	3.16	11.89	3.43	12.57	3.69	12.85	3.71	13.13	3.74
	23.00	8.89	2.12	10.49	2.65	12.09	3.17	12.83	3.44	13.56	3.71	13.86	3.72	14.16	3.75
	25.00	8.88	2.14	10.48	2.66	12.08	3.19	12.82	3.46	13.55	3.73	13.85	3.74	14.15	3.77
	27.00	8.85	2.15	10.45	2.67	12.05	3.20	12.78	3.47	13.51	3.74	13.81	3.76	14.10	3.79
	29.00	8.84	2.16	10.44	2.69	12.03	3.22	12.77	3.49	13.50	3.76	13.80	3.78	14.09	3.81
	31.00	8.83	2.17	10.43	2.70	12.02	3.24	12.76	3.51	13.48	3.78	13.78	3.80	14.08	3.83
	33.00	8.82	2.18	10.41	2.72	12.00	3.25	12.73	3.53	13.46	3.80	13.75	3.82	14.05	3.85
	35.00	8.76	2.26	10.34	2.82	11.93	3.37	12.65	3.66	13.38	3.94	13.67	3.95	13.96	3.99
	37.00	8.68	2.40	10.24	2.99	11.81	3.59	12.53	3.89	13.24	4.19	13.54	4.21	13.82	4.25
	39.00	8.50	2.41	10.03	3.01	11.57	3.60	12.27	3.91	12.97	4.21	13.26	4.22	13.54	4.26
	41.00	8.41	2.42	9.93	3.02	11.45	3.62	12.15	3.92	12.84	4.23	13.13	4.24	13.41	4.28
	43.00	8.32	2.44	9.83	3.04	11.33	3.63	12.02	3.94	12.71	4.25	12.99	4.26	13.27	4.30
80%	10.00	7.25	1.78	8.56	2.22	9.87	2.66	10.47	2.88	11.07	3.11	11.31	3.12	11.56	3.15
	12.00	7.26	1.78	8.57	2.22	9.88	2.66	10.48	2.89	11.08	3.11	11.33	3.12	11.57	3.15
	14.00	7.27	1.79	8.58	2.22	9.89	2.66	10.49	2.89	11.09	3.11	11.34	3.12	11.58	3.15
	16.00	7.28	1.79	8.59	2.23	9.90	2.67	10.51	2.90	11.10	3.12	11.35	3.13	11.59	3.16
	18.00	7.28	1.80	8.60	2.24	9.91	2.68	10.52	2.90	11.12	3.13	11.36	3.14	11.61	3.17
	19.00	7.30	1.80	8.62	2.25	9.93	2.69	10.54	2.92	11.14	3.15	11.39	3.16	11.63	3.19
	21.00	7.32	1.81	8.64	2.25	9.97	2.70	10.57	2.93	11.18	3.16	11.42	3.16	11.67	3.20
	23.00	7.90	1.81	9.32	2.26	10.75	2.71	11.41	2.94	12.06	3.17	12.32	3.17	12.59	3.21
	25.00	7.89	1.82	9.31	2.27	10.74	2.72	11.39	2.95	12.04	3.18	12.31	3.19	12.57	3.22
	27.00	7.87	1.83	9.29	2.28	10.71	2.74	11.36	2.97	12.01	3.20	12.27	3.21	12.54	3.24
	29.00	7.86	1.84	9.28	2.30	10.70	2.75	11.35	2.98	12.00	3.22	12.26	3.23	12.52	3.26
	31.00	7.85	1.85	9.27	2.31	10.69	2.76	11.34	3.00	11.98	3.23	12.25	3.24	12.51	3.27
	33.00	7.84	1.86	9.25	2.32	10.66	2.78	11.32	3.01	11.96	3.25	12.23	3.26	12.49	3.29
	35.00	7.79	1.93	9.20	2.41	10.60	2.88	11.25	3.12	11.89	3.37	12.15	3.38	12.41	3.41
	37.00	7.71	2.05	9.10	2.56	10.50	3.06	11.14	3.32	11.77	3.58	12.03	3.59	12.29	3.63
	39.00	7.56	2.06	8.92	2.57	10.28	3.08	10.91	3.34	11.53	3.60	11.79	3.61	12.04	3.64
	41.00	7.48	2.07	8.83	2.58	10.18	3.09	10.80	3.35	11.41	3.61	11.67	3.62	11.92	3.66
	43.00	7.40	2.08	8.74	2.59	10.07	3.10	10.69	3.37	11.29	3.63	11.55	3.64	11.79	3.68

10.00	6.35	1.50	7.49	1.87	8.64	2.24	9.16	2.43	9.69	2.62	9.90	2.63	10.11	2.65
12.00	6.35	1.50	7.50	1.87	8.65	2.24	9.17	2.43	9.70	2.62	9.91	2.63	10.12	2.65
14.00	6.36	1.50	7.51	1.87	8.65	2.24	9.18	2.43	9.71	2.62	9.92	2.63	10.13	2.66
16.00	6.37	1.51	7.51	1.88	8.66	2.25	9.19	2.44	9.72	2.63	9.93	2.64	10.14	2.67
18.00	6.37	1.51	7.52	1.88	8.67	2.26	9.20	2.45	9.73	2.64	9.94	2.65	10.15	2.67
19.00	6.39	1.52	7.54	1.89	8.69	2.27	9.22	2.46	9.75	2.65	9.96	2.66	10.18	2.69
21.00	6.41	1.52	7.56	1.90	8.72	2.27	9.25	2.46	9.78	2.66	10.00	2.67	10.21	2.69
23.00	6.91	1.53	8.16	1.90	9.41	2.28	9.98	2.47	10.55	2.67	10.78	2.67	11.01	2.70
25.00	6.90	1.54	8.15	1.91	9.40	2.29	9.97	2.49	10.54	2.68	10.77	2.69	11.00	2.71
27.00	6.88	1.54	8.13	1.92	9.37	2.30	9.94	2.50	10.51	2.69	10.74	2.70	10.97	2.73
29.00	6.88	1.55	8.12	1.93	9.36	2.32	9.93	2.51	10.50	2.71	10.73	2.72	10.96	2.74
31.00	6.87	1.56	8.11	1.94	9.35	2.33	9.92	2.53	10.49	2.72	10.72	2.73	10.95	2.76
33.00	6.86	1.57	8.09	1.95	9.33	2.34	9.90	2.54	10.47	2.74	10.70	2.74	10.93	2.77
35.00	6.82	1.63	8.05	2.03	9.28	2.43	9.84	2.63	10.40	2.84	10.63	2.84	10.86	2.87
37.00	6.75	1.73	7.97	2.15	9.18	2.58	9.74	2.80	10.30	3.02	10.53	3.03	10.75	3.05
39.00	6.61	1.74	7.80	2.16	9.00	2.59	9.55	2.81	10.09	3.03	10.32	3.04	10.53	3.07
41.00	6.54	1.74	7.72	2.17	8.91	2.60	9.45	2.82	9.99	3.04	10.21	3.05	10.43	3.08
43.00	6.47	1.75	7.64	2.18	8.81	2.61	9.35	2.84	9.88	3.06	10.10	3.07	10.32	3.10
10.00	5.44	1.24	6.42	1.55	7.40	1.85	7.85	2.01	8.30	2.17	8.49	2.17	8.67	2.19
12.00	5.44	1.24	6.43	1.55	7.41	1.85	7.86	2.01	8.31	2.17	8.50	2.18	8.68	2.20
14.00	5.45	1.24	6.43	1.55	7.42	1.86	7.87	2.01	8.32	2.17	8.50	2.18	8.69	2.20
16.00	5.46	1.25	6.44	1.56	7.43	1.86	7.88	2.02	8.33	2.18	8.51	2.18	8.69	2.21
18.00	5.46	1.25	6.45	1.56	7.43	1.87	7.89	2.02	8.34	2.18	8.52	2.19	8.70	2.21
19.00	5.47	1.26	6.46	1.57	7.45	1.88	7.90	2.04	8.36	2.19	8.54	2.20	8.72	2.22
21.00	5.49	1.26	6.48	1.57	7.47	1.88	7.93	2.04	8.38	2.20	8.57	2.21	8.75	2.23
23.00	5.92	1.26	6.99	1.58	8.06	1.89	8.55	2.05	9.04	2.21	9.24	2.21	9.44	2.23
25.00	5.92	1.27	6.99	1.58	8.05	1.90	8.55	2.06	9.03	2.22	9.23	2.22	9.43	2.25
27.00	5.90	1.28	6.97	1.59	8.03	1.91	8.52	2.07	9.01	2.23	9.21	2.24	9.40	2.26
29.00	5.89	1.28	6.96	1.60	8.02	1.92	8.51	2.08	9.00	2.24	9.20	2.25	9.39	2.27
31.00	5.89	1.29	6.95	1.61	8.01	1.93	8.50	2.09	8.99	2.25	9.19	2.26	9.38	2.28
33.00	5.88	1.30	6.94	1.62	8.00	1.94	8.49	2.10	8.97	2.26	9.17	2.27	9.36	2.29
35.00	5.84	1.35	6.90	1.68	7.95	2.01	8.44	2.18	8.92	2.35	9.12	2.35	9.31	2.38
37.00	5.78	1.43	6.83	1.78	7.87	2.14	8.35	2.32	8.83	2.50	9.02	2.50	9.22	2.53
39.00	5.67	1.44	6.69	1.79	7.71	2.14	8.18	2.33	8.65	2.51	8.84	2.51	9.03	2.54
41.00	5.61	1.44	6.62	1.80	7.63	2.15	8.10	2.34	8.56	2.52	8.75	2.53	8.94	2.55
43.00	5.55	1.45	6.55	1.81	7.55	2.16	8.01	2.35	8.47	2.53	8.66	2.54	8.84	2.56
10.00	4.53	1.01	5.35	1.25	6.17	1.50	6.54	1.63	6.92	1.76	7.07	1.76	7.22	1.78
12.00	4.54	1.01	5.36	1.25	6.18	1.50	6.55	1.63	6.93	1.76	7.08	1.76	7.23	1.78
14.00	4.54	1.01	5.36	1.26	6.18	1.50	6.56	1.63	6.93	1.76	7.09	1.76	7.24	1.78
16.00	4.55	1.01	5.37	1.26	6.19	1.51	6.57	1.64	6.94	1.76	7.09	1.77	7.25	1.79
18.00	4.55	1.01	5.37	1.26	6.20	1.51	6.57	1.64	6.95	1.77	7.10	1.77	7.25	1.79
19.00	4.56	1.02	5.38	1.27	6.21	1.52	6.59	1.65	6.96	1.78	7.12	1.78	7.27	1.80
21.00	4.58	1.02	5.40	1.27	6.23	1.52	6.61	1.65	6.98	1.78	7.14	1.79	7.29	1.80
23.00	4.94	1.02	5.83	1.28	6.72	1.53	7.13	1.66	7.53	1.79	7.70	1.79	7.87	1.81
25.00	4.93	1.03	5.82	1.28	6.71	1.54	7.12	1.67	7.53	1.80	7.69	1.80	7.86	1.82
27.00	4.92	1.04	5.80	1.29	6.69	1.55	7.10	1.68	7.51	1.81	7.67	1.81	7.84	1.83
29.00	4.91	1.04	5.80	1.30	6.69	1.55	7.09	1.68	7.50	1.82	7.66	1.82	7.83	1.84
31.00	4.91	1.05	5.79	1.30	6.68	1.56	7.09	1.69	7.49	1.83	7.66	1.83	7.82	1.85
33.00	4.90	1.05	5.78	1.31	6.67	1.57	7.07	1.70	7.48	1.83	7.64	1.84	7.80	1.86
35.00	4.87	1.09	5.75	1.36	6.63	1.63	7.03	1.76	7.43	1.90	7.60	1.91	7.76	1.93
37.00	4.82	1.16	5.69	1.44	6.56	1.73	6.96	1.88	7.36	2.02	7.52	2.03	7.68	2.05
39.00	4.72	1.16	5.57	1.45	6.43	1.74	6.82	1.88	7.21	2.03	7.37	2.04	7.52	2.06
41.00	4.67	1.17	5.52	1.46	6.36	1.75	6.75	1.89	7.13	2.04	7.29	2.05	7.45	2.07
43.00	4.62	1.18	5.46	1.46	6.29	1.75	6.68	1.90	7.06	2.05	7.22	2.06	7.37	2.08

YDS-140WC35A COOLING
TC Total capacity PI Power input

Combination, %(Capacity index)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14		16		18		19		20		22		24	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
100%	10.00	9.03	2.57	10.66	3.20	12.28	3.83	13.03	4.15	13.78	4.48	14.08	4.49	14.38	4.53
	12.00	9.04	2.57	10.67	3.20	12.30	3.83	13.05	4.16	13.79	4.48	14.10	4.50	14.40	4.54
	14.00	9.05	2.57	10.68	3.21	12.31	3.84	13.06	4.16	13.81	4.49	14.11	4.50	14.41	4.54
	16.00	9.06	2.58	10.69	3.22	12.32	3.85	13.08	4.18	13.82	4.50	14.13	4.52	14.43	4.56
	18.00	9.06	2.59	10.70	3.22	12.34	3.86	13.09	4.19	13.84	4.51	14.14	4.53	14.44	4.57
	19.00	9.08	2.60	10.72	3.24	12.36	3.88	13.12	4.21	13.87	4.54	14.17	4.55	14.48	4.59
	21.00	9.11	2.61	10.76	3.25	12.40	3.89	13.16	4.22	13.91	4.55	14.22	4.56	14.52	4.60
	23.00	9.83	2.61	11.61	3.26	13.38	3.90	14.20	4.23	15.01	4.56	15.34	4.57	15.67	4.62
	25.00	9.82	2.63	11.59	3.27	13.37	3.92	14.18	4.25	14.99	4.58	15.32	4.60	15.65	4.64
	27.00	9.79	2.64	11.56	3.29	13.33	3.94	14.14	4.28	14.95	4.61	15.28	4.62	15.60	4.67
	29.00	9.78	2.66	11.55	3.31	13.31	3.96	14.13	4.30	14.93	4.63	15.26	4.65	15.59	4.69
	31.00	9.77	2.67	11.54	3.33	13.30	3.98	14.11	4.32	14.92	4.66	15.25	4.67	15.57	4.72
	33.00	9.75	2.68	11.51	3.34	13.27	4.00	14.08	4.34	14.89	4.68	15.22	4.70	15.54	4.74
	35.00	9.70	2.78	11.45	3.47	13.20	4.15	14.00	4.50	14.80	4.85	15.13	4.87	15.45	4.91
	37.00	9.60	2.96	11.33	3.69	13.06	4.41	13.86	4.79	14.65	5.16	14.98	5.18	15.29	5.23
	39.00	9.40	2.97	11.10	3.70	12.80	4.43	13.58	4.81	14.35	5.18	14.67	5.20	14.99	5.25
	41.00	9.31	2.98	10.99	3.72	12.67	4.45	13.44	4.83	14.21	5.21	14.52	5.22	14.83	5.27
	43.00	9.21	3.00	10.87	3.74	12.54	4.47	13.30	4.85	14.06	5.23	14.37	5.25	14.68	5.30
90%	10.00	8.12	2.22	9.59	2.76	11.06	3.31	11.73	3.59	12.40	3.87	12.67	3.88	12.94	3.92
	12.00	8.13	2.22	9.60	2.77	11.07	3.31	11.74	3.59	12.41	3.87	12.69	3.89	12.96	3.92
	14.00	8.14	2.22	9.61	2.77	11.08	3.32	11.76	3.60	12.43	3.88	12.70	3.89	12.97	3.93
	16.00	8.15	2.23	9.62	2.78	11.09	3.33	11.77	3.61	12.44	3.89	12.72	3.90	12.99	3.94
	18.00	8.16	2.24	9.63	2.79	11.10	3.34	11.78	3.62	12.45	3.90	12.73	3.91	13.00	3.95
	19.00	8.18	2.25	9.65	2.80	11.13	3.35	11.81	3.64	12.48	3.92	12.76	3.93	13.03	3.97
	21.00	8.20	2.25	9.68	2.81	11.16	3.36	11.84	3.65	12.52	3.93	12.80	3.94	13.07	3.98
	23.00	8.85	2.26	10.44	2.82	12.04	3.37	12.78	3.66	13.50	3.94	13.80	3.95	14.10	3.99
	25.00	8.84	2.27	10.43	2.83	12.03	3.39	12.76	3.68	13.49	3.96	13.79	3.98	14.08	4.01
	27.00	8.81	2.28	10.40	2.85	11.99	3.41	12.73	3.70	13.45	3.98	13.75	4.00	14.04	4.04
	29.00	8.80	2.30	10.39	2.86	11.98	3.43	12.71	3.72	13.44	4.00	13.74	4.02	14.03	4.06
	31.00	8.80	2.31	10.38	2.88	11.97	3.44	12.70	3.73	13.42	4.03	13.72	4.04	14.02	4.08
	33.00	8.78	2.32	10.36	2.89	11.95	3.46	12.68	3.75	13.40	4.05	13.70	4.06	13.99	4.10
	35.00	8.73	2.40	10.30	3.00	11.88	3.59	12.60	3.89	13.32	4.19	13.61	4.21	13.90	4.25
	37.00	8.64	2.56	10.20	3.19	11.76	3.81	12.47	4.14	13.19	4.46	13.48	4.47	13.77	4.52
	39.00	8.46	2.57	9.99	3.20	11.52	3.83	12.22	4.16	12.92	4.48	13.21	4.49	13.49	4.54
	41.00	8.38	2.58	9.89	3.21	11.40	3.85	12.10	4.17	12.79	4.50	13.07	4.51	13.35	4.56
	43.00	8.29	2.59	9.79	3.23	11.28	3.87	11.97	4.19	12.65	4.52	12.93	4.53	13.21	4.58
80%	10.00	7.22	1.90	8.52	2.36	9.83	2.83	10.43	3.07	11.02	3.31	11.27	3.32	11.51	3.35
	12.00	7.23	1.90	8.53	2.36	9.84	2.83	10.44	3.07	11.03	3.31	11.28	3.32	11.52	3.35
	14.00	7.24	1.90	8.54	2.37	9.85	2.83	10.45	3.07	11.05	3.31	11.29	3.32	11.53	3.36
	16.00	7.24	1.91	8.55	2.37	9.86	2.84	10.46	3.08	11.06	3.32	11.30	3.33	11.54	3.37
	18.00	7.25	1.91	8.56	2.38	9.87	2.85	10.47	3.09	11.07	3.33	11.31	3.34	11.56	3.37
	19.00	7.27	1.92	8.58	2.39	9.89	2.86	10.49	3.11	11.09	3.35	11.34	3.36	11.58	3.39
	21.00	7.29	1.92	8.61	2.40	9.92	2.87	10.53	3.11	11.13	3.36	11.38	3.37	11.62	3.40
	23.00	7.86	1.93	9.28	2.41	10.70	2.88	11.36	3.12	12.00	3.37	12.27	3.38	12.53	3.41
	25.00	7.86	1.94	9.28	2.42	10.69	2.90	11.35	3.14	11.99	3.39	12.26	3.40	12.52	3.43
	27.00	7.83	1.95	9.25	2.43	10.66	2.91	11.31	3.16	11.96	3.40	12.22	3.41	12.48	3.45
	29.00	7.83	1.96	9.24	2.44	10.65	2.93	11.30	3.17	11.94	3.42	12.21	3.43	12.47	3.46
	31.00	7.82	1.97	9.23	2.46	10.64	2.94	11.29	3.19	11.93	3.44	12.20	3.45	12.46	3.48
	33.00	7.80	1.98	9.21	2.47	10.62	2.96	11.27	3.21	11.91	3.46	12.17	3.47	12.43	3.50
	35.00	7.76	2.05	9.16	2.56	10.56	3.06	11.20	3.32	11.84	3.58	12.10	3.59	12.36	3.63
	37.00	7.68	2.18	9.06	2.72	10.45	3.26	11.09	3.53	11.72	3.81	11.98	3.82	12.24	3.86
	39.00	7.52	2.19	8.88	2.73	10.24	3.27	10.86	3.55	11.48	3.83	11.74	3.84	11.99	3.88
	41.00	7.45	2.20	8.79	2.75	10.13	3.29	10.75	3.57	11.36	3.84	11.62	3.86	11.86	3.89
	43.00	7.37	2.21	8.70	2.76	10.03	3.30	10.64	3.58	11.25	3.86	11.50	3.87	11.74	3.91

10.00	6.32	1.60	7.46	1.99	8.60	2.38	9.12	2.58	9.64	2.78	9.86	2.79	10.07	2.82
12.00	6.33	1.60	7.47	1.99	8.61	2.38	9.13	2.59	9.65	2.79	9.87	2.80	10.08	2.82
14.00	6.33	1.60	7.47	1.99	8.62	2.39	9.14	2.59	9.66	2.79	9.88	2.80	10.09	2.83
16.00	6.34	1.60	7.48	2.00	8.63	2.39	9.15	2.60	9.67	2.80	9.89	2.81	10.10	2.84
18.00	6.35	1.61	7.49	2.00	8.64	2.40	9.16	2.60	9.69	2.81	9.90	2.81	10.11	2.84
19.00	6.36	1.62	7.51	2.01	8.65	2.41	9.18	2.62	9.71	2.82	9.92	2.83	10.13	2.86
21.00	6.38	1.62	7.53	2.02	8.68	2.42	9.21	2.62	9.74	2.83	9.95	2.84	10.17	2.86
23.00	6.88	1.63	8.12	2.03	9.37	2.43	9.94	2.63	10.50	2.84	10.74	2.84	10.97	2.87
25.00	6.87	1.63	8.12	2.04	9.36	2.44	9.93	2.64	10.49	2.85	10.73	2.86	10.95	2.89
27.00	6.85	1.64	8.09	2.05	9.33	2.45	9.90	2.66	10.46	2.87	10.69	2.87	10.92	2.90
29.00	6.85	1.65	8.08	2.06	9.32	2.46	9.89	2.67	10.45	2.88	10.68	2.89	10.91	2.92
31.00	6.84	1.66	8.08	2.07	9.31	2.48	9.88	2.69	10.44	2.90	10.67	2.90	10.90	2.93
33.00	6.83	1.67	8.06	2.08	9.29	2.49	9.86	2.70	10.42	2.91	10.65	2.92	10.88	2.95
35.00	6.79	1.73	8.01	2.15	9.24	2.58	9.80	2.80	10.36	3.02	10.59	3.03	10.81	3.06
37.00	6.72	1.84	7.93	2.29	9.14	2.74	9.70	2.98	10.26	3.21	10.48	3.22	10.71	3.25
39.00	6.58	1.85	7.77	2.30	8.96	2.76	9.51	2.99	10.05	3.22	10.27	3.23	10.49	3.26
41.00	6.52	1.86	7.69	2.31	8.87	2.77	9.41	3.00	9.94	3.24	10.17	3.25	10.38	3.28
43.00	6.45	1.86	7.61	2.32	8.77	2.78	9.31	3.02	9.84	3.25	10.06	3.26	10.27	3.29
10.00	5.42	1.32	6.39	1.65	7.37	1.97	7.82	2.14	8.27	2.30	8.45	2.31	8.63	2.33
12.00	5.42	1.32	6.40	1.65	7.38	1.97	7.83	2.14	8.28	2.31	8.46	2.31	8.64	2.34
14.00	5.43	1.32	6.41	1.65	7.39	1.98	7.84	2.14	8.28	2.31	8.47	2.32	8.65	2.34
16.00	5.43	1.33	6.41	1.66	7.39	1.98	7.85	2.15	8.29	2.32	8.48	2.32	8.66	2.35
18.00	5.44	1.33	6.42	1.66	7.40	1.99	7.85	2.15	8.30	2.32	8.49	2.33	8.67	2.35
19.00	5.45	1.34	6.43	1.67	7.42	2.00	7.87	2.17	8.32	2.33	8.50	2.34	8.69	2.36
21.00	5.47	1.34	6.45	1.67	7.44	2.00	7.90	2.17	8.35	2.34	8.53	2.35	8.71	2.37
23.00	5.90	1.35	6.96	1.68	8.03	2.01	8.52	2.18	9.00	2.35	9.20	2.35	9.40	2.38
25.00	5.89	1.35	6.96	1.69	8.02	2.02	8.51	2.19	8.99	2.36	9.19	2.37	9.39	2.39
27.00	5.88	1.36	6.94	1.69	8.00	2.03	8.48	2.20	8.97	2.37	9.17	2.38	9.36	2.40
29.00	5.87	1.37	6.93	1.70	7.99	2.04	8.48	2.21	8.96	2.38	9.16	2.39	9.35	2.41
31.00	5.86	1.37	6.92	1.71	7.98	2.05	8.47	2.22	8.95	2.40	9.15	2.40	9.34	2.43
33.00	5.85	1.38	6.91	1.72	7.96	2.06	8.45	2.24	8.93	2.41	9.13	2.42	9.33	2.44
35.00	5.82	1.43	6.87	1.78	7.92	2.14	8.40	2.32	8.88	2.50	9.08	2.50	9.27	2.53
37.00	5.76	1.52	6.80	1.90	7.84	2.27	8.32	2.46	8.79	2.66	8.99	2.66	9.18	2.69
39.00	5.64	1.53	6.66	1.91	7.68	2.28	8.15	2.47	8.61	2.67	8.80	2.68	8.99	2.70
41.00	5.58	1.54	6.59	1.91	7.60	2.29	8.06	2.49	8.52	2.68	8.71	2.69	8.90	2.71
43.00	5.53	1.54	6.52	1.92	7.52	2.30	7.98	2.50	8.43	2.69	8.62	2.70	8.81	2.73
10.00	4.51	1.07	5.33	1.33	6.14	1.60	6.52	1.73	6.89	1.87	7.04	1.87	7.19	1.89
12.00	4.52	1.07	5.33	1.34	6.15	1.60	6.52	1.73	6.90	1.87	7.05	1.87	7.20	1.89
14.00	4.52	1.07	5.34	1.34	6.16	1.60	6.53	1.74	6.90	1.87	7.06	1.88	7.21	1.90
16.00	4.53	1.08	5.34	1.34	6.16	1.61	6.54	1.74	6.91	1.88	7.06	1.88	7.21	1.90
18.00	4.53	1.08	5.35	1.34	6.17	1.61	6.55	1.75	6.92	1.88	7.07	1.89	7.22	1.91
19.00	4.54	1.08	5.36	1.35	6.18	1.62	6.56	1.75	6.93	1.89	7.09	1.90	7.24	1.92
21.00	4.56	1.09	5.38	1.35	6.20	1.62	6.58	1.76	6.96	1.90	7.11	1.90	7.26	1.92
23.00	4.92	1.09	5.80	1.36	6.69	1.63	7.10	1.76	7.50	1.90	7.67	1.91	7.83	1.93
25.00	4.91	1.10	5.80	1.37	6.68	1.63	7.09	1.77	7.50	1.91	7.66	1.92	7.82	1.94
27.00	4.90	1.10	5.78	1.37	6.66	1.64	7.07	1.78	7.47	1.92	7.64	1.93	7.80	1.95
29.00	4.89	1.11	5.77	1.38	6.66	1.65	7.06	1.79	7.47	1.93	7.63	1.94	7.79	1.96
31.00	4.89	1.11	5.77	1.39	6.65	1.66	7.06	1.80	7.46	1.94	7.62	1.95	7.79	1.97
33.00	4.88	1.12	5.76	1.39	6.64	1.67	7.04	1.81	7.44	1.95	7.61	1.96	7.77	1.98
35.00	4.85	1.16	5.72	1.44	6.60	1.73	7.00	1.88	7.40	2.02	7.56	2.03	7.72	2.05
37.00	4.80	1.23	5.67	1.54	6.53	1.84	6.93	2.00	7.33	2.15	7.49	2.16	7.65	2.18
39.00	4.70	1.24	5.55	1.54	6.40	1.85	6.79	2.00	7.18	2.16	7.34	2.17	7.49	2.19
41.00	4.65	1.24	5.49	1.55	6.33	1.86	6.72	2.01	7.10	2.17	7.26	2.18	7.42	2.20
43.00	4.61	1.25	5.44	1.56	6.27	1.87	6.65	2.02	7.03	2.18	7.19	2.19	7.34	2.21

YDS-280WC35A COOLING
TC Total capacity PI Power input

Combination, %(Capacity index)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14		16		18		19		20		22		24	
		TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW
100	10	19.39	3.34	22.89	4.16	26.39	4.98	28.00	5.40	29.61	5.82	30.25	5.84	30.90	5.90
	12	19.39	3.40	22.89	4.24	26.39	5.07	28.00	5.50	29.61	5.93	30.25	5.95	30.90	6.00
	14	19.39	3.46	22.89	4.31	26.39	5.16	28.00	5.60	29.61	6.04	30.25	6.06	30.90	6.11
	16	19.39	3.52	22.89	4.39	26.39	5.26	28.00	5.70	29.61	6.14	30.25	6.16	30.90	6.22
	18	19.39	3.58	22.89	4.47	26.39	5.35	28.00	5.80	29.61	6.25	30.25	6.27	30.90	6.33
	19	19.39	3.65	22.89	4.54	26.39	5.44	28.00	5.90	29.61	6.36	30.25	6.38	30.90	6.44
	21	19.39	3.91	22.89	4.87	26.39	5.83	28.00	6.33	29.61	6.82	30.25	6.84	30.90	6.91
	23	19.39	4.19	22.89	5.22	26.39	6.25	28.00	6.78	29.61	7.30	30.25	7.33	30.90	7.40
	25	19.39	4.48	22.89	5.58	26.39	6.68	28.00	7.25	29.61	7.82	30.25	7.84	30.90	7.92
	27	19.39	4.79	22.89	5.97	26.39	7.15	28.00	7.75	29.61	8.35	30.25	8.38	30.90	8.46
	29	19.39	5.11	22.89	6.37	26.39	7.63	28.00	8.28	29.61	8.92	30.25	8.95	30.90	9.03
	31	19.39	5.45	22.89	6.80	26.39	8.14	28.00	8.83	29.61	9.51	30.25	9.54	30.90	9.64
	33	19.39	5.81	22.89	7.24	26.39	8.67	28.00	9.40	29.61	10.13	30.25	10.16	30.90	10.26
	35	19.39	6.18	22.89	7.70	26.39	9.22	28.00	10.00	29.61	10.78	30.25	10.81	30.90	10.92
	37	19.39	6.57	22.89	8.19	26.39	9.81	28.00	10.64	29.61	11.47	30.25	11.50	30.90	11.61
	39	19.39	6.60	22.89	8.23	26.39	9.85	28.00	10.68	29.61	11.52	30.25	11.55	30.90	11.66
	41	19.39	6.63	22.89	8.26	26.39	9.89	28.00	10.73	29.61	11.57	30.25	11.60	30.90	11.72
	43	19.39	6.66	22.89	8.30	26.39	9.94	28.00	10.78	29.61	11.62	30.25	11.66	30.90	11.77
90	10	17.45	2.89	20.60	3.59	23.75	4.30	25.20	4.67	26.65	5.03	27.23	5.05	27.81	5.10
	12	17.45	2.94	20.60	3.66	23.75	4.38	25.20	4.75	26.65	5.13	27.23	5.14	27.81	5.19
	14	17.45	2.99	20.60	3.73	23.75	4.46	25.20	4.84	26.65	5.22	27.23	5.23	27.81	5.29
	16	17.45	3.05	20.60	3.79	23.75	4.54	25.20	4.93	26.65	5.31	27.23	5.33	27.81	5.38
	18	17.45	3.10	20.60	3.86	23.75	4.62	25.20	5.01	26.65	5.41	27.23	5.42	27.81	5.47
	19	17.45	3.15	20.60	3.93	23.75	4.70	25.20	5.10	26.65	5.50	27.23	5.52	27.81	5.57
	21	17.45	3.38	20.60	4.21	23.75	5.04	25.20	5.47	26.65	5.89	27.23	5.91	27.81	5.97
	23	17.45	3.62	20.60	4.51	23.75	5.40	25.20	5.86	26.65	6.31	27.23	6.33	27.81	6.39
	25	17.45	3.87	20.60	4.83	23.75	5.78	25.20	6.27	26.65	6.76	27.23	6.78	27.81	6.84
	27	17.45	4.14	20.60	5.16	23.75	6.18	25.20	6.70	26.65	7.22	27.23	7.24	27.81	7.31
	29	17.45	4.42	20.60	5.51	23.75	6.60	25.20	7.15	26.65	7.71	27.23	7.74	27.81	7.81
	31	17.45	4.71	20.60	5.87	23.75	7.03	25.20	7.63	26.65	8.22	27.23	8.25	27.81	8.33
	33	17.45	5.02	20.60	6.26	23.75	7.49	25.20	8.13	26.65	8.76	27.23	8.79	27.81	8.87
	35	17.45	5.34	20.60	6.66	23.75	7.97	25.20	8.65	26.65	9.32	27.23	9.35	27.81	9.44
	37	17.45	5.68	20.60	7.08	23.75	8.48	25.20	9.19	26.65	9.91	27.23	9.94	27.81	10.04
	39	17.45	5.71	20.60	7.11	23.75	8.51	25.20	9.23	26.65	9.95	27.23	9.99	27.81	10.08
	41	17.45	5.73	20.60	7.14	23.75	8.55	25.20	9.28	26.65	10.00	27.23	10.03	27.81	10.13
	43	17.45	5.76	20.60	7.18	23.75	8.59	25.20	9.32	26.65	10.05	27.23	10.08	27.81	10.17
80	10	15.51	2.46	18.31	3.07	21.11	3.68	22.40	3.99	23.69	4.30	24.20	4.31	24.72	4.35
	12	15.51	2.51	18.31	3.13	21.11	3.74	22.40	4.06	23.69	4.38	24.20	4.39	24.72	4.43
	14	15.51	2.56	18.31	3.18	21.11	3.81	22.40	4.14	23.69	4.46	24.20	4.47	24.72	4.51
	16	15.51	2.60	18.31	3.24	21.11	3.88	22.40	4.21	23.69	4.54	24.20	4.55	24.72	4.60
	18	15.51	2.65	18.31	3.30	21.11	3.95	22.40	4.28	23.69	4.62	24.20	4.63	24.72	4.68
	19	15.51	2.69	18.31	3.35	21.11	4.02	22.40	4.36	23.69	4.70	24.20	4.71	24.72	4.76
	21	15.51	2.89	18.31	3.60	21.11	4.31	22.40	4.67	23.69	5.04	24.20	5.05	24.72	5.10
	23	15.51	3.09	18.31	3.85	21.11	4.61	22.40	5.00	23.69	5.39	24.20	5.41	24.72	5.46
	25	15.51	3.31	18.31	4.12	21.11	4.94	22.40	5.35	23.69	5.77	24.20	5.79	24.72	5.85
	27	15.51	3.54	18.31	4.41	21.11	5.28	22.40	5.72	23.69	6.17	24.20	6.19	24.72	6.25
	29	15.51	3.78	18.31	4.71	21.11	5.63	22.40	6.11	23.69	6.59	24.20	6.61	24.72	6.67
	31	15.51	4.03	18.31	5.02	21.11	6.01	22.40	6.52	23.69	7.03	24.20	7.05	24.72	7.12
	33	15.51	4.29	18.31	5.34	21.11	6.40	22.40	6.94	23.69	7.48	24.20	7.51	24.72	7.58
	35	15.51	4.56	18.31	5.69	21.11	6.81	22.40	7.38	23.69	7.96	24.20	7.98	24.72	8.06
	37	15.51	4.85	18.31	6.05	21.11	7.24	22.40	7.85	23.69	8.47	24.20	8.49	24.72	8.58
	39	15.51	4.87	18.31	6.07	21.11	7.27	22.40	7.89	23.69	8.50	24.20	8.53	24.72	8.61
	41	15.51	4.90	18.31	6.10	21.11	7.31	22.40	7.92	23.69	8.54	24.20	8.57	24.72	8.65
	43	15.51	4.92	18.31	6.13	21.11	7.34	22.40	7.96	23.69	8.58	24.20	8.61	24.72	8.69

70	10	13.57	2.08	16.02	2.59	18.47	3.10	19.60	3.36	20.73	3.62	21.18	3.63	21.63	3.67
	12	13.57	2.11	16.02	2.63	18.47	3.15	19.60	3.42	20.73	3.69	21.18	3.70	21.63	3.73
	14	13.57	2.15	16.02	2.68	18.47	3.21	19.60	3.48	20.73	3.75	21.18	3.77	21.63	3.80
	16	13.57	2.19	16.02	2.73	18.47	3.27	19.60	3.54	20.73	3.82	21.18	3.83	21.63	3.87
	18	13.57	2.23	16.02	2.78	18.47	3.33	19.60	3.61	20.73	3.89	21.18	3.90	21.63	3.94
	19	13.57	2.27	16.02	2.83	18.47	3.38	19.60	3.67	20.73	3.96	21.18	3.97	21.63	4.01
	21	13.57	2.43	16.02	3.03	18.47	3.63	19.60	3.93	20.73	4.24	21.18	4.25	21.63	4.29
	23	13.57	2.60	16.02	3.24	18.47	3.88	19.60	4.21	20.73	4.54	21.18	4.56	21.63	4.60
	25	13.57	2.79	16.02	3.47	18.47	4.16	19.60	4.51	20.73	4.86	21.18	4.87	21.63	4.92
	27	13.57	2.98	16.02	3.71	18.47	4.44	19.60	4.82	20.73	5.20	21.18	5.21	21.63	5.26
	29	13.57	3.18	16.02	3.96	18.47	4.74	19.60	5.15	20.73	5.55	21.18	5.56	21.63	5.62
	31	13.57	3.39	16.02	4.23	18.47	5.06	19.60	5.49	20.73	5.92	21.18	5.93	21.63	5.99
	33	13.57	3.61	16.02	4.50	18.47	5.39	19.60	5.85	20.73	6.30	21.18	6.32	21.63	6.38
	35	13.57	3.84	16.02	4.79	18.47	5.73	19.60	6.22	20.73	6.70	21.18	6.72	21.63	6.79
	37	13.57	4.09	16.02	5.09	18.47	6.10	19.60	6.61	20.73	7.13	21.18	7.15	21.63	7.22
	39	13.57	4.11	16.02	5.11	18.47	6.12	19.60	6.64	20.73	7.16	21.18	7.18	21.63	7.25
	41	13.57	4.12	16.02	5.14	18.47	6.15	19.60	6.67	20.73	7.19	21.18	7.21	21.63	7.28
	43	13.57	4.14	16.02	5.16	18.47	6.18	19.60	6.70	20.73	7.23	21.18	7.25	21.63	7.32
60	10	11.63	1.72	13.73	2.14	15.83	2.56	16.80	2.78	17.77	3.00	18.15	3.01	18.54	3.03
	12	11.63	1.75	13.73	2.18	15.83	2.61	16.80	2.83	17.77	3.05	18.15	3.06	18.54	3.09
	14	11.63	1.78	13.73	2.22	15.83	2.66	16.80	2.88	17.77	3.11	18.15	3.12	18.54	3.15
	16	11.63	1.81	13.73	2.26	15.83	2.70	16.80	2.93	17.77	3.16	18.15	3.17	18.54	3.20
	18	11.63	1.84	13.73	2.30	15.83	2.75	16.80	2.99	17.77	3.22	18.15	3.23	18.54	3.26
	19	11.63	1.88	13.73	2.34	15.83	2.80	16.80	3.04	17.77	3.27	18.15	3.28	18.54	3.32
	21	11.63	2.01	13.73	2.51	15.83	3.00	16.80	3.26	17.77	3.51	18.15	3.52	18.54	3.55
	23	11.63	2.16	13.73	2.69	15.83	3.22	16.80	3.49	17.77	3.76	18.15	3.77	18.54	3.81
	25	11.63	2.31	13.73	2.87	15.83	3.44	16.80	3.73	17.77	4.02	18.15	4.03	18.54	4.07
	27	11.63	2.47	13.73	3.07	15.83	3.68	16.80	3.99	17.77	4.30	18.15	4.31	18.54	4.36
	29	11.63	2.63	13.73	3.28	15.83	3.93	16.80	4.26	17.77	4.59	18.15	4.61	18.54	4.65
	31	11.63	2.81	13.73	3.50	15.83	4.19	16.80	4.54	17.77	4.90	18.15	4.91	18.54	4.96
	33	11.63	2.99	13.73	3.73	15.83	4.46	16.80	4.84	17.77	5.22	18.15	5.23	18.54	5.28
	35	11.63	3.18	13.73	3.96	15.83	4.75	16.80	5.15	17.77	5.55	18.15	5.57	18.54	5.62
	37	11.63	3.38	13.73	4.22	15.83	5.05	16.80	5.47	17.77	5.90	18.15	5.92	18.54	5.98
	39	11.63	3.40	13.73	4.23	15.83	5.07	16.80	5.50	17.77	5.93	18.15	5.95	18.54	6.00
	41	11.63	3.41	13.73	4.25	15.83	5.09	16.80	5.52	17.77	5.95	18.15	5.97	18.54	6.03
	43	11.63	3.43	13.73	4.27	15.83	5.12	16.80	5.55	17.77	5.98	18.15	6.00	18.54	6.06
50	10	9.70	1.39	11.45	1.73	13.20	2.08	14.00	2.25	14.81	2.43	15.13	2.43	15.45	2.46
	12	9.70	1.42	11.45	1.77	13.20	2.11	14.00	2.29	14.81	2.47	15.13	2.48	15.45	2.50
	14	9.70	1.44	11.45	1.80	13.20	2.15	14.00	2.34	14.81	2.52	15.13	2.53	15.45	2.55
	16	9.70	1.47	11.45	1.83	13.20	2.19	14.00	2.38	14.81	2.56	15.13	2.57	15.45	2.60
	18	9.70	1.49	11.45	1.86	13.20	2.23	14.00	2.42	14.81	2.61	15.13	2.62	15.45	2.64
	19	9.70	1.52	11.45	1.89	13.20	2.27	14.00	2.46	14.81	2.65	15.13	2.66	15.45	2.69
	21	9.70	1.63	11.45	2.03	13.20	2.43	14.00	2.64	14.81	2.84	15.13	2.85	15.45	2.88
	23	9.70	1.75	11.45	2.18	13.20	2.60	14.00	2.83	14.81	3.05	15.13	3.05	15.45	3.08
	25	9.70	1.87	11.45	2.33	13.20	2.79	14.00	3.02	14.81	3.26	15.13	3.27	15.45	3.30
	27	9.70	2.00	11.45	2.49	13.20	2.98	14.00	3.23	14.81	3.48	15.13	3.49	15.45	3.53
	29	9.70	2.13	11.45	2.66	13.20	3.18	14.00	3.45	14.81	3.72	15.13	3.73	15.45	3.77
	31	9.70	2.27	11.45	2.83	13.20	3.39	14.00	3.68	14.81	3.97	15.13	3.98	15.45	4.02
	33	9.70	2.42	11.45	3.02	13.20	3.61	14.00	3.92	14.81	4.23	15.13	4.24	15.45	4.28
	35	9.70	2.58	11.45	3.21	13.20	3.84	14.00	4.17	14.81	4.50	15.13	4.51	15.45	4.55
	37	9.70	2.74	11.45	3.42	13.20	4.09	14.00	4.44	14.81	4.78	15.13	4.80	15.45	4.84
	39	9.70	2.75	11.45	3.43	13.20	4.11	14.00	4.45	14.81	4.80	15.13	4.82	15.45	4.86
	41	9.70	2.77	11.45	3.45	13.20	4.13	14.00	4.47	14.81	4.82	15.13	4.84	15.45	4.89
	43	9.70	2.78	11.45	3.46	13.20	4.14	14.00	4.50	14.81	4.85	15.13	4.86	15.45	4.91

YDS-100WC15A HEATING

TC Total capacity PI Power input

combination, %(capacity index)	outdoor temperature	Indoor temperature(°CDB)												
		16		18		20		21		22		24		
		TC °CDB	PI kW	TC kW	PI kW									
100%	-14.7	-15	7.48	2.87	7.64	2.90	7.80	3.02	7.95	3.11	8.11	3.17	8.26	3.24
	-12.6	-13	7.90	2.92	8.07	2.95	8.23	3.07	8.40	3.17	8.56	3.23	8.72	3.29
	-10.5	-11	8.32	2.97	8.49	3.00	8.66	3.12	8.84	3.22	9.01	3.28	9.18	3.34
	-9.5	-10	8.52	2.99	8.69	3.02	8.87	3.15	9.05	3.24	9.23	3.30	9.40	3.37
	-8.5	-9.1	8.71	3.01	8.90	3.04	9.08	3.17	9.26	3.27	9.44	3.33	9.62	3.39
	-7	-7.6	9.01	3.05	9.20	3.08	9.39	3.21	9.58	3.30	9.76	3.37	9.95	3.43
	-5	-5.6	9.41	3.09	9.60	3.12	9.80	3.25	10.00	3.35	10.19	3.42	10.39	3.48
	-3	-3.7	9.81	3.14	10.01	3.17	10.21	3.30	10.42	3.40	10.62	3.47	10.83	3.53
	0	-0.7	10.40	3.20	10.62	3.24	10.83	3.37	11.05	3.47	11.27	3.54	11.48	3.61
	3	2.2	11.00	3.27	11.22	3.31	11.45	3.44	11.68	3.55	11.91	3.62	12.14	3.69
	5	4.1	11.39	3.32	11.63	3.35	11.87	3.49	12.10	3.60	12.34	3.67	12.58	3.74
	7	6	11.79	3.36	12.03	3.40	12.28	3.54	12.53	3.65	12.77	3.72	13.02	3.79
	9	7.9	12.86	3.67	13.13	3.71	13.40	3.86	13.67	3.98	13.93	4.06	14.20	4.13
	11	9.8	12.87	3.68	13.14	3.71	13.41	3.87	13.68	3.99	13.95	4.06	14.21	4.14
	13	11.8	12.90	3.68	13.17	3.72	13.43	3.88	13.70	3.99	13.97	4.07	14.24	4.15
	15	13.7	12.92	3.69	13.19	3.73	13.46	3.88	13.73	4.00	14.00	4.08	14.27	4.16
90%	-14.7	-15	6.74	2.55	6.88	2.57	7.02	2.68	7.16	2.76	7.30	2.82	7.44	2.87
	-12.6	-13	7.11	2.59	7.26	2.62	7.41	2.73	7.56	2.81	7.70	2.86	7.85	2.92
	-10.5	-11	7.49	2.63	7.64	2.66	7.80	2.77	7.95	2.85	8.11	2.91	8.27	2.96
	-9.5	-10	7.66	2.65	7.82	2.68	7.98	2.79	8.14	2.87	8.30	2.93	8.46	2.99
	-8.5	-9.1	7.84	2.67	8.01	2.70	8.17	2.81	8.33	2.90	8.50	2.95	8.66	3.01
	-7	-7.6	8.11	2.70	8.28	2.73	8.45	2.84	8.62	2.93	8.79	2.99	8.96	3.04
	-5	-5.6	8.47	2.74	8.64	2.77	8.82	2.89	9.00	2.97	9.17	3.03	9.35	3.09
	-3	-3.7	8.82	2.78	9.01	2.81	9.19	2.93	9.38	3.02	9.56	3.07	9.74	3.13
	0	-0.7	9.36	2.84	9.56	2.87	9.75	2.99	9.95	3.08	10.14	3.14	10.34	3.20
	3	2.2	9.90	2.90	10.10	2.93	10.31	3.05	10.51	3.15	10.72	3.21	10.93	3.27
	5	4.1	10.25	2.94	10.47	2.97	10.68	3.10	10.89	3.19	11.11	3.25	11.32	3.31
	7	6	10.61	2.98	10.83	3.01	11.05	3.14	11.27	3.23	11.49	3.30	11.72	3.36
	9	7.9	11.58	3.25	11.82	3.29	12.06	3.42	12.30	3.53	12.54	3.60	12.78	3.66
	11	9.8	11.59	3.26	11.83	3.29	12.07	3.43	12.31	3.53	12.55	3.60	12.79	3.67
	13	11.8	11.61	3.27	11.85	3.30	12.09	3.44	12.33	3.54	12.57	3.61	12.82	3.68
	15	13.7	11.63	3.27	11.87	3.31	12.11	3.44	12.36	3.55	12.60	3.62	12.84	3.68
80%	-14.7	-15	5.99	2.24	6.11	2.26	6.24	2.35	6.36	2.42	6.49	2.47	6.61	2.52
	-12.6	-13	6.32	2.27	6.45	2.30	6.58	2.39	6.72	2.46	6.85	2.51	6.98	2.56
	-10.5	-11	6.65	2.31	6.79	2.33	6.93	2.43	7.07	2.51	7.21	2.55	7.35	2.60
	-9.5	-10	6.81	2.33	6.95	2.35	7.10	2.45	7.24	2.52	7.38	2.57	7.52	2.62
	-8.5	-9.1	6.97	2.35	7.12	2.37	7.26	2.47	7.41	2.54	7.55	2.59	7.70	2.64
	-7	-7.6	7.21	2.37	7.36	2.40	7.51	2.50	7.66	2.57	7.81	2.62	7.96	2.67
	-5	-5.6	7.53	2.41	7.68	2.43	7.84	2.53	8.00	2.61	8.15	2.66	8.31	2.71
	-3	-3.7	7.84	2.44	8.01	2.47	8.17	2.57	8.33	2.65	8.50	2.70	8.66	2.75
	0	-0.7	8.32	2.50	8.49	2.52	8.67	2.63	8.84	2.71	9.01	2.76	9.19	2.81
	3	2.2	8.80	2.55	8.98	2.57	9.16	2.68	9.35	2.76	9.53	2.82	9.71	2.87
	5	4.1	9.11	2.58	9.30	2.61	9.49	2.72	9.68	2.80	9.87	2.86	10.06	2.91
	7	6	9.43	2.62	9.63	2.65	9.82	2.76	10.02	2.84	10.22	2.89	10.41	2.95
	9	7.9	10.29	2.86	10.50	2.89	10.72	3.01	10.93	3.10	11.15	3.16	11.36	3.22
	11	9.8	10.30	2.86	10.51	2.89	10.73	3.01	10.94	3.10	11.16	3.16	11.37	3.22
	13	11.8	10.32	2.87	10.53	2.90	10.75	3.02	10.96	3.11	11.18	3.17	11.39	3.23
	15	13.7	10.34	2.87	10.55	2.90	10.77	3.02	10.98	3.11	11.20	3.17	11.41	3.24

70%	-14.7	-15	5.24	1.93	5.35	1.95	5.46	2.03	5.57	2.09	5.68	2.13	5.79	2.17
	-12.6	-13	5.53	1.96	5.65	1.98	5.76	2.06	5.88	2.12	5.99	2.16	6.11	2.21
	-10.5	-11	5.82	1.99	5.94	2.01	6.07	2.09	6.19	2.16	6.31	2.20	6.43	2.24
	-9.5	-10	5.96	2.00	6.09	2.03	6.21	2.11	6.33	2.17	6.46	2.22	6.58	2.26
	-8.5	-9.1	6.10	2.02	6.23	2.04	6.35	2.13	6.48	2.19	6.61	2.23	6.74	2.28
	-7	-7.6	6.31	2.04	6.44	2.06	6.57	2.15	6.70	2.21	6.83	2.26	6.97	2.30
	-5	-5.6	6.59	2.07	6.72	2.09	6.86	2.18	7.00	2.25	7.14	2.29	7.27	2.33
	-3	-3.7	6.86	2.10	7.01	2.13	7.15	2.21	7.29	2.28	7.44	2.32	7.58	2.37
	0	-0.7	7.28	2.15	7.43	2.17	7.58	2.26	7.74	2.33	7.89	2.37	8.04	2.42
	3	2.2	7.70	2.19	7.86	2.22	8.02	2.31	8.18	2.38	8.34	2.43	8.50	2.47
	5	4.1	7.97	2.22	8.14	2.25	8.31	2.34	8.47	2.41	8.64	2.46	8.81	2.51
	7	6	8.25	2.25	8.42	2.28	8.60	2.37	8.77	2.44	8.94	2.49	9.11	2.54
	9	7.9	9.00	2.46	9.19	2.49	9.38	2.59	9.57	2.67	9.75	2.72	9.94	2.77
	11	9.8	9.01	2.46	9.20	2.49	9.39	2.59	9.57	2.67	9.76	2.72	9.95	2.78
	13	11.8	9.03	2.47	9.22	2.50	9.40	2.60	9.59	2.68	9.78	2.73	9.97	2.78
	15	13.7	9.04	2.47	9.23	2.50	9.42	2.60	9.61	2.68	9.80	2.73	9.99	2.79
60%	-14.7	-15	4.49	1.62	4.58	1.63	4.68	1.70	4.77	1.75	4.87	1.79	4.96	1.82
	-12.6	-13	4.74	1.64	4.84	1.66	4.94	1.73	5.04	1.78	5.14	1.82	5.23	1.85
	-10.5	-11	4.99	1.67	5.09	1.69	5.20	1.76	5.30	1.81	5.41	1.84	5.51	1.88
	-9.5	-10	5.11	1.68	5.22	1.70	5.32	1.77	5.43	1.82	5.54	1.86	5.64	1.89
	-8.5	-9.1	5.23	1.69	5.34	1.71	5.45	1.78	5.56	1.84	5.66	1.87	5.77	1.91
	-7	-7.6	5.41	1.71	5.52	1.73	5.63	1.80	5.75	1.86	5.86	1.89	5.97	1.93
	-5	-5.6	5.65	1.74	5.76	1.76	5.88	1.83	6.00	1.89	6.12	1.92	6.23	1.96
	-3	-3.7	5.88	1.76	6.01	1.78	6.13	1.86	6.25	1.91	6.37	1.95	6.50	1.99
	0	-0.7	6.24	1.80	6.37	1.82	6.50	1.90	6.63	1.95	6.76	1.99	6.89	2.03
	3	2.2	6.60	1.84	6.73	1.86	6.87	1.94	7.01	2.00	7.15	2.03	7.28	2.07
	5	4.1	6.84	1.87	6.98	1.89	7.12	1.96	7.26	2.02	7.40	2.06	7.55	2.10
	7	6	7.07	1.89	7.22	1.91	7.37	1.99	7.52	2.05	7.66	2.09	7.81	2.13
	9	7.9	7.72	2.06	7.88	2.09	8.04	2.17	8.20	2.24	8.36	2.28	8.52	2.32
	11	9.8	7.72	2.07	7.88	2.09	8.05	2.18	8.21	2.24	8.37	2.28	8.53	2.33
	13	11.8	7.74	2.07	7.90	2.09	8.06	2.18	8.22	2.25	8.38	2.29	8.54	2.33
	15	13.7	7.75	2.07	7.91	2.10	8.08	2.18	8.24	2.25	8.40	2.29	8.56	2.34
50%	-14.7	-15	3.74	1.31	3.82	1.32	3.90	1.37	3.98	1.41	4.05	1.44	4.13	1.47
	-12.6	-13	3.95	1.33	4.03	1.34	4.12	1.40	4.20	1.44	4.28	1.47	4.36	1.49
	-10.5	-11	4.16	1.35	4.25	1.36	4.33	1.42	4.42	1.46	4.51	1.49	4.59	1.52
	-9.5	-10	4.26	1.36	4.35	1.37	4.44	1.43	4.52	1.47	4.61	1.50	4.70	1.53
	-8.5	-9.1	4.36	1.37	4.45	1.38	4.54	1.44	4.63	1.48	4.72	1.51	4.81	1.54
	-7	-7.6	4.51	1.38	4.60	1.40	4.69	1.46	4.79	1.50	4.88	1.53	4.98	1.56
	-5	-5.6	4.70	1.40	4.80	1.42	4.90	1.48	5.00	1.52	5.10	1.55	5.19	1.58
	-3	-3.7	4.90	1.43	5.00	1.44	5.11	1.50	5.21	1.55	5.31	1.58	5.41	1.61
	0	-0.7	5.20	1.46	5.31	1.47	5.42	1.53	5.53	1.58	5.63	1.61	5.74	1.64
	3	2.2	5.50	1.49	5.61	1.50	5.73	1.57	5.84	1.61	5.96	1.64	6.07	1.67
	5	4.1	5.70	1.51	5.81	1.52	5.93	1.59	6.05	1.63	6.17	1.67	6.29	1.70
	7	6	5.89	1.53	6.02	1.54	6.14	1.61	6.26	1.66	6.39	1.69	6.51	1.72
	9	7.9	6.43	1.67	6.56	1.68	6.70	1.75	6.83	1.81	6.97	1.84	7.10	1.88
	11	9.8	6.44	1.67	6.57	1.69	6.70	1.76	6.84	1.81	6.97	1.85	7.11	1.88
	13	11.8	6.45	1.67	6.58	1.69	6.72	1.76	6.85	1.81	6.99	1.85	7.12	1.88
	15	13.7	6.46	1.68	6.59	1.69	6.73	1.76	6.86	1.82	7.00	1.85	7.13	1.89

YDS-100WC35A HEATING

TC Total capacity PI Power input

combination, %(capacity index)	outdoor temperature	Indoor temperature(°CDB)												
		16		18		20		21		22		24		
		TC °CDB	PI kW	TC °CWB	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	TC kW	PI kW	
100%	-14.7	-15	7.31	2.77	7.47	2.80	7.62	2.91	7.77	3.00	7.92	3.06	8.08	3.12
	-12.6	-13	7.72	2.81	7.88	2.84	8.04	2.96	8.20	3.05	8.36	3.11	8.53	3.17
	-10.5	-11	8.13	2.86	8.30	2.89	8.47	3.01	8.64	3.10	8.81	3.16	8.97	3.22
	-9.5	-10	8.32	2.88	8.50	2.91	8.67	3.03	8.84	3.12	9.02	3.18	9.19	3.24
	-8.5	-9.1	8.52	2.90	8.69	2.93	8.87	3.05	9.05	3.15	9.23	3.21	9.40	3.27
	-7	-7.6	8.81	2.93	8.99	2.97	9.17	3.09	9.36	3.18	9.54	3.24	9.72	3.31
	-5	-5.6	9.19	2.98	9.39	3.01	9.58	3.14	9.77	3.23	9.96	3.29	10.15	3.35
	-3	-3.7	9.58	3.02	9.78	3.05	9.98	3.18	10.18	3.28	10.38	3.34	10.58	3.40
	0	-0.7	10.16	3.09	10.38	3.12	10.59	3.25	10.80	3.35	11.01	3.41	11.22	3.48
	3	2.2	10.74	3.15	10.97	3.19	11.19	3.32	11.42	3.42	11.64	3.48	11.86	3.55
	5	4.1	11.13	3.20	11.36	3.23	11.60	3.36	11.83	3.47	12.06	3.53	12.29	3.60
	7	6	11.52	3.24	11.76	3.27	12.00	3.41	12.24	3.51	12.48	3.58	12.72	3.65
	9	7.9	12.57	3.53	12.83	3.57	13.09	3.72	13.35	3.83	13.62	3.91	13.88	3.98
	11	9.8	12.58	3.54	12.84	3.58	13.10	3.73	13.37	3.84	13.63	3.91	13.89	3.99
	13	11.8	12.60	3.55	12.87	3.58	13.13	3.73	13.39	3.85	13.65	3.92	13.92	4.00
	15	13.7	12.63	3.55	12.89	3.59	13.15	3.74	13.42	3.85	13.68	3.93	13.94	4.00
90%	-14.7	-15	6.58	2.45	6.72	2.48	6.86	2.58	6.99	2.66	7.13	2.71	7.27	2.76
	-12.6	-13	6.95	2.49	7.09	2.52	7.24	2.63	7.38	2.70	7.53	2.76	7.67	2.81
	-10.5	-11	7.32	2.53	7.47	2.56	7.62	2.67	7.77	2.75	7.93	2.80	8.08	2.85
	-9.5	-10	7.49	2.55	7.65	2.58	7.80	2.69	7.96	2.77	8.11	2.82	8.27	2.88
	-8.5	-9.1	7.66	2.57	7.82	2.60	7.98	2.71	8.14	2.79	8.30	2.84	8.46	2.90
	-7	-7.6	7.93	2.60	8.09	2.63	8.26	2.74	8.42	2.82	8.59	2.88	8.75	2.93
	-5	-5.6	8.27	2.64	8.45	2.67	8.62	2.78	8.79	2.86	8.96	2.92	9.14	2.97
	-3	-3.7	8.62	2.68	8.80	2.71	8.98	2.82	9.16	2.90	9.34	2.96	9.52	3.02
	0	-0.7	9.15	2.74	9.34	2.77	9.53	2.88	9.72	2.97	9.91	3.03	10.10	3.08
	3	2.2	9.67	2.80	9.87	2.82	10.07	2.94	10.27	3.03	10.48	3.09	10.68	3.15
	5	4.1	10.02	2.83	10.23	2.86	10.44	2.98	10.65	3.07	10.85	3.13	11.06	3.19
	7	6	10.37	2.87	10.58	2.90	10.80	3.02	11.02	3.11	11.23	3.17	11.45	3.24
	9	7.9	11.31	3.13	11.55	3.17	11.78	3.30	12.02	3.40	12.25	3.46	12.49	3.53
	11	9.8	11.32	3.14	11.56	3.17	11.79	3.30	12.03	3.40	12.27	3.47	12.50	3.54
	13	11.8	11.34	3.15	11.58	3.18	11.82	3.31	12.05	3.41	12.29	3.48	12.52	3.54
	15	13.7	11.36	3.15	11.60	3.18	11.84	3.32	12.07	3.42	12.31	3.48	12.55	3.55
80%	-14.7	-15	5.85	2.15	5.97	2.18	6.10	2.27	6.22	2.34	6.34	2.38	6.46	2.43
	-12.6	-13	6.18	2.19	6.31	2.21	6.43	2.31	6.56	2.37	6.69	2.42	6.82	2.47
	-10.5	-11	6.50	2.23	6.64	2.25	6.77	2.34	6.91	2.41	7.04	2.46	7.18	2.51
	-9.5	-10	6.66	2.24	6.80	2.27	6.94	2.36	7.07	2.43	7.21	2.48	7.35	2.53
	-8.5	-9.1	6.81	2.26	6.95	2.28	7.10	2.38	7.24	2.45	7.38	2.50	7.52	2.54
	-7	-7.6	7.05	2.28	7.19	2.31	7.34	2.41	7.49	2.48	7.63	2.53	7.78	2.57
	-5	-5.6	7.36	2.32	7.51	2.34	7.66	2.44	7.82	2.51	7.97	2.56	8.12	2.61
	-3	-3.7	7.67	2.35	7.83	2.38	7.98	2.48	8.14	2.55	8.30	2.60	8.46	2.65
	0	-0.7	8.13	2.40	8.30	2.43	8.47	2.53	8.64	2.61	8.81	2.66	8.98	2.71
	3	2.2	8.60	2.45	8.77	2.48	8.95	2.58	9.13	2.66	9.31	2.71	9.49	2.76
	5	4.1	8.91	2.49	9.09	2.51	9.28	2.62	9.46	2.70	9.65	2.75	9.83	2.80
	7	6	9.22	2.52	9.41	2.55	9.60	2.65	9.79	2.73	9.98	2.79	10.18	2.84
	9	7.9	10.05	2.75	10.26	2.78	10.47	2.90	10.68	2.98	10.89	3.04	11.10	3.10
	11	9.8	10.06	2.76	10.27	2.79	10.48	2.90	10.69	2.99	10.90	3.05	11.11	3.10
	13	11.8	10.08	2.76	10.29	2.79	10.50	2.91	10.71	2.99	10.92	3.05	11.13	3.11
	15	13.7	10.10	2.77	10.31	2.80	10.52	2.91	10.73	3.00	10.94	3.06	11.15	3.12

70%	-14.7	-15	5.12	1.86	5.23	1.87	5.33	1.95	5.44	2.01	5.55	2.05	5.65	2.09
	-12.6	-13	5.40	1.89	5.52	1.91	5.63	1.99	5.74	2.04	5.86	2.08	5.97	2.12
	-10.5	-11	5.69	1.92	5.81	1.94	5.93	2.02	6.05	2.08	6.16	2.12	6.28	2.16
	-9.5	-10	5.83	1.93	5.95	1.95	6.07	2.03	6.19	2.09	6.31	2.13	6.43	2.18
	-8.5	-9.1	5.96	1.95	6.09	1.97	6.21	2.05	6.33	2.11	6.46	2.15	6.58	2.19
	-7	-7.6	6.16	1.97	6.29	1.99	6.42	2.07	6.55	2.13	6.68	2.17	6.81	2.22
	-5	-5.6	6.44	2.00	6.57	2.02	6.70	2.10	6.84	2.17	6.97	2.21	7.11	2.25
	-3	-3.7	6.71	2.03	6.85	2.05	6.99	2.13	7.13	2.20	7.27	2.24	7.41	2.28
	0	-0.7	7.11	2.07	7.26	2.09	7.41	2.18	7.56	2.24	7.71	2.29	7.86	2.33
	3	2.2	7.52	2.11	7.68	2.14	7.83	2.22	7.99	2.29	8.15	2.34	8.30	2.38
	5	4.1	7.79	2.14	7.96	2.17	8.12	2.26	8.28	2.32	8.44	2.37	8.60	2.41
	7	6	8.06	2.17	8.23	2.19	8.40	2.29	8.57	2.35	8.74	2.40	8.90	2.45
	9	7.9	8.80	2.37	8.98	2.39	9.16	2.49	9.35	2.57	9.53	2.62	9.71	2.67
	11	9.8	8.81	2.37	8.99	2.40	9.17	2.50	9.36	2.57	9.54	2.62	9.72	2.67
	13	11.8	8.82	2.38	9.01	2.40	9.19	2.50	9.37	2.58	9.56	2.63	9.74	2.68
	15	13.7	8.84	2.38	9.02	2.41	9.21	2.51	9.39	2.58	9.57	2.63	9.76	2.68
60%	-14.7	-15	4.39	1.56	4.48	1.57	4.57	1.64	4.66	1.69	4.75	1.72	4.85	1.75
	-12.6	-13	4.63	1.58	4.73	1.60	4.83	1.67	4.92	1.72	5.02	1.75	5.12	1.78
	-10.5	-11	4.88	1.61	4.98	1.62	5.08	1.69	5.18	1.74	5.28	1.78	5.38	1.81
	-9.5	-10	4.99	1.62	5.10	1.64	5.20	1.71	5.31	1.76	5.41	1.79	5.51	1.82
	-8.5	-9.1	5.11	1.63	5.22	1.65	5.32	1.72	5.43	1.77	5.54	1.80	5.64	1.84
	-7	-7.6	5.28	1.65	5.39	1.67	5.50	1.74	5.61	1.79	5.72	1.82	5.83	1.86
	-5	-5.6	5.52	1.67	5.63	1.69	5.75	1.76	5.86	1.82	5.98	1.85	6.09	1.89
	-3	-3.7	5.75	1.70	5.87	1.72	5.99	1.79	6.11	1.84	6.23	1.88	6.35	1.91
	0	-0.7	6.10	1.74	6.23	1.75	6.35	1.83	6.48	1.88	6.61	1.92	6.73	1.96
	3	2.2	6.45	1.77	6.58	1.79	6.72	1.87	6.85	1.92	6.98	1.96	7.12	2.00
	5	4.1	6.68	1.80	6.82	1.82	6.96	1.89	7.10	1.95	7.24	1.99	7.38	2.02
	7	6	6.91	1.82	7.06	1.84	7.20	1.92	7.34	1.98	7.49	2.01	7.63	2.05
	9	7.9	7.54	1.99	7.70	2.01	7.86	2.09	8.01	2.16	8.17	2.20	8.33	2.24
	11	9.8	7.55	1.99	7.71	2.01	7.86	2.10	8.02	2.16	8.18	2.20	8.33	2.24
	13	11.8	7.56	1.99	7.72	2.02	7.88	2.10	8.03	2.16	8.19	2.20	8.35	2.25
	15	13.7	7.58	2.00	7.73	2.02	7.89	2.10	8.05	2.17	8.21	2.21	8.36	2.25
50%	-14.7	-15	3.66	1.26	3.73	1.27	3.81	1.32	3.89	1.36	3.96	1.39	4.04	1.42
	-12.6	-13	3.86	1.28	3.94	1.29	4.02	1.35	4.10	1.39	4.18	1.41	4.26	1.44
	-10.5	-11	4.06	1.30	4.15	1.31	4.23	1.37	4.32	1.41	4.40	1.44	4.49	1.46
	-9.5	-10	4.16	1.31	4.25	1.32	4.33	1.38	4.42	1.42	4.51	1.45	4.59	1.47
	-8.5	-9.1	4.26	1.32	4.35	1.33	4.44	1.39	4.52	1.43	4.61	1.46	4.70	1.48
	-7	-7.6	4.40	1.33	4.50	1.35	4.59	1.40	4.68	1.45	4.77	1.47	4.86	1.50
	-5	-5.6	4.60	1.35	4.69	1.37	4.79	1.42	4.88	1.47	4.98	1.50	5.08	1.52
	-3	-3.7	4.79	1.37	4.89	1.39	4.99	1.45	5.09	1.49	5.19	1.52	5.29	1.55
	0	-0.7	5.08	1.40	5.19	1.42	5.29	1.48	5.40	1.52	5.51	1.55	5.61	1.58
	3	2.2	5.37	1.43	5.48	1.45	5.60	1.51	5.71	1.55	5.82	1.58	5.93	1.61
	5	4.1	5.57	1.45	5.68	1.47	5.80	1.53	5.91	1.57	6.03	1.60	6.15	1.64
	7	6	5.76	1.47	5.88	1.49	6.00	1.55	6.12	1.60	6.24	1.63	6.36	1.66
	9	7.9	6.28	1.61	6.42	1.62	6.55	1.69	6.68	1.74	6.81	1.77	6.94	1.81
	11	9.8	6.29	1.61	6.42	1.63	6.55	1.69	6.68	1.74	6.81	1.78	6.95	1.81
	13	11.8	6.30	1.61	6.43	1.63	6.56	1.70	6.70	1.75	6.83	1.78	6.96	1.82
	15	13.7	6.31	1.61	6.44	1.63	6.58	1.70	6.71	1.75	6.84	1.78	6.97	1.82

YDS-140WC15A HEATING

TC Total capacity PI Power input

combination, %(capacity index)	outdoor temperature	Indoor temperature(°CDB)												
		16		18		20		21		22		24		
		TC °CDB	PI kW	TC °CWb	PI kW	TC °CDB	PI kW	TC °CDB	PI kW	TC °CDB	PI kW	TC °CDB	PI kW	
100%	-14.7	-15	9.64	3.20	9.84	3.23	10.04	3.37	10.25	3.47	10.45	3.53	10.65	3.60
	-12.6	-13	10.18	3.25	10.39	3.28	10.60	3.42	10.82	3.52	11.03	3.59	11.24	3.66
	-10.5	-11	10.72	3.30	10.94	3.34	11.16	3.48	11.39	3.58	11.61	3.65	11.83	3.72
	-9.5	-10	10.97	3.33	11.20	3.36	11.43	3.50	11.66	3.61	11.89	3.68	12.11	3.75
	-8.5	-9.1	11.23	3.35	11.46	3.39	11.69	3.53	11.93	3.64	12.16	3.71	12.40	3.78
	-7	-7.6	11.61	3.39	11.85	3.43	12.09	3.57	12.34	3.68	12.58	3.75	12.82	3.82
	-5	-5.6	12.12	3.44	12.37	3.48	12.63	3.62	12.88	3.73	13.13	3.80	13.38	3.88
	-3	-3.7	12.63	3.49	12.90	3.53	13.16	3.68	13.42	3.79	13.68	3.86	13.95	3.93
	0	-0.7	13.40	3.57	13.68	3.60	13.96	3.75	14.24	3.87	14.52	3.94	14.79	4.02
	3	2.2	14.17	3.64	14.46	3.68	14.76	3.83	15.05	3.95	15.35	4.03	15.64	4.10
	5	4.1	14.68	3.69	14.98	3.73	15.29	3.89	15.59	4.00	15.90	4.08	16.20	4.16
	7	6	15.19	3.74	15.50	3.78	15.82	3.94	16.14	4.06	16.45	4.14	16.77	4.22
	9	7.9	16.57	4.08	16.91	4.13	17.26	4.30	17.60	4.43	17.95	4.51	18.30	4.60
	11	9.8	16.58	4.09	16.93	4.13	17.28	4.31	17.62	4.44	17.97	4.52	18.31	4.61
	13	11.8	16.61	4.10	16.96	4.14	17.31	4.31	17.65	4.44	18.00	4.53	18.35	4.62
	15	13.7	16.65	4.11	16.99	4.15	17.34	4.32	17.69	4.45	18.03	4.54	18.38	4.62
90%	-14.7	-15	8.68	2.83	8.86	2.86	9.04	2.98	9.22	3.07	9.40	3.13	9.58	3.19
	-12.6	-13	9.16	2.88	9.35	2.91	9.54	3.03	9.73	3.12	9.92	3.19	10.12	3.25
	-10.5	-11	9.64	2.93	9.85	2.96	10.05	3.08	10.25	3.18	10.45	3.24	10.65	3.30
	-9.5	-10	9.87	2.95	10.08	2.98	10.29	3.11	10.49	3.20	10.70	3.26	10.90	3.32
	-8.5	-9.1	10.10	2.97	10.31	3.00	10.53	3.13	10.74	3.22	10.95	3.29	11.16	3.35
	-7	-7.6	10.45	3.01	10.67	3.04	10.88	3.16	11.10	3.26	11.32	3.32	11.54	3.39
	-5	-5.6	10.91	3.05	11.14	3.08	11.36	3.21	11.59	3.31	11.82	3.37	12.05	3.44
	-3	-3.7	11.37	3.10	11.61	3.13	11.84	3.26	12.08	3.36	12.32	3.42	12.55	3.49
	0	-0.7	12.06	3.16	12.31	3.20	12.56	3.33	12.81	3.43	13.06	3.50	13.31	3.56
	3	2.2	12.75	3.23	13.01	3.26	13.28	3.40	13.55	3.50	13.81	3.57	14.08	3.64
	5	4.1	13.21	3.27	13.48	3.31	13.76	3.45	14.03	3.55	14.31	3.62	14.58	3.69
	7	6	13.67	3.32	13.95	3.35	14.24	3.49	14.52	3.60	14.81	3.67	15.09	3.74
	9	7.9	14.91	3.62	15.22	3.66	15.53	3.81	15.84	3.93	16.16	4.00	16.47	4.08
	11	9.8	14.93	3.63	15.24	3.67	15.55	3.82	15.86	3.93	16.17	4.01	16.48	4.09
	13	11.8	14.95	3.63	15.26	3.67	15.58	3.83	15.89	3.94	16.20	4.02	16.51	4.09
	15	13.7	14.98	3.64	15.29	3.68	15.60	3.83	15.92	3.95	16.23	4.02	16.54	4.10
80%	-14.7	-15	7.71	2.49	7.87	2.52	8.04	2.62	8.20	2.70	8.36	2.75	8.52	2.80
	-12.6	-13	8.14	2.53	8.31	2.56	8.48	2.66	8.65	2.74	8.82	2.80	8.99	2.85
	-10.5	-11	8.57	2.57	8.75	2.60	8.93	2.71	9.11	2.79	9.29	2.84	9.47	2.90
	-9.5	-10	8.78	2.59	8.96	2.62	9.14	2.73	9.33	2.81	9.51	2.86	9.69	2.92
	-8.5	-9.1	8.98	2.61	9.17	2.64	9.36	2.75	9.54	2.83	9.73	2.89	9.92	2.94
	-7	-7.6	9.29	2.64	9.48	2.67	9.68	2.78	9.87	2.86	10.06	2.92	10.26	2.97
	-5	-5.6	9.70	2.68	9.90	2.71	10.10	2.82	10.30	2.90	10.50	2.96	10.71	3.02
	-3	-3.7	10.11	2.72	10.32	2.75	10.53	2.86	10.74	2.95	10.95	3.00	11.16	3.06
	0	-0.7	10.72	2.78	10.94	2.81	11.17	2.92	11.39	3.01	11.61	3.07	11.84	3.13
	3	2.2	11.33	2.84	11.57	2.87	11.80	2.99	12.04	3.07	12.28	3.13	12.51	3.19
	5	4.1	11.74	2.88	11.99	2.91	12.23	3.03	12.47	3.12	12.72	3.18	12.96	3.24
	7	6	12.15	2.91	12.40	2.94	12.66	3.07	12.91	3.16	13.16	3.22	13.42	3.28
	9	7.9	13.26	3.18	13.53	3.21	13.81	3.35	14.08	3.45	14.36	3.51	14.64	3.58
	11	9.8	13.27	3.19	13.54	3.22	13.82	3.35	14.10	3.45	14.37	3.52	14.65	3.59
	13	11.8	13.29	3.19	13.57	3.22	13.85	3.36	14.12	3.46	14.40	3.53	14.68	3.59
	15	13.7	13.32	3.20	13.59	3.23	13.87	3.37	14.15	3.47	14.43	3.53	14.70	3.60

70%	-14.7	-15	6.75	2.14	6.89	2.17	7.03	2.26	7.17	2.32	7.31	2.37	7.45	2.41
	-12.6	-13	7.13	2.18	7.27	2.20	7.42	2.29	7.57	2.36	7.72	2.41	7.87	2.45
	-10.5	-11	7.50	2.21	7.66	2.24	7.81	2.33	7.97	2.40	8.13	2.45	8.28	2.49
	-9.5	-10	7.68	2.23	7.84	2.25	8.00	2.35	8.16	2.42	8.32	2.47	8.48	2.51
	-8.5	-9.1	7.86	2.25	8.02	2.27	8.19	2.37	8.35	2.44	8.51	2.48	8.68	2.53
	-7	-7.6	8.13	2.27	8.30	2.30	8.47	2.39	8.64	2.46	8.80	2.51	8.97	2.56
	-5	-5.6	8.48	2.31	8.66	2.33	8.84	2.43	9.02	2.50	9.19	2.55	9.37	2.60
	-3	-3.7	8.84	2.34	9.03	2.37	9.21	2.46	9.40	2.54	9.58	2.59	9.76	2.64
	0	-0.7	9.38	2.39	9.57	2.42	9.77	2.52	9.97	2.59	10.16	2.64	10.36	2.69
	3	2.2	9.92	2.44	10.12	2.47	10.33	2.57	10.54	2.65	10.74	2.70	10.95	2.75
	5	4.1	10.27	2.48	10.49	2.50	10.70	2.61	10.92	2.68	11.13	2.74	11.34	2.79
	7	6	10.63	2.51	10.85	2.54	11.07	2.64	11.30	2.72	11.52	2.77	11.74	2.83
	9	7.9	11.60	2.74	11.84	2.77	12.08	2.88	12.32	2.97	12.57	3.03	12.81	3.08
	11	9.8	11.61	2.74	11.85	2.77	12.09	2.89	12.33	2.97	12.58	3.03	12.82	3.09
	13	11.8	11.63	2.75	11.87	2.78	12.11	2.89	12.36	2.98	12.60	3.04	12.84	3.10
	15	13.7	11.65	2.75	11.89	2.78	12.14	2.90	12.38	2.98	12.62	3.04	12.87	3.10
60%	-14.7	-15	5.79	1.80	5.91	1.82	6.03	1.89	6.15	1.95	6.27	1.99	6.39	2.03
	-12.6	-13	6.11	1.83	6.23	1.85	6.36	1.92	6.49	1.98	6.62	2.02	6.74	2.06
	-10.5	-11	6.43	1.86	6.56	1.88	6.70	1.96	6.83	2.01	6.97	2.05	7.10	2.09
	-9.5	-10	6.58	1.87	6.72	1.89	6.86	1.97	6.99	2.03	7.13	2.07	7.27	2.11
	-8.5	-9.1	6.74	1.89	6.88	1.91	7.02	1.99	7.16	2.04	7.30	2.08	7.44	2.12
	-7	-7.6	6.97	1.91	7.11	1.93	7.26	2.01	7.40	2.07	7.55	2.11	7.69	2.15
	-5	-5.6	7.27	1.94	7.42	1.96	7.58	2.04	7.73	2.10	7.88	2.14	8.03	2.18
	-3	-3.7	7.58	1.96	7.74	1.98	7.90	2.07	8.05	2.13	8.21	2.17	8.37	2.21
	0	-0.7	8.04	2.01	8.21	2.03	8.37	2.11	8.54	2.17	8.71	2.22	8.88	2.26
	3	2.2	8.50	2.05	8.68	2.07	8.85	2.16	9.03	2.22	9.21	2.26	9.38	2.31
	5	4.1	8.81	2.08	8.99	2.10	9.17	2.19	9.36	2.25	9.54	2.30	9.72	2.34
	7	6	9.11	2.11	9.30	2.13	9.49	2.22	9.68	2.28	9.87	2.33	10.06	2.37
	9	7.9	9.94	2.30	10.15	2.32	10.36	2.42	10.56	2.49	10.77	2.54	10.98	2.59
	11	9.8	9.95	2.30	10.16	2.33	10.37	2.42	10.57	2.49	10.78	2.54	10.99	2.59
	13	11.8	9.97	2.31	10.18	2.33	10.38	2.43	10.59	2.50	10.80	2.55	11.01	2.60
	15	13.7	9.99	2.31	10.20	2.33	10.40	2.43	10.61	2.50	10.82	2.55	11.03	2.60
50%	-14.7	-15	4.82	1.45	4.92	1.47	5.02	1.53	5.12	1.57	5.22	1.61	5.32	1.64
	-12.6	-13	5.09	1.48	5.20	1.49	5.30	1.55	5.41	1.60	5.51	1.63	5.62	1.66
	-10.5	-11	5.36	1.50	5.47	1.52	5.58	1.58	5.69	1.63	5.80	1.66	5.92	1.69
	-9.5	-10	5.49	1.51	5.60	1.53	5.71	1.59	5.83	1.64	5.94	1.67	6.06	1.70
	-8.5	-9.1	5.61	1.52	5.73	1.54	5.85	1.60	5.96	1.65	6.08	1.68	6.20	1.72
	-7	-7.6	5.81	1.54	5.93	1.56	6.05	1.62	6.17	1.67	6.29	1.70	6.41	1.74
	-5	-5.6	6.06	1.56	6.19	1.58	6.31	1.65	6.44	1.70	6.57	1.73	6.69	1.76
	-3	-3.7	6.32	1.59	6.45	1.60	6.58	1.67	6.71	1.72	6.84	1.75	6.97	1.79
	0	-0.7	6.70	1.62	6.84	1.64	6.98	1.71	7.12	1.76	7.26	1.79	7.40	1.83
	3	2.2	7.08	1.65	7.23	1.67	7.38	1.74	7.53	1.79	7.67	1.83	7.82	1.86
	5	4.1	7.34	1.68	7.49	1.70	7.64	1.77	7.80	1.82	7.95	1.85	8.10	1.89
	7	6	7.59	1.70	7.75	1.72	7.91	1.79	8.07	1.84	8.23	1.88	8.38	1.92
	9	7.9	8.28	1.86	8.46	1.87	8.63	1.95	8.80	2.01	8.98	2.05	9.15	2.09
	11	9.8	8.29	1.86	8.46	1.88	8.64	1.96	8.81	2.02	8.98	2.05	9.16	2.09
	13	11.8	8.31	1.86	8.48	1.88	8.65	1.96	8.83	2.02	9.00	2.06	9.17	2.10
	15	13.7	8.32	1.87	8.50	1.89	8.67	1.96	8.84	2.02	9.02	2.06	9.19	2.10

YDS-140WC35A HEATING

TC Total capacity PI Power input

combination, %(capacity index)	outdoor temperature	Indoor temperature(°CDB)												
		16		18		20		21		22		24		
		TC °CDB	PI kW	TC °CWb	PI kW	TC °CDB	PI kW	TC °CDB	PI kW	TC °CDB	PI kW	TC °CDB	PI kW	
100%	-14.7	-15	9.75	3.57	9.96	3.61	10.16	3.76	10.36	3.87	10.57	3.95	10.77	4.02
	-12.6	-13	10.30	3.63	10.51	3.67	10.72	3.82	10.94	3.94	11.15	4.01	11.37	4.09
	-10.5	-11	10.84	3.69	11.06	3.73	11.29	3.88	11.52	4.00	11.74	4.08	11.97	4.15
	-9.5	-10	11.10	3.72	11.33	3.76	11.56	3.91	11.79	4.03	12.02	4.11	12.25	4.19
	-8.5	-9.1	11.35	3.74	11.59	3.78	11.83	3.94	12.06	4.06	12.30	4.14	12.54	4.22
	-7	-7.6	11.74	3.79	11.99	3.83	12.23	3.99	12.48	4.11	12.72	4.19	12.97	4.27
	-5	-5.6	12.26	3.84	12.51	3.88	12.77	4.05	13.03	4.17	13.28	4.25	13.54	4.33
	-3	-3.7	12.78	3.90	13.04	3.94	13.31	4.10	13.57	4.23	13.84	4.31	14.11	4.39
	0	-0.7	13.55	3.98	13.83	4.03	14.12	4.19	14.40	4.32	14.68	4.40	14.96	4.49
	3	2.2	14.33	4.07	14.62	4.11	14.92	4.28	15.22	4.41	15.52	4.50	15.82	4.58
	5	4.1	14.84	4.12	15.15	4.17	15.46	4.34	15.77	4.47	16.08	4.56	16.39	4.64
	7	6	15.36	4.18	15.68	4.22	16.00	4.40	16.32	4.53	16.64	4.62	16.96	4.71
	9	7.9	16.76	4.56	17.11	4.61	17.46	4.80	17.81	4.94	18.15	5.04	18.50	5.14
	11	9.8	16.77	4.57	17.12	4.62	17.47	4.81	17.82	4.95	18.17	5.05	18.52	5.15
	13	11.8	16.80	4.58	17.15	4.63	17.50	4.82	17.85	4.96	18.20	5.06	18.55	5.16
	15	13.7	16.83	4.59	17.19	4.63	17.54	4.83	17.89	4.97	18.24	5.07	18.59	5.16
90%	-14.7	-15	8.78	3.17	8.96	3.20	9.14	3.33	9.33	3.43	9.51	3.50	9.69	3.57
	-12.6	-13	9.27	3.22	9.46	3.25	9.65	3.39	9.84	3.49	10.04	3.56	10.23	3.62
	-10.5	-11	9.75	3.27	9.96	3.30	10.16	3.44	10.36	3.55	10.57	3.61	10.77	3.68
	-9.5	-10	9.99	3.30	10.19	3.33	10.40	3.47	10.61	3.57	10.82	3.64	11.03	3.71
	-8.5	-9.1	10.22	3.32	10.43	3.36	10.64	3.49	10.86	3.60	11.07	3.67	11.28	3.74
	-7	-7.6	10.57	3.36	10.79	3.39	11.01	3.53	11.23	3.64	11.45	3.71	11.67	3.78
	-5	-5.6	11.03	3.41	11.26	3.44	11.49	3.59	11.72	3.69	11.95	3.77	12.18	3.84
	-3	-3.7	11.50	3.46	11.74	3.49	11.98	3.64	12.22	3.75	12.46	3.82	12.70	3.89
	0	-0.7	12.20	3.53	12.45	3.57	12.70	3.72	12.96	3.83	13.21	3.90	13.47	3.98
	3	2.2	12.89	3.61	13.16	3.64	13.43	3.80	13.70	3.91	13.97	3.99	14.24	4.06
	5	4.1	13.36	3.66	13.64	3.69	13.92	3.85	14.19	3.96	14.47	4.04	14.75	4.12
	7	6	13.82	3.71	14.11	3.75	14.40	3.90	14.69	4.02	14.98	4.10	15.26	4.17
	9	7.9	15.08	4.04	15.40	4.09	15.71	4.26	16.02	4.38	16.34	4.47	16.65	4.55
	11	9.8	15.10	4.05	15.41	4.09	15.72	4.26	16.04	4.39	16.35	4.48	16.67	4.56
	13	11.8	15.12	4.06	15.44	4.10	15.75	4.27	16.07	4.40	16.38	4.49	16.70	4.57
	15	13.7	15.15	4.07	15.47	4.11	15.78	4.28	16.10	4.41	16.41	4.49	16.73	4.58
80%	-14.7	-15	7.80	2.78	7.96	2.81	8.13	2.93	8.29	3.01	8.45	3.07	8.61	3.13
	-12.6	-13	8.24	2.83	8.41	2.86	8.58	2.97	8.75	3.06	8.92	3.12	9.09	3.18
	-10.5	-11	8.67	2.87	8.85	2.90	9.03	3.02	9.21	3.11	9.39	3.17	9.57	3.23
	-9.5	-10	8.88	2.89	9.06	2.92	9.25	3.05	9.43	3.14	9.62	3.20	9.80	3.26
	-8.5	-9.1	9.08	2.92	9.27	2.95	9.46	3.07	9.65	3.16	9.84	3.22	10.03	3.28
	-7	-7.6	9.39	2.95	9.59	2.98	9.79	3.10	9.98	3.20	10.18	3.26	10.37	3.32
	-5	-5.6	9.81	2.99	10.01	3.02	10.22	3.15	10.42	3.24	10.62	3.31	10.83	3.37
	-3	-3.7	10.22	3.04	10.43	3.07	10.65	3.20	10.86	3.29	11.07	3.36	11.29	3.42
	0	-0.7	10.84	3.10	11.07	3.13	11.29	3.26	11.52	3.36	11.74	3.43	11.97	3.49
	3	2.2	11.46	3.17	11.70	3.20	11.94	3.33	12.18	3.43	12.42	3.50	12.65	3.57
	5	4.1	11.87	3.21	12.12	3.24	12.37	3.38	12.62	3.48	12.86	3.55	13.11	3.62
	7	6	12.29	3.25	12.54	3.29	12.80	3.43	13.06	3.53	13.31	3.60	13.57	3.67
	9	7.9	13.41	3.55	13.69	3.59	13.96	3.74	14.24	3.85	14.52	3.92	14.80	4.00
	11	9.8	13.42	3.56	13.70	3.59	13.98	3.74	14.26	3.86	14.54	3.93	14.82	4.01
	13	11.8	13.44	3.56	13.72	3.60	14.00	3.75	14.28	3.86	14.56	3.94	14.84	4.01
	15	13.7	13.47	3.57	13.75	3.61	14.03	3.76	14.31	3.87	14.59	3.95	14.87	4.02

70%	-14.7	-15	6.83	2.39	6.97	2.42	7.11	2.52	7.25	2.60	7.40	2.65	7.54	2.70
	-12.6	-13	7.21	2.43	7.36	2.46	7.51	2.56	7.66	2.64	7.81	2.69	7.96	2.74
	-10.5	-11	7.59	2.47	7.74	2.50	7.90	2.60	8.06	2.68	8.22	2.73	8.38	2.79
	-9.5	-10	7.77	2.49	7.93	2.52	8.09	2.62	8.25	2.70	8.41	2.75	8.58	2.81
	-8.5	-9.1	7.95	2.51	8.11	2.54	8.28	2.64	8.44	2.72	8.61	2.78	8.78	2.83
	-7	-7.6	8.22	2.54	8.39	2.57	8.56	2.67	8.73	2.75	8.90	2.81	9.08	2.86
	-5	-5.6	8.58	2.58	8.76	2.60	8.94	2.71	9.12	2.79	9.30	2.85	9.48	2.90
	-3	-3.7	8.94	2.61	9.13	2.64	9.32	2.75	9.50	2.83	9.69	2.89	9.87	2.94
	0	-0.7	9.49	2.67	9.68	2.70	9.88	2.81	10.08	2.90	10.28	2.95	10.47	3.01
	3	2.2	10.03	2.73	10.24	2.76	10.45	2.87	10.66	2.96	10.86	3.01	11.07	3.07
	5	4.1	10.39	2.76	10.61	2.79	10.82	2.91	11.04	3.00	11.26	3.06	11.47	3.11
	7	6	10.75	2.80	10.98	2.83	11.20	2.95	11.42	3.04	11.65	3.10	11.87	3.16
	9	7.9	11.73	3.06	11.97	3.09	12.22	3.22	12.46	3.32	12.71	3.38	12.95	3.44
	11	9.8	11.74	3.06	11.99	3.10	12.23	3.22	12.48	3.32	12.72	3.39	12.96	3.45
	13	11.8	11.76	3.07	12.01	3.10	12.25	3.23	12.50	3.33	12.74	3.39	12.99	3.46
	15	13.7	11.78	3.07	12.03	3.11	12.28	3.24	12.52	3.33	12.77	3.40	13.01	3.46
60%	-14.7	-15	5.85	2.01	5.97	2.03	6.10	2.11	6.22	2.18	6.34	2.22	6.46	2.26
	-12.6	-13	6.18	2.04	6.31	2.06	6.43	2.15	6.56	2.21	6.69	2.26	6.82	2.30
	-10.5	-11	6.50	2.07	6.64	2.10	6.77	2.18	6.91	2.25	7.04	2.29	7.18	2.34
	-9.5	-10	6.66	2.09	6.80	2.11	6.94	2.20	7.07	2.27	7.21	2.31	7.35	2.35
	-8.5	-9.1	6.81	2.11	6.95	2.13	7.10	2.22	7.24	2.28	7.38	2.33	7.52	2.37
	-7	-7.6	7.05	2.13	7.19	2.15	7.34	2.24	7.49	2.31	7.63	2.35	7.78	2.40
	-5	-5.6	7.36	2.16	7.51	2.18	7.66	2.28	7.82	2.34	7.97	2.39	8.12	2.43
	-3	-3.7	7.67	2.19	7.83	2.22	7.98	2.31	8.14	2.38	8.30	2.42	8.46	2.47
	0	-0.7	8.13	2.24	8.30	2.26	8.47	2.36	8.64	2.43	8.81	2.48	8.98	2.52
	3	2.2	8.60	2.29	8.77	2.31	8.95	2.41	9.13	2.48	9.31	2.53	9.49	2.58
	5	4.1	8.91	2.32	9.09	2.34	9.28	2.44	9.46	2.51	9.65	2.56	9.83	2.61
	7	6	9.22	2.35	9.41	2.38	9.60	2.47	9.79	2.55	9.98	2.60	10.18	2.65
	9	7.9	10.05	2.56	10.26	2.59	10.47	2.70	10.68	2.78	10.89	2.83	11.10	2.89
	11	9.8	10.06	2.57	10.27	2.60	10.48	2.70	10.69	2.79	10.90	2.84	11.11	2.89
	13	11.8	10.08	2.57	10.29	2.60	10.50	2.71	10.71	2.79	10.92	2.85	11.13	2.90
	15	13.7	10.10	2.58	10.31	2.61	10.52	2.71	10.73	2.80	10.94	2.85	11.15	2.90
50%	-14.7	-15	4.88	1.62	4.98	1.64	5.08	1.71	5.18	1.76	5.28	1.79	5.38	1.83
	-12.6	-13	5.15	1.65	5.25	1.67	5.36	1.74	5.47	1.79	5.58	1.82	5.68	1.86
	-10.5	-11	5.42	1.68	5.53	1.69	5.64	1.76	5.76	1.82	5.87	1.85	5.98	1.89
	-9.5	-10	5.55	1.69	5.66	1.71	5.78	1.78	5.89	1.83	6.01	1.87	6.13	1.90
	-8.5	-9.1	5.68	1.70	5.80	1.72	5.91	1.79	6.03	1.84	6.15	1.88	6.27	1.92
	-7	-7.6	5.87	1.72	5.99	1.74	6.12	1.81	6.24	1.87	6.36	1.90	6.48	1.94
	-5	-5.6	6.13	1.75	6.26	1.76	6.38	1.84	6.51	1.89	6.64	1.93	6.77	1.97
	-3	-3.7	6.39	1.77	6.52	1.79	6.65	1.86	6.79	1.92	6.92	1.96	7.05	2.00
	0	-0.7	6.78	1.81	6.92	1.83	7.06	1.90	7.20	1.96	7.34	2.00	7.48	2.04
	3	2.2	7.16	1.85	7.31	1.87	7.46	1.95	7.61	2.00	7.76	2.04	7.91	2.08
	5	4.1	7.42	1.87	7.58	1.89	7.73	1.97	7.89	2.03	8.04	2.07	8.19	2.11
	7	6	7.68	1.90	7.84	1.92	8.00	2.00	8.16	2.06	8.32	2.10	8.48	2.14
	9	7.9	8.38	2.07	8.55	2.09	8.73	2.18	8.90	2.25	9.08	2.29	9.25	2.33
	11	9.8	8.39	2.08	8.56	2.10	8.74	2.18	8.91	2.25	9.09	2.29	9.26	2.34
	13	11.8	8.40	2.08	8.58	2.10	8.75	2.19	8.93	2.25	9.10	2.30	9.28	2.34
	15	13.7	8.42	2.08	8.59	2.11	8.77	2.19	8.94	2.26	9.12	2.30	9.29	2.35

YDS-280WC35A HEATING

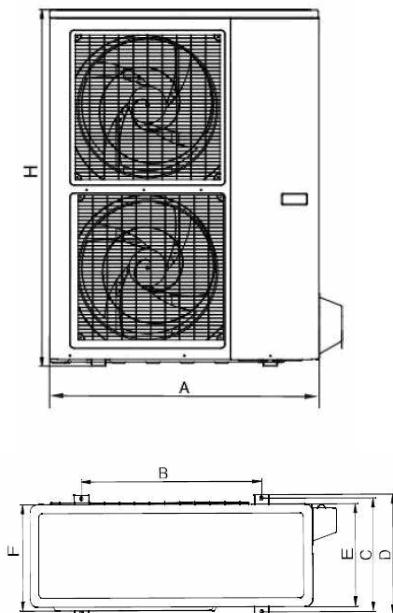
TC Total capacity PI Power input

combination, %(capacity index)	outdoor temperature	Indoor temperature(°Cdb)												
		16		18		20		21		22		24		
		TC °Cdb	PI kW	TC kW	PI kW									
100	-14.7	-15	19.54	8.03	19.54	8.20	19.54	8.37	18.76	8.00	17.99	7.64	16.44	6.90
	-12.6	-13	20.62	8.16	20.62	8.34	20.62	8.51	19.81	8.14	18.99	7.76	17.35	7.02
	-10.5	-11	21.71	8.29	21.71	8.47	21.71	8.65	20.85	8.27	19.99	7.89	18.26	7.13
	-9.5	-10	22.23	8.36	22.23	8.54	22.23	8.71	21.35	8.33	20.46	7.95	18.70	7.19
	-8.5	-9.1	22.75	8.42	22.75	8.60	22.75	8.78	21.84	8.39	20.94	8.01	19.14	7.24
	-7	-7.6	23.52	8.51	23.52	8.70	23.52	8.88	22.59	8.49	21.66	8.10	19.79	7.32
	-5	-5.6	24.56	8.64	24.56	8.83	24.56	9.01	23.58	8.62	22.61	8.22	20.66	7.43
	-3	-3.7	25.59	8.77	25.59	8.95	25.59	9.14	24.58	8.74	23.56	8.34	21.53	7.54
	0	-0.7	27.15	8.96	27.15	9.15	27.15	9.34	26.07	8.93	24.99	8.52	22.84	7.70
	3	2.2	28.70	9.15	28.70	9.34	28.70	9.54	27.56	9.12	26.42	8.70	24.14	7.87
	5	4.1	29.73	9.27	29.73	9.47	29.73	9.67	28.55	9.24	27.37	8.82	25.01	7.97
	7	6	30.77	9.40	30.77	9.60	30.77	9.80	29.55	9.37	28.33	8.94	25.89	8.08
	9	7.9	30.77	9.08	30.77	9.28	30.77	9.47	29.55	9.06	28.33	8.64	25.89	7.81
	11	9.8	30.77	8.77	30.77	8.95	30.77	9.14	29.55	8.74	28.33	8.34	25.89	7.54
	13	11.8	30.77	8.45	30.77	8.63	30.77	8.81	29.55	8.43	28.33	8.04	25.89	7.27
	15	13.7	30.77	8.14	30.77	8.31	30.77	8.48	29.55	8.11	28.33	7.74	25.89	7.00
90	-14.7	-15	17.58	7.12	17.58	7.27	17.58	7.42	16.89	7.10	16.19	6.77	14.79	6.12
	-12.6	-13	18.56	7.24	18.56	7.39	18.56	7.54	17.82	7.21	17.09	6.88	15.62	6.22
	-10.5	-11	19.54	7.35	19.54	7.51	19.54	7.67	18.76	7.33	17.99	7.00	16.44	6.32
	-9.5	-10	20.01	7.41	20.01	7.57	20.01	7.73	19.21	7.39	18.42	7.05	16.83	6.37
	-8.5	-9.1	20.47	7.47	20.47	7.63	20.47	7.78	19.66	7.44	18.85	7.10	17.22	6.42
	-7	-7.6	21.17	7.55	21.17	7.71	21.17	7.87	20.33	7.53	19.49	7.18	17.81	6.49
	-5	-5.6	22.10	7.66	22.10	7.83	22.10	7.99	21.23	7.64	20.35	7.29	18.59	6.59
	-3	-3.7	23.03	7.77	23.03	7.94	23.03	8.11	22.12	7.75	21.21	7.40	19.38	6.69
	0	-0.7	24.43	7.94	24.43	8.11	24.43	8.28	23.46	7.92	22.49	7.56	20.55	6.83
	3	2.2	25.83	8.11	25.83	8.28	25.83	8.46	24.80	8.09	23.78	7.71	21.73	6.97
	5	4.1	26.76	8.22	26.76	8.40	26.76	8.57	25.70	8.20	24.64	7.82	22.51	7.07
	7	6	27.69	8.33	27.69	8.51	27.69	8.69	26.59	8.31	25.50	7.93	23.30	7.17
	9	7.9	27.69	8.05	27.69	8.23	27.69	8.40	26.59	8.03	25.50	7.66	23.30	6.93
	11	9.8	27.69	7.77	27.69	7.94	27.69	8.11	26.59	7.75	25.50	7.40	23.30	6.69
	13	11.8	27.69	7.49	27.69	7.65	27.69	7.81	26.59	7.47	25.50	7.13	23.30	6.44
	15	13.7	27.69	7.21	27.69	7.37	27.69	7.52	26.59	7.19	25.50	6.86	23.30	6.20
80	-14.7	-15	15.63	6.25	15.63	6.38	15.63	6.52	15.01	6.23	14.39	5.95	13.15	5.38
	-12.6	-13	16.50	6.35	16.50	6.49	16.50	6.63	15.84	6.33	15.19	6.04	13.88	5.46
	-10.5	-11	17.37	6.46	17.37	6.60	17.37	6.73	16.68	6.44	15.99	6.14	14.61	5.55
	-9.5	-10	17.78	6.51	17.78	6.65	17.78	6.78	17.08	6.49	16.37	6.19	14.96	5.60
	-8.5	-9.1	18.20	6.56	18.20	6.70	18.20	6.84	17.47	6.54	16.75	6.24	15.31	5.64
	-7	-7.6	18.82	6.63	18.82	6.77	18.82	6.91	18.07	6.61	17.32	6.31	15.83	5.70
	-5	-5.6	19.65	6.73	19.65	6.87	19.65	7.01	18.87	6.71	18.09	6.40	16.53	5.79
	-3	-3.7	20.47	6.83	20.47	6.97	20.47	7.12	19.66	6.81	18.85	6.49	17.22	5.87
	0	-0.7	21.72	6.97	21.72	7.12	21.72	7.27	20.86	6.95	19.99	6.63	18.27	6.00
	3	2.2	22.96	7.12	22.96	7.27	22.96	7.42	22.05	7.10	21.14	6.77	19.32	6.12
	5	4.1	23.79	7.22	23.79	7.37	23.79	7.53	22.84	7.20	21.90	6.87	20.01	6.21
	7	6	24.62	7.32	24.62	7.47	24.62	7.63	23.64	7.30	22.66	6.96	20.71	6.29
	9	7.9	24.62	7.07	24.62	7.22	24.62	7.37	23.64	7.05	22.66	6.73	20.71	6.08
	11	9.8	24.62	6.83	24.62	6.97	24.62	7.12	23.64	6.81	22.66	6.49	20.71	5.87
	13	11.8	24.62	6.58	24.62	6.72	24.62	6.86	23.64	6.56	22.66	6.26	20.71	5.66
	15	13.7	24.62	6.33	24.62	6.47	24.62	6.61	23.64	6.32	22.66	6.03	20.71	5.45

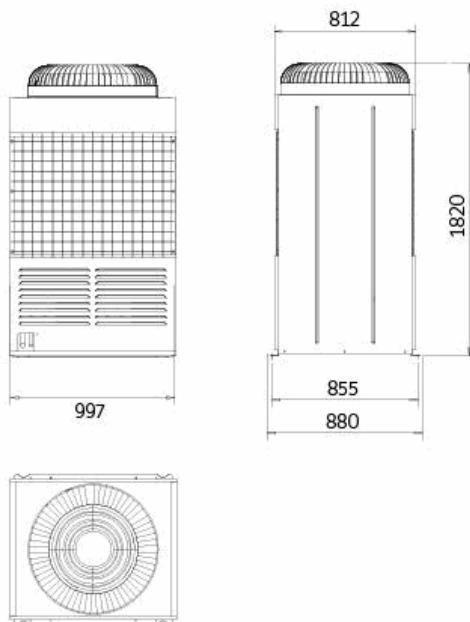
70	-14.7	-15	13.68	5.38	13.68	5.50	13.68	5.61	13.13	5.37	12.59	5.12	11.50	4.63
	-12.6	-13	14.44	5.47	14.44	5.59	14.44	5.71	13.86	5.46	13.29	5.21	12.15	4.71
	-10.5	-11	15.20	5.56	15.20	5.68	15.20	5.80	14.59	5.54	13.99	5.29	12.79	4.78
	-9.5	-10	15.56	5.60	15.56	5.72	15.56	5.84	14.94	5.59	14.32	5.33	13.09	4.82
	-8.5	-9.1	15.92	5.65	15.92	5.77	15.92	5.89	15.29	5.63	14.66	5.37	13.39	4.85
	-7	-7.6	16.47	5.71	16.47	5.83	16.47	5.95	15.81	5.69	15.16	5.43	13.85	4.91
	-5	-5.6	17.19	5.79	17.19	5.92	17.19	6.04	16.51	5.78	15.83	5.51	14.46	4.98
	-3	-3.7	17.92	5.88	17.92	6.00	17.92	6.13	17.20	5.86	16.49	5.59	15.07	5.06
	0	-0.7	19.00	6.01	19.00	6.13	19.00	6.26	18.25	5.99	17.49	5.71	15.99	5.16
	3	2.2	20.09	6.13	20.09	6.26	20.09	6.39	19.29	6.11	18.50	5.83	16.90	5.27
	5	4.1	20.81	6.22	20.81	6.35	20.81	6.48	19.99	6.20	19.16	5.91	17.51	5.35
	7	6	21.54	6.30	21.54	6.44	21.54	6.57	20.68	6.28	19.83	6.00	18.12	5.42
	9	7.9	21.54	6.09	21.54	6.22	21.54	6.35	20.68	6.07	19.83	5.79	18.12	5.24
	11	9.8	21.54	5.88	21.54	6.00	21.54	6.13	20.68	5.86	19.83	5.59	18.12	5.06
	13	11.8	21.54	5.67	21.54	5.79	21.54	5.91	20.68	5.65	19.83	5.39	18.12	4.87
	15	13.7	21.54	5.46	21.54	5.57	21.54	5.69	20.68	5.44	19.83	5.19	18.12	4.69
60	-14.7	-15	11.72	4.52	11.72	4.61	11.72	4.71	11.26	4.50	10.79	4.30	9.86	3.88
	-12.6	-13	12.37	4.59	12.37	4.69	12.37	4.79	11.88	4.58	11.39	4.37	10.41	3.95
	-10.5	-11	13.03	4.66	13.03	4.76	13.03	4.86	12.51	4.65	11.99	4.44	10.96	4.01
	-9.5	-10	13.34	4.70	13.34	4.80	13.34	4.90	12.81	4.69	12.28	4.47	11.22	4.04
	-8.5	-9.1	13.65	4.74	13.65	4.84	13.65	4.94	13.11	4.72	12.56	4.50	11.48	4.07
	-7	-7.6	14.11	4.79	14.11	4.89	14.11	4.99	13.55	4.77	12.99	4.56	11.87	4.12
	-5	-5.6	14.73	4.86	14.73	4.96	14.73	5.07	14.15	4.85	13.57	4.62	12.40	4.18
	-3	-3.7	15.36	4.93	15.36	5.04	15.36	5.14	14.75	4.92	14.14	4.69	12.92	4.24
	0	-0.7	16.29	5.04	16.29	5.14	16.29	5.25	15.64	5.02	15.00	4.79	13.70	4.33
	3	2.2	17.22	5.14	17.22	5.25	17.22	5.36	16.54	5.13	15.85	4.89	14.49	4.42
	5	4.1	17.84	5.21	17.84	5.33	17.84	5.44	17.13	5.20	16.42	4.96	15.01	4.48
	7	6	18.46	5.29	18.46	5.40	18.46	5.51	17.73	5.27	17.00	5.03	15.53	4.55
	9	7.9	18.46	5.11	18.46	5.22	18.46	5.33	17.73	5.09	17.00	4.86	15.53	4.39
	11	9.8	18.46	4.93	18.46	5.04	18.46	5.14	17.73	4.92	17.00	4.69	15.53	4.24
	13	11.8	18.46	4.75	18.46	4.85	18.46	4.96	17.73	4.74	17.00	4.52	15.53	4.09
	15	13.7	18.46	4.58	18.46	4.67	18.46	4.77	17.73	4.56	17.00	4.35	15.53	3.94
50	-14.7	-15	9.77	3.65	9.77	3.73	9.77	3.80	9.38	3.64	8.99	3.47	8.22	3.14
	-12.6	-13	10.31	3.71	10.31	3.79	10.31	3.87	9.90	3.70	9.49	3.53	8.68	3.19
	-10.5	-11	10.86	3.77	10.86	3.85	10.86	3.93	10.42	3.76	9.99	3.58	9.13	3.24
	-9.5	-10	11.11	3.80	11.11	3.88	11.11	3.96	10.67	3.79	10.23	3.61	9.35	3.26
	-8.5	-9.1	11.37	3.83	11.37	3.91	11.37	3.99	10.92	3.81	10.47	3.64	9.57	3.29
	-7	-7.6	11.76	3.87	11.76	3.95	11.76	4.03	11.29	3.86	10.83	3.68	9.89	3.33
	-5	-5.6	12.28	3.93	12.28	4.01	12.28	4.09	11.79	3.91	11.30	3.73	10.33	3.38
	-3	-3.7	12.80	3.98	12.80	4.07	12.80	4.15	12.29	3.97	11.78	3.79	10.77	3.43
	0	-0.7	13.57	4.07	13.57	4.16	13.57	4.24	13.03	4.06	12.50	3.87	11.42	3.50
	3	2.2	14.35	4.16	14.35	4.24	14.35	4.33	13.78	4.14	13.21	3.95	12.07	3.57
	5	4.1	14.87	4.21	14.87	4.30	14.87	4.39	14.28	4.20	13.69	4.01	12.51	3.62
	7	6	15.39	4.27	15.39	4.36	15.39	4.45	14.77	4.26	14.16	4.06	12.94	3.67
	9	7.9	15.39	4.13	15.39	4.21	15.39	4.30	14.77	4.11	14.16	3.93	12.94	3.55
	11	9.8	15.39	3.98	15.39	4.07	15.39	4.15	14.77	3.97	14.16	3.79	12.94	3.43
	13	11.8	15.39	3.84	15.39	3.92	15.39	4.00	14.77	3.83	14.16	3.65	12.94	3.30
	15	13.7	15.39	3.70	15.39	3.78	15.39	3.85	14.77	3.69	14.16	3.52	12.94	3.18

3. Dimensions/Required Installation Space

3.1) Dimensions



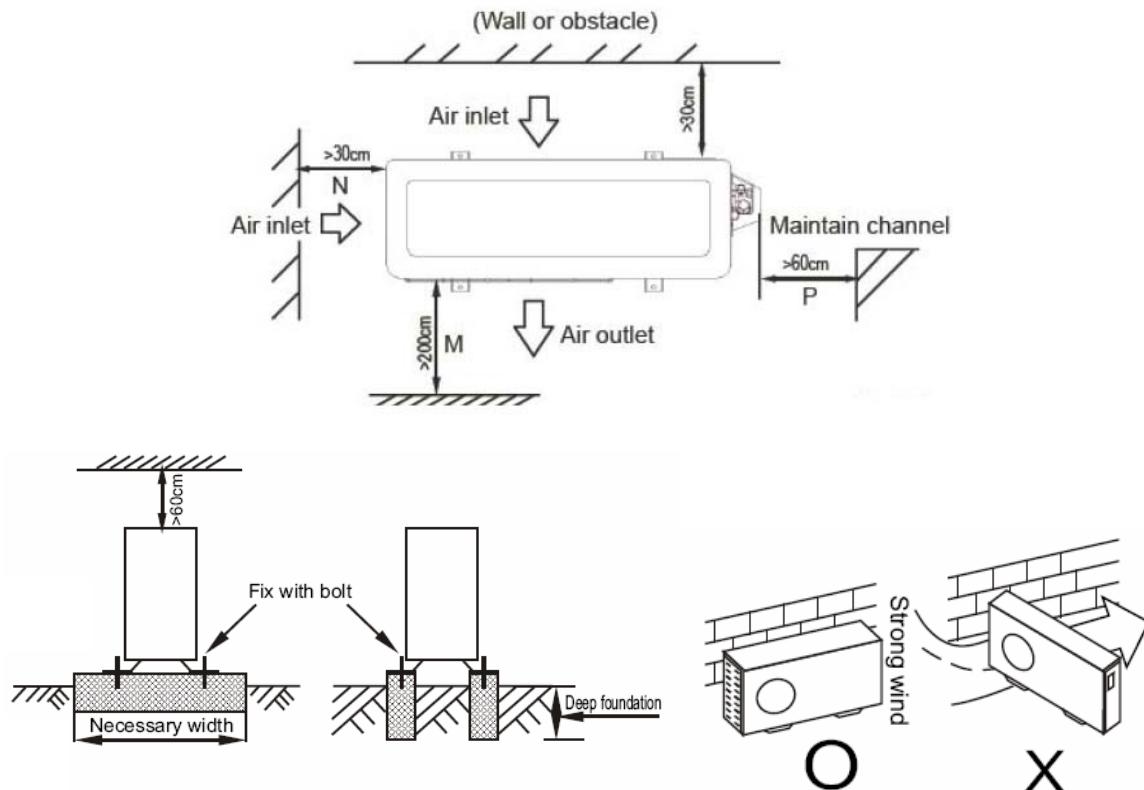
Model	A	B	C	D	E	F	H	Remark
YDS-100WC15/35	940	600	360	400	376	1020	1245	R-410A
YDS-140WC15/35								



YDS-280WC

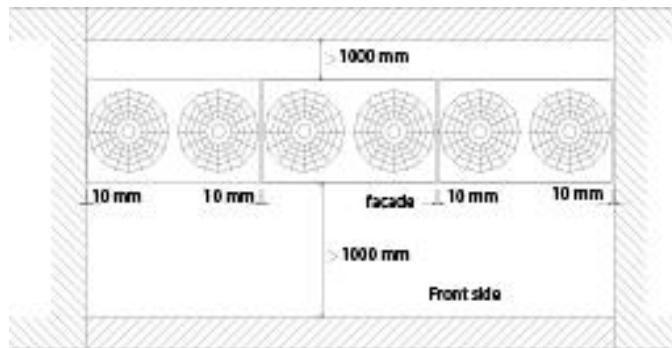
3.2) Required installation space

3.2.1 10 and 14 kW

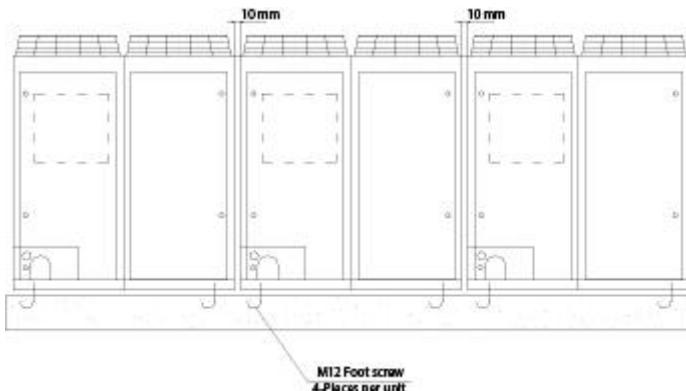


3.2.2 28 kW

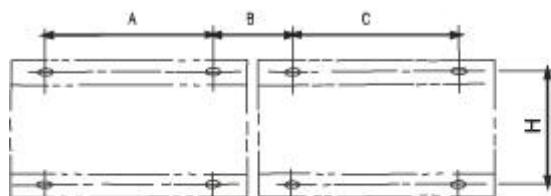
- (1) Power supply equipment is preferred to be installed by the side of the outdoor unit;
- (2) ensure there is sufficient space for the maintenance of the outdoor unit;
- (3) A proper space between outdoor units should be kept;



(4) 10mm distance should be left between outdoor units;



(5) Distance between foot screws is shown as follows; (unit: mm)



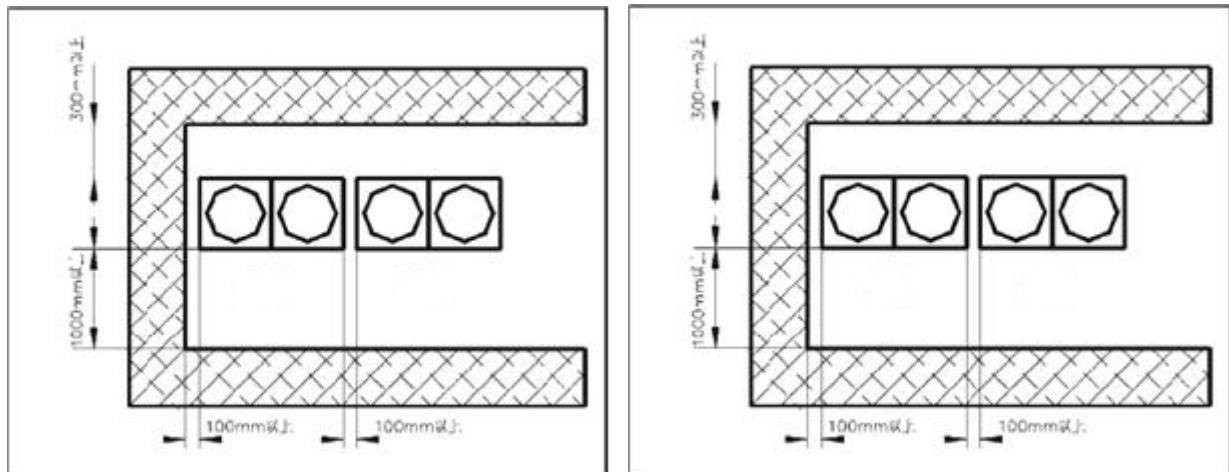
kW	10,14	28
A	624	1030
B		55
C		1030

(6) Outdoor unit arrangement

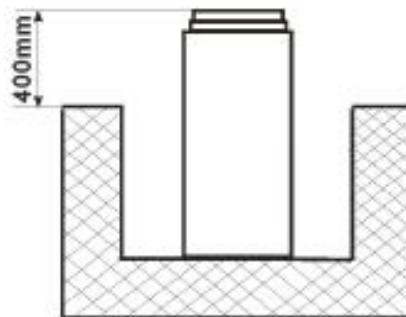
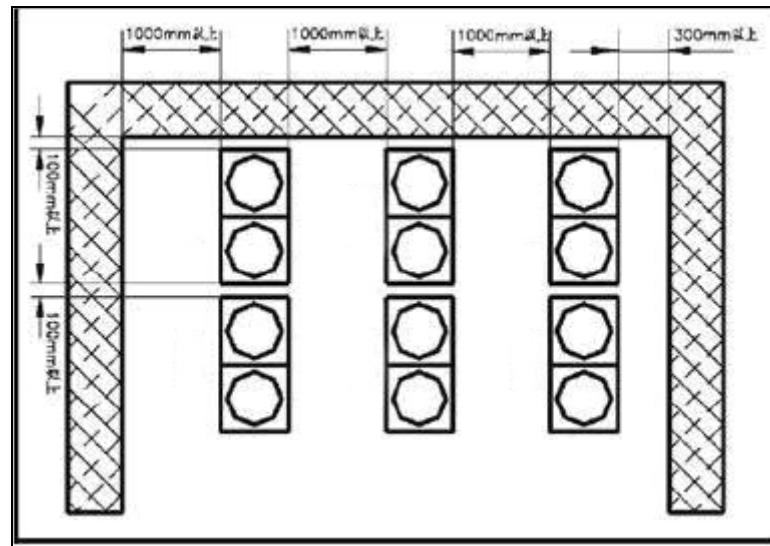
1) Outdoor units are higher than the surrounding buildings

Outdoor units are aligned in one line

Outdoor units are aligned in two lines



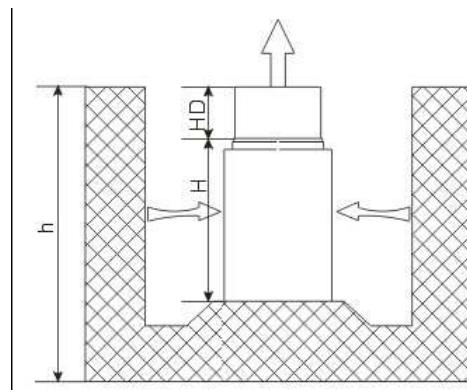
More than two line of outdoor units



(7) Outdoor units are lower than the surrounding obstacles

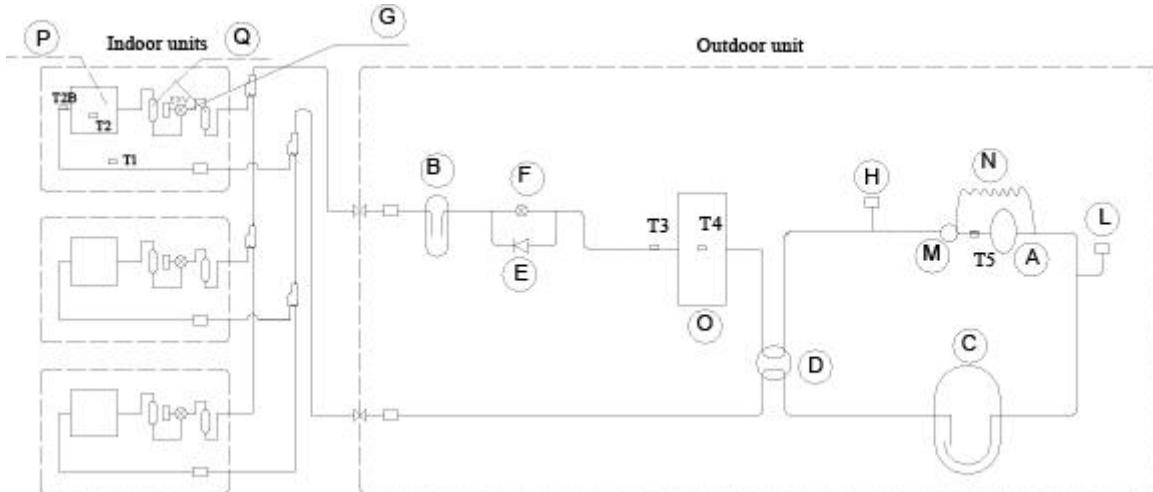
If the outdoor units are lower than the surrounding obstacles, in order to ensure an effective "heat exchange" a conduit is strongly recommended to help the heat emission and avoid the discharging air being absorbed into the system again. The conduit is made on the installation spot with the height $HD = H - h$.

(Note; because the outdoor fan motor have no enough static pressure, the Max. Length should be less than 3meters.)



4. Piping Diagrams

4.1) 10kw, 14 kW



Instruction of temperature sensor:

T1: Ambient temperature sensor is used to compare to the setting temperature and judge and decide the open degree of EXV and decide the output capacity (for indoor units every indoor unit has a T2 temperature sensor).

T2: Middle temperature sensor of evaporator, is used to modify the open degree of indoor unit EXV compared to the average temperature of T2 (for indoor units every indoor unit have a T2 temperature sensor) Available in cooling mode

T2B: outlet temperature of evaporator, is used to modify the open degree of indoor unit EXV compared to the average temperature of T2B (for indoor units every indoor unit have a T2B temperature sensor) Available in heating mode

T3: outlet temperature of condenser (in cooling mode), is used to judge whether the system should to operate defrosting program and judge whether should be stop the defrosting program.

T4: Outdoor ambient temperature, it has two functions: a. to adjust the speed of outdoor fan motor; b. to modify the output of system.

T5: discharge temperature of compressor, is used to protect the compressor avoid damage because of superheating

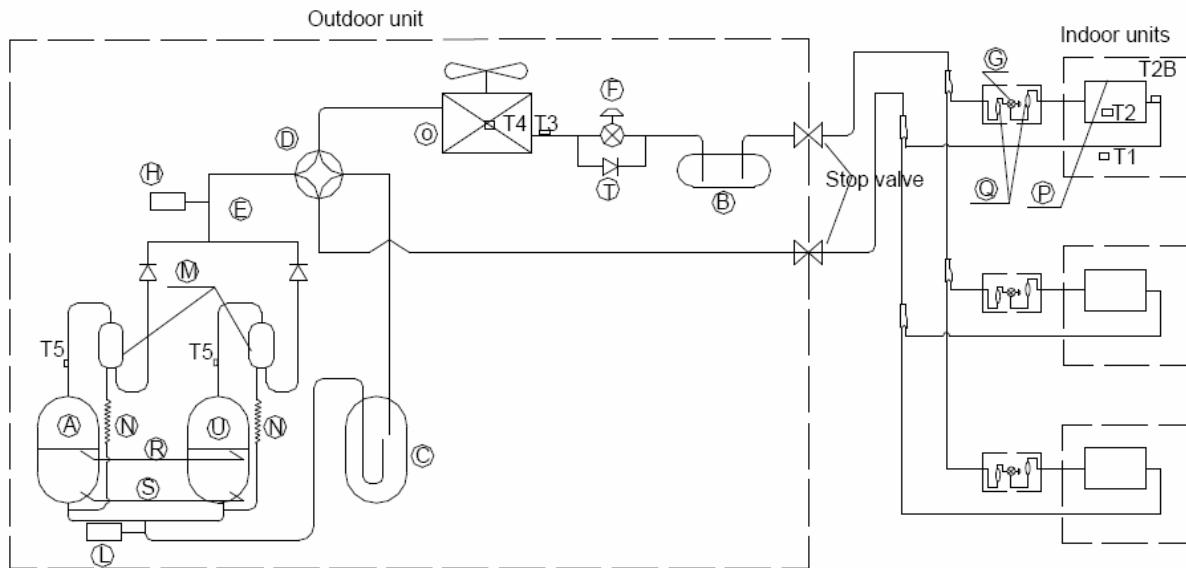
Instruction of other important components:

A. Compressor: Adopts the Copeland (In USA) Digital scroll compressor and controls the output capacity range from 10% to 100% step less capacity modulation.

B. High-pressure accumulator: In the partial load, the excrecent refrigerant will be storage in this equipment and decrease the load and power input.

-
- C. Low-pressure accumulator: In the partial load, the excrement refrigerant will be storage in this equipment and decrease the load and power input.
 - D. Four-way valve: It is only available for cooling and heating system and change the refrigerant flow direction.
 - E. Check valve: It is only available in cooling mode to form a refrigerant loop.
 - F. Electronic expansion valve: It is only available in heating mode to control system's superheating and function as a capillary tube to decrease the refrigerant pressure and function as throttle.
 - G. Electronic expansion valve: According to the capacity requirement of indoor unit adjust the refrigerant flow volume.
 - H. High-pressure switch: Switches trip when preset pressure exceeds $3.3 \pm 0.1\text{MPa}$, thus stopping operation.
 - L. Low-pressure switch: Switches trip when the suction pressure is lower than $0.15 \pm 0.1\text{MPa}$, thus stopping operation.
 - M. Oil separator: Device that collected oil discharged from the compressor and returns it to the compressor via oil return capillary. Also function as reservoir for holding excess oil.
 - N. Oil return capillary: Function as a way for discharged oil return to the compressor.
 - O. Outdoor heat exchanger: Exchange the heat with outdoors ambient
 - P. Indoor heat exchanger: Exchange the heat with indoor ambient
 - Q. Muffle and Filter: Decrease the noise and avoid other things blocked the indoor unit EXV.

4.2) 28kw -Single fan



Instruction of temperature sensor:

T1: Ambient temperature sensor is used to compare to the setting temperature and judge and decide the open degree of EXV and decide the output capacity (for indoor units every indoor unit has a T2 temperature sensor).

T2: Middle temperature sensor of evaporator, is used to modify the open degree of indoor unit EXV compared to the average temperature of T2 (for indoor units every indoor unit have a T2 temperature sensor) Available in cooling mode

T2B: outlet temperature of evaporator, is used to modify the open degree of indoor unit EXV compared to the average temperature of T2B (for indoor units every indoor unit have a T2B temperature sensor) Available in heating mode

T3: outlet temperature of condenser (in cooling mode), is used to judge whether the system should to operate defrosting program and judge whether should be stop the defrosting program.

T4: Outdoor ambient temperature, it has two functions: a. to adjust the speed of outdoor fan motor; b. to modify the output of system.

T5: discharge temperature of compressor, is used to protect the compressor avoid damage because of superheating

Instruction of other important components:

A. Compressor: Adopts the Copeland (In USA) Digital scroll compressor and controls the output capacity range from 10% to 100% step less capacity modulation.

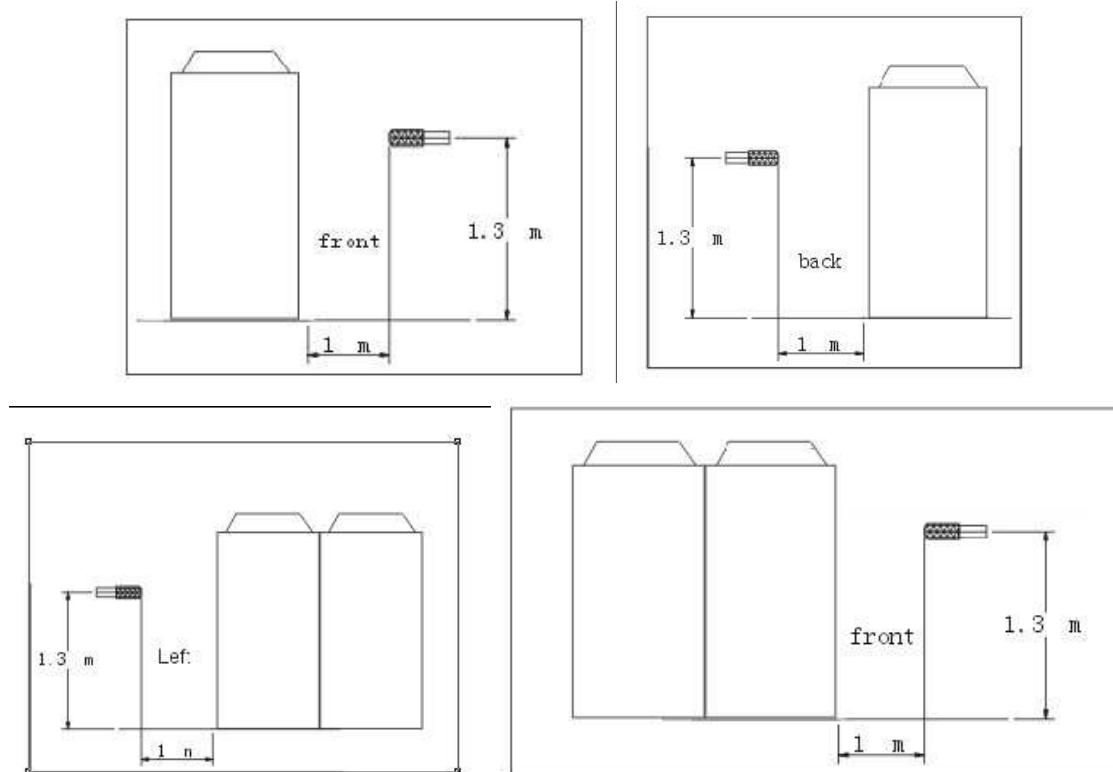
B. High-pressure accumulator: In the partial load, the excrecent refrigerant will be storage in this equipment and decrease the load and power input.

C. Low-pressure accumulator: In the partial load, the excrecent refrigerant will be storage in this equipment and decrease the load and power input.

-
- D. Four-way valve: It is only available for cooling and heating system and change the refrigerant flow direction.
 - E. Check valve: Prevents the refrigerant return back to the compressor and damaged the compressor.
 - F. Electronic expansion valve: It is only available in heating mode to control system's superheating and function as a capillary tube to decrease the refrigerant pressure and function as throttle.
 - G. Electronic expansion valve: According to the capacity requirement of indoor unit adjust the refrigerant flow volume.
 - H. High-pressure switch: Switches trip when preset pressure exceeds $3.3 \pm 0.1\text{MPa}$, thus stopping operation.
 - L. Low-pressure switch: Switches trip when the suction pressure is lower than $0.15 \pm 0.1\text{MPa}$, thus stopping operation.
 - M. Oil separator: Device that collected oil discharged from the compressor and returns it to the compressor via oil return capillary. Also function as reservoir for holding excess oil.
 - N. Oil return capillary: Function as a way for discharged oil return to the compressor.
 - O. Outdoor heat exchanger: Exchange the heat with outdoors ambient
 - P. Indoor heat exchanger: Exchange the heat with indoor ambient
 - Q. Muffle and Filter: Decrease the noise and avoid other things blocked the indoor unit EXV.
 - R. Gas balance pipe: In the top of compressors to balance the suction pressure and guarantee every compressor in the same system have the same refrigerant volumes.
 - S. Oil balance pipe: In the bottom of compressors to balance the oil level of every compressor in system.
 - T. Check valve: It is only available in cooling mode to form a refrigerant loop.
 - U. Fixed compressor: On/off according to the capacity requirement of total indoor units

5. Noise level

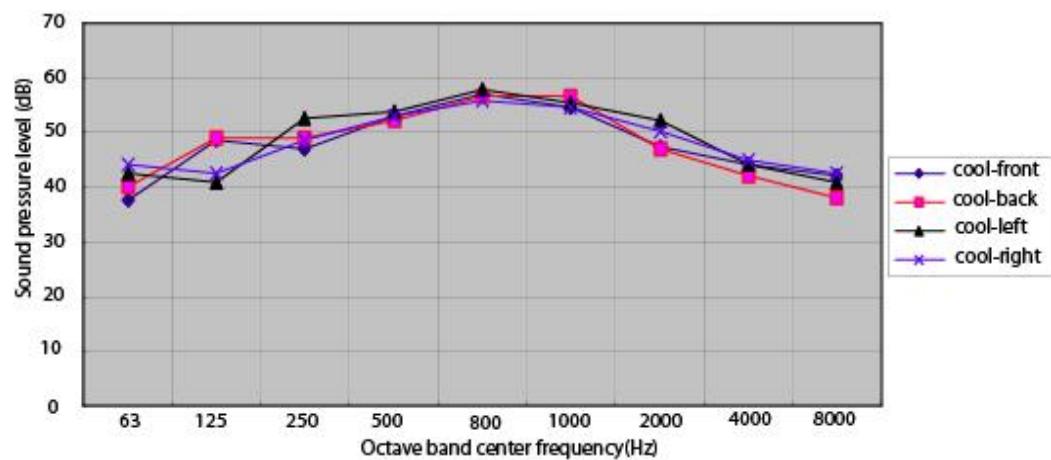
5.1) Standard of testing



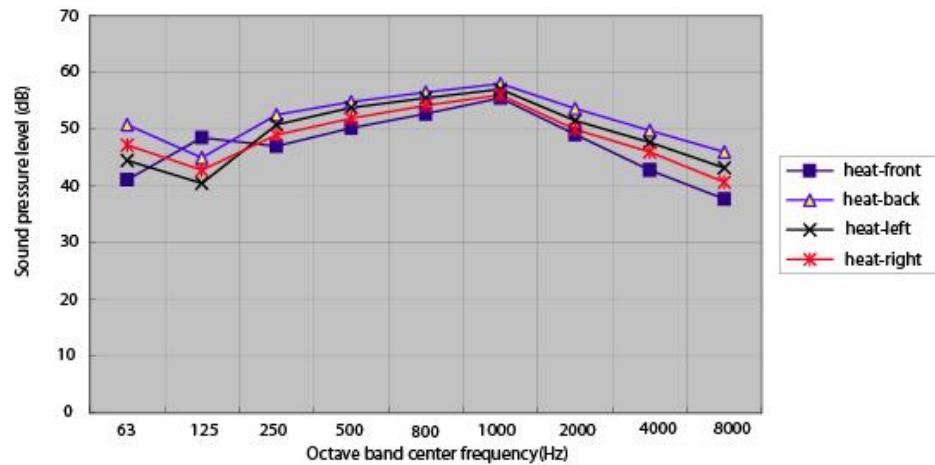
5.2) Octave band level

1) YDS-100WC15/35, YDS-140WC15/35

Cooling

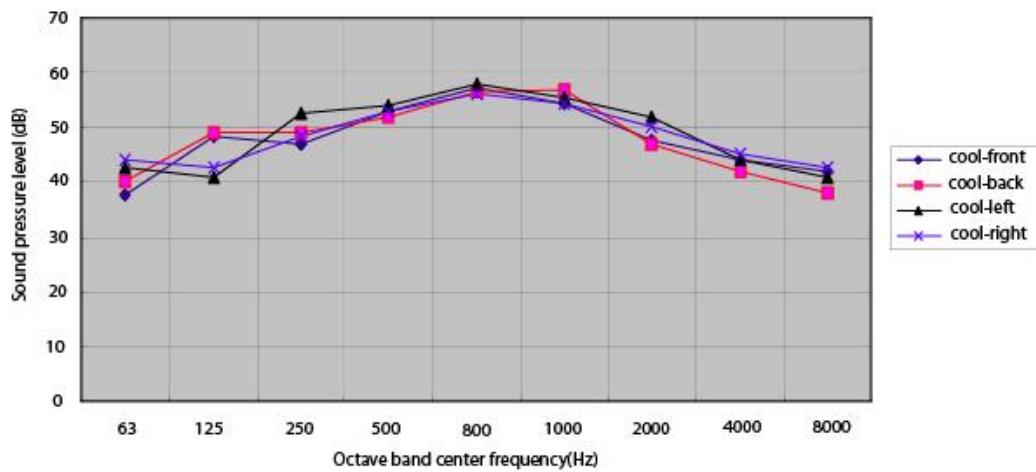


Heating

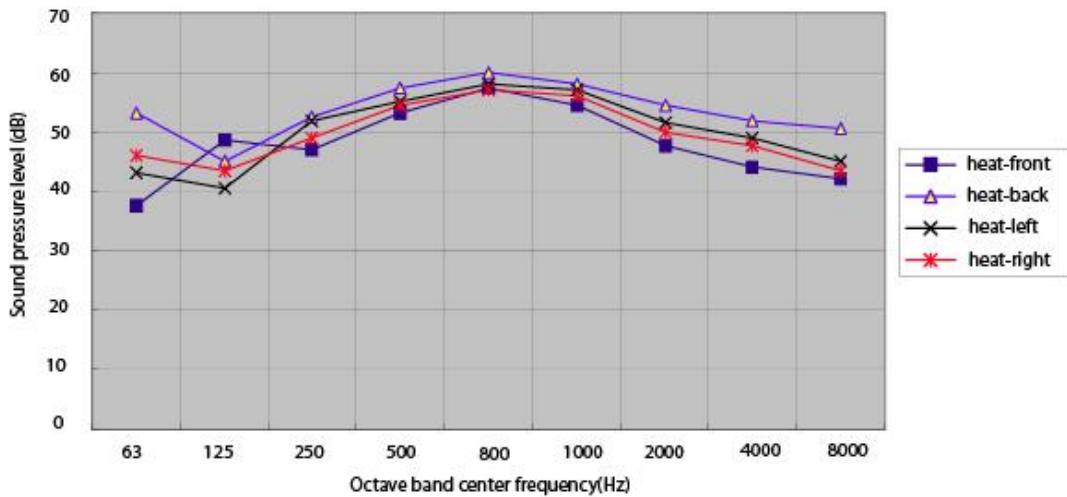


2) YDS-280WC35

Cooling

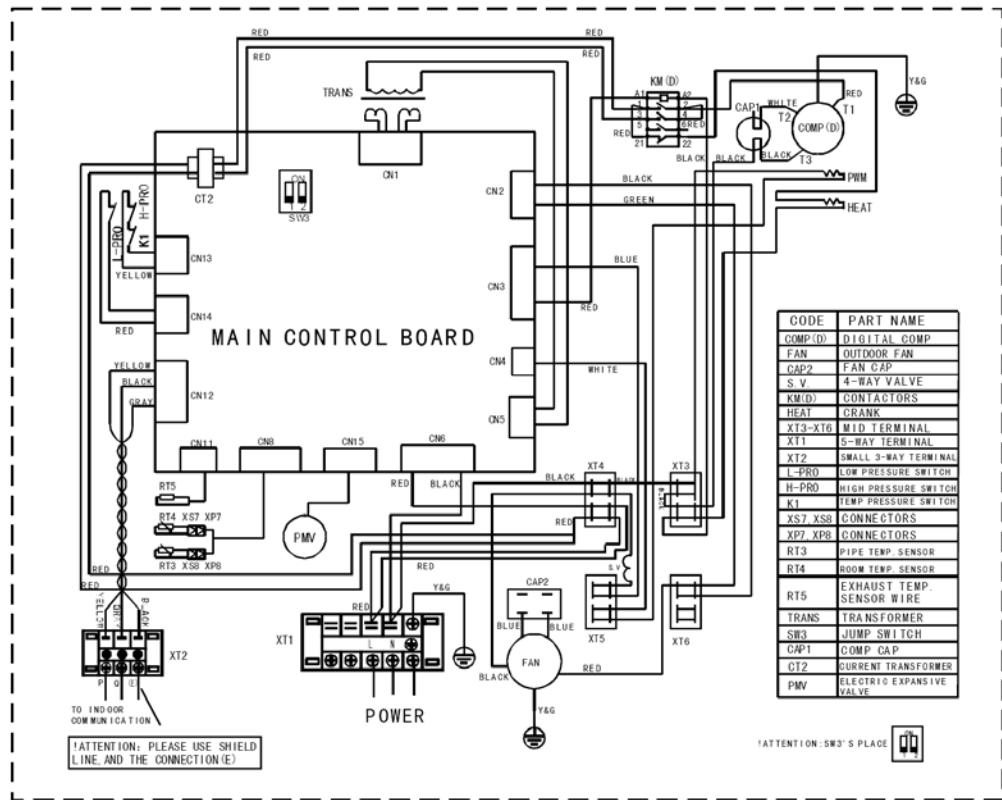


Heating

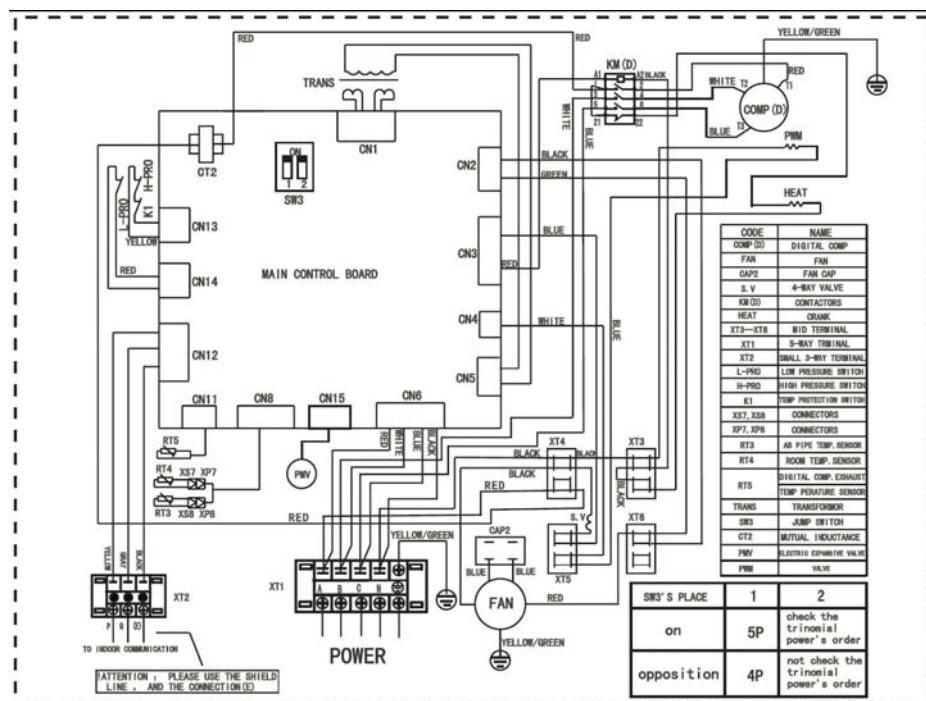


6. Outdoor wiring diagram

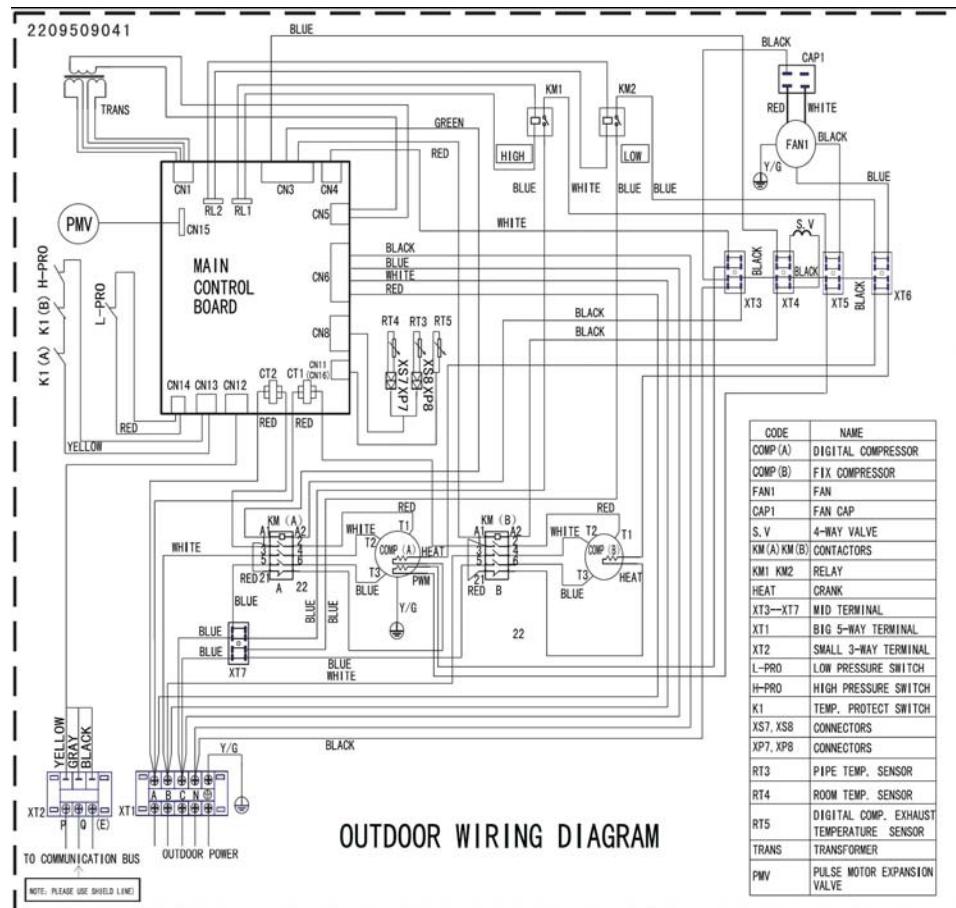
6.1) YDS-100/140WC15



6.2) YDS -100/140WC35



(3) YDS-280WC35



7 Trouble-shooting

7.1) The air-conditioner does not run after pressing ON/OFF button.

1) Communication malfunction between outdoor units (Only valid for 20,30HP)

Display: The outdoor unit digital diode is displaying "E0"

Solutions: (1) Check if communication cable is broken off

(2) Exchange P, Q line if there is no broken circuit

2) Phase sequence error

Display: The outdoor unit digital diode is displaying "E1"

Solutions: (1) Check if the voltage between the power line terminals A, B, C of outdoor units and N is normally 220v. If not please check whether the power lines are well connected.

(2) After checking the voltage without finding any error, please transpose any two of the outdoor units power lines (A, B.C.)

3) Communication trouble between indoor unit and outdoor unit

Display: Outdoor unit digital diode is displaying "E2" and the timer lamp on the display board of the indoor unit, which has the communication trouble blinks.

Solutions: (1) Check if communication cable is broken off

(2) Exchange P, Q line if there is no broken circuit

4) Outdoor unit temperature sensor abnormal

Display: Outdoor unit digital diode is displaying E3, E4, E5, and E7 (Only valid for 20,30HP)

Solutions: (1) Measure T3, T4, T5, T6 electric resistance respectively and replace the broken one if the electric resistance is not correct.

(2) If the electric resistance is normal, please test the outdoor PCB and change a new one if it does not work well.

5) Indoor unit temperature sensor abnormal

Display: The operation lamp of the indoor unit blinks

Solutions: (1) Measure T1, T2, and T3 electric resistance respectively to see if there is an open or short circuit

(2)If the electric resistance is normal, please test the indoor PCB and change a new one if it does not work well.

6) Water-level switch abnormal

Display: Outdoor unit digital diode display "E6" and Indoor unit alarm lamp blinks

Method: Check if the water level switch is closed and replace a new switch if the old one is bad.

7) The address of outdoor unit malfunction (Only valid for 20,30HP)

Display: Outdoor unit digital diode display "E8"

Method: Check the address code of outdoor unit PCB and make sure the address code is in the right position.

7.2) After running a while the system stops to perform protection.

1) Water level alarming trouble

Display: Indoor unit alarm lamp blinks

Solutions: (1) Check if water pump runs well

(2) Check if the drainpipe is broken

(3) Check if the water level switch is blocked

(4) If the above situations do not occur please change a new indoor PCB

2) High-pressure protection

Display: The outdoor unit digital diode is displaying:"P1"

Solutions: (1) Check if the high-pressure protection switch is broken or loosen

(2) Test if the discharge temperature of the compressor is too high. If the discharge temperature is too high and the current is lower than the rated current, the system is probably lack of refrigerant and replenishes it.

(3)Test if the pressure (high pressure) is too high or the current is overloaded.

If so the possible causes are: the overcharge of refrigerant, the system air leakage, or bad ventilation conditions.

a. Let the surplus refrigerant out if refrigerant is too much

b. Let the entire refrigerant out, re-visualize the system and then replenish the refrigerant if air is penetrating into the system.

c. Improve the ventilation and heat-emission environment for the outdoor unit

3) Low-pressure protection

Display: The outdoor unit digital diode is displaying:"P2"

Solutions: (1) Check if the low pressure protection switch is broken or loosen

(2) Test if the pressure (low pressure) is too low. The probable reasons are: the overcharge of refrigerant or system blockade.

4) Over current protection

Display: The outdoor unit diode. Is displaying:"P3"

Solutions: (1) Check if the current is overloaded.

(2) The possible reasons for the over current are: the overcharge of refrigerant, air leakage, and bad ventilation and heat-emission conditions.

5) Compressor discharge temperature protection, Condenser high temperature protection

Display: P4/ P5 is displayed on the outdoor unit diode

Solutions: (1) Test digital discharge temperature, outdoor condenser T3 temperature

(2) Test system pressure

(3)High digital discharge temperature is likely owing to the lack of refrigerant, air leakage or system blockade. Check the above items respectively to solve the problem.

(4) Condenser high temperature protection owes to the overcharge of refrigerant, air leakage or bad ventilation and heat-emission conditions.

7.3) Cooling or heating capacity is not enough.

1) Address setting for the indoor units is wrong

Solutions: Do spot check of the indoor unit address and reset for those repeated ones.

2) Capacity code setting for the indoor units is wrong

Solutions: Do spot check of the indoor unit capacity code and reset for those repeated ones.

3) Overcharge or lack of refrigerant

4) The system air leakage or alcidine leakage

5) PWM of the digital compressor leakage

Solutions: Please change a new PWM valve

6) 4-way valve leakage / blockade

Solutions: Replace with a new 4-way valve

7) Compressor leakage/ wear and tear

Solutions: Replace with a new compressor

8) Too many indoor units are connected. If all the indoor units are in operation, cooling/heating effect will be lowered.

Solutions: (1) Avoid all the indoor units running simultaneously.

(2) Reduce the indoor units that connected in the system

7.4)The whole system may run well while a specific indoor unit does not operate quite well

1) Mode conflict

If within one system some indoor units are in cooling mode, while some others are in heating mode, mode conflict will be displayed on those cooling units LED and as a result those units will be power off.

2) Indoor sensor electric resistance changing

When the indoor sensor electric resistance changes to a certain extent, under the control of the PCB, the indoor unit will stop running at the set temperature. Consequently the cooling effect is weakened

3) Electric throttle kit blockade

Solutions: Use new electric throttle kits

4) EXV trouble of the power off units

If the refrigerant is leaked owing to EXV trouble of the power off units, the refrigerant will run through that power-- off units. As a result the cooling/heating capacity of the operating units is lowered.

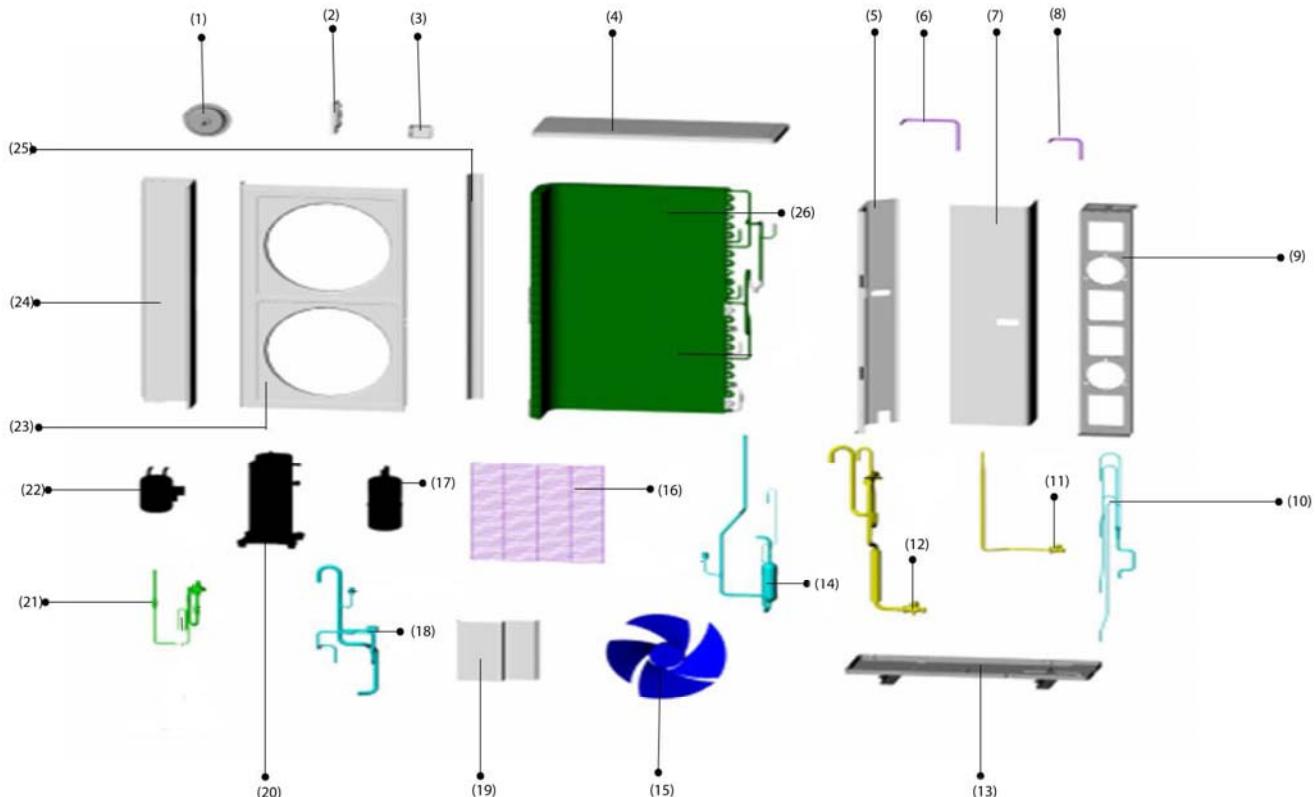
Solutions: Replace all the bad electric throttle kits

8. Explode view and spare part list.

MODEL

YDS-100-140WC15/35

R-410A 220-240 V 1Ph/3Ph 50Hz



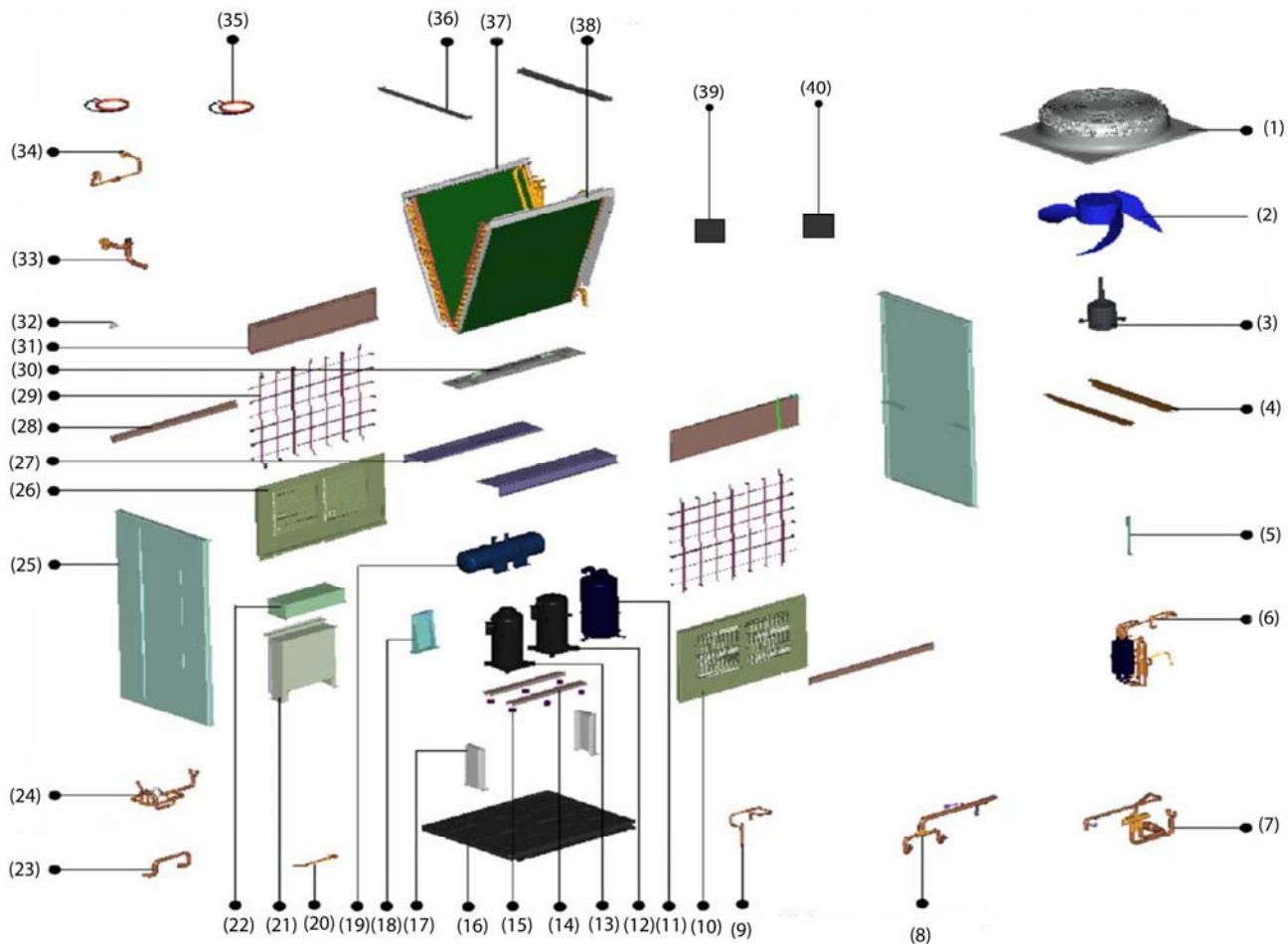
ITEM NO	PART NUMBER				PART NAME	QTY	REMARK
	100WC15	140WC15	100WC35	140WC35			
1		202M400430102			Motor	2	
2	201M295400046	201M295400030	201M295400046	201M295400030	Valve plate	1	
3	201M148700009	201M145400003	201M148700009	201M145400003	Handle	2	
4	201M290500038	201M290500109	201M290500038	201M290500109	Top cover ass'y	1	
5		201M295500270			Partition board ass'y	1	
6	201M695590205		201M695090061		Accumulator connection pipe	1	
7	201M248700127	201M245400054	201M248700127	201M245400054	Front clapboard ass'y	1	
8	201M695590206		201M695090153		Accumulator connection pipe	1	
9		201M247890000			Motor bracket ass'y	1	
10	201M695590229		201M695590230		Capillary ass'y	1	
11		201M695090062			High pressure valve ass'y	1	
-		201M600720091			Low pressure valve	1	
12		201M695090141			4-way valve ass'y	1	
-		201M600600111			4-way valve	1	
-		201M600720425			Low pressure valve	1	
13	201M247800075	201M247800072	201M295590058	201M295090002	Base ass'y	1	
14	201M695590209		201M695090064		Discharge pipe ass'y	1	
-		202M301820020			Pressure controller	1	
15		201M100300102			Axial flow fan	2	
16	201M295400073	201M295020208	201M295400073	201M295020208	Grille	2	
17		201M601000107			Accumulator cylinder	1	
18	201M695590201		201M695090068		Suction pipe ass'y	1	
-		202M301820021			Pressure controller	1	
-		201M600600501			Pressure-relief-valve	1	
19	203M395590006		203M395090018		E-part box ass'y	1	

-	201M295590052	201M248700064	201M248700022	Electric installation board	1	
-	201M395500040	201M395590000		Main controller ass'y	1	
-	202M300850050	202M300850043		AC contactor	1	
-	202M300900109			Transformer	1	
-	202M401000412		-	Compressor capacitor	1	
-	202M401100505			Motor capacitor	2	
20	201M401420220	201M401420050		Compressor	1	
21	201M695590192	201M695090071		Electronic expansion valve ass'y	1	
-	201M600900055			Strainer	1	
-	201M600810002	201M600800027		One way valve	1	
-	201M600900040			Strainer	2	
-	201M601300021			Electronic expansion valve	1	
22	201M601000020			Accumulator cylinder	1	
23	201M248700039	201M245400051	201M248700039	Front panel	1	
24	201M275600016	201M275600010	201M275600016	Rear clapboard ass'y	1	
25	201M290500413	201M290500106	201M290500413	Rear support board II	1	
26	201M595590008	201M595590009		Condenser ass'y	1	
-	202M301310063			Temp sensor	1	
-	202M450200331			Temp sensor ass'y	1	

MODEL

YDS-280WC35

R-410A 220-240 V 3Ph 50Hz



ITEM NO	PART NO.	PART NAME	QTY	REMARK
1	201M195010052	Top cover	1	
2	201M100300203	Axial flow fan	1	
3	202M400480022	motor	1	
4	201M295010049	Motor bracket	2	
5	201M295010064	oil separator supporter	1	
6	201M695090098	discharge pipe ass'y	1	
-	201M600800027	One way valve	1	
-	201M600810003	One way valve	1	
-	201M600900067	Strainer	2	
7	201M695090044	4-way valve ass'y	1	
-	201M600900058	Strainer	1	
-	201M600500171	Branch pipe	1	
-	202M301820014	Pressure controller	1	
-	201M600600110	4-way valve	1	
-	201M601200004	Pipe joint	1	
8	201M695090157	Suction pipe ass'y	1	
-	201M600500211	branch pipe	1	
-	202M301820021	Pressure controller	1	
-	201M601200004	Pipe joint	1	
9	201M695030312	unloading switch ass'y	1	
-	201M600600501	Pressure-relief-valve	1	

-	201M600980000	Strainer	1	
10	201M295010070	Cover	1	
11	201M601100016	seporator	1	
12	201M401420030	Compressor	1	
13	201M401420040	Compressor	1	
14	201M295020905	compresso supporting board ass'y	2	
15	201M295020906	compressor gasket	8	
16	201M295030308	Base ass'y	1	
17	201M295010057	Drainage pan holder	2	
18	201M295000051	Valve plate	1	
19	201M601010001	Accumulator	1	
20	201M695020901	connection pipe	1	
21	203M395590000	E-part box ass'y	1	
-	202M300900109	Transformer (TT2-B35+D90-1F)	1	
-	201M395590001	Main control board ass'y	1	
-	202M401000410	Compressor capacitor	1	
-	202M300800003	Relay	2	
-	202M301610601	Surge suppresser	2	
-	202M300850043	Contactor	2	
22	201M295010097	E-Part box cover	1	
23	201M695020902	connection pipe	1	
24	201M695090045	Electronic expansion valve ass'y	1	
-	201M601300021	Electronic expansion valve	1	
-	201M600500206	branch pipe	1	
-	201M600810001	One way valve	1	
25	201M295030315	Side board	2	
26	201M295010071	Cover	1	
26	201M295010095	Support board	2	
27	201M295010061	cover	2	
29	201M295010059	Rear-front net	2	
30	201M295010100	Drainage pan	1	
31	201M295010096	Cover	2	
32	201M295000016	Fixing board	1	
33	201M695090106	Low pressure valve ass'y	1	
-	201M600710105	Low pressure valve	1	
34	201M695090105	High pressure valve Ass'y	1	
-	201M600710517	High pressure valve	1	
-	201M600900055	Strainer	1	
35	202M495020901	compressor electric heater	2	
36	201M295010094	Clapboard supporting board	2	
37	201M595090004	Condenser ass'y	1	
-	201M595090002	Condenser	1	
-	201M595090005	Condenser	1	
38	201M595090001	Condenser ass'y	1	
-	201M595090002	Condenser	1	
-	201M595090003	Condenser	1	
39	202M450200314	ambient temp sensor ass'y	1	
40	202M450200331	evaporator temp sensor ass'y	1	
41	200M500100003	R410A	11Kg	

Part 4 Indoor Units

Contents

1. Introduction.....	70
2. Four-way cassette type.....	71
3. Wall mounted type.....	102
4. Ceiling &Floor type.....	125
5. Medium static pressure type.....	151
6. Expose and conceal floor standing.....	183
7. Hi ESP duct.....	220

1. Introduction

1.1) Indoor unit range

Type	Model	Capacity (kW)										Refrigerant Type
Cassette	Four-way cassette type		2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	R-410A
	Compact	2.2	2.8	3.6	4.5	5.6						
Duct	Medium ESP	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	R-410A
	High ESP								20.0	25.0	28.0	R-410A
Floor standing		2.2	2.8	3.6	4.5	5.6	7.1	8.0				R-410A
Ceiling & floor type				3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	R-410A
Wall-mounted type		2.2	2.8	3.6	4.5	5.6	7.1					R-410A

1.2) Main characteristics

Electronic throttle kit



- (1). Extremely low noise, 3 dB (A) lower compared with which put EXV into the indoor unit case.
- (2). Easy maintenance. Being separated from indoor unit, fixed on the body or inside the indoor unit independently, thus it can be replaced easily.
- (3). Easy installation, just quick connection by flare nut.

Remark:

- (1) One electronic Throttle Kit only can be applied to one indoor unit.
- (2) Electronic Throttle Kit needn't order separately, it has been packed with the indoor units together in the factory.

Part 4.1 Four-way cassette

Contents

1. Features	73
2. Specifications.....	77
3. Capacity table.....	80
4. Dimensions.....	88
5. Service space.....	89
6. Wiring diagrams.....	90
7. Electrical characteristic.....	92
8. Refrigerant system diagram.....	92
9. Noise level.....	93
10. Velocity & temperature distribution.....	95
11. Exploded view parts.....	96

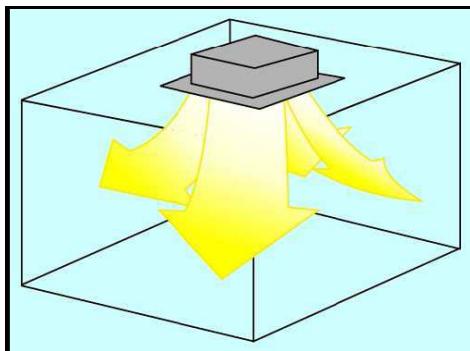
1. Feature

1.1) Low operation noise

- Streamline plate ensures quietness
- Creates natural and comfortable environment

1.2) Efficient cooling

- Equal, fast and wide-range cooling



Four-way airflow



3- Dimensional Screw fan

1.3) Excellent performance. Higher heat-exchanging efficiency and lower noise.

The optimal evaporator & sufficient airflow volume guarantees the excellent capacity

1.4) The adoption of the most advanced 3- Dimensional Screw fan

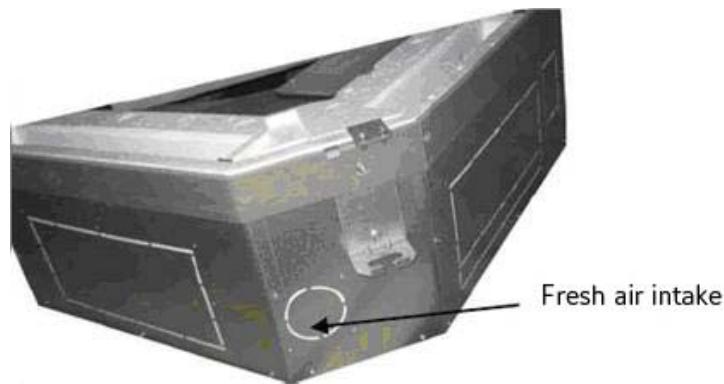
- Reduces the air resistance passing through
- Smoothes the air flow
- Makes air speed distribution to the heat exchange uniform



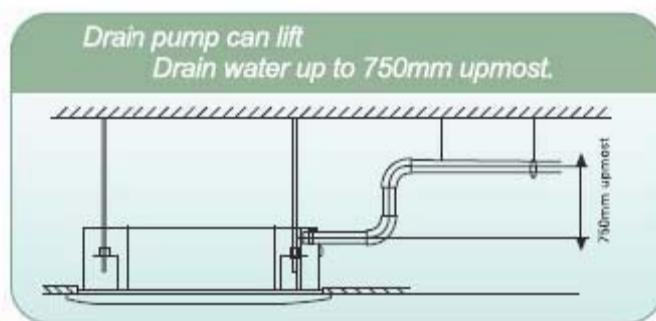
1.5) Adding digital tube displaying on the display board. LED can display the Error Code to make the malfunction checking easier.



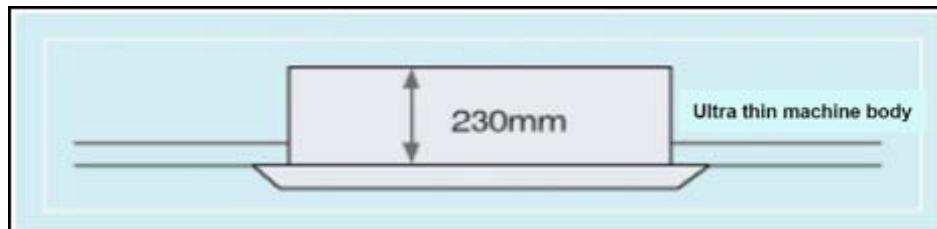
1.6) Fresh air makes life healthier and more comfortable.



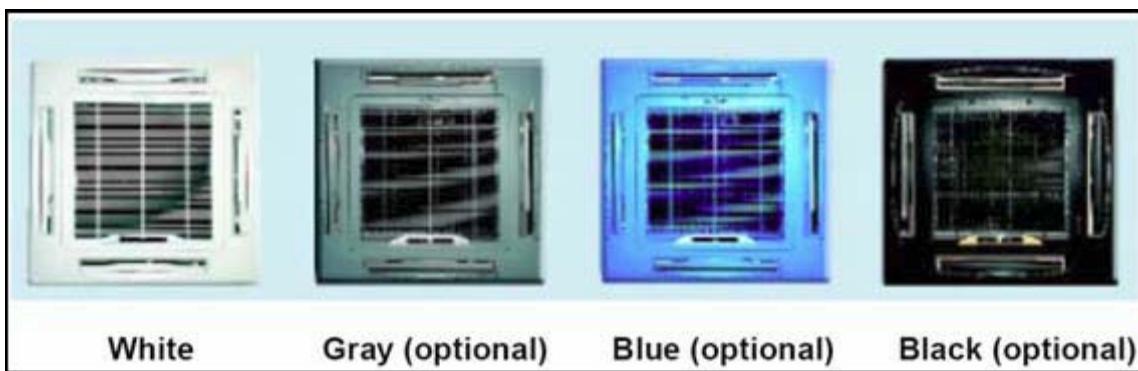
1.7) Drainage pump can take up the condenser water to 750mm.



1.8) Ultra thin machine body to easy installation and maintenance: 2.8kW~8.0kW: 230mm, 9.0kW~11.2kW:300mm.



1.9) Different color panels for choose: White, Gray, Blue, Black

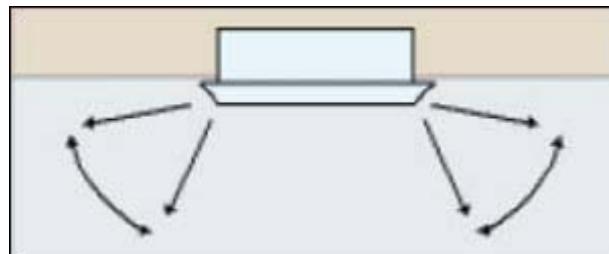


1.10) Swing angle of louver

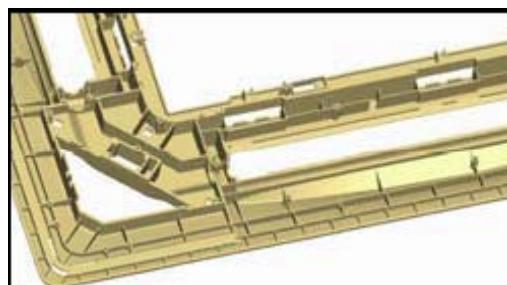
1) Add one more swing motor, one motor driving two louvers. Controlling the inter space of each part, minimizing the angle loss.

2) The swing angle of the first louver are 40~42 degrees and the second louver are 37~38 degrees.

New evaporator and inner configuration designed can acquire high heat-exchanger effect.

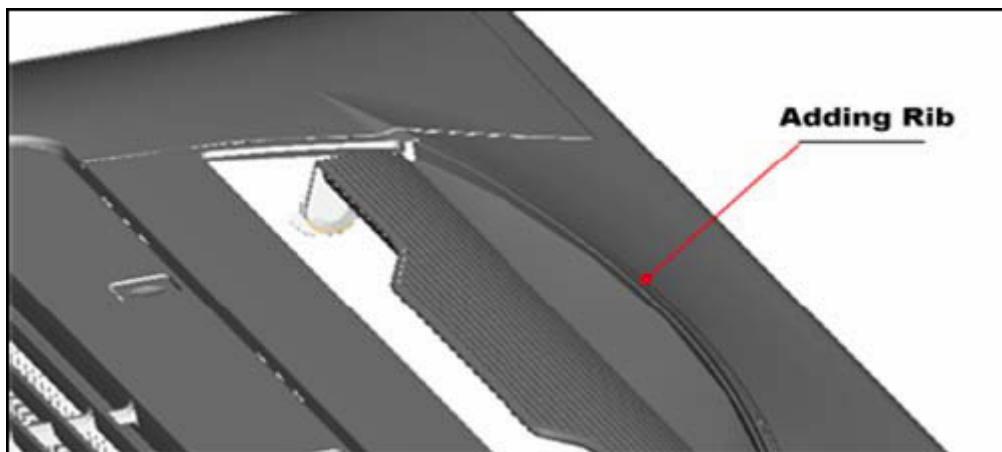


1.11) More strengthening rib design around the panel, preventing the distortion for the panel.



1.12) New outlet frame design to make the phenomena of coagulation great improvement: prevent the condensing water from damaging the air guide strip.

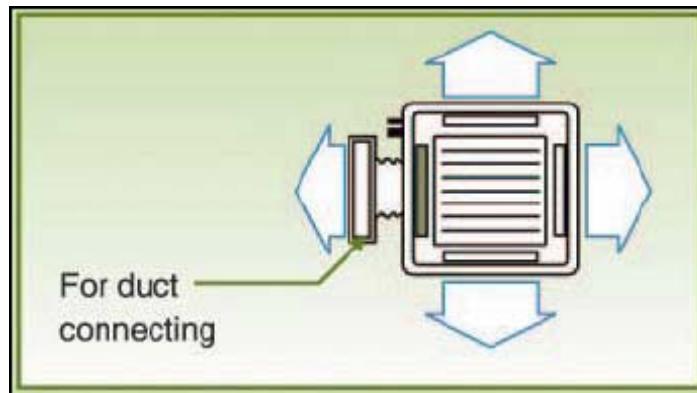
1.13) Adding rib on the panel of fan outlet, which can avoid the air outlet direct flow to people.



1.14) 4 speeds available, optional super high fan speed design suitable for the large building over 3m high.



1.15) Reserve spaces for air side-outlet, it is available to connect duct pipe hence Air supplying from the four sides to nearby small room.



1.16) Optimal design, smaller Control Box, Space saving and convenient for wiring, Using fire resistance galvanized steel for E-box material. Metal box make the control part more stable and prevent damaging

2. Specifications

2.1) Four -Way Cassette Compact YDS-22-56 GC15IA R-410A 50 Hz

Model		YDS-22GC15IA	YDS-28GC15IA	YDS-36GC15IA	YDS-45GC15IA	YDS-56GC15IA		
Power Supply	Ph-V-Hz		1 Ph-220-240 V-50 Hz					
Nominal capacity								
Cooling	Capacity	Btu/h	2.2	2.8	3.6	4.5		
	Input	W	58	58	58	63		
	Rated current	A	0.26	0.26	0.26	0.28		
Heating	Capacity	Btu/h	2.6	3.2	4.0	5.0		
	Input	W	58	58	58	63		
	Rated current	A	0.26	0.26	0.26	0.28		
Motor								
Input	W		65/59/55		64/57/48			
Capacitor	uF		1.2uF/450V		2.5uF/450V			
Speed (Hi/Me/Lo)	r/min		930/770		930/660			
Coil								
Number of rows			1		2			
Tube pitch(a)x row pitch(b)	mm		21x13.37					
Fin spacing	mm		1.4					
Fin type (code)			Hydrophilic aluminum					
Tube outside dia.and type	mm		Φ7					
Coil length x height x width	mm		1188x210x13.37		1247x26.74 x210			
Number of circuits			3		5			
Performance								
Noise level (Hi/Me/Lo)	dB(A)		38/35		39/36			
Air flow (Hi/Me/Lo)	m³/h		570/400					
Piping size Liquid/ Gas side	mm		Φ6.35/Φ12.7		Φ9.53/Φ15.9			
Containerization								
Unit	Dimensions (WxHxD)	mm	580 x 254 x580					
	Packing (WxHxD)	mm	750x340 x745					
	Net/Gross weight	Kg	18/25		24/30			
Panel	Dimensions (WxHxD)	mm	650 x30 x650					
	Packing (WxHxD)	mm	715 x115 x715					
	Net/Gross weight	Kg	3/5					
Qty per 20'/40'/40'HQ	Pieces		119/249/252					

Notes: 1. Nominal cooling capacities are based on the following conditions: return air temp. : 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)

2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)

2.2) Four - Way Cassette YDS-28-140 KC15IA R-410A 50 Hz

Model			YDS-28KC15IA	YDS-36KC15IA	YDS-45KC15IA	YDS-56KC15IA				
Power supply		Ph-V-Hz	1Ph-220-240V-50Hz							
Capacity										
Cooling	Capacity	kW	2.8	3.6	4.5	5.6				
	Input	W	90.0	90.0	90.0	90.0				
Heating	Capacity	kW	3.2	4.0	5.0	6.3				
	Input	W	90.0	90.0	90.0	90.0				
Motor										
Input		W	95/85/75							
Capacitor		uF	3uF/450V							
Speed (hi/mid/lo)		r/min	700/550/480							
Coil										
Number of rows			1	2						
Tube pitch(a)x row pitch(b)		mm	21x13.37							
Fin spacing		mm	1.45							
Fin type			Hydrophilic aluminum							
Tube outside dia. and type		mm	φ7			Inner groove tube				
Coil length x height x width		mm	1959.4x168x12.7	1959.4x168x25.4						
Number of circuits			4	8						
Performance										
Noise level (Hi/Med/Low)		dB(A)	42/38/35							
Air flow (Hi/Med/Low)		m³/h	950/800/650							
Piping size	Liquid side/ Gas side	mm	φ6.4/φ12.7			φ9.53/φ15.9				
Containerization										
Unit	Dimension (WxHxD)	mm	840x230x840							
	Packing (WxHxD)	mm	955x247x955							
	Net/Gross weight	kg	27/31	30/34						
Panel	Dimension (WxHxD)	mm	950x46x950							
	Packing (WxHxD)	mm	1035x90x1035							
	Net/Gross weight	kg	6/9							
Qty per 20'/40'/40'HQ		Pieces	62/132/135							

Notes: 1. Nominal cooling capacities are based on the following conditions: return air temp. : 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
 2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)

Model			YDS-71KC15IA	YDS-80KC15IA	YDS-90KC15IA	YDS-112KC15IA	YDS-140KC15IA			
Power supply		Ph-V-Hz	1Ph-220-240V-50Hz							
Capacity										
Cooling	Capacity	kW	7.1	8	9	11.2	14			
	Input	W	115	115	160	160	180			
Heating	Capacity	kW	8	9	10	12.5	15			
	Input	W	115	115	160	160	180			
Motor										
Input		W	120/110/100		165/143/114		204			
Capacitor		uF	3.5uF/450V		3.5uF/450V		4			
Speed (Hi/Me/Lo)		r/min	800/670/550		840/770/640		770/640/550			
Coil										
Number of rows			2			3				
Tube pitch(a)x row pitch(b)		mm	21x13.37							
Fin spacing		mm	1.45			1.5				
Fin type			Hydrophilic Aluminum							
Tube outside dia. and type		mm	φ7 Inner groove Tube							
Coil length x height x width		mm	1959.4x168x26.74			1916x252x40.1				
Number of circuits			8			2				
Performance										
Noise level (Hi/Me/Lo)		dB(A)	48/45/42		53/48/45		48/45/43			
Air flow (Hi/Me/Lo)		m³/h	1220/1010/820		1540/1300/1120		1802/1483/1284			
Piping size	Liquid / Gas side	mm	φ9.53/φ15.9							
Containerization										
Unit	Dimension (WxHxD)	mm	840x230x840		840x300x840					
	Packing (WxHxD)	mm	955x247x955		955x317x955					
	Net/Gross weight	kg	30/34		36/41					
Panel	Dimension (WxHxD)	mm	950x46x950							
	Packing (WxHxD)	mm	1035x90x1035							
	Net/Gross weight	kg	6/9							
Qty per 20'/40'/40'HQ		Pieces	62/132/135							

Notes:

- Nominal cooling capacities are based on the following conditions: return air temp. : 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)

3. Capacity table

3.1) Cooling

TC: total capacity SHC: sensible capacity

Indoor unit size (kW)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
2.2	10	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.90	1.70
	12	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	14	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	16	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	18	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	20	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.70	1.50
	21	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.70	1.50
	23	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.70	1.50
	25	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.60	1.50
	27	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.60	1.50
	29	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.50	1.50
	31	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.50	1.50
	33	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.40	1.50
	35	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.30	1.50	2.40	1.50
	37	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.30	1.50	2.30	1.50
	39	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.20	1.60	2.30	1.50	2.30	1.50
2.8	10.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.70	2.10
	12.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.10
	14.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.10
	16.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.00
	18.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.50	2.00
	20.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.40	1.90
	21.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.40	1.90
	23.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.10	3.40	1.90
	25.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.00	3.30	1.90
	27.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.00	3.30	1.90
	29.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.20	1.90
	31.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.20	1.90
	33.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.10	2.00
	35.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.10	2.90	1.90	3.10	2.00
	37.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.10	2.90	1.90	2.90	1.90
	39.0	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.80	2.00	2.90	1.90	2.90	1.90
3.6	10.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.80	2.80
	12.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70
	14.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70
	16.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70
	18.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70
	20.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	21.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	23.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	25.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60
	27.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60
	29.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.50
	31.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.40
	33.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.00	2.40
	35.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	4.00	2.40
	37.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	3.90	2.30
	39.0	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.70	3.90	2.40

Indoor unit size (kW)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
4.5	10.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40
	12.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40
	14.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.80	3.30
	16.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20
	18.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20
	20.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.50	3.20
	21.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.40	3.10
	23.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.40	3.10
	25.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.30	3.00
	27.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.30	3.00
	29.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.10	2.90
	31.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	5.10	3.00
	33.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.90	2.90
	35.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.80	2.80
	37.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90
	39.0	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90
5.6	10.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10
	12.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10
	14.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.20	4.10
	16.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00
	18.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10
	20.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10
	21.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.00	4.10
	23.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00
	25.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.50	4.10	6.80	3.90
	27.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.40	4.00	6.50	3.80
	29.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.30	4.00	6.40	3.70
	31.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.20	3.90	6.30	3.70
	33.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.00	3.80	6.30	3.70
	35.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.70	6.20	3.60
	37.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.90	6.10	3.50
	39.0	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	5.70	3.80	5.80	3.80	6.00	3.50
7.1	10.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.20	4.90
	12.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.10	4.80
	14.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.00	4.80
	16.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.90	4.70
	18.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.70	4.70
	20.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.50	4.60
	21.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.40	4.50
	23.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.30	4.50
	25.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.20	4.40
	27.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.10	4.90	8.20	4.40
	29.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.00	4.80	8.10	4.50
	31.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.90	4.70	7.80	4.40
	33.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.80	4.70	7.80	4.40
	35.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.60	4.60	7.70	4.30
	37.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.50	4.50	7.60	4.30
	39.0	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.20	4.60	7.40	4.40	7.60	4.30

Indoor unit size (kW)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
8.0	10.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.40	5.60
	12.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.20	5.50
	14.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.20	5.50
	16.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.00	5.40
	18.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.80	5.30
	20.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.60	5.20
	21.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.40	5.10
	23.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.40	5.10
	25.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.30	5.00
	27.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.10	5.30	9.20	5.10
	29.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	9.00	5.30	9.10	5.00
	31.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.90	5.20	8.80	4.80
	33.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.80	5.20	8.80	4.80
	35.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.60	5.10	8.60	4.80
	37.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.30	5.40	8.40	5.00	8.60	4.90
	39.0	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.10	5.30	8.30	5.00	8.60	4.90
9.0	10.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.70	6.60
	12.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.50	6.50
	14.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.40	6.40
	16.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.30	6.30
	18.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.00	6.30
	20.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	10.80	6.20
	21.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	10.60	6.10
	23.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	10.50	6.00
	25.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	10.40	6.00
	27.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.30	6.40	10.40	5.90
	29.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.10	6.20	10.30	5.80
	31.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.00	6.20	9.90	5.70
	33.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	9.90	6.10	9.90	5.70
	35.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.50	6.50	9.60	6.00	9.70	5.70
	37.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.30	6.30	9.50	5.90	9.60	5.80
	39.0	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.20	6.20	9.40	5.80	9.60	5.80
10.0	10.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.90	7.30	13.00	7.30
	12.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.90	7.30	12.80	7.20
	14.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.90	7.30	12.70	7.10
	16.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.90	7.30	12.50	7.00
	18.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.90	7.30	12.20	6.80
	20.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.90	7.30	12.00	6.70
	21.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.90	7.30	11.80	6.60
	23.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.70	7.30	11.70	6.60
	25.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.60	7.20	11.60	6.50
	27.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.50	7.10	11.50	6.60
	29.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.40	7.10	11.40	6.50
	31.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.30	7.00	11.00	6.30
	33.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.60	7.00	11.20	6.90	11.00	6.30
	35.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.50	6.90	10.80	6.70	10.80	6.30
	37.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.40	6.90	10.80	6.70	10.70	6.20
	39.0	6.90	5.60	8.10	6.20	9.40	6.90	10.00	7.00	10.20	6.70	10.40	6.60	10.70	6.30

Indoor unit size (kW)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
11.2	10.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	15.50	9.00
	12.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	14.40	8.40
	14.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	14.20	8.20
	16.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	14.10	8.20
	18.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	14.00	8.10
	20.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	13.90	8.10
	21.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	13.80	8.00
	23.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.10	8.10	13.70	7.90
	25.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.00	8.10	13.60	7.90
	27.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	12.90	8.00	13.40	7.80
	29.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	12.80	7.90	13.30	7.90
	31.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	12.70	7.80	12.80	7.50
	33.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	12.50	7.80	12.50	7.40
	35.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.80	8.00	12.40	7.70	12.30	7.30
	37.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.60	7.90	12.30	7.60	12.10	7.10
	39.0	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.40	7.80	12.20	7.60	11.90	7.10
14.0	10.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	18.20	10.20
	12.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	17.90	10.00
	14.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	17.80	10.00
	16.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	17.50	9.80
	18.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	17.10	9.60
	20.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	16.80	9.40
	21.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	16.50	9.30
	23.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.40	10.20	16.40	9.20
	25.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.20	10.10	16.20	9.10
	27.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.10	10.00	16.10	9.20
	29.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.00	9.90	16.00	9.10
	31.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	15.80	9.80	15.40	8.80
	33.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	15.70	9.70	15.40	8.80
	35.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.70	9.70	15.10	9.40	15.10	8.80
	37.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.60	9.60	15.10	9.40	15.00	8.70
	39.0	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.30	9.40	14.60	9.20	15.00	8.80

3.2) Heating

TC: total capacity

Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °DB					
			16	18	20	21	22	24
	°CDB	°CWB	kW	kW	kW	kW	kW	kW
2.2	-15.0	-14.7	1.64	1.64	1.64	1.64	1.64	1.64
	-13.0	-12.6	1.74	1.74	1.74	1.74	1.74	1.74
	-11.0	-10.5	1.82	1.82	1.82	1.82	1.82	1.82
	-10.0	-9.5	1.90	1.90	1.90	1.90	1.90	1.90
	-9.1	-8.5	1.95	1.95	1.95	1.95	1.95	1.95
	-7.6	-7.0	1.98	1.98	1.98	1.98	1.98	1.98
	-5.6	-5.0	2.05	2.05	2.05	2.05	2.05	2.05
	-3.7	-3.0	2.16	2.16	2.16	2.16	2.16	2.16
	-0.7	0.0	2.31	2.31	2.31	2.31	2.31	2.18
	2.2	3.0	2.44	2.44	2.44	2.44	2.39	2.18
	4.1	5.0	2.52	2.52	2.52	2.52	2.39	2.18
	6.0	7.0	2.60	2.60	2.60	2.52	2.39	2.18
	7.9	9.0	2.68	2.68	2.93	2.52	2.39	2.18
	9.8	11.0	2.76	2.76	2.60	2.52	2.39	2.18
	11.8	13.0	2.86	2.81	2.60	2.52	2.39	2.18
	13.7	15.0	2.94	2.81	2.60	2.52	2.39	2.18
2.8	-15.0	-14.7	2.02	2.02	2.02	2.02	2.02	2.02
	-13.0	-12.6	2.14	2.14	2.14	2.14	2.14	2.14
	-11.0	-10.5	2.24	2.24	2.24	2.24	2.24	2.24
	-10.0	-9.5	2.34	2.34	2.34	2.34	2.34	2.34
	-9.1	-8.5	2.40	2.40	2.40	2.40	2.40	2.40
	-7.6	-7.0	2.43	2.43	2.43	2.43	2.43	2.43
	-5.6	-5.0	2.53	2.53	2.53	2.53	2.53	2.53
	-3.7	-3.0	2.66	2.66	2.66	2.66	2.66	2.66
	-0.7	0.0	2.85	2.85	2.85	2.85	2.85	2.69
	2.2	3.0	3.01	3.01	3.01	3.01	2.94	2.69
	4.1	5.0	3.10	3.10	3.10	3.10	2.94	2.69
	6.0	7.0	3.20	3.20	3.20	3.10	2.94	2.69
	7.9	9.0	3.30	3.30	2.93	3.10	2.94	2.69
	9.8	11.0	3.39	3.39	3.20	3.10	2.94	2.69
	11.8	13.0	3.52	3.46	3.20	3.10	2.94	2.69
	13.7	15.0	3.62	3.46	3.20	3.10	2.94	2.69
3.6	-15.0	-14.7	2.52	2.52	2.52	2.52	2.52	2.52
	-13.0	-12.6	2.68	2.68	2.68	2.68	2.68	2.68
	-11.0	-10.5	2.80	2.80	2.80	2.80	2.80	2.80
	-10.0	-9.5	2.92	2.92	2.92	2.92	2.92	2.92
	-9.1	-8.5	3.00	3.00	3.00	3.00	3.00	3.00
	-7.6	-7.0	3.04	3.04	3.04	3.04	3.04	3.04
	-5.6	-5.0	3.16	3.16	3.16	3.16	3.16	3.16
	-3.7	-3.0	3.32	3.32	3.32	3.32	3.32	3.32
	-0.7	0.0	3.56	3.56	3.56	3.56	3.56	3.36
	2.2	3.0	3.76	3.76	3.76	3.76	3.68	3.36
	4.1	5.0	3.88	3.88	3.88	3.88	3.68	3.36
	6.0	7.0	4.00	4.00	4.00	3.88	3.68	3.36
	7.9	9.0	4.12	4.12	2.93	3.88	3.68	3.36
	9.8	11.0	4.24	4.24	4.00	3.88	3.68	3.36
	11.8	13.0	4.40	4.32	4.00	3.88	3.68	3.36
	13.7	15.0	4.52	4.32	4.00	3.88	3.68	3.36

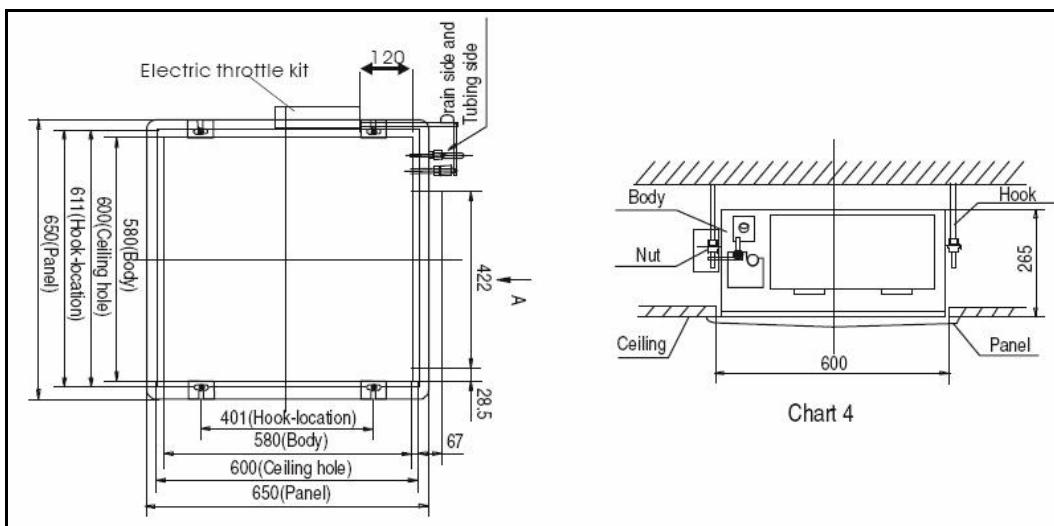
Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °DB				
			16	18	20	21	22
	TC	TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW
4.5	-15.0	-14.7	3.15	3.15	3.15	3.15	3.15
	-13.0	-12.6	3.35	3.35	3.35	3.35	3.35
	-11.0	-10.5	3.50	3.50	3.50	3.50	3.50
	-10.0	-9.5	3.65	3.65	3.65	3.65	3.65
	-9.1	-8.5	3.75	3.75	3.75	3.75	3.75
	-7.6	-7.0	3.80	3.80	3.80	3.80	3.80
	-5.6	-5.0	3.95	3.95	3.95	3.95	3.95
	-3.7	-3.0	4.15	4.15	4.15	4.15	4.15
	-0.7	0.0	4.45	4.45	4.45	4.45	4.20
	2.2	3.0	4.70	4.70	4.70	4.70	4.20
	4.1	5.0	4.85	4.85	4.85	4.85	4.20
	6.0	7.0	5.00	5.00	5.00	4.85	4.20
	7.9	9.0	5.15	5.15	2.93	4.85	4.20
	9.8	11.0	5.30	5.30	5.00	4.85	4.20
	11.8	13.0	5.50	5.40	5.00	4.85	4.20
	13.7	15.0	5.65	5.40	5.00	4.85	4.20
5.6	-15.0	-14.7	3.97	3.97	3.97	3.97	3.97
	-13.0	-12.6	4.22	4.22	4.22	4.22	4.22
	-11.0	-10.5	4.41	4.41	4.41	4.41	4.41
	-10.0	-9.5	4.60	4.60	4.60	4.60	4.60
	-9.1	-8.5	4.73	4.73	4.73	4.73	4.73
	-7.6	-7.0	4.79	4.79	4.79	4.79	4.79
	-5.6	-5.0	4.98	4.98	4.98	4.98	4.98
	-3.7	-3.0	5.23	5.23	5.23	5.23	5.23
	-0.7	0.0	5.61	5.61	5.61	5.61	5.29
	2.2	3.0	5.92	5.92	5.92	5.80	5.29
	4.1	5.0	6.11	6.11	6.11	5.80	5.29
	6.0	7.0	6.30	6.30	6.30	5.80	5.29
	7.9	9.0	6.49	6.49	2.93	6.11	5.29
	9.8	11.0	6.68	6.68	6.30	6.11	5.29
	11.8	13.0	6.93	6.80	6.30	6.11	5.29
	13.7	15.0	7.12	6.80	6.30	6.11	5.29
7.1	-15.0	-14.7	5.04	5.04	5.04	5.04	5.04
	-13.0	-12.6	5.36	5.36	5.36	5.36	5.36
	-11.0	-10.5	5.60	5.60	5.60	5.60	5.60
	-10.0	-9.5	5.84	5.84	5.84	5.84	5.84
	-9.1	-8.5	6.00	6.00	6.00	6.00	6.00
	-7.6	-7.0	6.08	6.08	6.08	6.08	6.08
	-5.6	-5.0	6.32	6.32	6.32	6.32	6.32
	-3.7	-3.0	6.64	6.64	6.64	6.64	6.64
	-0.7	0.0	7.12	7.12	7.12	7.12	6.72
	2.2	3.0	7.52	7.52	7.52	7.36	6.72
	4.1	5.0	7.76	7.76	7.76	7.36	6.72
	6.0	7.0	8.00	8.00	8.00	7.36	6.72
	7.9	9.0	8.24	8.24	2.93	7.76	6.72
	9.8	11.0	8.48	8.48	8.00	7.76	6.72
	11.8	13.0	8.80	8.64	8.00	7.76	6.72
	13.7	15.0	9.04	8.64	8.00	7.76	6.72

Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °DB					
			16	18	20	21	22	24
	TC	TC	TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW	kW
8	-15.0	-14.7	5.67	5.67	5.67	5.67	5.67	5.67
	-13.0	-12.6	6.03	6.03	6.03	6.03	6.03	6.03
	-11.0	-10.5	6.30	6.30	6.30	6.30	6.30	6.30
	-10.0	-9.5	6.57	6.57	6.57	6.57	6.57	6.57
	-9.1	-8.5	6.75	6.75	6.75	6.75	6.75	6.75
	-7.6	-7.0	6.84	6.84	6.84	6.84	6.84	6.84
	-5.6	-5.0	7.11	7.11	7.11	7.11	7.11	7.11
	-3.7	-3.0	7.47	7.47	7.47	7.47	7.47	7.47
	-0.7	0.0	8.01	8.01	8.01	8.01	8.01	7.56
	2.2	3.0	8.46	8.46	8.46	8.46	8.28	7.56
	4.1	5.0	8.73	8.73	8.73	8.73	8.28	7.56
	6.0	7.0	9.00	9.00	9.00	8.73	8.28	7.56
	7.9	9.0	9.27	9.27	2.93	8.73	8.28	7.56
	9.8	11.0	9.54	9.54	9.00	8.73	8.28	7.56
	11.8	13.0	9.90	9.72	9.00	8.73	8.28	7.56
	13.7	15.0	10.17	9.72	9.00	8.73	8.28	7.56
9	-15.0	-14.7	6.30	6.30	6.30	6.30	6.30	6.30
	-13.0	-12.6	6.70	6.70	6.70	6.70	6.70	6.70
	-11.0	-10.5	7.00	7.00	7.00	7.00	7.00	7.00
	-10.0	-9.5	7.30	7.30	7.30	7.30	7.30	7.30
	-9.1	-8.5	7.50	7.50	7.50	7.50	7.50	7.50
	-7.6	-7.0	7.60	7.60	7.60	7.60	7.60	7.60
	-5.6	-5.0	7.90	7.90	7.90	7.90	7.90	7.90
	-3.7	-3.0	8.30	8.30	8.30	8.30	8.30	8.30
	-0.7	0.0	8.90	8.90	8.90	8.90	8.90	8.40
	2.2	3.0	9.40	9.40	9.40	9.40	9.20	8.40
	4.1	5.0	9.70	9.70	9.70	9.70	9.20	8.40
	6.0	7.0	10.00	10.00	10.00	9.70	9.20	8.40
	7.9	9.0	10.30	10.30	2.93	9.70	9.20	8.40
	9.8	11.0	10.60	10.60	10.00	9.70	9.20	8.40
	11.8	13.0	11.00	10.80	10.00	9.70	9.20	8.40
	13.7	15.0	11.30	10.80	10.00	9.70	9.20	8.40
10	-15.0	-14.7	6.93	6.93	6.93	6.93	6.93	6.93
	-13.0	-12.6	7.37	7.37	7.37	7.37	7.37	7.37
	-11.0	-10.5	7.70	7.70	7.70	7.70	7.70	7.70
	-10.0	-9.5	8.03	8.03	8.03	8.03	8.03	8.03
	-9.1	-8.5	8.25	8.25	8.25	8.25	8.25	8.25
	-7.6	-7.0	8.36	8.36	8.36	8.36	8.36	8.36
	-5.6	-5.0	8.69	8.69	8.69	8.69	8.69	8.69
	-3.7	-3.0	9.13	9.13	9.13	9.13	9.13	9.13
	-0.7	0.0	9.79	9.79	9.79	9.79	9.79	9.24
	2.2	3.0	10.34	10.34	10.34	10.34	10.12	9.24
	4.1	5.0	10.67	10.67	10.67	10.67	10.12	9.24
	6.0	7.0	11.00	11.00	11.00	10.67	10.12	9.24
	7.9	9.0	11.33	11.33	11.00	10.67	10.12	9.24
	9.8	11.0	11.66	11.66	11.00	10.67	10.12	9.24
	11.8	13.0	12.10	11.88	11.00	10.67	10.12	9.24
	13.7	15.0	12.43	11.88	11.00	10.67	10.12	9.24

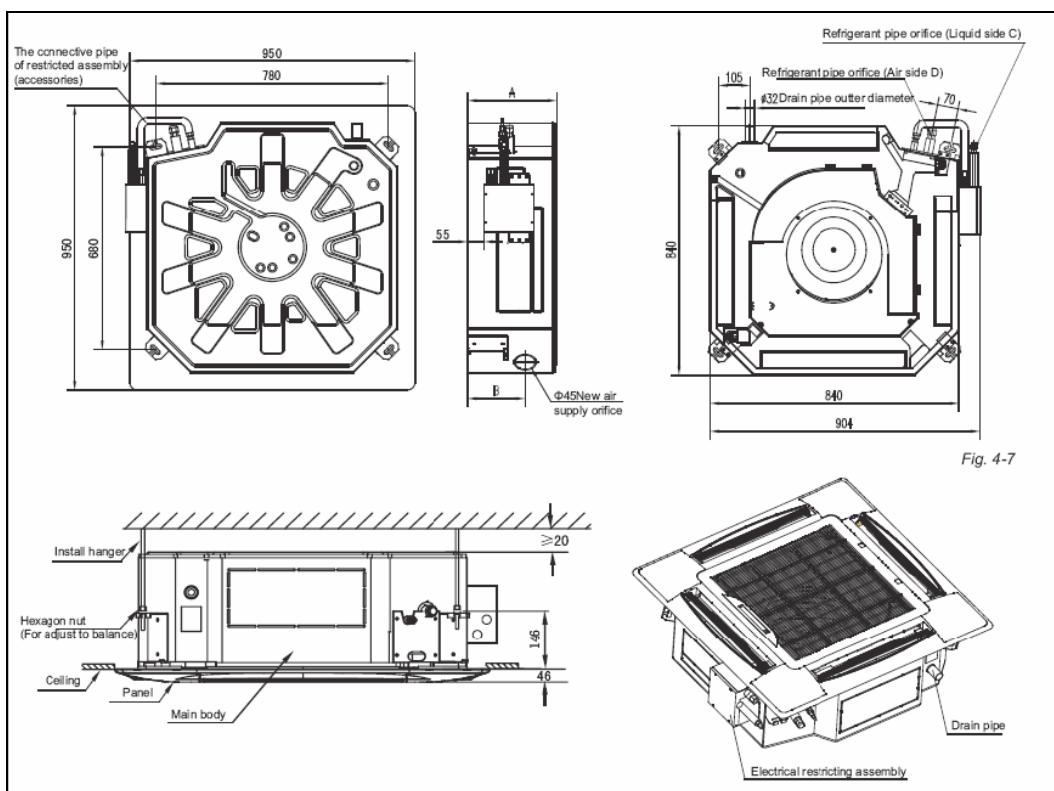
Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °DB					
			16	18	20	21	22	24
	TC	TC	TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW	kW
11.2	-15.0	-14.7	7.88	7.88	7.88	7.88	7.88	7.88
	-13.0	-12.6	8.38	8.38	8.38	8.38	8.38	8.38
	-11.0	-10.5	8.75	8.75	8.75	8.75	8.75	8.75
	-10.0	-9.5	9.13	9.13	9.13	9.13	9.13	9.13
	-9.1	-8.5	9.38	9.38	9.38	9.38	9.38	9.38
	-7.6	-7.0	9.50	9.50	9.50	9.50	9.50	9.50
	-5.6	-5.0	9.88	9.88	9.88	9.88	9.88	9.88
	-3.7	-3.0	10.38	10.38	10.38	10.38	10.38	10.38
	-0.7	0.0	11.13	11.13	11.13	11.13	11.13	10.50
	2.2	3.0	11.75	11.75	11.75	11.75	11.50	10.50
	4.1	5.0	12.13	12.13	12.13	12.13	11.50	10.50
	6.0	7.0	12.50	12.50	12.50	12.13	11.50	10.50
	7.9	9.0	12.88	12.88	12.50	12.13	11.50	10.50
	9.8	11.0	13.25	13.25	12.50	12.13	11.50	10.50
	11.8	13.0	13.75	13.50	12.50	12.13	11.50	10.50
	13.7	15.0	14.13	13.50	12.50	12.13	11.50	10.50
14.0	-15.0	-14.70	9.45	9.45	9.45	9.45	9.45	9.45
	-13.0	-12.60	10.05	10.05	10.05	10.05	10.05	10.05
	-11.0	-10.50	10.50	10.50	10.50	10.50	10.50	10.50
	-10.0	-9.50	10.95	10.95	10.95	10.95	10.95	10.95
	-9.1	-8.50	11.25	11.25	11.25	11.25	11.25	11.25
	-7.6	-7.00	11.40	11.40	11.40	11.40	11.40	11.40
	-5.6	-5.00	11.85	11.85	11.85	11.85	11.85	11.85
	-3.7	-3.00	12.45	12.45	12.45	12.45	12.45	12.45
	-0.7	0.00	13.35	13.35	13.35	13.35	13.35	12.60
	2.2	3.00	14.10	14.10	14.10	14.10	13.80	12.60
	4.1	5.00	14.55	14.55	14.55	14.55	13.80	12.60
	6.0	7.00	15.00	15.00	15.00	14.55	13.80	12.60
	7.9	9.00	15.45	15.45	15.00	14.55	13.80	12.60
	9.8	11.00	15.90	15.90	15.00	14.55	13.80	12.60
	11.8	13.00	16.50	16.20	15.00	14.55	13.80	12.60
	13.7	15.00	16.95	16.20	15.00	14.55	13.80	12.60

4. Dimensions

4.1) YDS-22-56GC



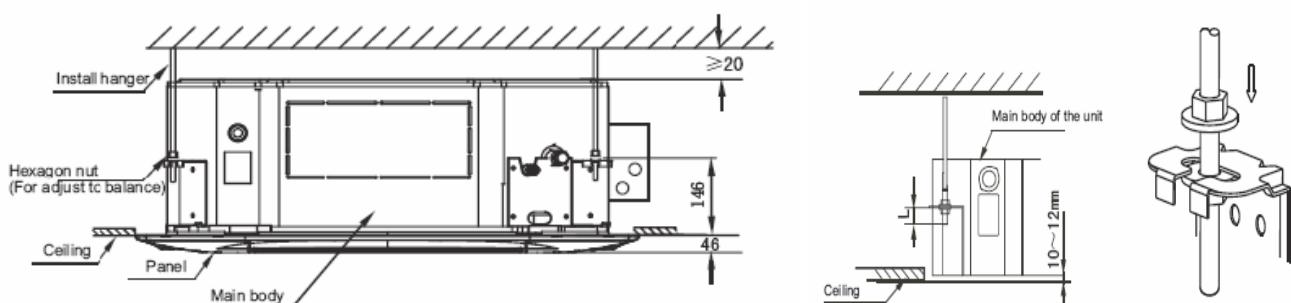
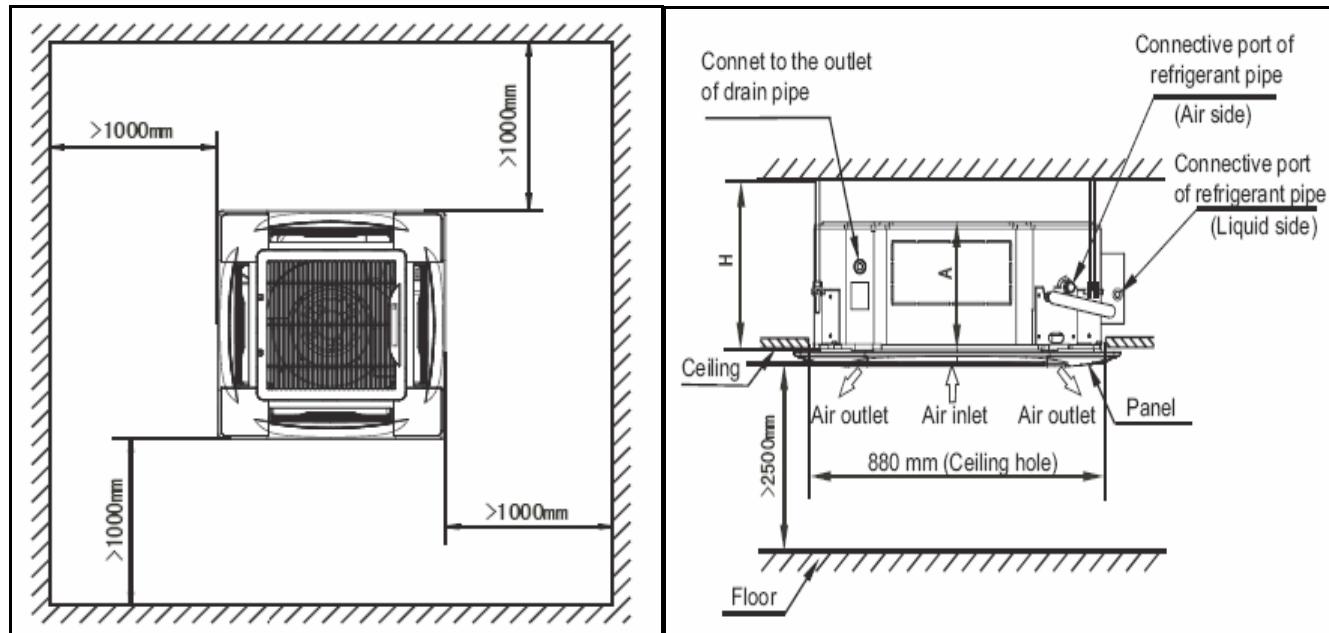
4.2 YDS-28-140KC



Indoor unit model	A(mm)	B(mm)
YDS-28-80KC	230	170
YDS-90-140KC	300	190

5. Service Space

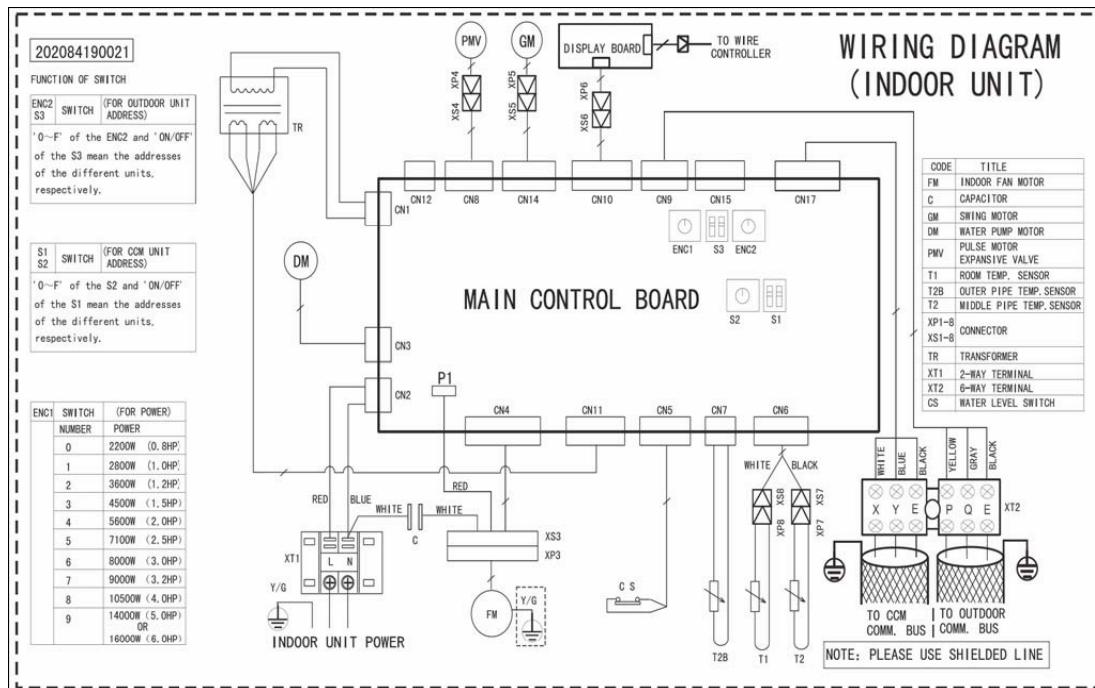
- 1) There is enough room for installation and maintenance.
- 2) The ceiling is horizontal, and its structure can endure the weight of the indoor unit.
- 3) The outlet and the inlet are not impeded, and the influence of external air is the least.
- 4) The air flow can reach throughout the room.
- 5) The connecting pipe and drainpipe could be extracted out easily.
- 6) There is no direct radiation from heaters.



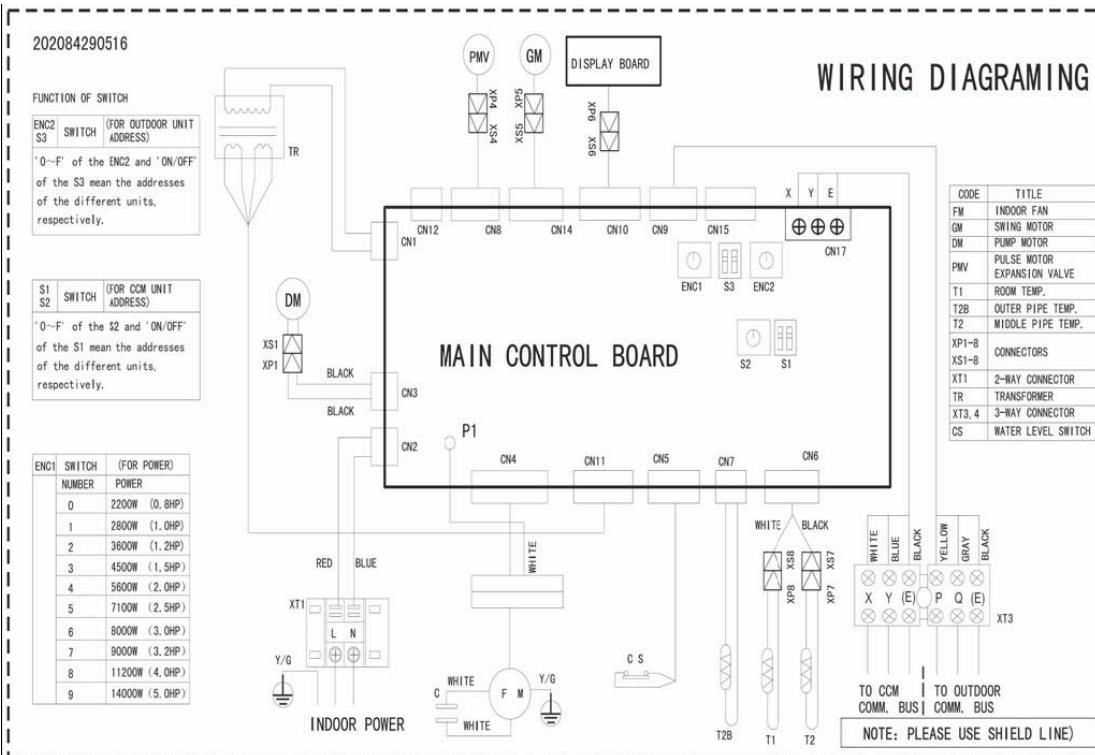
Indoor unit	H(mm)
YDS-28-80KC	≥260
YDS-90-140KC	≥300
YDS-22-56GC	≥280

6. Wiring diagram

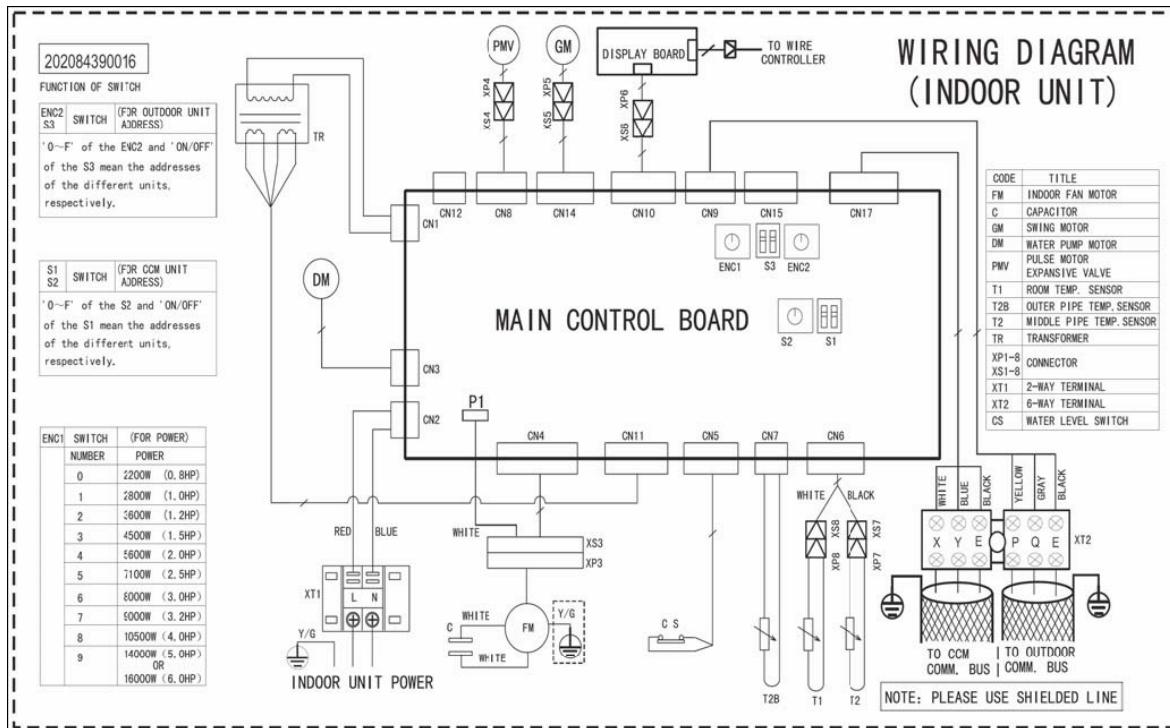
6.1) YDS-22-36GC



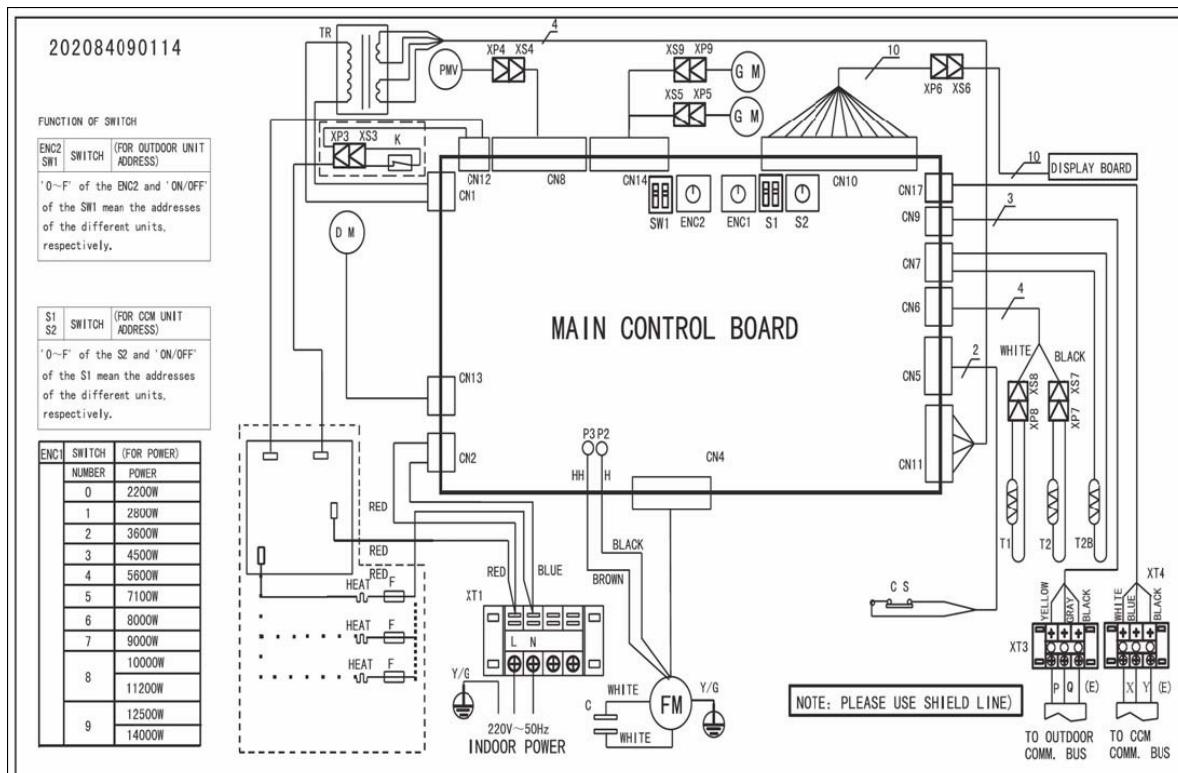
6.2) YDS-45GC



6.3) YDS-56GC



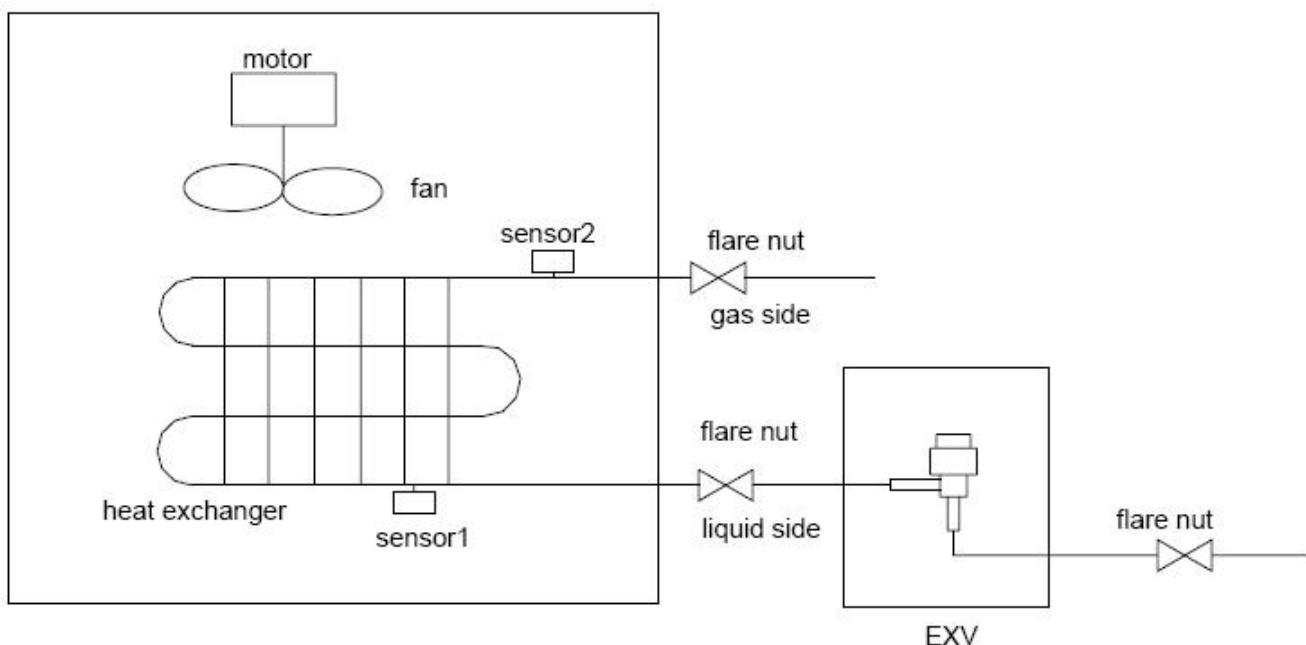
6.4) YDS-28-140KC



7. Electrical characteristic

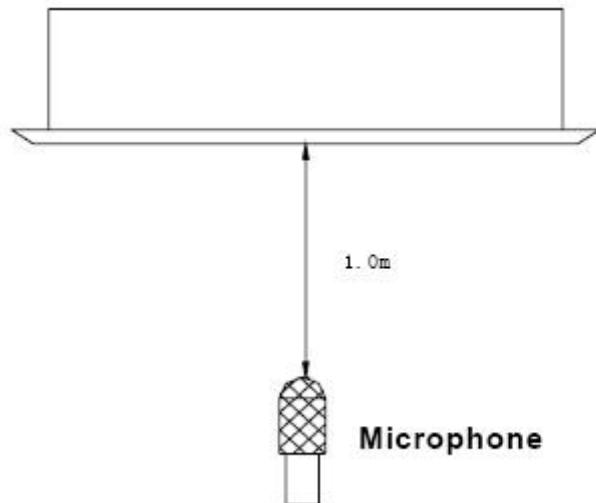
Model		Indoor Unit				Power Supply		IFM
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
YDS-22-28GC	50Hz	220-240V	198V	254V	0.32	5A	0.045	0.251
YDS-36-56GC	50Hz	220-240V	198V	254V	0.33	5A	0.045	0.264
YDS-28-56KC	50Hz	220-240V	198V	254V	0.45	5A	0.025	0.36
YDS-71-80KC	50Hz	220-240V	198V	254V	0.54	5A	0.042	0.43
YDS-90-140KC	50Hz	220-240V	198V	254V	0.74	5A	0.056	0.59

8. Refrigerant system diagram



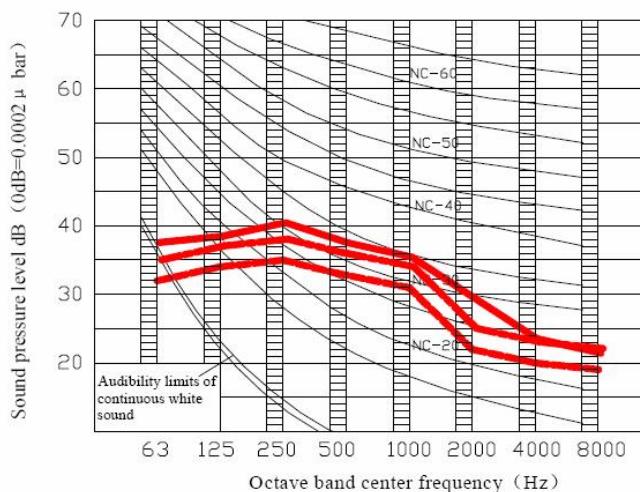
9. Noise level

9.1) Test condition

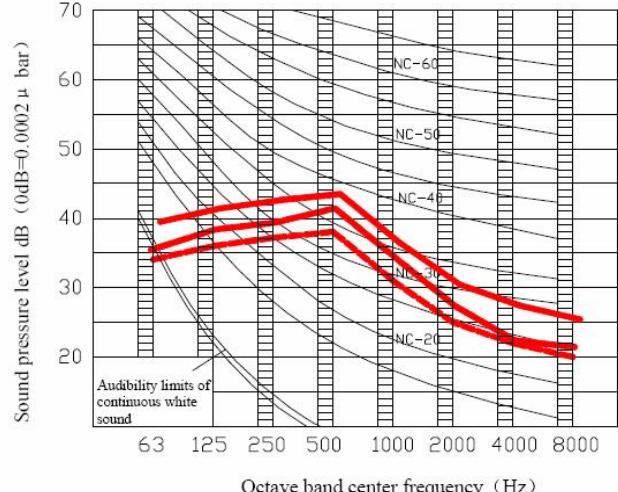


9.2) Noise spectrums

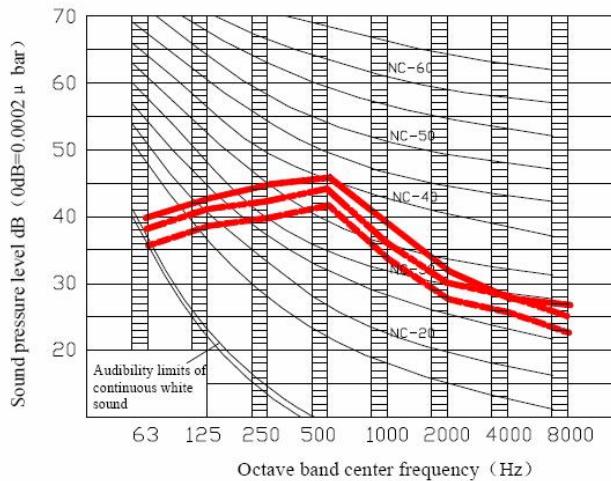
YDS-22, 28, 36G/K



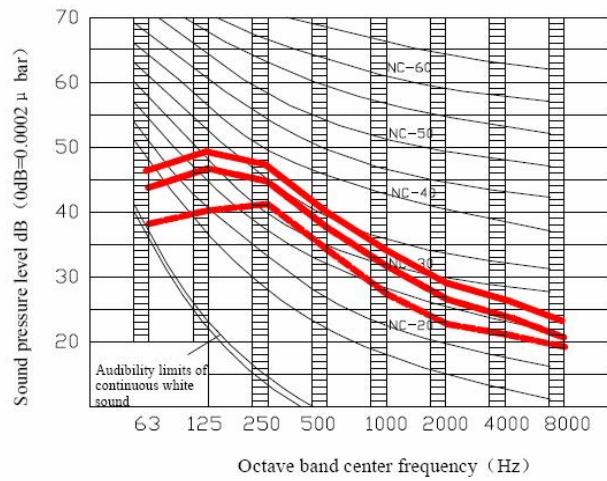
YDS-45, 56G/K



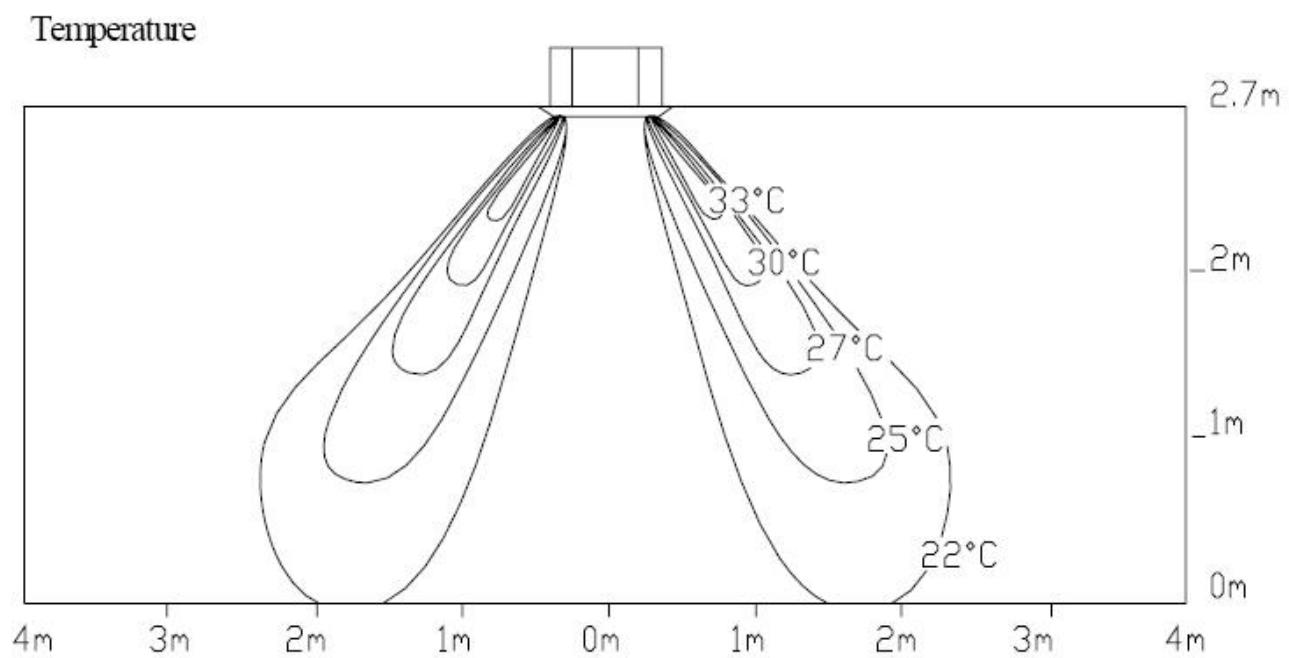
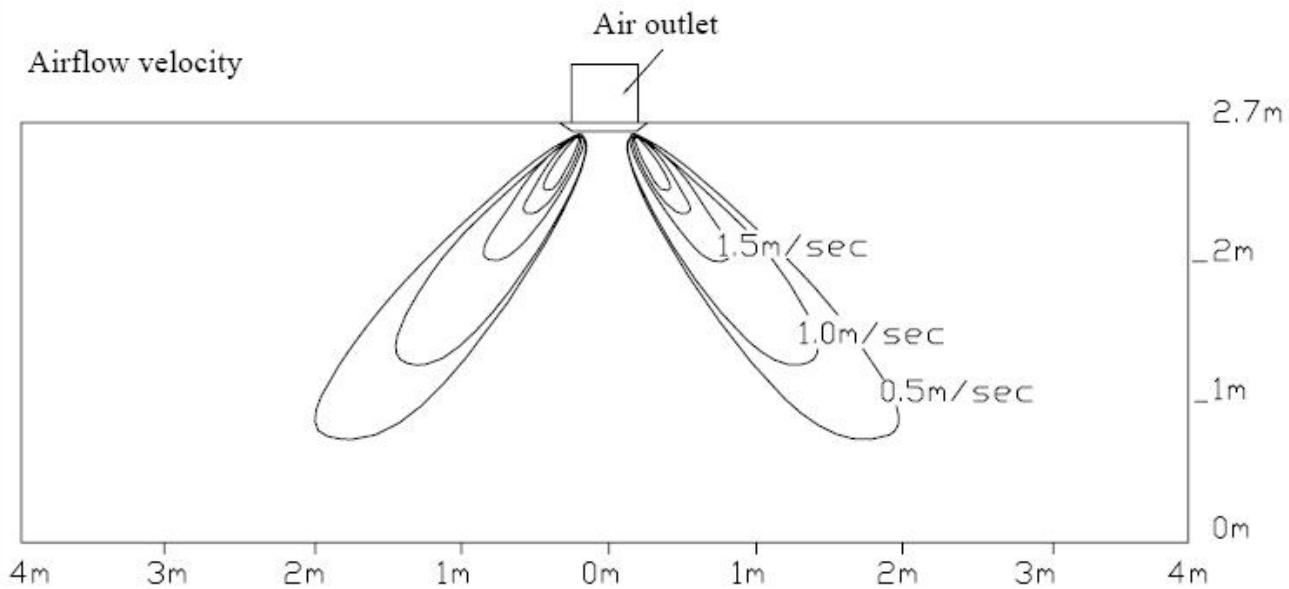
YDS-71,80K



YDS-90, 112K



10. Air velocity & temperature distribution

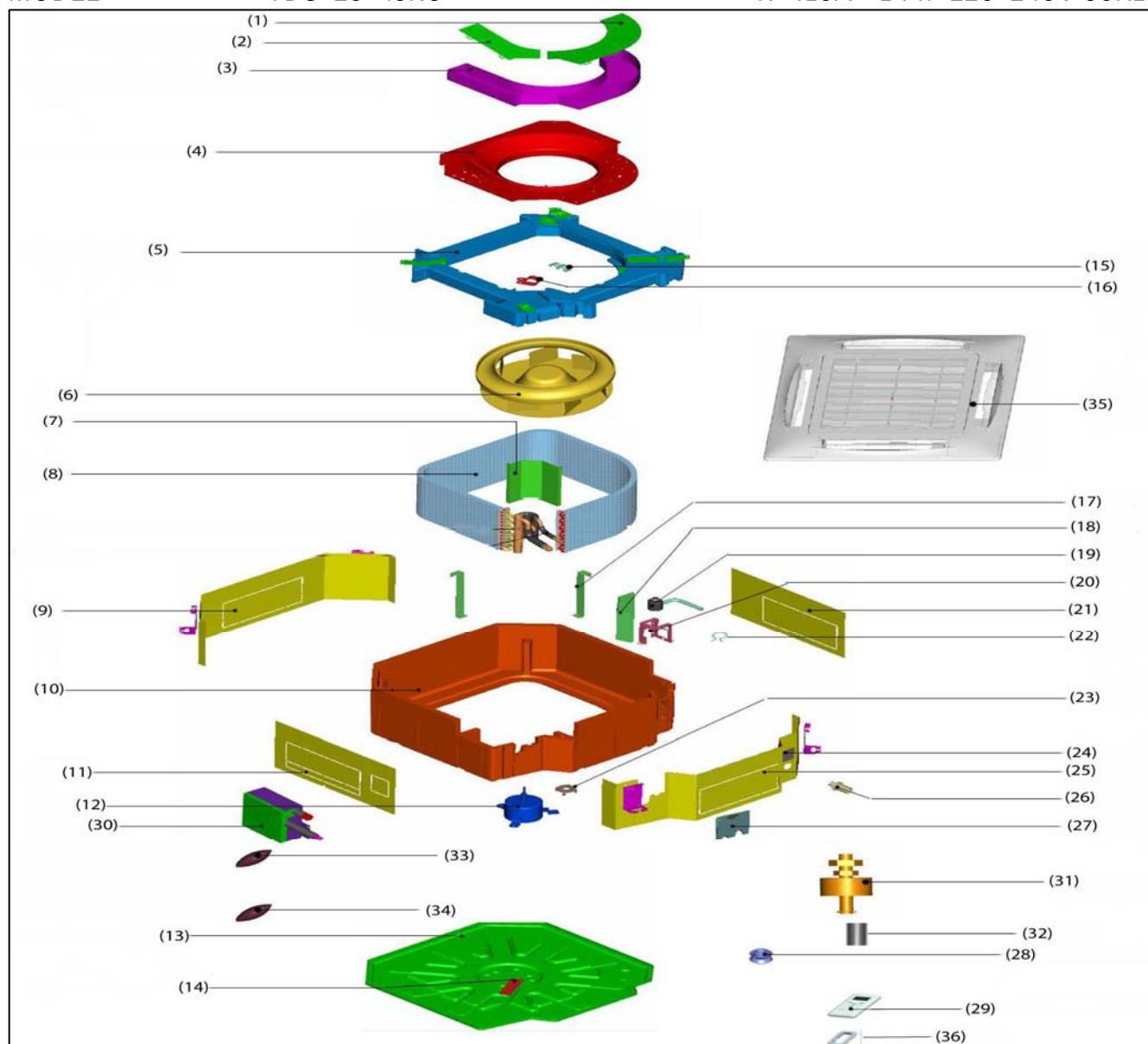


11. Explode view and spare part list.

MODEL

YDS-28-45KC

R-410A 1 Ph 220-240V 50Hz

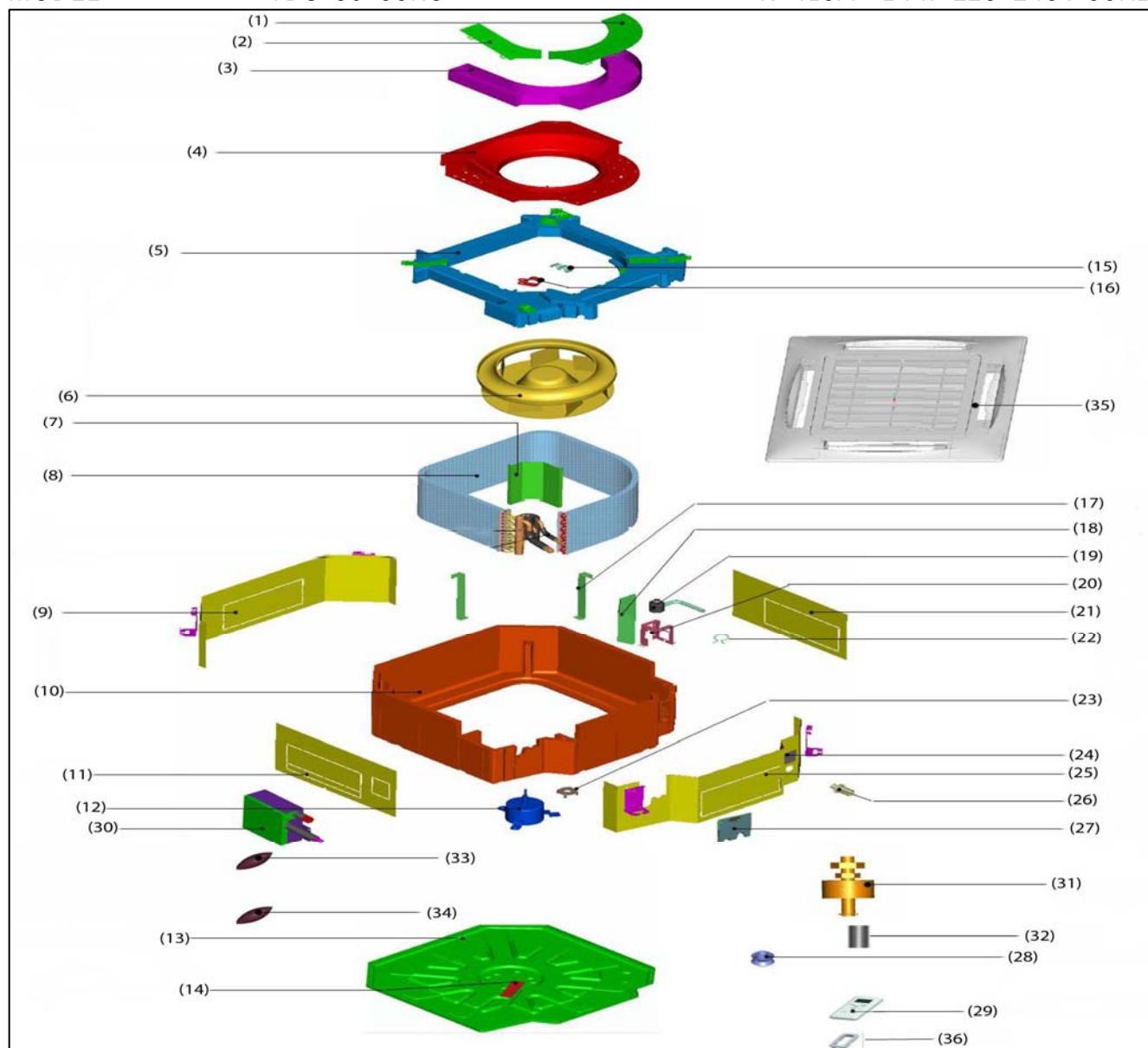


ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	2.8 kW	3.6 kW	4.5 kW			
1		201M242800085		Electric control box head cover I	1	
2		201M242800084		Electric control box head cover II	1	
3	203M384090010	203M384090013	203M384090010	Electric control box assembly of indoor unit	1	
-		201M242800091		Electric control box welded assembly	1	
-		202M300900109		Voltage transformer	1	
-		202M301310009		Indoor temp. sensor subassembly	1	
-		202M401100353		Capacitor	1	
-		201M385000000		Four sides air outlet indoor main control plate	1	
4	201M142800075	201M142800079	201M142800075	Air inducing coils subassembly	1	
5		202M242500075		Foam subassembly ,drip tray	1	
6		201M142000003		Fan assembly	1	
7		201M242500082		Evaporator fixing board	1	
8	201M584040340	201M584210350		Evaporator assembly	1	
-	201M584040133	201M542500076		Evaporator	1	
-	201M684000003	201M684210223		Evaporator output tube assembly	1	
-	201M684000001	201M684210220		Evaporator filter assembly	1	
-		201M600200001		Barrel	1	
9		201M242500079		Front barrier I subassembly	1	
10		202M242500076		Foam seat subassembly	1	
11		201M242500088		Front barrier II subassembly	1	
12		202M400400371		Asynchronous dynamo	1	
13		201M242500080		Base pan welded assembly	1	
14		201M242500081		Plate, wire	1	
15		201M242800082		Tandem, wire	1	
16		201M102020216		Bipitch wire clip	1	
17		201M242500083		Evaporator fixing hook	3	
18		201M242500084		Water pump baffle plate	1	
19		202M400600200		Water drain pump subassembly	1	
20		201M242000003		Water pump installation bracket subassembly	1	
21		201M242500089		Front barrier IVsubassembly	1	
22		201M242000013		Water pump pumping pipe grommet	1	
23		201M242000008		Fan fins	1	
24		201M242800092		Water finder cover subassembly	1	
25		201M242500078		Front barrier III subassembly	1	
26		201M142000002		Water pumping connect pipe	1	
27		201M242800078		Exhalant tube seal plate subassembly	1	
28		202M742000002		Water pump's rubber pad	3	
29		203M3550A1500		Wireless remote,YORK-R91/BGE, York brand,White	1	
30		201M609890034		Electrical restriction assembly	1	
31		202M301310051		Liquid level sensor assembly	1	
32	201M684040340	201M684110118	201M684040340	Connective pipe subassembly of electrical restriction assembly	1	
33		202M440500004		Pipe temperature sensor subassembly	1	
34		202M301300303		Pipe temperature sensor	1	
35		201M109990000		Panel	1	
-		202M400100007		Stepper motor	2	
-		203M342890005		Display control box ass'y	1	
36		201M155090070		Remote controller holder ass'y	1	

MODEL

YDS-56-80KC

R-410A 1 Ph 220-240V 50Hz

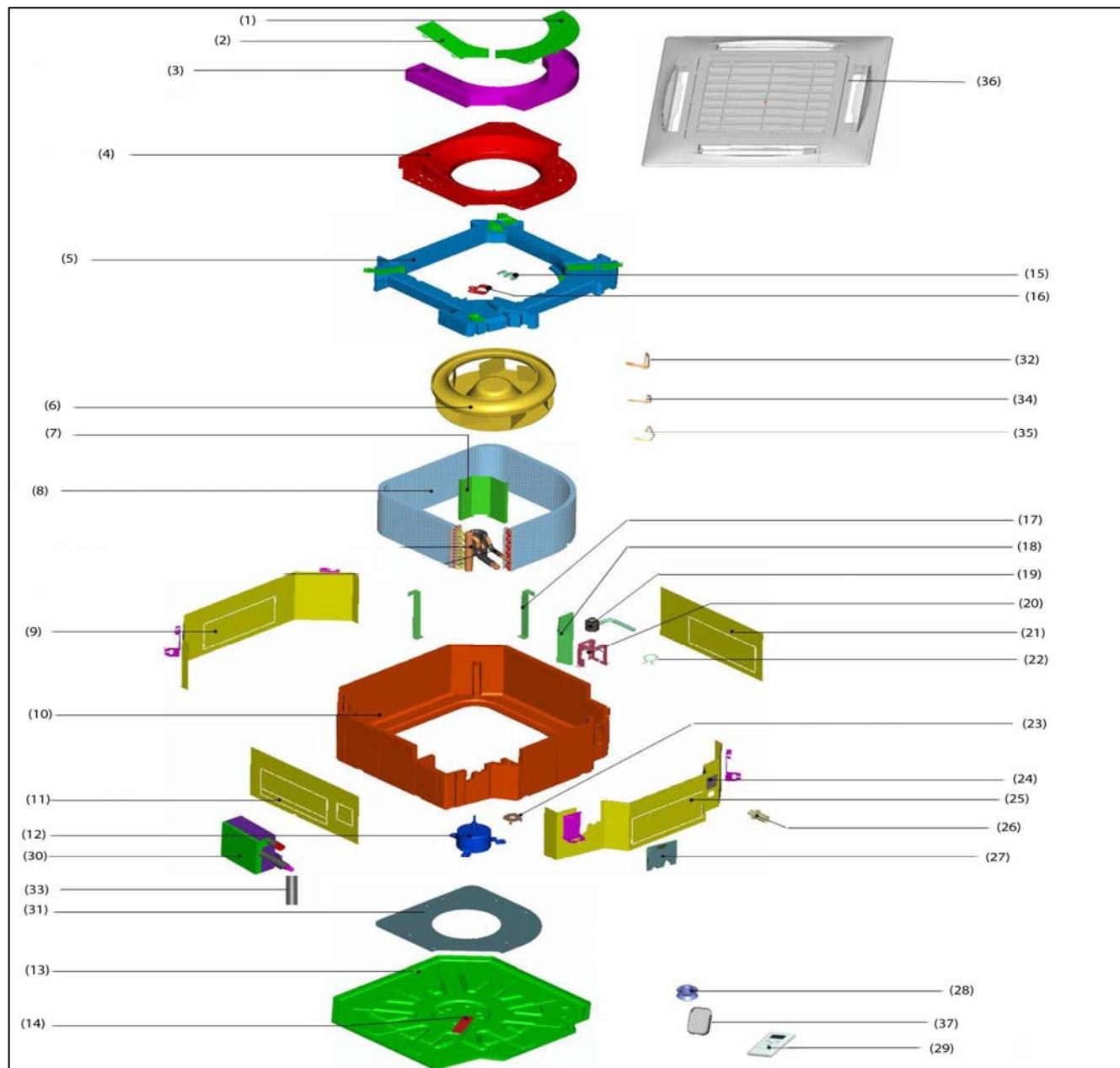


ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	5.6 kW	7.1 kW	8.0 kW			
1		201M242800085		Electric control box head cover I	1	
2		201M242800084		Electric control box head cover II	1	
3	203M384090013	203M384090010	203M384090010	Electric control box assembly of indoor unit	1	
-		201M242800091		Electric control box welded assembly	1	
-		202M300900109		Voltage transformer	1	
-		202M301310009		Indoor temp. sensor subassembly	1	
-		202M401100353		Capacitor	1	
-		201M385000000		Four sides air outlet indoor main control plate	1	
4	201M142800079	201M142800075	201M142800075	Air inducing coils subassembly	1	
5		202M242500075		Foam subassembly ,drip tray	1	
6		201M142000003		Fan saaembly	1	
7		201M242500082		Evaporator fixing board	1	
8		201M584300270		Evaporator assembly	1	
-	201M542500076	201M542500076	201M542500076	Evaporator	1	
-		201M684090303		Evaporator output tube assembly	1	
-		201M642090102		Evaporator filter assembly	1	
-		201M600200001		Barrel	1	
9		201M242500079		Front barrier I subassembly	1	
10		202M242500076		Foam seat subassembly	1	
11		201M242500088		Front barrier II subassembly	1	
12		202M400400371		Asynchronous dynamo	1	
13		201M242500080		Base pan welded assembly	1	
14		201M242500081		Plate, wire	1	
15		201M242800082		Tandem, wire	1	
16		201M102020216		Bipitch wire clip	1	
17		201M242500083		Evaporator fixing hook	3	
18		201M242500084		Water pump baffle plate	1	
19		202M400600200		Water drain pump subassembly	1	
20		201M242000003		Water pump installation bracket subassembly	1	
21		201M242500089		Front barrier IVsubassembly	1	
22		201M242000013		Water pump pumping pipe grommet	1	
23		201M242000008		Fan fins	1	
24		201M242800092		Water finder cover subassembly	1	
25		201M242500078		Front barrier III subassembly	1	
26		201M142000002		Water pumping connect pipe	1	
27		201M242800078		Exhalant tube seal plate subassembly	1	
28		202M742000002		Water pump's rubber pad	3	
29		203M3550A1500		Wireless remote,YORK-R91/BGE,York brand,White	1	
30		201M609890035		Electrical restriction assembly	1	
31		202M301310051		Liquid level sensor assembly	1	
32	201M684500000	201M684090006	201M684090006	Connective pipe subassembly of electrical restriction assembly	1	
33		202M440500004		Pipe temperature sensor subassembly	1	
34		202M301300303		Pipe temperature sensor	1	
35		201M109990000		Panel	1	
-		202M400100007		Stepper motor	2	
-		201M342890001		Display control box ass'y	1	
36		201M155090070		Remote controller holder ass'y	1	

MODEL

YDS-90-140KC

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	9.0 kW	11.2 kW	14.0 kW			
1	201M242800085	201M256410071		Electricity control box coping I	1	
2	201M242800084	201M256410070		Electricity control box coping II	1	
3	203M384090010	203M342990001		E-part box ass'y	1	
-	201M242800091	201M242990001		E-part box	1	
-	202M300900109	202M300900204		Transformer (TT2-B35+D90-1F)	1	
-	202M301310009			room temp sensor ass'y	1	
-	202M401100354	202M401100407		Motor capacitor	1	
-	201M385000000			Main controller ass'y	1	
4	201M142800075	201M142990001		Ring ass'y	1	
5	202M242800075	202M242990001		Foam ass'y	1	
6	201M142000601			Fan ass'y	1	
7	201M242800086	201M242990006		Evaporator fixing board	1	
8	201M584500180	201M542990001		Evaporator ass'y	1	
-	201M542800076	201M542990002		Evaporator	1	
-	201M684090302	201M642990001		Evaporator Outlet pipe ass'y	1	
-	201M684090300	201M642990006		Evaporator distributor ass'y	1	
-	201M600200001			Sleeve	1	
9	201M242800080			Board ass'y	1	
10	202M242800076	202M242990002		Foam ass'y	1	
11	201M242800093	201M284600001		Board ass'y	1	
12	202M400400222	202M400400275		Motor	1	
13	201M242800081	201M242990009		Base	1	
14	201M242500081			Clamp board	1	
15	201M242800082			Wire clamp	1	
16	201M102020216			Wire clip	1	
17	201M242800087	201M242990005		Evaporator fixing hanger	3	
18	201M242800088			Water pump board	1	
19	202M400600200			Drain pump	1	
20	201M242000605	201M242990003		Water Pump installation bracket ass'y	1	
21	201M242800094			Board ass'y	1	
22	201M242000013			Water pipe clamp	1	
23	201M242000008			fan clip	1	
24	201M242800092			Water cover ass'y	1	
25	201M242800079	201M242990008		Board ass'y	1	
26	201M142000002			water pipe	1	
27	201M242800078	201M155060801		Sealed board ass'y	1	
28	202M742000002			pump Rubber washer	1	
29	203M3550A1500			Wireless remote,YORK-R91/BGE,York brand,White	1	
30	201M609890035	201M609890040		Electric throttle ass'y	1	
31	201M242800083			Gasket	1	
32	202M301310051			Water level sensor ass'y	1	
33	201M684090006	202M742990001		Connecting pipe ass'y	1	
34	202M440500004			Evaporator temp. sensor ass'y	1	
35	202M301300303			Evaporator temp. sensor	1	
36	201M109990000			Panel	1	
-	202M400100007			Stepper motor	2	
-	201M342890001	203M342890005		Display board ass'y	1	
37	201M155090070			Remote holder,R91,York brand,White	1	

Part 4.2 Wall Mounted

Contents

1. Features	104
2. Specifications.....	106
3. Capacity table.....	108
4. Dimensions.....	112
5. Piping diagram.....	114
6. Wiring diagrams.....	115
7. Sound level.....	117
8. Velocity & temperature distribution.....	119
9. Electrical characteristic.....	120
10. Exploded view parts.....	121

1. Features

1.1) Everest

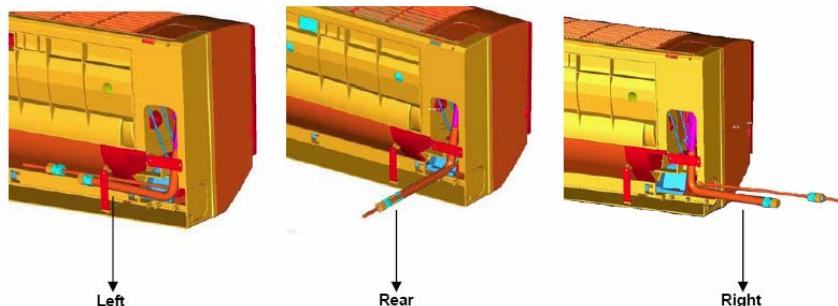


1. Easy and flexible installation, which can satisfy the different space demands
2. Air cleaning equipment and the high efficiency filter, keep the air fresh
3. Low noise, creates quite and comfortable environment
4. The optimization system designed and evaporator employs a multi-bend structure which enlarges the heat exchange surface, more efficient.
5. Trapezium inner groove copper pipe and hydrophilic aluminum foil make the heat exchange more sufficient.
6. Supply air freely: cool air flow up, warm air flow down, fast and symmetrical adjust temperature, don't blow people.
7. The direction of up and down air flow can be controlled by remote controller, the direction of left and right air flow can adjust, achieve solid circle supply air.
8. Adopt cross fan and optimization wind path design, supply air is strong and quiet.

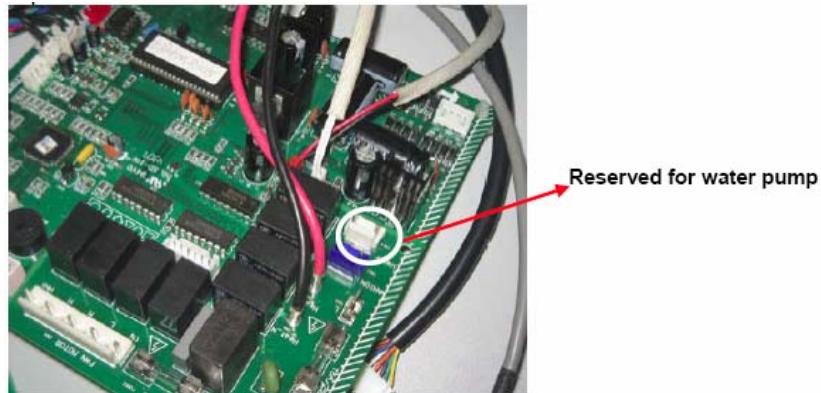
1.2) EXV Integrated



1. LED display.
2. Big and small panels have different colors for choose: white and brown for big panel, blue and brown for small panel, and the other colors can be customized according to the customers' demands.
3. Built-in the electronic throttle kit.
4. Multi-refrigerant outlet pipe method: left\right\rear, satisfy the need of different rooms.



-
- 5. Adopt new type installation plate, easy for installation and stable.
 - 6. Reserved the socket on main control board for water pump and PCB can be customized if you need water pump function.



- 7. Three air flow speed: high, middle and low, double air guides.
- 8. Low noise, creates quite and comfortable environment.
- 9. Air cleaning equipment and the high efficiency filter, keep the air fresh.

2. Specifications

2.1) Hi wall Everest YDS-22-56 EC15EA/EB R-410A 50 Hz

Model		YDS-22EC15EA	YDS-28EC15EA	YDS-36EC15EA	YDS-45EC15EA	YDS-56EC15EB
Power Supply	Ph-V-Hz	1 Ph -220-240V-50Hz				
Nominal capacity						
Cooling	Capacity	kW	2.2	2.8	3.6	4.5
	Input	W	40	40	40	50
Heating	Capacity	kW	2.6	3.2	4	5
	Input	W	40	40	40	50
Motor						
Input	W		40			50
Capacitor	uF			1.5uF/450V		
Speed (Hi/Mi/Lo)	r/min		1180x1000x850		1180x1080x800	
Coil						
a. Number of rows				2		
b. Tube pitch(a)x row pitch(b)	mm			21 x 13.37		
c. Fin spacing	mm			1.3		
d. Fin type (code)				Hydrophilic aluminum		
e. Tube outside dia. and type	mm			φ7 , Inner groove tube		
f. Coil length x height x width	mm		637x294x26.74		725X325X26.74	
g. Number of circuits				2		
Performance						
Noise level (Hi/Me/Lo)	dB(A)		42/39/36		46/43/39	
Air flow (Hi/Lo)	m³/h		580/430/410		1150/800/650	
Piping size	Liquid/ Gas side	mm	φ6.35/ φ12.7		φ9.53/φ15.9	
Containerization						
Dimensions	Unit (WxHxD)	mm	790x265x195		920×292×225	
	Packing (WxHxD)	mm	875x447x290		1015X465X295	
	Net/Gross weight	Kg	14-W.B.		15/17	
Qty per 20'/40'/40'HQ	Pieces		312/668/780		288/578/653	

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature: 35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Capacities are net, not including a deduction for cooling (an addition for heating) for indoor fan motor heat

2.2) Hi wall EXV Integrated YDS-22-56 HC15IA R-410A 50 Hz

Model			YDS-22HC15IA	YDS-28HC15IA	YDS-36HC15IA	YDS-45HC15IA	YDS-56HC15IA
Power supply		Ph-V-Hz	1 Ph-220-240V-50Hz				
Nominal capacity							
Cooling	Capacity	kW	2.2	2.8	3.6	4.5	5.6
	Input	W	30.0	30.0	30.0	45.0	45.0
Heating	Capacity	kW	2.6	3.2	4.0	5.0	6.3
	Input	W	30.0	30.0	30.0	45.0	45.0
Motor							
Input		W	30/24/22		44/42/39		
Capacitor		uF	1.2				
Speed (Hi/Me/Lo)		r/min	880/810/760		1030/980/880		
Coil							
Number of rows			2				
Tube pitch(a)x row pitch(b)		mm	21 x13.37				
Fin spacing		mm	1.5				
Fin type			Hydrophilic Aluminum				
Tube outside dia. and type		mm	φ7, Inner groove Tube				
Coil length x height x width		mm	635x315 x26.74		785x357x26.74		
Number of circuits			3		6		
Performance							
Noise level (Hi/Me/Lo)		dB(A)	35/32/29		40/38/34		
Air flow (Hi/Me/Lo)		m³/h	580/500/420		900/760/650		
Piping size	Liquid side/ Gas side	mm	φ6.35/φ12.7		φ9.53/φ15.9		
Containerization							
Dimensions	Unit (WxHxD)	mm	915 x210x290		1070 x210x315		
	Packing (WxHxD)	mm	1020X300X385		1180X300X410		
	Net/Gross weight	kg	12/16		15/19		
Qty per 20'/40'/40'HQ		Pieces	312/668/780		288/578/653		

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature: 35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Capacities are net, not including a deduction for cooling (an addition for heating) for indoor fan motor heat

3. Capacity table

3.1) Cooling

TC: total capacity SHC: sensible capacity

Indoor Unit size (kW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14		16		18		19		20		22		24	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
2.2	10	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.90	1.70
	12	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	14	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	16	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	18	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	20	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.70	1.50
	21	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.70	1.50
	23	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.70	1.50
	25	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.60	1.50
	27	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.60	1.50
	29	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.50	1.50
	31	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.50	1.50
	33	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.40	1.50
	35	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.30	1.50	2.40	1.50
	37	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.30	1.50	2.30	1.50
	39	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.20	1.60	2.30	1.50	2.30	1.50
2.8	10	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.70	2.10
	12	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.10
	14	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.10
	16	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.00
	18	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.50	2.00
	20	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.40	1.90
	21	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.40	1.90
	23	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.10	3.40	1.90
	25	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.00	3.30	1.90
	27	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.00	3.30	1.90
	29	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.20	1.90
	31	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.20	1.90
	33	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.10	2.00
	35	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.10	2.90	1.90	3.10	2.00
	37	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.10	2.90	1.90	2.90	1.90
	39	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.80	2.00	2.90	1.90	2.90	1.90
3.6	10	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.80	2.80
	12	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70
	14	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70
	16	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70
	18	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70
	20	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	21	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	23	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	25	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60
	27	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60
	29	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.50
	31	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.40
	33	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.00	2.40
	35	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	4.00	2.40
	37	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	3.90	2.30
	39	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.70	3.90	2.40

Indoor Unit size (kW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14		16		18		19		20		22		24	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
4.50	10.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40
	12.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40
	14.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.80	3.30
	16.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20
	18.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20
	20.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.50	3.20
	21.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.40	3.10
	23.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.40	3.10
	25.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.30	3.00
	27.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.30	3.00
	29.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.10	2.90
	31.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	5.10	3.00
	33.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.90	2.90
	35.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.80	2.80
	37.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90
	39.00	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90
5.60	10.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10
	12.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10
	14.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.20	4.10
	16.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00
	18.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10
	20.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10
	21.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.00	4.10
	23.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00
	25.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.50	4.10	6.80	3.90
	27.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.40	4.00	6.50	3.80
	29.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.30	4.00	6.40	3.70
	31.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.20	3.90	6.30	3.70
	33.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.00	3.80	6.30	3.70
	35.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.70	6.20	3.60
	37.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.90	6.10	3.50
	39.00	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	5.70	3.80	5.80	3.80	6.00	3.50

3.2) Heating

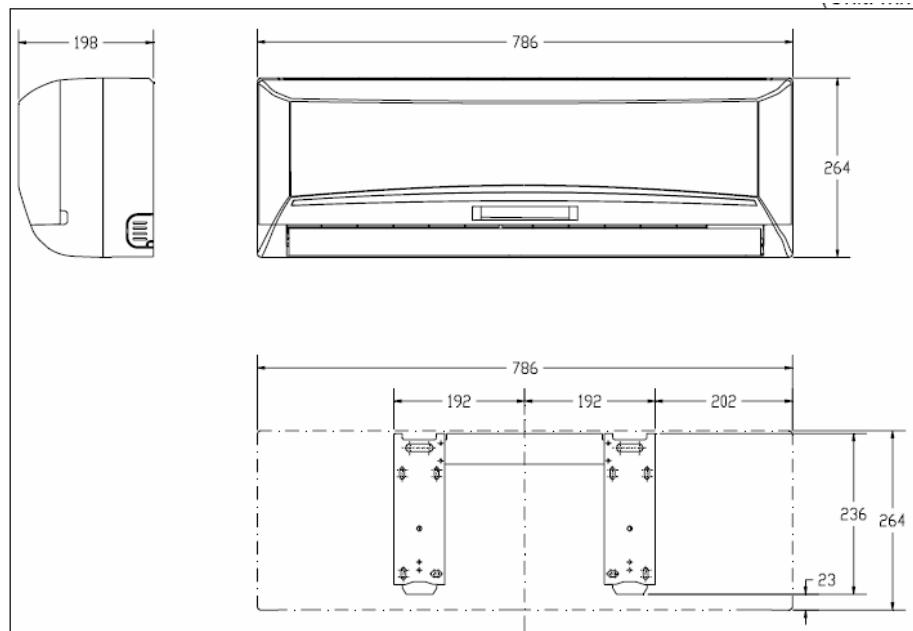
TC: total capacity

Indoor Unit size (kW)	Outdoor temperature		Indoor temperature °C DB					
			14	16	18	20	22	24
	°CDB	°CWB	kW	kW	kW	kW	kW	kW
2.2	-15	-14.7	1.64	1.64	1.64	1.64	1.64	1.64
	-13	-12.6	1.74	1.74	1.74	1.74	1.74	1.74
	-11	-10.5	1.82	1.82	1.82	1.82	1.82	1.82
	-10	-9.5	1.90	1.90	1.90	1.90	1.90	1.90
	-9.1	-8.5	1.95	1.95	1.95	1.95	1.95	1.95
	-7.6	-7	1.98	1.98	1.98	1.98	1.98	1.98
	-5.6	-5	2.05	2.05	2.05	2.05	2.05	2.05
	-3.7	-3	2.16	2.16	2.16	2.16	2.16	2.16
	-0.7	0	2.31	2.31	2.31	2.31	2.31	2.18
	2.2	3	2.44	2.44	2.44	2.44	2.39	2.18
	4.1	5	2.52	2.52	2.52	2.52	2.39	2.18
	6	7	2.60	2.60	2.60	2.60	2.39	2.18
	7.9	9	2.68	2.68	2.93	2.52	2.39	2.18
	9.8	11	2.76	2.76	2.60	2.52	2.39	2.18
	11.8	13	2.86	2.81	2.60	2.52	2.39	2.18
2.8	-15	-14.7	2.02	2.02	2.02	2.02	2.02	2.02
	-13	-12.6	2.14	2.14	2.14	2.14	2.14	2.14
	-11	-10.5	2.24	2.24	2.24	2.24	2.24	2.24
	-10	-9.5	2.34	2.34	2.34	2.34	2.34	2.34
	-9.1	-8.5	2.40	2.40	2.40	2.40	2.40	2.40
	-7.6	-7	2.43	2.43	2.43	2.43	2.43	2.43
	-5.6	-5	2.53	2.53	2.53	2.53	2.53	2.53
	-3.7	-3	2.66	2.66	2.66	2.66	2.66	2.66
	-0.7	0	2.85	2.85	2.85	2.85	2.85	2.69
	2.2	3	3.01	3.01	3.01	3.01	2.94	2.69
	4.1	5	3.10	3.10	3.10	3.10	2.94	2.69
	6	7	3.20	3.20	3.20	3.10	2.94	2.69
	7.9	9	3.30	3.30	2.93	3.10	2.94	2.69
	9.8	11	3.39	3.39	3.20	3.10	2.94	2.69
	11.8	13	3.52	3.46	3.20	3.10	2.94	2.69
	13.7	15	3.62	3.46	3.20	3.10	2.94	2.69
3.6	-15	-14.7	2.52	2.52	2.52	2.52	2.52	2.52
	-13	-12.6	2.68	2.68	2.68	2.68	2.68	2.68
	-11	-10.5	2.80	2.80	2.80	2.80	2.80	2.80
	-10	-9.5	2.92	2.92	2.92	2.92	2.92	2.92
	-9.1	-8.5	3.00	3.00	3.00	3.00	3.00	3.00
	-7.6	-7	3.04	3.04	3.04	3.04	3.04	3.04
	-5.6	-5	3.16	3.16	3.16	3.16	3.16	3.16
	-3.7	-3	3.32	3.32	3.32	3.32	3.32	3.32
	-0.7	0	3.56	3.56	3.56	3.56	3.56	3.36
	2.2	3	3.76	3.76	3.76	3.76	3.68	3.36
	4.1	5	3.88	3.88	3.88	3.88	3.68	3.36
	6	7	4.00	4.00	4.00	3.88	3.68	3.36
	7.9	9	4.12	4.12	2.93	3.88	3.68	3.36
	9.8	11	4.24	4.24	4.00	3.88	3.68	3.36
	11.8	13	4.40	4.32	4.00	3.88	3.68	3.36
	13.7	15	4.52	4.32	4.00	3.88	3.68	3.36

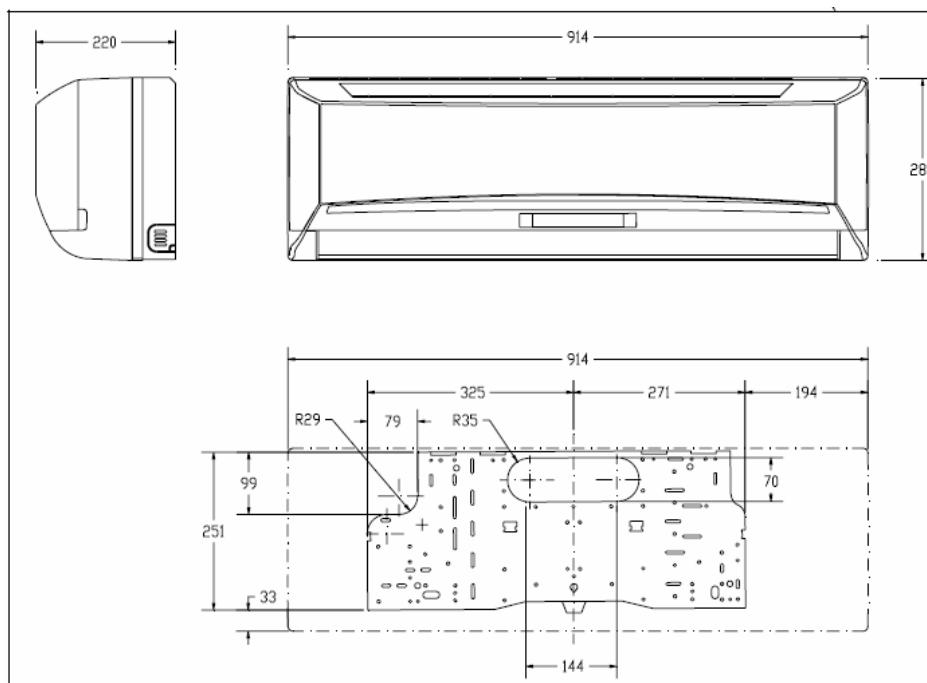
Indoor Unit size (kW)	Outdoor temperature		Indoor temperature °C DB				
			14	16	18	20	24
	TC	TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW
4.5	-15	-14.7	3.15	3.15	3.15	3.15	3.15
	-13	-12.6	3.35	3.35	3.35	3.35	3.35
	-11	-10.5	3.50	3.50	3.50	3.50	3.50
	-10	-9.5	3.65	3.65	3.65	3.65	3.65
	-9.1	-8.5	3.75	3.75	3.75	3.75	3.75
	-7.6	-7	3.80	3.80	3.80	3.80	3.80
	-5.6	-5	3.95	3.95	3.95	3.95	3.95
	-3.7	-3	4.15	4.15	4.15	4.15	4.15
	-0.7	0	4.45	4.45	4.45	4.45	4.45
	2.2	3	4.70	4.70	4.70	4.70	4.70
	4.1	5	4.85	4.85	4.85	4.85	4.85
	6	7	5.00	5.00	5.00	4.85	4.60
	7.9	9	5.15	5.15	2.93	4.85	4.60
	9.8	11	5.30	5.30	5.00	4.85	4.60
5.6	11.8	13	5.50	5.40	5.00	4.85	4.60
	13.7	15	5.65	5.40	5.00	4.85	4.60
	-15	-14.7	3.97	3.97	3.97	3.97	3.97
	-13	-12.6	4.22	4.22	4.22	4.22	4.22
	-11	-10.5	4.41	4.41	4.41	4.41	4.41
	-10	-9.5	4.60	4.60	4.60	4.60	4.60
	-9.1	-8.5	4.73	4.73	4.73	4.73	4.73
	-7.6	-7	4.79	4.79	4.79	4.79	4.79
	-5.6	-5	4.98	4.98	4.98	4.98	4.98
	-3.7	-3	5.23	5.23	5.23	5.23	5.23
	-0.7	0	5.61	5.61	5.61	5.61	5.29
	2.2	3	5.92	5.92	5.92	5.80	5.29
	4.1	5	6.11	6.11	6.11	5.80	5.29
	6	7	6.30	6.30	6.30	5.80	5.29
	7.9	9	6.49	6.49	2.93	6.11	5.80
	9.8	11	6.68	6.68	6.30	6.11	5.80
	11.8	13	6.93	6.80	6.30	6.11	5.80
	13.7	15	7.12	6.80	6.30	6.11	5.80

4. Dimensions

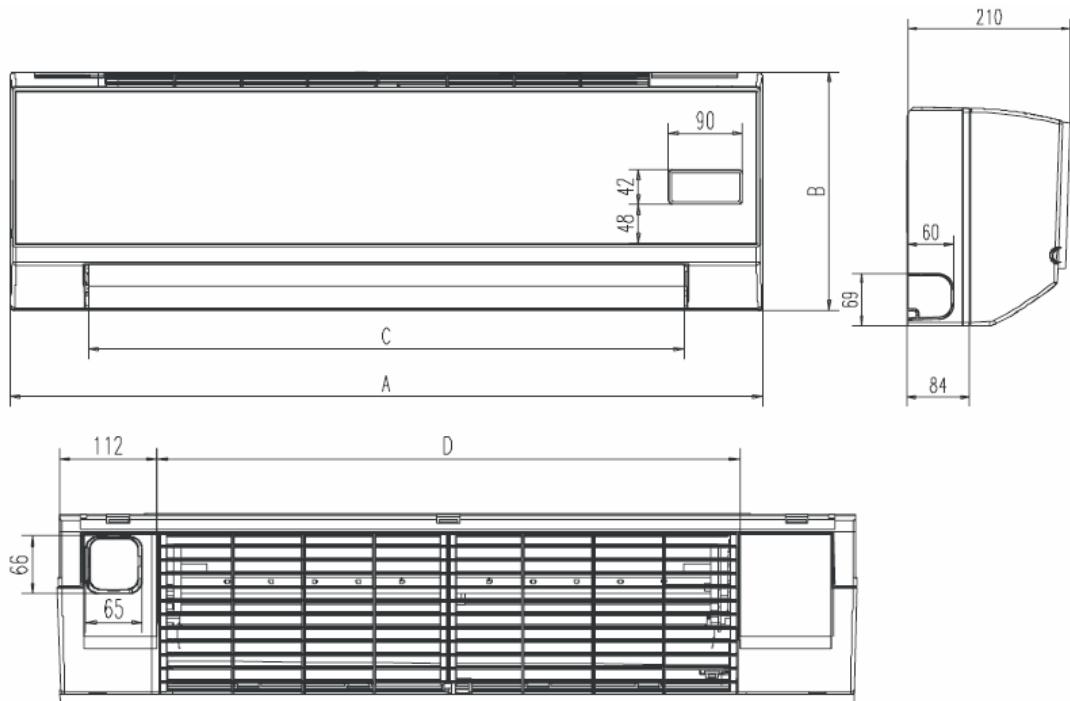
4.1) YDS-22-36EC



4.2) YDS-45-56EC



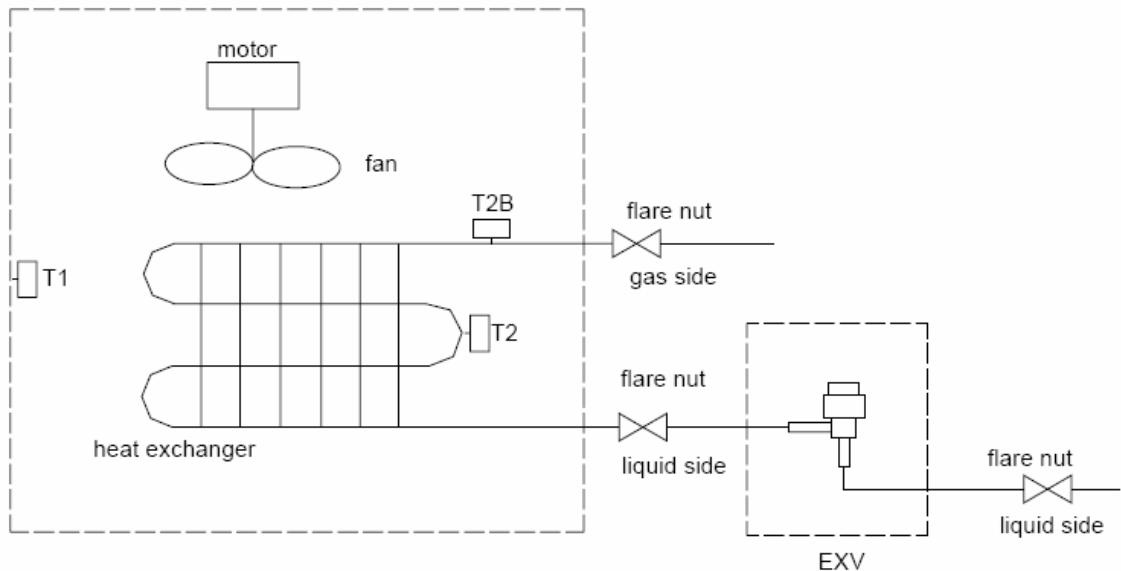
4.3) YDS-22-56HC



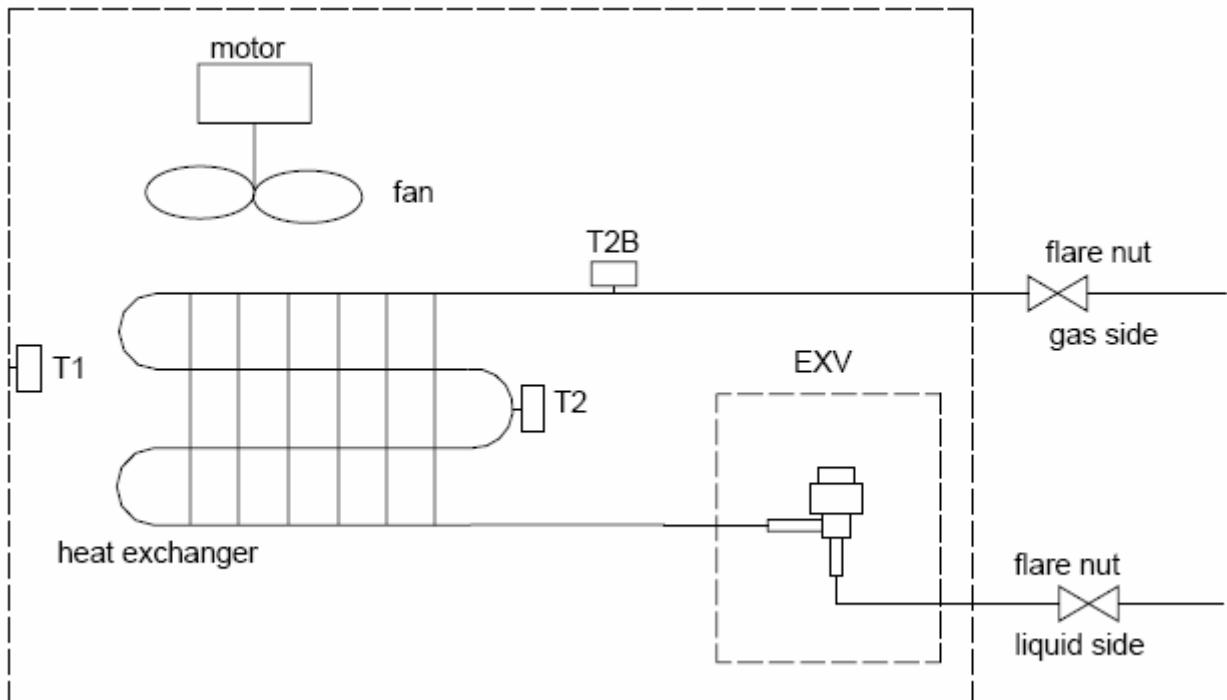
Model	2.2kW	2.8 kW	3.6 kW	4.5 kW	5.6 kW
A	915	915	915	1070	1070
B	290	290	290	315	315
C	725	725	725	885	885
D	670	670	670	815	815

5. Piping Diagrams

5.1) YDS-22-56EC

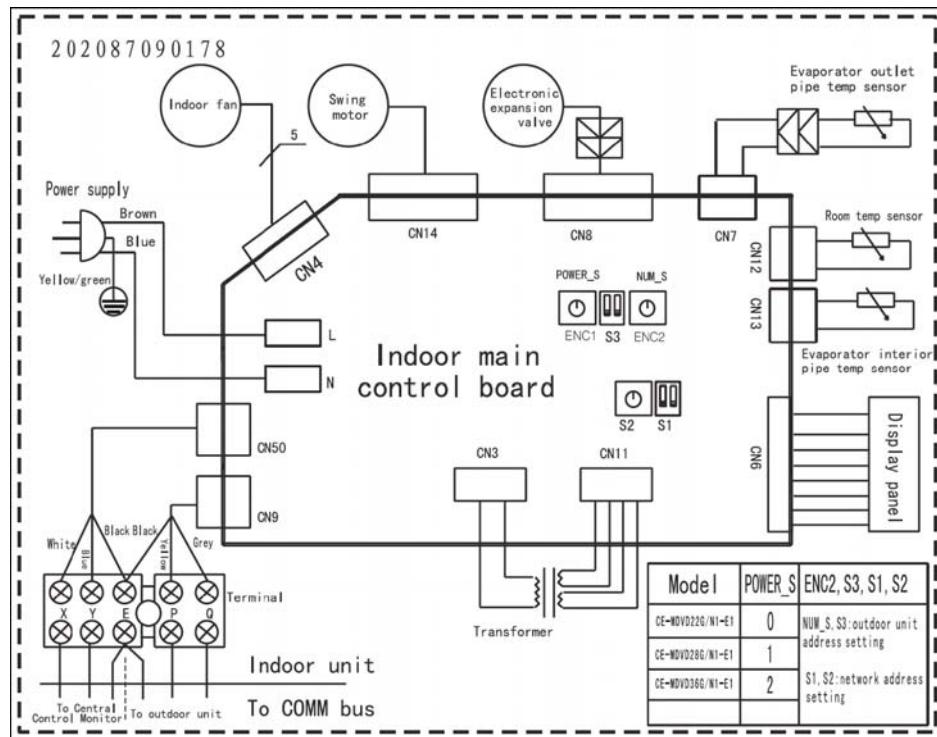


5.2) YDS-22-56HC

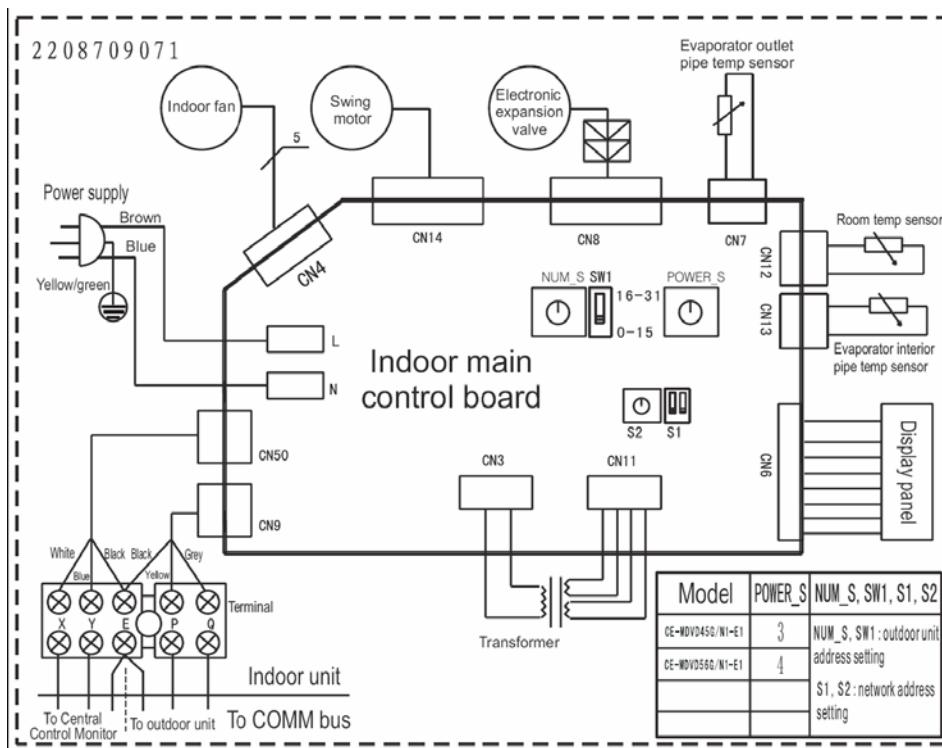


6. Wiring diagrams

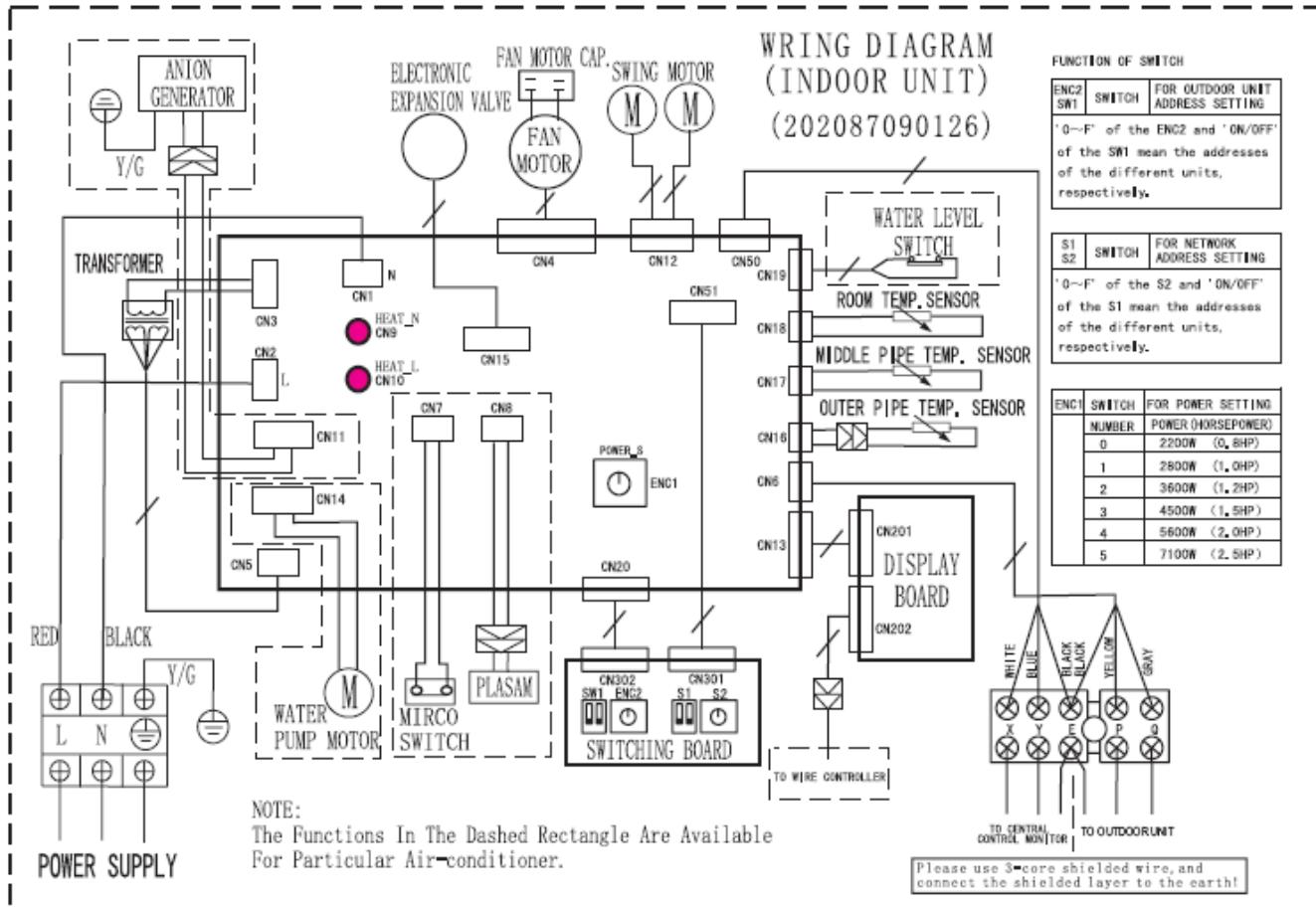
6.1) YDS-22-36EC



6.2) YDS-45-56EC

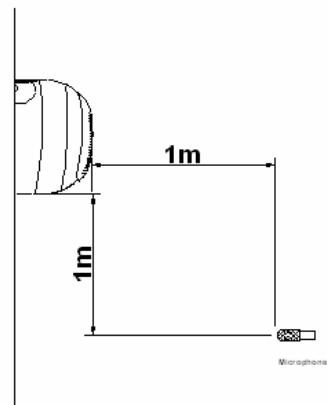


6.3) YDS-22-56HC



7. Sound level

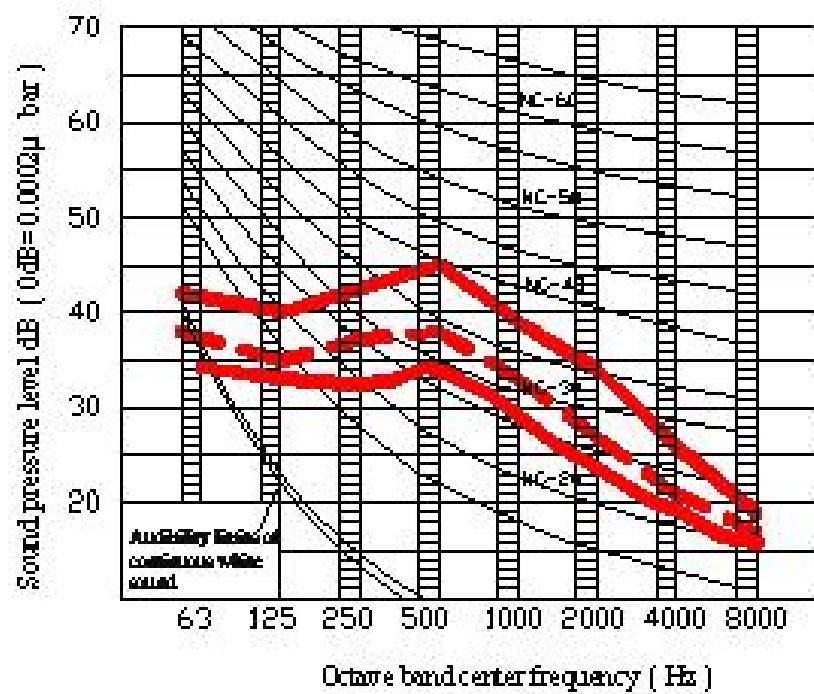
7.1) Test condition



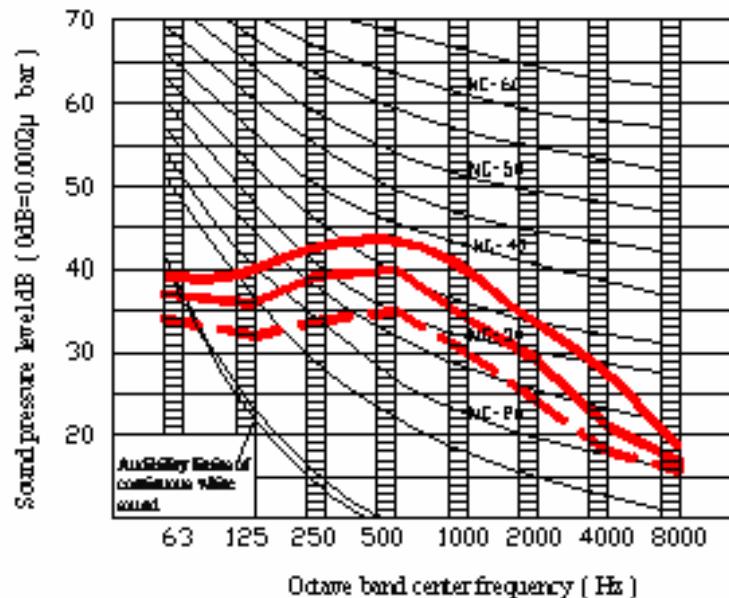
- High airflow
- - - Mid airflow
- - - Low airflow

7.2) Noise spectrums

YDS-22-36EC/HC



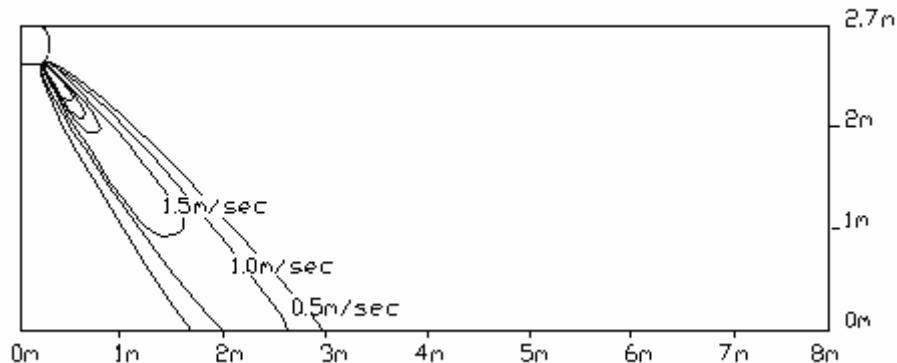
YDS-45-56EC/HC



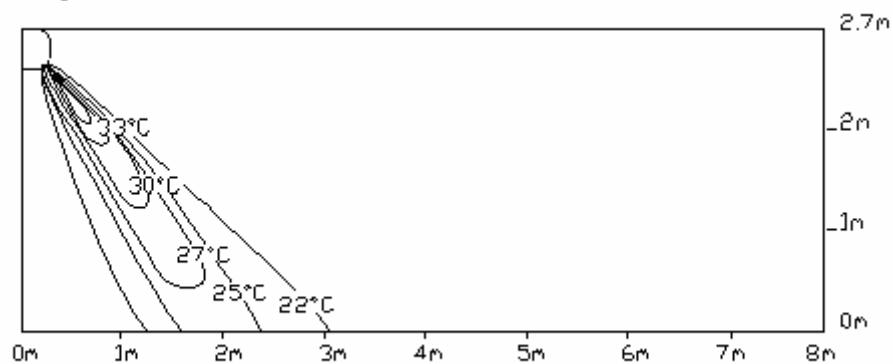
8. Velocity & temperature distribution

Discharge angle 70°

Airflow velocity



Temperature



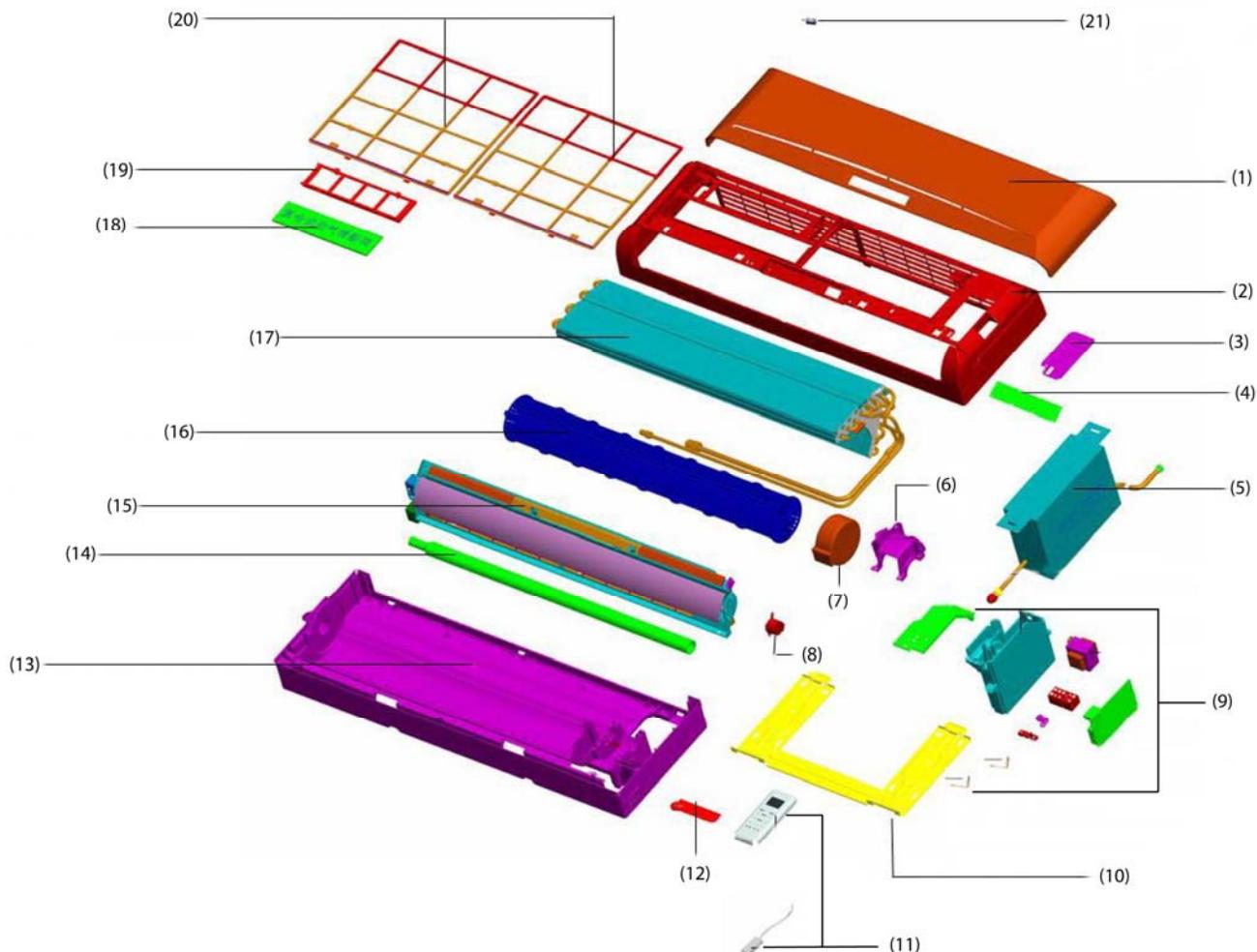
9. Electrical characteristic

Model	Indoor Unit				Power Supply		IFM	
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
YDS-22EC/HC	50	220-240V	198	254	0.3	15	0.013	0.225
YDS-28EC/HC	50	220-240V	198	254	0.3	15	0.013	0.225
YDS-36EC/HC	50	220-240V	198	254	0.3	15	0.013	0.225
YDS-45EC/HC	50	220-240V	198	254	0.3	15	0.028	0.24
YDS-56EC/HC	50	220-240V	198	254	0.3	15	0.028	0.24

10. Explode view and spare part list

MODEL YDS-22-56EC

R-410A 1 Ph 220-240V 50Hz



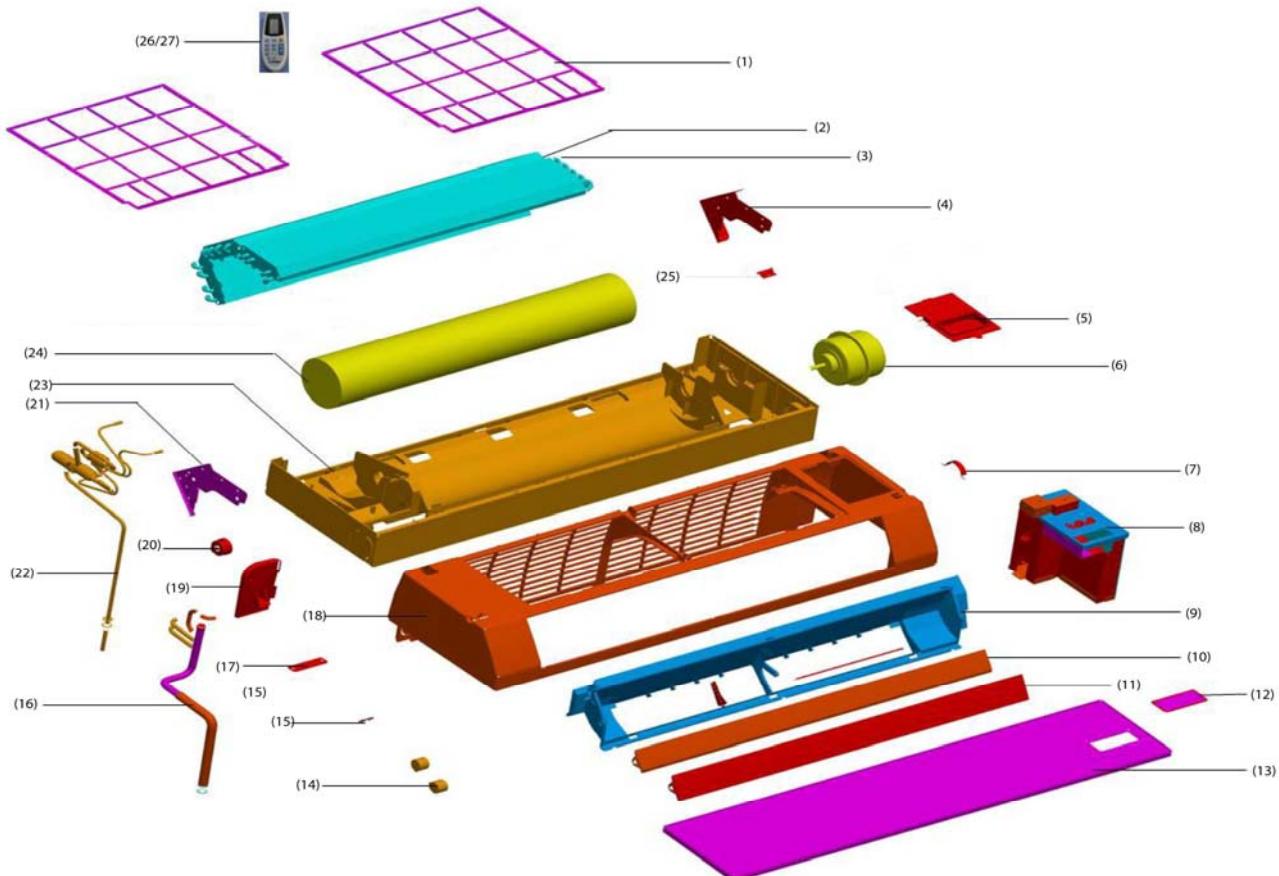
ITEM NO	PART NUMBER					PART NAME	QTY	REMARK
	2.2 kW	2.8 kW	3.6 kW	4.5 kW	5.6 kW			
1	201M130490119			201M130290172		Panel ass'y	1	
2	201M132590058			201M130290164		Panel frame ass'y	1	
3	201M130490186			201M130290288		E-Part box cover	1	
4	203M332390267			203M3870A0025		Display board ass'y	1	
5	201M684090109			201M609890097		Electric throttle ass'y	1	
6	201M130490106			201M130210052		motor cover	1	
7	202M400380005			202M400380004		motor	1	
8	202M400200006			202M400200025		Stepper motor	1	
9	203M387090037			203M387090038		E-part box ass'y	1	
-	201M130490184			201M130210070		E-Part box cover	1	
-	201M130490108			201M130210069		E-Part box	1	
-	202M300900578					Transformer	1	
-	201M387090035			201M387090036		Main controller ass'y	1	
-			202M301450119			Wire joint, 5p	1	
-	201M130100209			201M135210303		wire clamp	2	
-			202M432390005			room temp sensor ass'y	1	

-	202M301300080		Evaporator temp. sensor ass'y	1		
-	202M440500004		Evaporator temp. sensor ass'y	1		
10	201M230390006	201M230500010	installation board	1		
11	203M3550A1500		Wireless remote,R91/BGE,York brand,Silver	1		
-	201M155090070		Remote holder,R91,York brand,White	1		
12	201M130100204		Pipe clamp	1		
13	201M130490118	201M132800001	Base ass'y	1		
14	201M130000011	201M101020014	Drain hose	1		
15	201M130490117	201M130290253	Air outlet ass'y	1		
16	201M100200100	201M100200014	Cross fan	1		
17	201M587090024	201M587090023	Evaporator ass'y	1		
-	201M530490030	201M530210052	front Evaporator	1		
-	201M530490031	201M530210051	Rear Evaporator	1		
-	201M630490017	201M630210058	Evaporator intput pipe ass'y	1		
-	201M630490013	201M630210050	201M687090053	Evaporator Outlet pipe ass'y	1	
18	201M130100212		Air cleaner	1		
19	201M130100217		Air cleaner holder	1		
20	201M130490113	201M130290162	Filter	2		
21	202M401200001		Motor capacitor	1		

MODEL

YDS-22-56HC

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER					PART NAME	QTY	REMARK
	2.2 kW	2.8 kW	3.6 kW	4.5 kW	5.6 kW			
1	201M187090020			201M187090033		Filter	2	
2		202M486150220				Coil temp sensor	1	
3	201M587090005		201M587090012			Evaporator	3	
4	201M287090024		201M287090027			Evaporator right joint board	1	
5		201M130490002				Sensor block	1	
6		201M387090022				Display board ass'y	1	
7	202M400400061		202M400400062			Motor	1	
8	201M287090018		201M287090025			Motor plate	2	
9		203M387090021				E-part box ass'y	1	
-		201M187090027				Electric control box holder	1	
-		201M287090021				Electric control box side board ass'y	1	
-		201M287090020				Electric control box soleplate	1	
-		201M287090019				E-Part box cover	1	
-		201M387090027				dial code switch board ass'y	1	
-		202M300900109				Transformer (TT2-B35+D90-1F)	1	
-		201M387090029				Main controller ass'y	1	
-		202M401100006				Motor capacitor	1	
-		202M432390005				room temp sensor ass'y	1	
10	201M187090021		201M187090028			Air outlet ass'y	1	
11	201M187090019		201M187090032			Top air deflector	1	
12	201M187090018		201M187090031			Below air deflector	1	
13	201M187090015		201M187090029			panel	1	
14	201M187090016		201M187090030			Panel	1	
15		202M400200028				Stepper motor	1	

16	201M187090017			screw cover	3			
17	201M687090057	201M687090090	201M687090081	Outlet pipe ass'y	1			
-	202M441200200			Coil temperature sensor	1			
18	201M287090017			Pipe clamp	1			
19	201M187090022	201M187090034		Frame	1			
20	201M187090036			Drainage pan	1			
21	202M730100201			Bearing base	1			
22	201M287090023	201M287090026		Evaporator connection board	1			
23	201M687090063	201M687090091	201M687090072	Inlet pipe ass'y	1			
24	201M187090023	201M187090035		Base ass'y	1			
25	201M100200024	201M100200025		Cross fan	1			
26	203M3550A1500			Wireless remote,R91/BGE,York brand, Silver	1			
27	201M155090070			Remote holder,R91,York brand, White	1			

Part 4.3 Floor & ceiling

Contents

1. Features.....	127
2. Specifications.....	129
3. Capacity table.....	131
4. Dimensions.....	137
5. Wiring diagrams.....	138
6. Refrigerant system diagrams	139
7. Noise level	140
8. Velocity & temperature distribution.....	142
9. Functional part & safety device.....	144
10. Exploded view parts.....	145

1 Feature

(1) Convenient installation

- The ceiling type can be easily installed into a corner of the ceiling even if the ceiling is very narrow
- This is especially useful when installation of an air conditioner in the center of the ceiling is impossible due to a structure such as a lighting



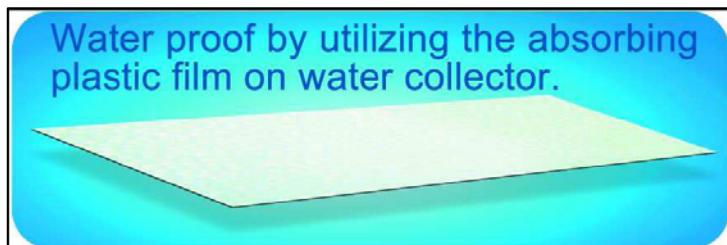
New Floor & ceiling type

(2) Double auto swing and wide angle air flow

- Air flow directional control minimizes the air resistance and produces wider air flow to vertical direction
- The range of horizontal air discharge is widened which secures wider air flow distribution to provide more comfortable air circulation no matter where the unit is set up



(3) Water proof by utilizing the waterproof film on water collector



(4) Low noise level plus compact size

-Shape of the blades has been improved to prevent noise caused by turbulence

2. Specifications

Floor Ceiling YDS-36-112FC15IA/IB R-410 50Hz

Model		YDS-36FC15IA		YDS-45FC15IB		YDS-56FC15IA		YDS-71FC15IA	
Power supply		Ph-V-Hz		1 Ph- 220-240 V- 50 Hz					
Nominal Capacity									
Cooling	Capacity	kW	3.5	4.7	5.3	7.0			
	Input	W	130	140	140	140			
Heating	Capacity	kW	4.0	5.1	6.2	8.2			
	Input	W	130	140	140	140			
Motor									
Input		W	120		120				
Capacitor		uF	1.2uF/450V		2uF/450V				
Speed (Hi/Me/Lo)		r/min	750/660/590		1280/ 1190/1000				
Coil									
Number of rows			2		3				
Tube pitch(a)x row pitch(b)		mm		25.4x22					
Fin spacing		mm		1.8					
Fin type (code)				Hydrophilic aluminum					
Tube outside dia. and type		mm		φ9.53 Inner groove tube					
Coil length x height x width		mm	804x254x44		804x254x66				
Number of circuits				5					
Performance									
Noise level (Hi/Me/Lo)		dB(A)	43/41/38		43/41/38				
Air flow (Hi/Me/Lo)		m³/h	650/570/500		800/600/500				
Piping size	Liquid/ Gas side	mm	φ6.4 /φ12.7			φ9.5 /φ15.9			
Containerization									
Dimensions	Unit (WxHxD)	mm		995x660x198					
	Packing (WxHxD)	mm		1089x744x296					
	Net/Gross weight	Kg		29/35					
Qty per 20'/40'/40'HQ		Pieces		128/270/300					

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature: 35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Capacities are net, not including a deduction for cooling (an addition for heating) for indoor fan motor heat

Model			YDS-80FC15IA	YDS-90FC15IA	YDS-112FC15IA	YDS-140FC15IA		
Power supply		Ph-V-Hz	1 Ph- 220-240 V- 50 Hz					
Nominal Capacity								
Cooling	Capacity	kW	7.9	8.8	11.7	14.1		
	Input	W	155	155	240	240		
Heating	Capacity	kW	9.4	10.6	13.2	15.5		
	Input	W	155	155	240	240		
Motor								
Input		W	130		182			
Capacitor		uF	3.5uF/450V		2.5 uF /450v			
Speed (Hi/Me/Lo)		r/min	1310/1200/1000		820/695/620			
Coil								
Number of rows			3					
Tube pitch(a)x row pitch(b)		mm	25.4x22					
Fin spacing		mm	1.7					
Fin type (code)			Hydrophilic aluminum					
Tube outside dia. and type		mm	φ9.53 Inner groove tube					
Coil length x height x width		mm	905x203x66		1150x254x66			
Number of circuits			5					
Performance								
Noise level (Hi/Me/Lo)		dB(A)	45/43/40		47/45/42			
Air flow (Hi/Me/Lo)		m³/h	1400/1200/1000		2000/1800/1600			
Piping size	Liquid/ Gas side	mm	φ9.5 /φ15.9					
Containerization								
Dimensions	Unit (WxHxD)	mm	1285x660x198		1670x680x240			
	Packing (WxHxD)	mm	1379x744x296		1764x760x329			
	Net/Gross weight	Kg	37/42		54/61			
Qty per 20'/40'/40'HQ		Pieces	128/270/300		99/203/228			

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature: 35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Capacities are net, not including a deduction for cooling (an addition for heating) for indoor fan motor heat

3. Capacity table

3.1) Cooling

TC: total capacity SHC: sensible capacity

Indoor Unit size (KW)	Outdoor temperature °C Db	Indoor temperature (°WB)														
		14		16		18		19		20		22				
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC			
3.6	10	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.80	2.80	
	12	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70	
	14	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70	
	16	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70	
	18	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70	
	20	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70	
	21	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70	
	23	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70	
	25	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60	
	27	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60	
	29	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.50	
	31	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.40	
	33	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.00	2.40	
	35	2.40	2.20	3.00	2.50	3.30	2.70	3.60	3.60	2.70	3.70	2.60	3.90	2.60	4.00	2.40
	37	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	3.90	2.30	
	39	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.70	3.90	2.40	
4.5	10	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40	
	12	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40	
	14	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.80	3.30	
	16	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20	
	18	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20	
	20	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.50	3.20	
	21	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.40	3.10	
	23	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.40	3.10	
	25	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.30	3.00	
	27	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.30	3.00	
	29	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.10	2.90	
	31	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	5.10	3.00	
	33	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.90	2.90	
	35	3.10	2.60	3.60	2.90	4.20	3.10	4.50	4.50	3.20	4.80	3.30	5.30	3.50	4.80	2.80
	37	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90	
	39	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90	
5.6	10	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10	
	12	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10	
	14	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.20	4.10	
	16	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00	
	18	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10	
	20	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10	
	21	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.00	4.10	
	23	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00	
	25	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.50	4.10	6.80	3.90	
	27	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.40	4.00	6.50	3.80	
	29	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.30	4.00	6.40	3.70	
	31	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.20	3.90	6.30	3.70	
	33	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.00	3.80	6.30	3.70	
	35	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.70	6.20	3.60	
	37	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.90	6.10	3.50	
	39	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	5.70	3.80	5.80	3.80	6.00	3.50	

Indoor Unit size (kW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14		16		18		19		20		22		24	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
7.1	10	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	9.2	4.9
	12	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	9.1	4.8
	14	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	9	4.8
	16	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	8.9	4.7
	18	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	8.7	4.7
	20	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	8.5	4.6
	21	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	8.4	4.5
	23	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	8.3	4.5
	25	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.4	4.9	8.2	4.4
	27	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8.1	4.9	8.2	4.4
	29	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	8	4.8	8.1	4.5
	31	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	7.9	4.7	7.8	4.4
	33	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	7.8	4.7	7.8	4.4
	35	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	7.6	4.6	7.7	4.3
	37	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.5	4.8	7.5	4.5	7.6	4.3
	39	5	3.8	5.8	4.2	6.7	4.6	7.1	4.7	7.2	4.6	7.4	4.4	7.6	4.3
8	10	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	10.4	5.6
	12	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	10.2	5.5
	14	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	10.2	5.5
	16	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	10	5.4
	18	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	9.8	5.3
	20	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	9.6	5.2
	21	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	9.4	5.1
	23	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	9.4	5.1
	25	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.4	5.5	9.3	5
	27	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.4	9.1	5.3	9.2	5.1
	29	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.5	9	5.3	9.1	5
	31	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.5	8.9	5.2	8.8	4.8
	33	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.5	8.8	5.2	8.8	4.8
	35	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.4	5.5	8.6	5.1	8.6	4.8
	37	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.3	5.4	8.4	5	8.6	4.9
	39	5.5	4.4	6.6	4.9	7.5	5.3	8	5.5	8.1	5.3	8.3	5	8.6	4.9
9	10	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	11.7	6.6
	12	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	11.5	6.5
	14	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	11.4	6.4
	16	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	11.3	6.3
	18	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	11	6.3
	20	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	10.8	6.2
	21	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	10.6	6.1
	23	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	10.5	6
	25	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.6	6.6	10.4	6
	27	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.3	6.4	10.4	5.9
	29	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10.1	6.2	10.3	5.8
	31	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	10	6.2	9.9	5.7
	33	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.6	6.5	9.9	6.1	9.9	5.7
	35	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.5	6.5	9.6	6	9.7	5.7
	37	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.3	6.3	9.5	5.9	9.6	5.8
	39	6.2	5.3	7.3	5.8	8.4	6.3	9	6.4	9.2	6.2	9.4	5.8	9.6	5.8

Indoor Unit size (kW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14		16		18		19		20		22		24	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
11.2	10	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	15.5	9
	12	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	14.4	8.4
	14	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	14.2	8.2
	16	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	14.1	8.2
	18	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	14	8.1
	20	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	13.9	8.1
	21	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.3	8.3	13.8	8
	23	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13.1	8.1	13.7	7.9
	25	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	13	8.1	13.6	7.9
	27	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.9	8	13.4	7.8
	29	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.8	7.9	13.3	7.9
	31	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.7	7.8	12.8	7.5
	33	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.9	8.1	12.5	7.8	12.5	7.4
	35	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.8	8	12.4	7.7	12.3	7.3
	37	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.6	7.9	12.3	7.6	12.1	7.1
	39	7.7	6.4	9.1	7.1	10.5	7.7	11.2	7.8	11.4	7.8	12.2	7.6	11.9	7.1
14	10	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.7	10.2	18.2	10.2
	12	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.7	10.2	17.9	10
	14	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.7	10.2	17.8	10
	16	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.7	10.2	17.5	9.8
	18	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.7	10.2	17.1	9.6
	20	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.7	10.2	16.8	9.4
	21	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.7	10.2	16.5	9.3
	23	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.4	10.2	16.4	9.2
	25	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.2	10.1	16.2	9.1
	27	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16.1	10	16.1	9.2
	29	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	16	9.9	16	9.1
	31	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	15.8	9.8	15.4	8.8
	33	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.8	9.8	15.7	9.7	15.4	8.8
	35	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.7	9.7	15.1	9.4	15.1	8.8
	37	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.6	9.6	15.1	9.4	15	8.7
	39	9.7	7.8	11.3	8.6	13.2	9.6	14	9.8	14.3	9.4	14.6	9.2	15	8.8

(3.2) Heating

TC: total capacity

Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °C DB					
			16	18	20	21	22	24
	TC	TC	TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW	kW
3.6	-15	-14.7	2.52	2.52	2.52	2.52	2.52	2.52
	-13	-12.6	2.68	2.68	2.68	2.68	2.68	2.68
	-11	-10.5	2.80	2.80	2.80	2.80	2.80	2.80
	-10	-9.5	2.92	2.92	2.92	2.92	2.92	2.92
	-9.1	-8.5	3.00	3.00	3.00	3.00	3.00	3.00
	-7.6	-7	3.04	3.04	3.04	3.04	3.04	3.04
	-5.6	-5	3.16	3.16	3.16	3.16	3.16	3.16
	-3.7	-3	3.32	3.32	3.32	3.32	3.32	3.32
	-0.7	0	3.56	3.56	3.56	3.56	3.56	3.36
	2.2	3	3.76	3.76	3.76	3.76	3.68	3.36
	4.1	5	3.88	3.88	3.88	3.88	3.68	3.36
	6	7	4.00	4.00	4.00	3.88	3.68	3.36
	7.9	9	4.12	4.12	2.93	3.88	3.68	3.36
	9.8	11	4.24	4.24	4.00	3.88	3.68	3.36
	11.8	13	4.40	4.32	4.00	3.88	3.68	3.36
	13.7	15	4.52	4.32	4.00	3.88	3.68	3.36
4.5	-15	-14.7	3.15	3.15	3.15	3.15	3.15	3.15
	-13	-12.6	3.35	3.35	3.35	3.35	3.35	3.35
	-11	-10.5	3.50	3.50	3.50	3.50	3.50	3.50
	-10	-9.5	3.65	3.65	3.65	3.65	3.65	3.65
	-9.1	-8.5	3.75	3.75	3.75	3.75	3.75	3.75
	-7.6	-7	3.80	3.80	3.80	3.80	3.80	3.80
	-5.6	-5	3.95	3.95	3.95	3.95	3.95	3.95
	-3.7	-3	4.15	4.15	4.15	4.15	4.15	4.15
	-0.7	0	4.45	4.45	4.45	4.45	4.45	4.20
	2.2	3	4.70	4.70	4.70	4.70	4.60	4.20
	4.1	5	4.85	4.85	4.85	4.85	4.60	4.20
	6	7	5.00	5.00	5.00	4.85	4.60	4.20
	7.9	9	5.15	5.15	2.93	4.85	4.60	4.20
	9.8	11	5.30	5.30	5.00	4.85	4.60	4.20
	11.8	13	5.50	5.40	5.00	4.85	4.60	4.20
	13.7	15	5.65	5.40	5.00	4.85	4.60	4.20
5.6	-15	-14.7	3.97	3.97	3.97	3.97	3.97	3.97
	-13	-12.6	4.22	4.22	4.22	4.22	4.22	4.22
	-11	-10.5	4.41	4.41	4.41	4.41	4.41	4.41
	-10	-9.5	4.60	4.60	4.60	4.60	4.60	4.60
	-9.1	-8.5	4.73	4.73	4.73	4.73	4.73	4.73
	-7.6	-7	4.79	4.79	4.79	4.79	4.79	4.79
	-5.6	-5	4.98	4.98	4.98	4.98	4.98	4.98
	-3.7	-3	5.23	5.23	5.23	5.23	5.23	5.23
	-0.7	0	5.61	5.61	5.61	5.61	5.61	5.29
	2.2	3	5.92	5.92	5.92	5.92	5.80	5.29
	4.1	5	6.11	6.11	6.11	6.11	5.80	5.29
	6	7	6.30	6.30	6.30	6.30	5.80	5.29
	7.9	9	6.49	6.49	2.93	6.11	5.80	5.29
	9.8	11	6.68	6.68	6.30	6.11	5.80	5.29
	11.8	13	6.93	6.80	6.30	6.11	5.80	5.29
	13.7	15	7.12	6.80	6.30	6.11	5.80	5.29

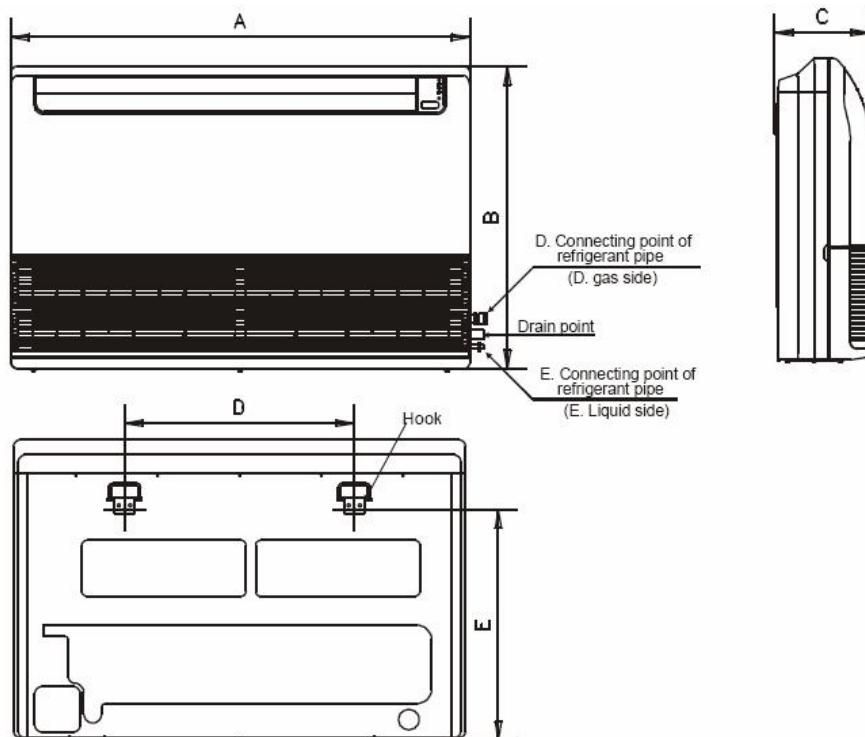
Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °C DB					
			16	18	20	21	22	24
	TC	TC	TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW	kW
7.1	-15	-14.7	5.04	5.04	5.04	5.04	5.04	5.04
	-13	-12.6	5.36	5.36	5.36	5.36	5.36	5.36
	-11	-10.5	5.60	5.60	5.60	5.60	5.60	5.60
	-10	-9.5	5.84	5.84	5.84	5.84	5.84	5.84
	-9.1	-8.5	6.00	6.00	6.00	6.00	6.00	6.00
	-7.6	-7	6.08	6.08	6.08	6.08	6.08	6.08
	-5.6	-5	6.32	6.32	6.32	6.32	6.32	6.32
	-3.7	-3	6.64	6.64	6.64	6.64	6.64	6.64
	-0.7	0	7.12	7.12	7.12	7.12	7.12	6.72
	2.2	3	7.52	7.52	7.52	7.52	7.36	6.72
	4.1	5	7.76	7.76	7.76	7.76	7.36	6.72
	6	7	8.00	8.00	8.00	7.76	7.36	6.72
	7.9	9	8.24	8.24	2.93	7.76	7.36	6.72
	9.8	11	8.48	8.48	8.00	7.76	7.36	6.72
	11.8	13	8.80	8.64	8.00	7.76	7.36	6.72
	13.7	15	9.04	8.64	8.00	7.76	7.36	6.72
8	-15	-14.7	5.67	5.67	5.67	5.67	5.67	5.67
	-13	-12.6	6.03	6.03	6.03	6.03	6.03	6.03
	-11	-10.5	6.30	6.30	6.30	6.30	6.30	6.30
	-10	-9.5	6.57	6.57	6.57	6.57	6.57	6.57
	-9.1	-8.5	6.75	6.75	6.75	6.75	6.75	6.75
	-7.6	-7	6.84	6.84	6.84	6.84	6.84	6.84
	-5.6	-5	7.11	7.11	7.11	7.11	7.11	7.11
	-3.7	-3	7.47	7.47	7.47	7.47	7.47	7.47
	-0.7	0	8.01	8.01	8.01	8.01	8.01	7.56
	2.2	3	8.46	8.46	8.46	8.46	8.28	7.56
	4.1	5	8.73	8.73	8.73	8.73	8.28	7.56
	6	7	9.00	9.00	9.00	8.73	8.28	7.56
	7.9	9	9.27	9.27	2.93	8.73	8.28	7.56
	9.8	11	9.54	9.54	9.00	8.73	8.28	7.56
	11.8	13	9.90	9.72	9.00	8.73	8.28	7.56
	13.7	15	10.17	9.72	9.00	8.73	8.28	7.56
9	-15	-14.7	6.30	6.30	6.30	6.30	6.30	6.30
	-13	-12.6	6.70	6.70	6.70	6.70	6.70	6.70
	-11	-10.5	7.00	7.00	7.00	7.00	7.00	7.00
	-10	-9.5	7.30	7.30	7.30	7.30	7.30	7.30
	-9.1	-8.5	7.50	7.50	7.50	7.50	7.50	7.50
	-7.6	-7	7.60	7.60	7.60	7.60	7.60	7.60
	-5.6	-5	7.90	7.90	7.90	7.90	7.90	7.90
	-3.7	-3	8.30	8.30	8.30	8.30	8.30	8.30
	-0.7	0	8.90	8.90	8.90	8.90	8.90	8.40
	2.2	3	9.40	9.40	9.40	9.40	9.20	8.40
	4.1	5	9.70	9.70	9.70	9.70	9.20	8.40
	6	7	10.00	10.00	10.00	9.70	9.20	8.40
	7.9	9	10.30	10.30	2.93	9.70	9.20	8.40
	9.8	11	10.60	10.60	10.00	9.70	9.20	8.40
	11.8	13	11.00	10.80	10.00	9.70	9.20	8.40
	13.7	15	11.30	10.80	10.00	9.70	9.20	8.40

Indoor Unit size (KW)	Outdoor temperature	Indoor temperature °C DB					
		16	18	20	21	22	24
		TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW
11.2	-15	-14.7	7.88	7.88	7.88	7.88	7.88
	-13	-12.6	8.38	8.38	8.38	8.38	8.38
	-11	-10.5	8.75	8.75	8.75	8.75	8.75
	-10	-9.5	9.13	9.13	9.13	9.13	9.13
	-9.1	-8.5	9.38	9.38	9.38	9.38	9.38
	-7.6	-7	9.50	9.50	9.50	9.50	9.50
	-5.6	-5	9.88	9.88	9.88	9.88	9.88
	-3.7	-3	10.38	10.38	10.38	10.38	10.38
	-0.7	0	11.13	11.13	11.13	11.13	10.50
	2.2	3	11.75	11.75	11.75	11.50	10.50
	4.1	5	12.13	12.13	12.13	11.50	10.50
	6	7	12.50	12.50	12.50	11.50	10.50
	7.9	9	12.88	12.88	2.93	11.50	10.50
	9.8	11	13.25	13.25	12.50	11.50	10.50
	11.8	13	13.75	13.50	12.50	11.50	10.50
	13.7	15	14.13	13.50	12.50	11.50	10.50
14	-15	-14.7	9.45	9.45	9.45	9.45	9.45
	-13	-12.6	10.05	10.05	10.05	10.05	10.05
	-11	-10.5	10.50	10.50	10.50	10.50	10.50
	-10	-9.5	10.95	10.95	10.95	10.95	10.95
	-9.1	-8.5	11.25	11.25	11.25	11.25	11.25
	-7.6	-7	11.40	11.40	11.40	11.40	11.40
	-5.6	-5	11.85	11.85	11.85	11.85	11.85
	-3.7	-3	12.45	12.45	12.45	12.45	12.45
	-0.7	0	13.35	13.35	13.35	13.35	12.60
	2.2	3	14.10	14.10	14.10	13.80	12.60
	4.1	5	14.55	14.55	14.55	13.80	12.60
	6	7	15.00	15.00	15.00	13.80	12.60
	7.9	9	15.45	15.45	15.00	13.80	12.60
	9.8	11	15.90	15.90	15.00	13.80	12.60
	11.8	13	16.50	16.20	15.00	13.80	12.60
	13.7	15	16.95	16.20	15.00	13.80	12.60

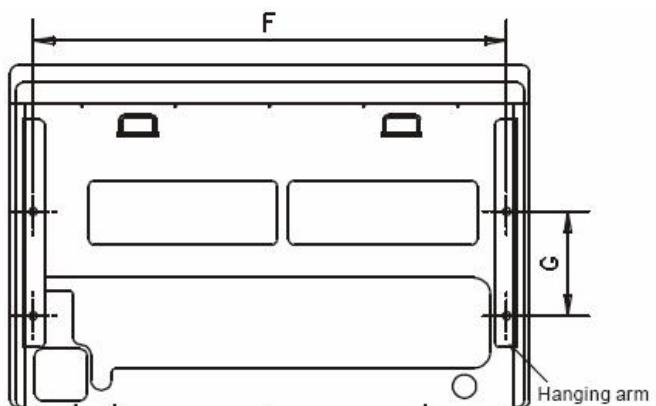
4. Dimensions

YDS-36-140FC

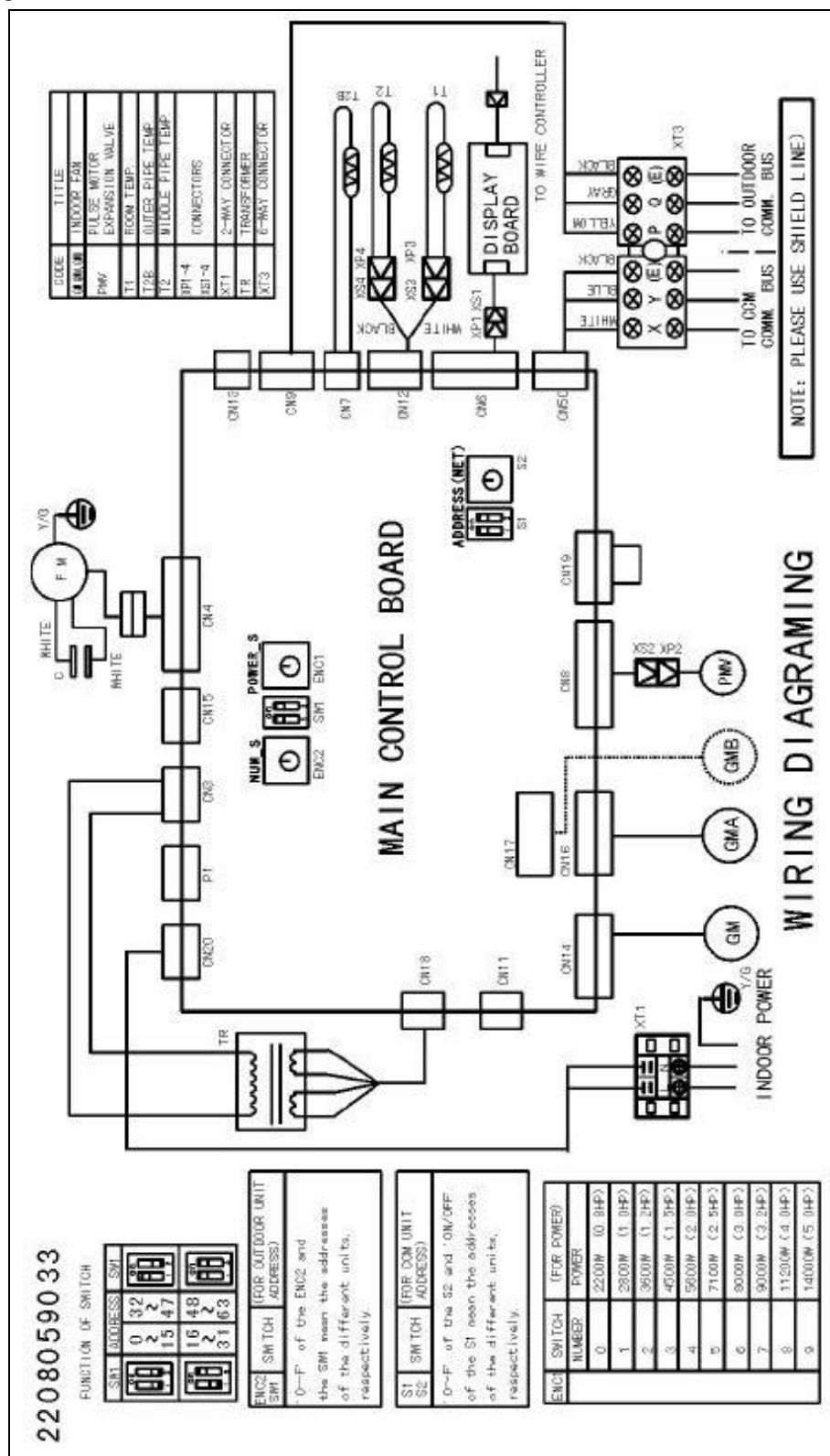
Wall mounting installation



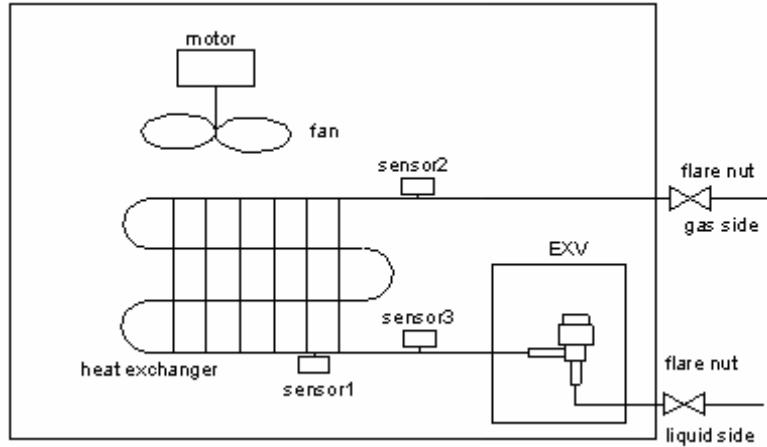
Ceiling installation



Capacity (kW)	A	B	C	D	E	F	G
3.6~7.1	990	660	206	505	506	907	200
8.0~9.0	1280	660	206	795	506	1195	200
11.2~14.0	1670	680	244	1070	450	1542	200

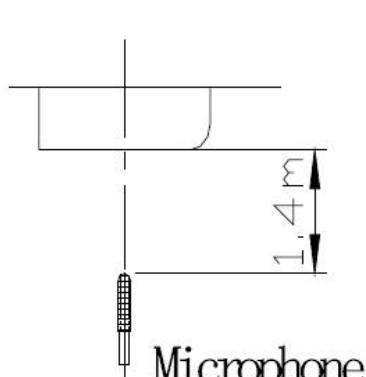


6. Refrigerant system diagram
YDS-36-140FC

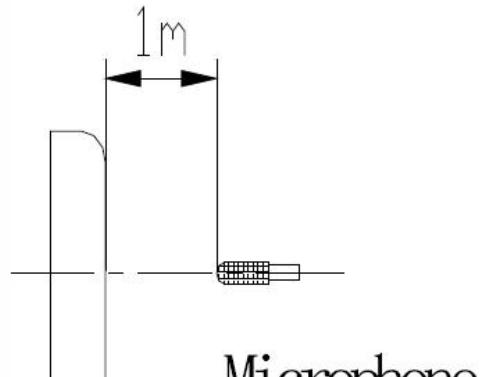


7. Noise level

7.1) Test condition



Ceiling type

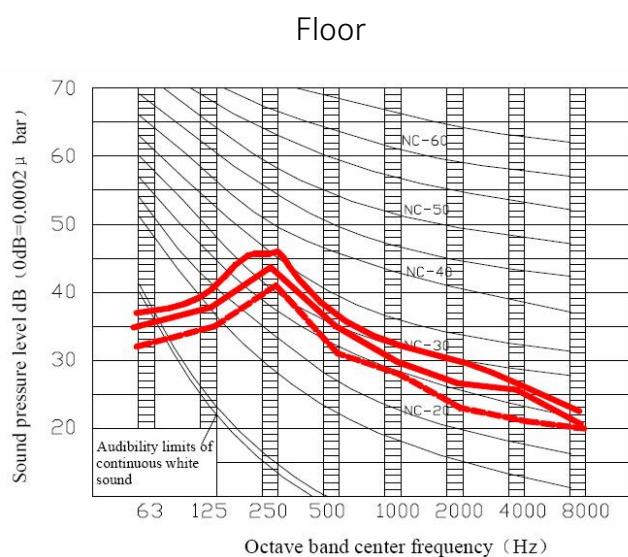
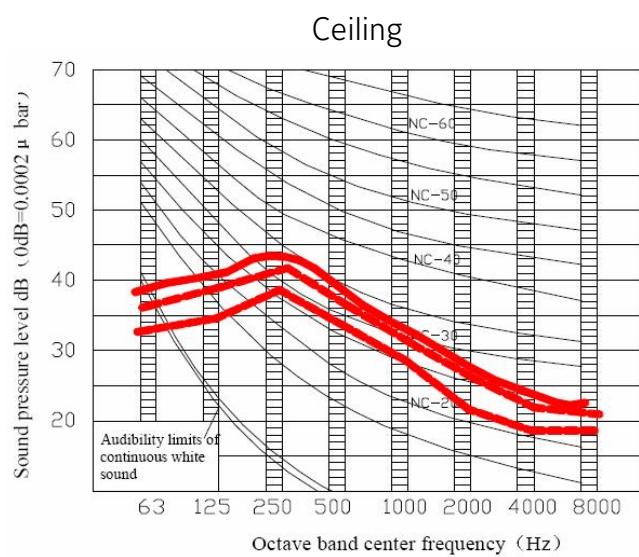


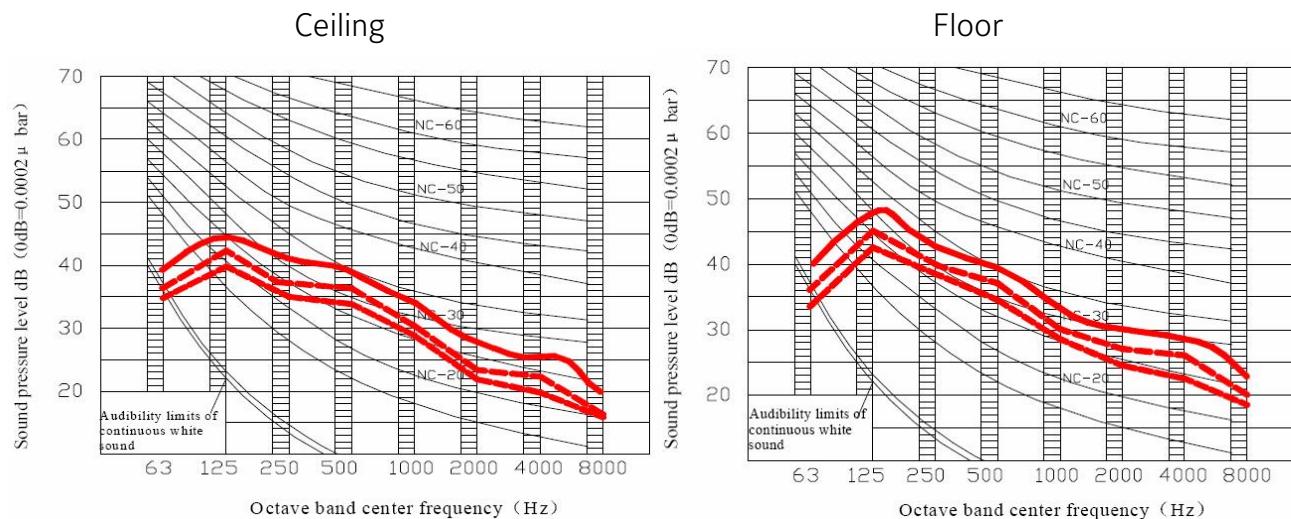
Floor type

—	High airflow
- - - -	Mid airflow
- - - .	Low airflow

7.2) Noise spectrums

YDS-36-56FC

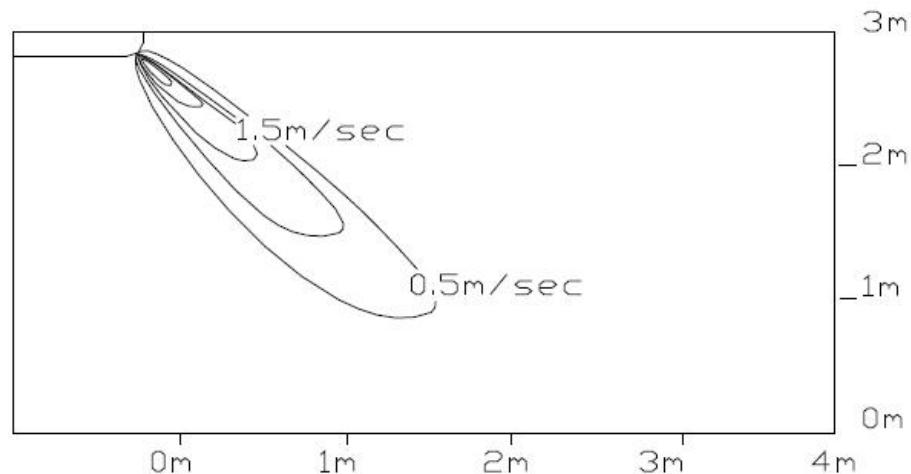


YDS-71-140FC


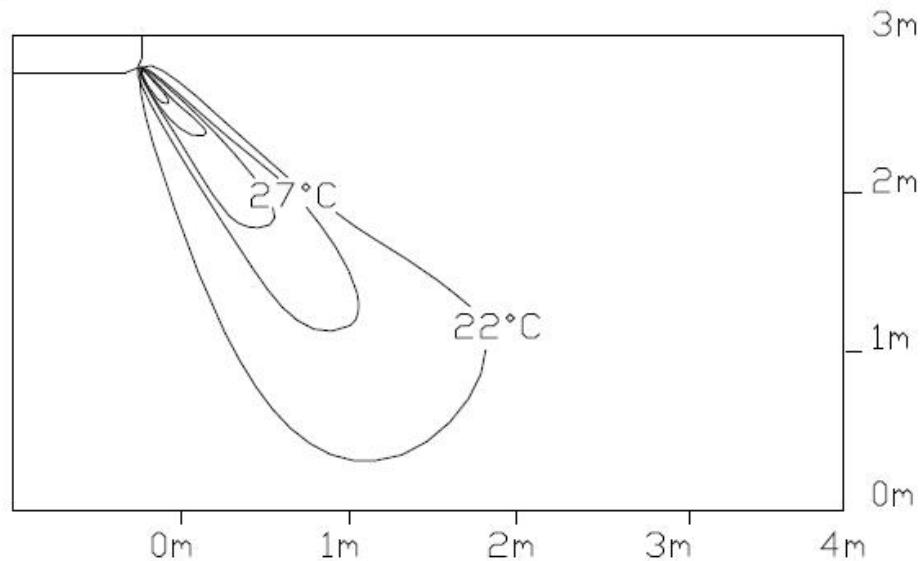
8. Velocity & temperature distribution

Ceiling Discharge angle 60°C

Airflow velocity

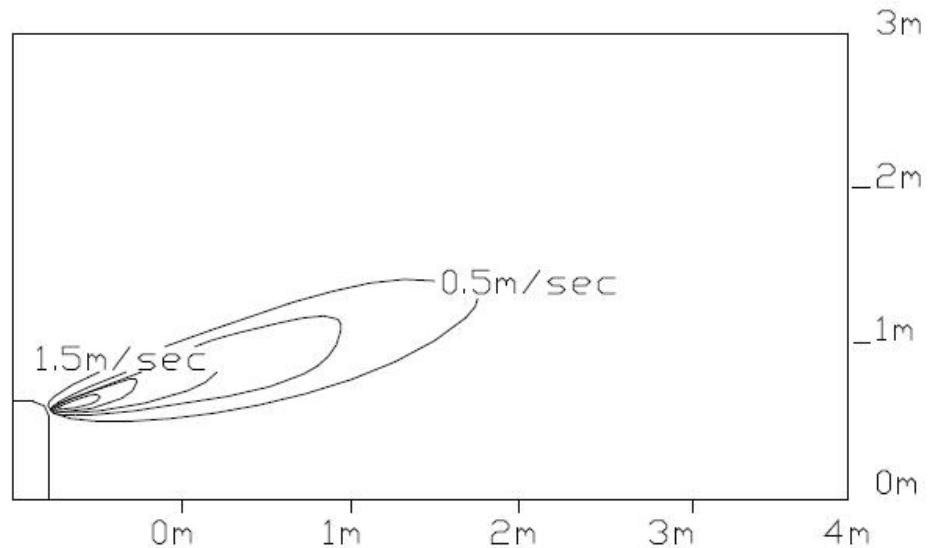


Temperature

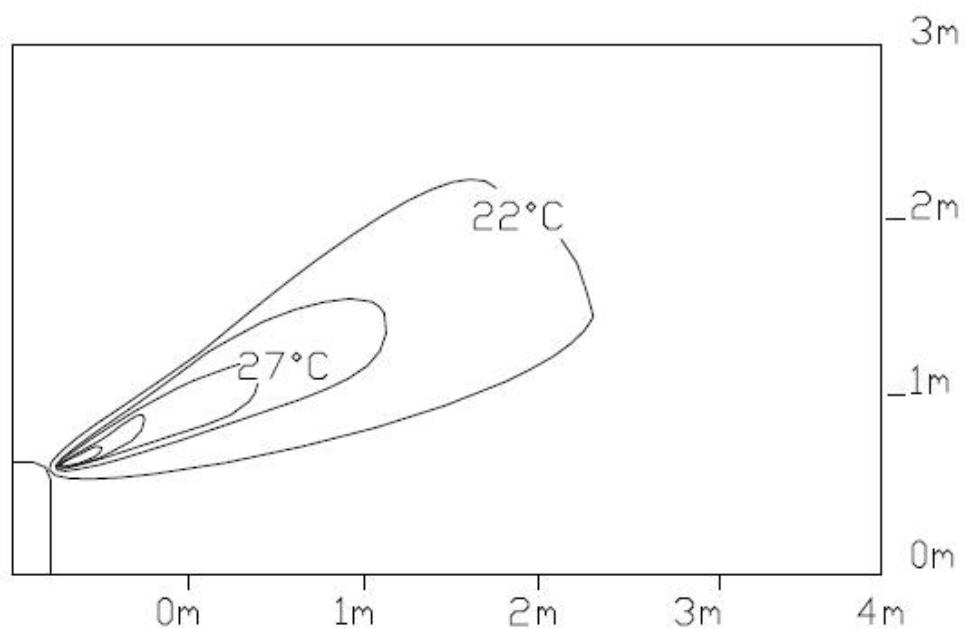


Floor Discharge angle 60°C

Airflow velocity



Temperature



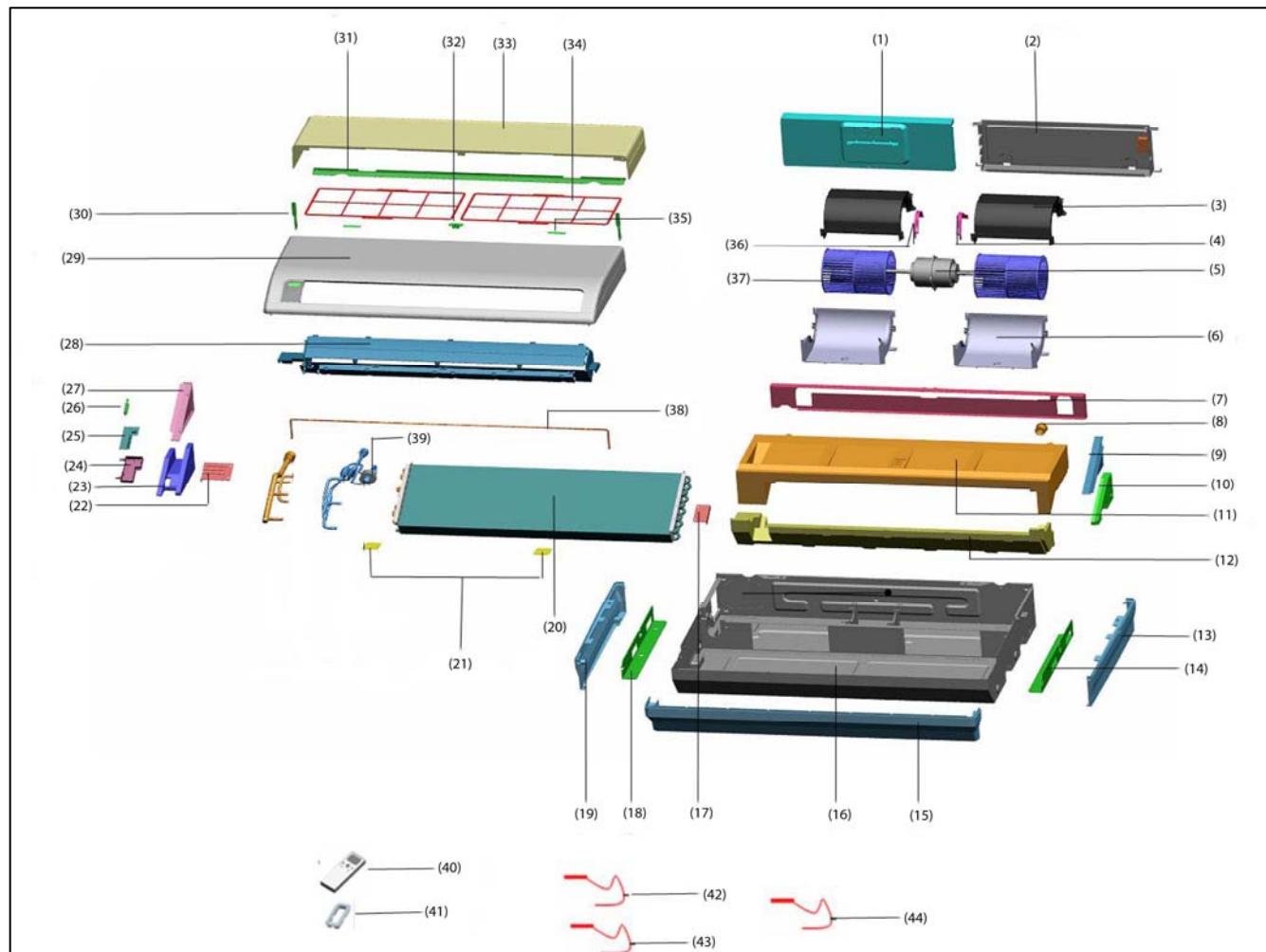
9. Functional part & safety device

Model YDS		36FC	45FC	56FC	71FC
Safety Device	PC board fuse			5A	
	Fan motor thermal protector			BW130° C	
Functional Device	Electronic throttle kit			Inner	

Model YDS		80FC	90FC	112FC	140FC
Safety Device	PC board fuse			5A	
	Fan motor thermal protector			BW130° C	
Functional Device	Electronic throttle kit			Inner	

10. Explode view and spare part list
MODEL YDS-36-71FC

R-410A 1 Ph 220-240V 50Hz



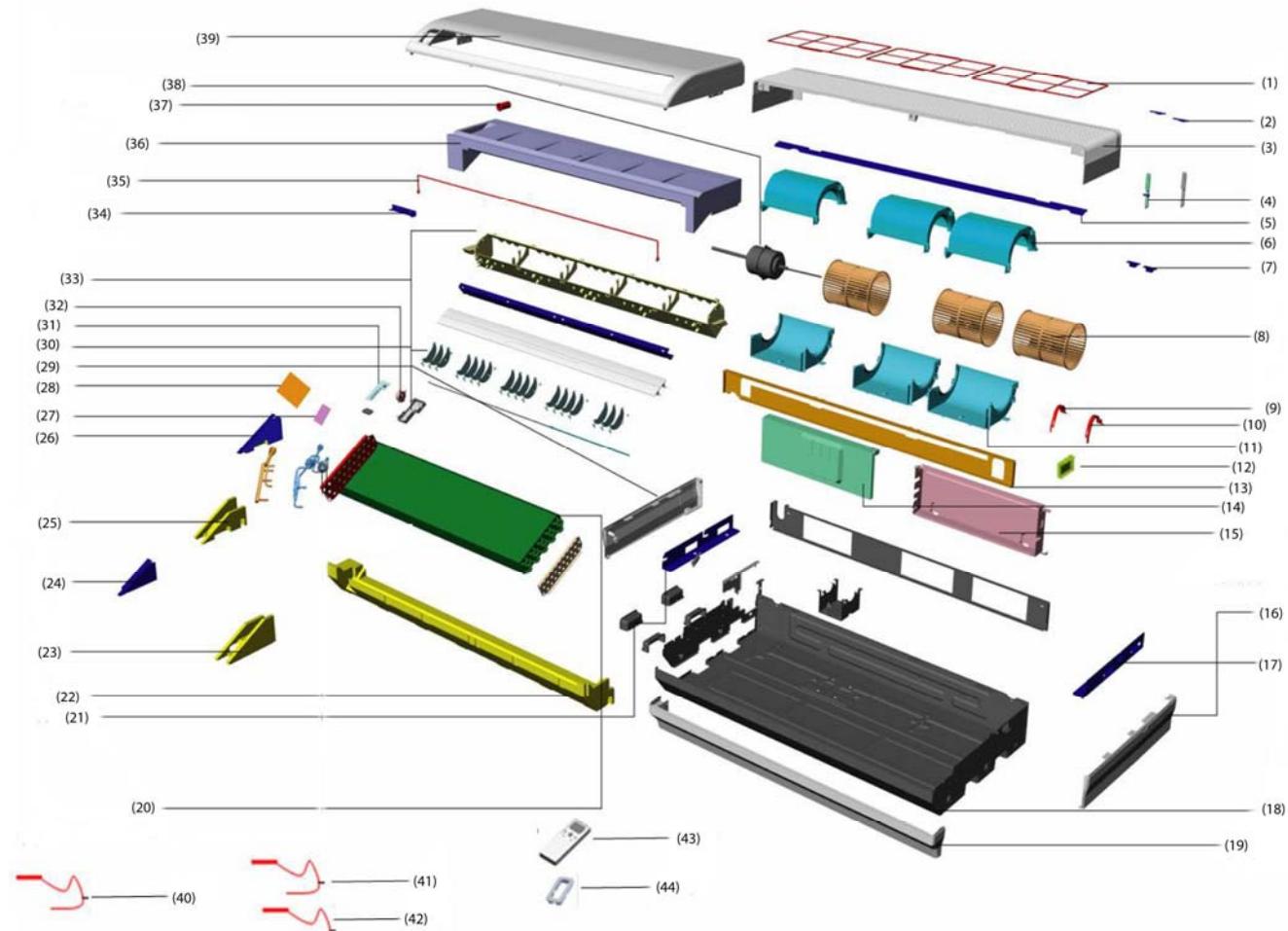
ITEM NO	PART NUMBER				PART NAME	QTY	REMARK
	3.6 kW	4.5 kW	5.6 kW	7.1 kW			
1				201M244290010	E-part box cover	1	
2	203M380590006	203M380590008		203M380590003	E-part box ass'y	1	
-			201M244290016		E-Part box	1	
-	202M401100006	202M401190048		202M401190019	Motor capacitor	1	
-			201M380590000		Main controller ass'y	1	
-			202M300900552		Transformer	1	
-			202M301450125		Terminal block JX0-B6-D	1	
-			202M301450042		Wire joint, 2p	1	
3		201M144290033			Volute shell	2	
4		201M280200005			Motor clamp	1	
5	202M400400466		202M400410644		Motor	1	
6		201M144290032			Volute shell	2	
7		201M244290011			Middle beam	1	
8					-		
9			201M244290018		Evaporator right clapboard	1	
10			202M244290005		Foam ass'y	1	
11			202M244290009		Drainage pan ass'y	1	

12	202M244290003			Foam ass'y	1	
13	201M144290008			Right cover	1	
14	201M244290013			Installation board	1	
15	201M144290005			Rear cover	1	
16	201M244290024			Base ass'y	1	
17	201M244290003			Evaporator right clapboard	1	
18	201M244290014			Installation board	1	
19	201M144290009			Left cover	1	
20	201M580590005	201M580590029	201M580590002	Evaporator ass'y	1	
-	201M544090001	201M544290002		Evaporator	1	
-	201M680590044	201M680590095	201M680590011	Evaporator input pipe ass'y	1	
-	201M601300032			Electronic expansion valve	1	
-	201M644090000	201M680590091	201M644290000	Evaporator outlet pipe ass'y	1	
21	201M244290015			Installation clamp	2	
22	201M244290004			Evaporator left clapboard	1	
23	202M244290004			Foam ass'y	1	
24	201M144290016			Display box	1	
25	201M344290002			Display board ass'y	1	
26	201M144290017			Manual button	1	
27	201M244290017			Evaporator left clapboard	1	
28	201M144290000			Air outlet ass'y	1	
-	202M400200101			Stepper motor	1	
-	202M400200100			Stepper motor(vertical)	1	
29	201M144290041			Panel ass'y	1	
30	201M144290012			Grille clamp	2	
31	201M244290000			Grille strengthening rib	1	
32	201M144290007			grille Clamp	1	
33	201M144290003			grille	1	
34	201M144290004			Filter	2	
35	201M244290001			grille Clamp	2	
36	201M280200006			motor clamp	1	
37	201M144290015			Plastic fan	2	
38	201M244290023			Drainage pan holder	2	
39	201M601320018			EEV solenoid	1	
40	203M3550A1510			Wireless remote,R92 HP,York brand	1	
41	201M155090070			Remote holder,R91,York brand,White	1	
42	202M440500003			Room temp sensor ass'y	1	
43	202M301300133			Coil temp. sensor ass'y	1	
44	202M440500002			Evaporator temp. sensor Ass'y	1	

MODEL

YDS-80-90FC

R-410A 1 Ph 220-240V 50Hz



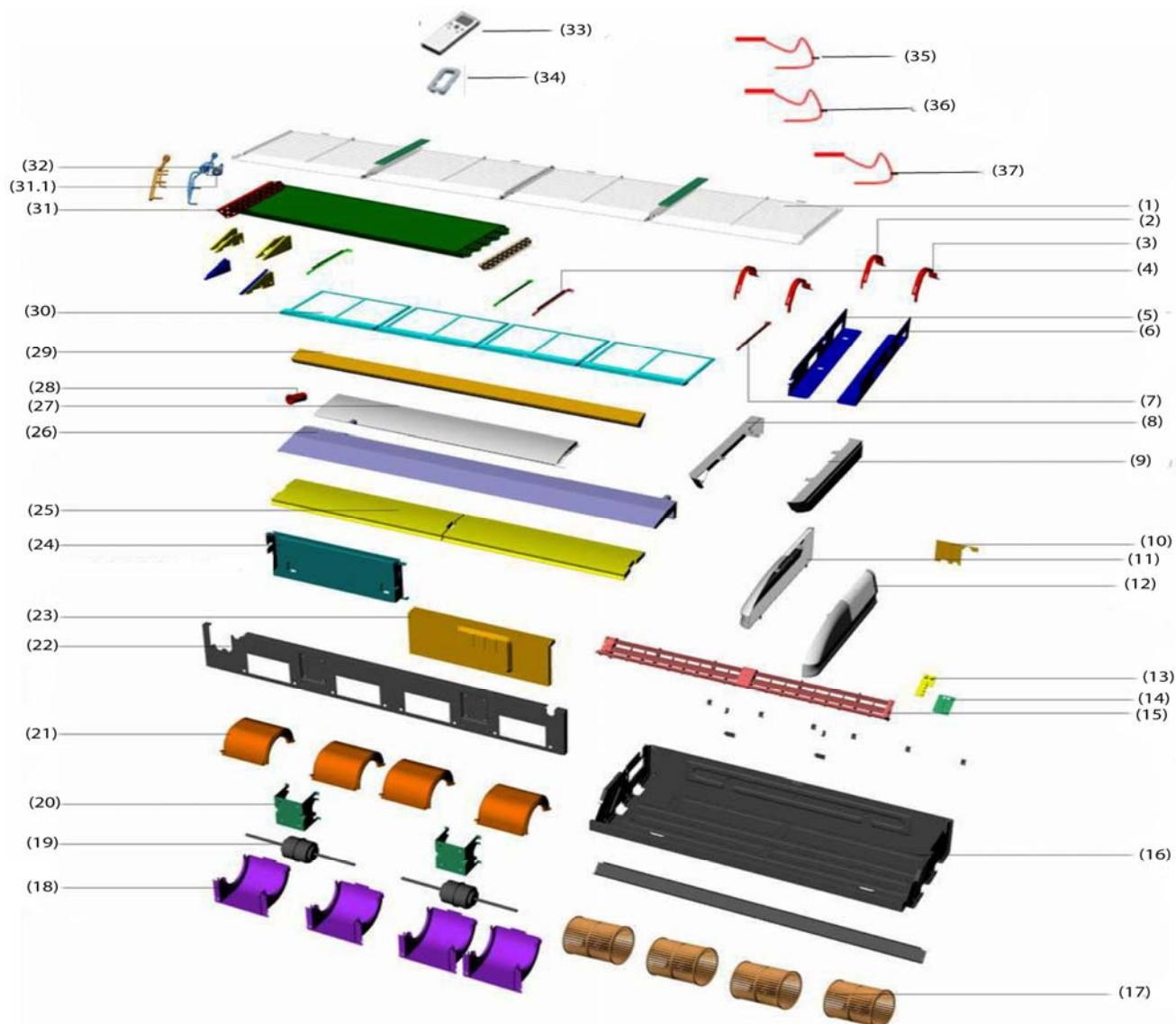
ITEM NO	PART NUMBER		PART NAME	QTY	REMARK
	8.0 kW	9.0 kW			
1	201M144490004		Filter	3	
2	201M244290001		grille Clamp	2	
3	201M144490006		grille	1	
4	201M144290012		Grille clamp	2	
5	201M244490004		Grille strengthening rib	1	
6	201M144290033		Volute shell	3	
7	201M144290007		grille Clamp	2	
8	201M144290015		Plastic fan	3	
9	201M280200006		Motor clamp	1	
10	201M280200005		Motor clamp	1	
11	201M144290032		Volute shell	3	
12	201M280200007		Board	1	
13	201M244490001		Middle beam	1	
14	201M244290010		E-part box cover	1	
15	203M380590004		E-part box ass'y	1	
-	201M244290016	201M244290016	E-Part box	1	
-	202M401100354		Motor capacitor	1	
-	201M380590000		Main controller ass'y	1	
-	202M300900552		Transformer	1	

-	202M301450125	Terminal block JX0-B6-D	1
-	202M301450042	Wire joint, 2p	1
16	201M144290009	Left cover	1
17	201M244290014	installation board	1
18	201M244490006	Base ass'y	1
19	201M144490001	Rear cover	1
20	201M580590003	Evaporator ass'y	1
-	201M601300032	Electronic expansion valve	1
-	201M601320018	EEV solenoid	1
21	201M244290013	installation board	1
22	202M244490003	Foam ass'y	1
23	202M244290004	Foam ass'y	1
24	201M244290017	Evaporator left clapboard	1
25	202M244290005	Foam ass'y	1
26	201M244290018	Evaporator right clapboard	1
27	201M244290003	Evaporator right clapboard	1
28	201M244290004	Evaporator left clapboard	1
29	201M144290008	Right cover	1
30	201M144290016	Display box	1
31	201M344290002	Display board ass'y	1
32	201M144290017	Manual button	1
33	201M144490002	Air outlet ass'y	1
-	202M400200101	Stepper motor	1
-	202M400200100	Stepper motor(vertical)	1
34	202M244290002	Foam	1
35	201M244290023	Drainage pan holder	2
36	202M244490006	Drainage pan ass'y	1
37		-	
38	202M400420807	Motor	1
39	201M144490021	Panel ass'y	1
40	202M301300133	Coil temp. sensor ass'y	1
41	202M440500002	Evaporator temp. sensor Ass'y	1
42	202M440500003	Room temp sensor ass'y	1
43	203M3550A1510	Wireless remote,R92 HP,York brand,White	1
44	201M155090070	Remote holder,R91,York brand,White	1

MODEL

YDS-112-140FC

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER		PART NAME	QTY	REMARK
	11.2 kW	14.0 kW			
1	201M144690004		Grille ass'y	2	
2	201M280200006		Motor clamp	2	
3	201M280200005		Motor clamp	2	
4	201M244690003		Filter bracket	2	
5	201M244290013		Installation board	1	
6	201M244290014		Installation board	1	
7	201M244690004		Filter bracket	2	
8	201M144690003		Sealed board	1	
9	201M144690002		Sealed board	1	
10	201M244690002		Pipe clamp board	1	
11	201M144690006		Cover	1	
12	201M144690005		Left cover	1	
13	201M144690000		Display board ass'y	1	
14	201M144690001		Display installation box	1	

15	201M144690008	Air outlet frame ass'y	1	
-	202M400200101	Stepper motor	1	
-	202M400200104	Stepper motor(horizontal)	1	
-	202M400200103	Stepper motor(vertical)	1	
-	201M344790000	Display board ass'y	1	
16	201M244690006	Base ass'y	1	
17	201M144690011	Plastic fan	4	
18	201M144690032	Volute shell	4	
19	202M400410844	Motor	2	
20	201M244290021	Motor bracket	2	
21	201M144690033	Volute shell	4	
22	201M244690009	Middle beam	1	
23	201M244290022	E-part box cover	1	
24	203M380590005	E-part box ass'y	1	
-	201M244290016	E-Part box	1	
-	202M401190019	Motor capacitor	2	
-	201M380590000	Main controller ass'y	1	
-	202M300900552	Transformer	1	
-	202M301450125	Wire joint	1	
-	202M301450042	Wire joint, 2p	1	
25	202M644690003	Foam	2	
26	201M244690025	Top cover ass'y	1	
27	201M244690016	Drainage pan ass'y	1	
28	201M144290018	Plastic cover	1	
29	202M244690000	Foam	2	
30	201M144690007	Filter	4	
31	201M580590004	Evaporator ass'y	1	
-	201M601300033	Electronic expansion valve	1	
32	201M601320018	EEV solenoid	1	
33	203M3550A1510	Remote controller	1	
34	201M155090070	Installation bracket	1	
35	202M440500003	Room temp sensor ass'y	1	
36	202M301300133	Temp.sensor ass'y	1	
37	202M440500002	Temp.sensor ass'y	1	

Part 4.4 Medium ESP Duct

Contents

1. Features.....	153
2. Specifications.....	155
3. Capacity table.....	157
4. Dimensions.....	165
5. Service space.....	168
5. Wiring diagrams.....	169
6. Refrigeration system diagram.....	171
7. Noise level.....	172
8. Static pressure curve.....	174
9. Function parts & safety device.....	176
11. Exploded view parts.....	177

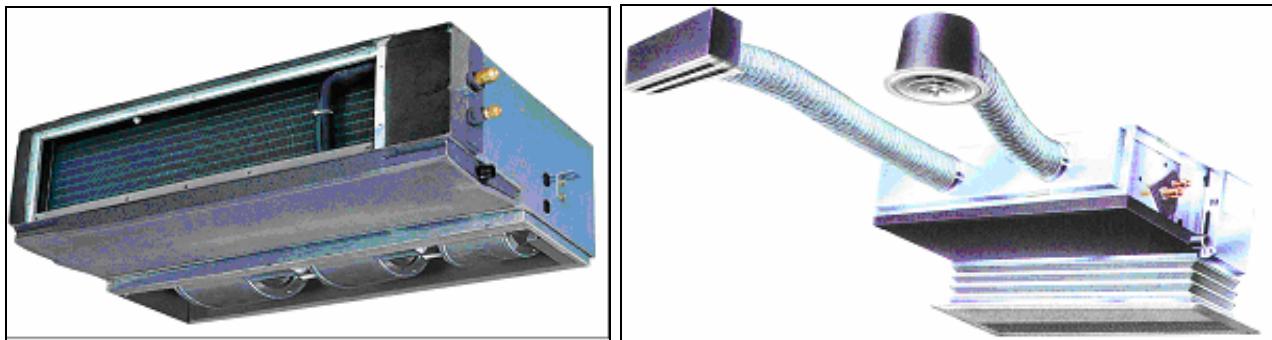
1. Features

1.1) Normal body

Economic and convenient installation

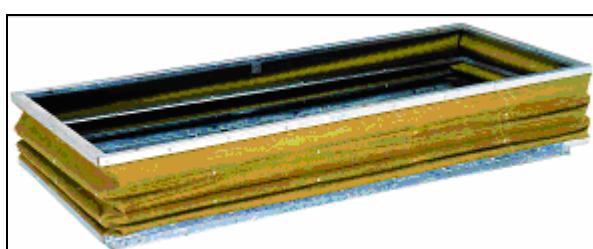
-Several diffusers branch off from an indoor unit, adjusting the room temperature, which makes many rooms to be air-conditioned with only one indoor unit.

-All models feature thin design making them applicable to ceiling pocket that tends to be shallow



A wild variety of optional accessories

-Including front clapboard, panel, canvas air passage, filter, etc.



Canvas air passage

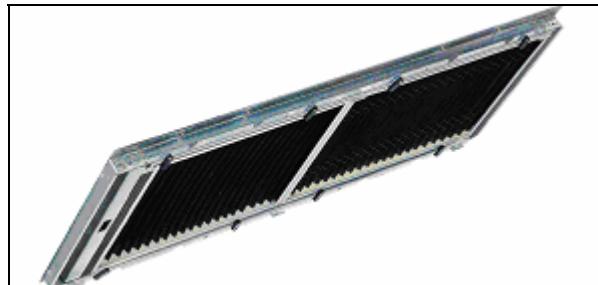


Clapboard



Panel

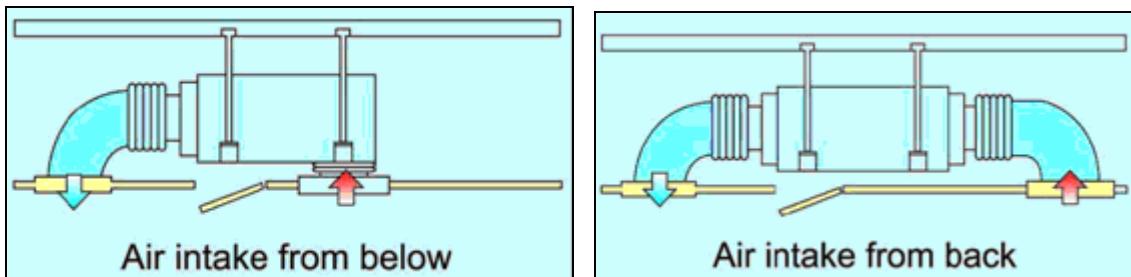
A long-life and high-efficiency filter



Filter

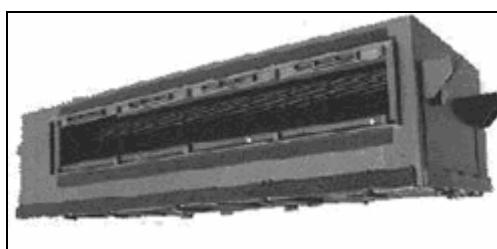
Way of air intake and inserting air filter

- Air intake can be positioned either at the back or below the unit. Similarly, the air filter also can be inserted either from the back or from the bottom of the unit.



1.2) All-plastic body

- Low operation noise
- Compact Structure and light weight
- Adopt Cross Fan
- Adopt 4-bend Evaporator with High Efficient



2. Specifications

Medium ESP Ducted YDS-22-140UC15 R-410A 50Hz

Model		YDS-22UC15EA		YDS-28UC15EB		YDS-36UC15EB		YDS-45UC15IB		YDS-56UC15IA							
Power Supply		Ph-V-Hz		1 Ph-220-240 V-50 Hz													
Nominal Capacity																	
Cooling	Capacity	kW	2.2	2.8	3.6	4.5	5.6										
	Input	W	35	35	35	110	110										
Heating	Capacity	kW	2.6	3.2	4.0	5.0	6.3										
	Input	W	35	35	35	110	110										
Motor																	
Input		W	34.5/30.5/27.3				117/110/101										
Capacitor		uF	0.8uF/450V	1uF/450V		3uF/450V											
Speed (Hi/Me/Lo)		r/min	940/840/760				900/800/690										
Coil																	
Number of rows			2				3										
Tube pitch(a)x row pitch(b)		mm	21X13.37				25.4X22										
Fin spacing		mm	1.5				1.7										
Fin type			Hydrophilic Aluminum														
Tube outside dia.and type		mm	Φ7 Inner groove Tube				Φ9.53 Inner groove Tube										
Coil length x height x width		mm	718 x317x26.74				800x254x66										
Number of circuits			4				3										
Performance																	
Noise level (Hi/Me/Lo)		dB(A)	34/32/30	35/33/31					45/41/38								
External static pressure		Pa	10				40										
Air flow (Hi/Me/Lo)		m³/h	570/400/320				1160/1100/950										
Piping size	Liquid/ Gas side	mm	Φ6.4 / Φ12.7				Φ9.5 / Φ15.9										
Containerization																	
Dimensions	Unit (WxHxD)	mm	955x210x385				1000x298x800										
	Packing (WxHxD)	mm	1114x277x469				1205x370x940										
	Net/Gross weight	Kg	15/19				37.2/43.3										
Qty per 20'/40'/40'HQ		Pieces	214/437/480				60/140/164										

Notes:

- Nominal cooling capacities are based on the following conditions: return air temperature : 27°CDB, 19°CWB, outdoor temperature: 35°CDB, equivalent ref. Piping: 8m(horizontal)
- Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, equivalent ref. Piping: 8m(horizontal)
- Capacities are net, not including a deduction for cooling (an addition for heating) for indoor fan motor heat

Model			YDS-71UC15IA	YDS-80UC15IA	YDS-90UC15IA	YDS-112UC15IA	YDS-140UC15IA			
Power Supply		Ph-V-Hz		1 Ph-220-240 V-50 Hz						
Nominal Capacity										
Cooling	Capacity	kW	7.1	8.0	9.0	11.2	14.0			
	Input	W	150	150	215	215	215			
Heating	Capacity	kW	8.0	8.4	10.0	12.5	15.0			
	Input	W	150	150	215	215	215			
Motor										
Input		W	170/150/133		104/87/78					
Capacitor		uF	6.5UF/450V		4UF/450V x2					
Speed (Hi/Me/Lo)		r/min	1100/1020/900		840/695/610					
Coil										
Number of rows			3							
Tube pitch(a)x row pitch(b)		mm	25.4X22							
Fin spacing		mm	1.7							
Fin type			Hydrophilic Aluminum							
Tube outside dia.and type		mm	φ9.53 Inner groove Tube							
Coil length x height x width		mm	800x254x66		1150x254x66					
Number of circuits			3		5					
Performance										
Noise level (Hi/Me/Lo)		dB(A)	46/44/42		47/45/43		48/46/44			
External static pressure		Pa	40		70					
Air flow (Hi/Me/Lo)		m³/h	1400/1100/900		1800/1500/1200					
Piping size	Liquid/ Gas side	mm	φ9.5 / φ15.9							
Containerization										
Dimensions	Unit (WxHxD)	mm	1000x298x800		1350x298x800					
	Packing (WxHxD)	mm	1205x370x940		1555x370x940					
	Net/Gross weight	Kg	37.2/43.3		51.4/58.3					
Qty per 20'/40'/40'HQ		Pieces	60/140/164		48/100/112					

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, outdoor temperature: 35°CDB, equivalent ref. Piping: 8m(horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, equivalent ref. Piping: 8m(horizontal)
3. Capacities are net, not including a deduction for cooling (an addition for heating) for indoor fan motor heat

3. Capacity table.

3.1) Cooling

TC: total capacity SHC: sensible capacity

Indoor Unit size (kW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14		16		18		19		20		22		24	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
2.2	10	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.90	1.70
	12	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	14	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	16	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	18	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	20	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.70	1.50
	21	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.70	1.50
	23	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.70	1.50
	25	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.60	1.50
	27	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.60	1.50
	29	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.50	1.50
	31	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.50	1.50
	33	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.40	1.50
	35	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.30	1.50	2.40	1.50
	37	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.30	1.50	2.30	1.50
	39	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.20	1.60	2.30	1.50	2.30	1.50
2.8	10	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.70	2.10
	12	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.10
	14	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.10
	16	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.00
	18	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.50	2.00
	20	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.40	1.90
	21	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.40	1.90
	23	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.10	3.40	1.90
	25	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.00	3.30	1.90
	27	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.00	3.30	1.90
	29	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.20	1.90
	31	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.20	1.90
	33	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.10	2.00
	35	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.10	2.90	1.90	3.10	2.00
	37	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.10	2.90	1.90	2.90	1.90
	39	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.80	2.00	2.90	1.90	2.90	1.90
3.6	10	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.80	2.80
	12	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70
	14	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70
	16	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70
	18	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70
	20	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	21	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	23	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	25	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60
	27	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60
	29	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.50
	31	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.40
	33	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.00	2.40
	35	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	4.00	2.40
	37	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	3.90	2.30
	39	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.70	3.90	2.40

Indoor Unit size (kW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14		16		18		19		20		22		24	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
4.5	10	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40
	12	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40
	14	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.80	3.30
	16	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20
	18	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20
	20	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.50	3.20
	21	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.40	3.10
	23	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.40	3.10
	25	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.30	3.00
	27	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.30	3.00
	29	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.10	2.90
	31	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	5.10	3.00
	33	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.90	2.90
	35	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.80	2.80
	37	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90
	39	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90
5.6	10	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10
	12	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10
	14	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.20	4.10
	16	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00
	18	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10
	20	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10
	21	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.00	4.10
	23	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00
	25	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.50	4.10	6.80	3.90
	27	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.40	4.00	6.50	3.80
	29	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.30	4.00	6.40	3.70
	31	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.20	3.90	6.30	3.70
	33	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.00	3.80	6.30	3.70
	35	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.70	6.20	3.60
	37	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.90	6.10	3.50
	39	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	5.70	3.80	5.80	3.80	6.00	3.50
7.1	10	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.20	4.90
	12	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.10	4.80
	14	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.00	4.80
	16	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.90	4.70
	18	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.70	4.70
	20	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.50	4.60
	21	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.40	4.50
	23	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.30	4.50
	25	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.20	4.40
	27	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.10	4.90	8.20	4.40
	29	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.00	4.80	8.10	4.50
	31	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.90	4.70	7.80	4.40
	33	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.80	4.70	7.80	4.40
	35	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.60	4.60	7.70	4.30
	37	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.50	4.50	7.60	4.30
	39	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.20	4.60	7.40	4.40	7.60	4.30

Indoor Unit size (kW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14		16		18		19		20		22		24	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
8	10	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.40	5.60
	12	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.20	5.50
	14	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.20	5.50
	16	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.00	5.40
	18	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.80	5.30
	20	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.60	5.20
	21	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.40	5.10
	23	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.40	5.10
	25	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.30	5.00
	27	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.10	5.30	9.20	5.10
	29	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	9.00	5.30	9.10	5.00
	31	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.90	5.20	8.80	4.80
	33	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.80	5.20	8.80	4.80
	35	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.60	5.10	8.60	4.80
	37	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.30	5.40	8.40	5.00	8.60	4.90
	39	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.10	5.30	8.30	5.00	8.60	4.90
9	10	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.70	6.60
	12	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.50	6.50
	14	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.40	6.40
	16	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.30	6.30
	18	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	11.00	6.30
	20	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	10.80	6.20
	21	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	10.60	6.10
	23	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	10.50	6.00
	25	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.60	6.60	10.40	6.00
	27	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.30	6.40	10.40	5.90
	29	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.10	6.20	10.30	5.80
	31	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	10.00	6.20	9.90	5.70
	33	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.60	6.50	9.90	6.10	9.90	5.70
	35	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.50	6.50	9.60	6.00	9.70	5.70
	37	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.30	6.30	9.50	5.90	9.60	5.80
	39	6.20	5.30	7.30	5.80	8.40	6.30	9.00	6.40	9.20	6.20	9.40	5.80	9.60	5.80
11.2	10	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	15.50	9.00
	12	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	14.40	8.40
	14	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	14.20	8.20
	16	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	14.10	8.20
	18	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	14.00	8.10
	20	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	13.90	8.10
	21	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.30	8.30	13.80	8.00
	23	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.10	8.10	13.70	7.90
	25	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	13.00	8.10	13.60	7.90
	27	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	12.90	8.00	13.40	7.80
	29	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	12.80	7.90	13.30	7.90
	31	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	12.70	7.80	12.80	7.50
	33	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.90	8.10	12.50	7.80	12.50	7.40
	35	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.80	8.00	12.40	7.70	12.30	7.30
	37	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.60	7.90	12.30	7.60	12.10	7.10
	39	7.70	6.40	9.10	7.10	10.50	7.70	11.20	7.80	11.40	7.80	12.20	7.60	11.90	7.10

Indoor Unit size (kW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14		16		18		19		20		22		24	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
14	10	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	18.20	10.20
	12	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	17.90	10.00
	14	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	17.80	10.00
	16	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	17.50	9.80
	18	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	17.10	9.60
	20	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	16.80	9.40
	21	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.70	10.20	16.50	9.30
	23	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.40	10.20	16.40	9.20
	25	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.20	10.10	16.20	9.10
	27	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.10	10.00	16.10	9.20
	29	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	16.00	9.90	16.00	9.10
	31	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	15.80	9.80	15.40	8.80
	33	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.80	9.80	15.70	9.70	15.40	8.80
	35	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.70	9.70	15.10	9.40	15.10	8.80
	37	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.60	9.60	15.10	9.40	15.00	8.70
	39	9.70	7.80	11.30	8.60	13.20	9.60	14.00	9.80	14.30	9.40	14.60	9.20	15.00	8.80

3.2) Heating

TC: total capacity

Indoor Unit size (KW)	Outdoor temperature	Indoor temperature °DB					
		16	18	20	21	22	24
		TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW
2.2	-15	-14.7	1.64	1.64	1.64	1.64	1.64
	-13	-12.6	1.74	1.74	1.74	1.74	1.74
	-11	-10.5	1.82	1.82	1.82	1.82	1.82
	-10	-9.5	1.90	1.90	1.90	1.90	1.90
	-9.1	-8.5	1.95	1.95	1.95	1.95	1.95
	-7.6	-7	1.98	1.98	1.98	1.98	1.98
	-5.6	-5	2.05	2.05	2.05	2.05	2.05
	-3.7	-3	2.16	2.16	2.16	2.16	2.16
	-0.7	0	2.31	2.31	2.31	2.31	2.18
	2.2	3	2.44	2.44	2.44	2.39	2.18
	4.1	5	2.52	2.52	2.52	2.39	2.18
	6	7	2.60	2.60	2.60	2.39	2.18
	7.9	9	2.68	2.68	2.93	2.52	2.18
	9.8	11	2.76	2.76	2.60	2.52	2.18
	11.8	13	2.86	2.81	2.60	2.52	2.18
	13.7	15	2.94	2.81	2.60	2.52	2.18
2.8	-15	-14.7	2.02	2.02	2.02	2.02	2.02
	-13	-12.6	2.14	2.14	2.14	2.14	2.14
	-11	-10.5	2.24	2.24	2.24	2.24	2.24
	-10	-9.5	2.34	2.34	2.34	2.34	2.34
	-9.1	-8.5	2.40	2.40	2.40	2.40	2.40
	-7.6	-7	2.43	2.43	2.43	2.43	2.43
	-5.6	-5	2.53	2.53	2.53	2.53	2.53
	-3.7	-3	2.66	2.66	2.66	2.66	2.66
	-0.7	0	2.85	2.85	2.85	2.85	2.69
	2.2	3	3.01	3.01	3.01	2.94	2.69
	4.1	5	3.10	3.10	3.10	2.94	2.69
	6	7	3.20	3.20	3.20	2.94	2.69
	7.9	9	3.30	3.30	2.93	2.94	2.69
	9.8	11	3.39	3.39	3.20	2.94	2.69
	11.8	13	3.52	3.46	3.20	2.94	2.69
	13.7	15	3.62	3.46	3.20	2.94	2.69
3.6	-15	-14.7	2.52	2.52	2.52	2.52	2.52
	-13	-12.6	2.68	2.68	2.68	2.68	2.68
	-11	-10.5	2.80	2.80	2.80	2.80	2.80
	-10	-9.5	2.92	2.92	2.92	2.92	2.92
	-9.1	-8.5	3.00	3.00	3.00	3.00	3.00
	-7.6	-7	3.04	3.04	3.04	3.04	3.04
	-5.6	-5	3.16	3.16	3.16	3.16	3.16
	-3.7	-3	3.32	3.32	3.32	3.32	3.32
	-0.7	0	3.56	3.56	3.56	3.56	3.36
	2.2	3	3.76	3.76	3.76	3.68	3.36
	4.1	5	3.88	3.88	3.88	3.68	3.36
	6	7	4.00	4.00	4.00	3.68	3.36
	7.9	9	4.12	4.12	2.93	3.68	3.36
	9.8	11	4.24	4.24	4.00	3.68	3.36
	11.8	13	4.40	4.32	4.00	3.68	3.36
	13.7	15	4.52	4.32	4.00	3.68	3.36

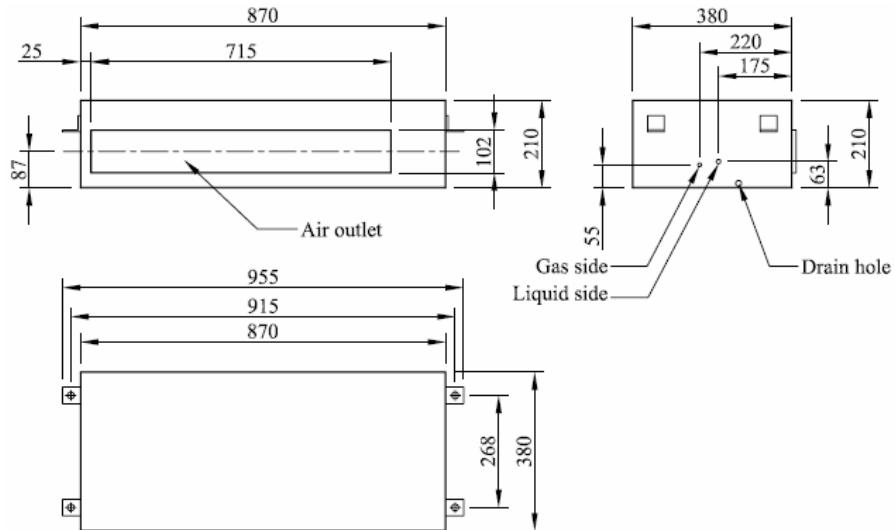
Indoor Unit size (KW)	Outdoor temperature	Indoor temperature °DB					
		16	18	20	21	22	24
		TC	TC	TC	TC	TC	TC
		°CDB	°CWB	kW	kW	kW	kW
4.5	-15	-14.7	3.15	3.15	3.15	3.15	3.15
	-13	-12.6	3.35	3.35	3.35	3.35	3.35
	-11	-10.5	3.50	3.50	3.50	3.50	3.50
	-10	-9.5	3.65	3.65	3.65	3.65	3.65
	-9.1	-8.5	3.75	3.75	3.75	3.75	3.75
	-7.6	-7	3.80	3.80	3.80	3.80	3.80
	-5.6	-5	3.95	3.95	3.95	3.95	3.95
	-3.7	-3	4.15	4.15	4.15	4.15	4.15
	-0.7	0	4.45	4.45	4.45	4.45	4.20
	2.2	3	4.70	4.70	4.70	4.60	4.20
	4.1	5	4.85	4.85	4.85	4.60	4.20
	6	7	5.00	5.00	5.00	4.60	4.20
	7.9	9	5.15	5.15	2.93	4.60	4.20
	9.8	11	5.30	5.30	5.00	4.60	4.20
5.6	11.8	13	5.50	5.40	5.00	4.60	4.20
	13.7	15	5.65	5.40	5.00	4.60	4.20
7.1	-15	-14.7	3.97	3.97	3.97	3.97	3.97
	-13	-12.6	4.22	4.22	4.22	4.22	4.22
	-11	-10.5	4.41	4.41	4.41	4.41	4.41
	-10	-9.5	4.60	4.60	4.60	4.60	4.60
	-9.1	-8.5	4.73	4.73	4.73	4.73	4.73
	-7.6	-7	4.79	4.79	4.79	4.79	4.79
	-5.6	-5	4.98	4.98	4.98	4.98	4.98
	-3.7	-3	5.23	5.23	5.23	5.23	5.23
	-0.7	0	5.61	5.61	5.61	5.61	5.29
	2.2	3	5.92	5.92	5.92	5.80	5.29
	4.1	5	6.11	6.11	6.11	5.80	5.29
	6	7	6.30	6.30	6.30	5.80	5.29
	7.9	9	6.49	6.49	2.93	5.80	5.29
	9.8	11	6.68	6.68	6.30	5.80	5.29
	11.8	13	6.93	6.80	6.30	5.80	5.29
	13.7	15	7.12	6.80	6.30	5.80	5.29

Indoor Unit size (KW)	Outdoor temperature	Indoor temperature °DB					
		16	18	20	21	22	24
		TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW
8	-15	-14.7	5.67	5.67	5.67	5.67	5.67
	-13	-12.6	6.03	6.03	6.03	6.03	6.03
	-11	-10.5	6.30	6.30	6.30	6.30	6.30
	-10	-9.5	6.57	6.57	6.57	6.57	6.57
	-9.1	-8.5	6.75	6.75	6.75	6.75	6.75
	-7.6	-7	6.84	6.84	6.84	6.84	6.84
	-5.6	-5	7.11	7.11	7.11	7.11	7.11
	-3.7	-3	7.47	7.47	7.47	7.47	7.47
	-0.7	0	8.01	8.01	8.01	8.01	7.56
	2.2	3	8.46	8.46	8.46	8.28	7.56
	4.1	5	8.73	8.73	8.73	8.28	7.56
	6	7	9.00	9.00	9.00	8.28	7.56
	7.9	9	9.27	9.27	2.93	8.28	7.56
	9.8	11	9.54	9.54	9.00	8.28	7.56
	11.8	13	9.90	9.72	9.00	8.28	7.56
	13.7	15	10.17	9.72	9.00	8.28	7.56
9	-15	-14.7	6.30	6.30	6.30	6.30	6.30
	-13	-12.6	6.70	6.70	6.70	6.70	6.70
	-11	-10.5	7.00	7.00	7.00	7.00	7.00
	-10	-9.5	7.30	7.30	7.30	7.30	7.30
	-9.1	-8.5	7.50	7.50	7.50	7.50	7.50
	-7.6	-7	7.60	7.60	7.60	7.60	7.60
	-5.6	-5	7.90	7.90	7.90	7.90	7.90
	-3.7	-3	8.30	8.30	8.30	8.30	8.30
	-0.7	0	8.90	8.90	8.90	8.90	8.40
	2.2	3	9.40	9.40	9.40	9.20	8.40
	4.1	5	9.70	9.70	9.70	9.20	8.40
	6	7	10.00	10.00	10.00	9.20	8.40
	7.9	9	10.30	10.30	2.93	9.20	8.40
	9.8	11	10.60	10.60	10.00	9.20	8.40
	11.8	13	11.00	10.80	10.00	9.20	8.40
	13.7	15	11.30	10.80	10.00	9.20	8.40
11.2	-15	-14.7	7.88	7.88	7.88	7.88	7.88
	-13	-12.6	8.38	8.38	8.38	8.38	8.38
	-11	-10.5	8.75	8.75	8.75	8.75	8.75
	-10	-9.5	9.13	9.13	9.13	9.13	9.13
	-9.1	-8.5	9.38	9.38	9.38	9.38	9.38
	-7.6	-7	9.50	9.50	9.50	9.50	9.50
	-5.6	-5	9.88	9.88	9.88	9.88	9.88
	-3.7	-3	10.38	10.38	10.38	10.38	10.38
	-0.7	0	11.13	11.13	11.13	11.13	10.50
	2.2	3	11.75	11.75	11.75	11.50	10.50
	4.1	5	12.13	12.13	12.13	11.50	10.50
	6	7	12.50	12.50	12.50	11.50	10.50
	7.9	9	12.88	12.88	2.93	11.50	10.50
	9.8	11	13.25	13.25	12.50	11.50	10.50
	11.8	13	13.75	13.50	12.50	11.50	10.50
	13.7	15	14.13	13.50	12.50	11.50	10.50

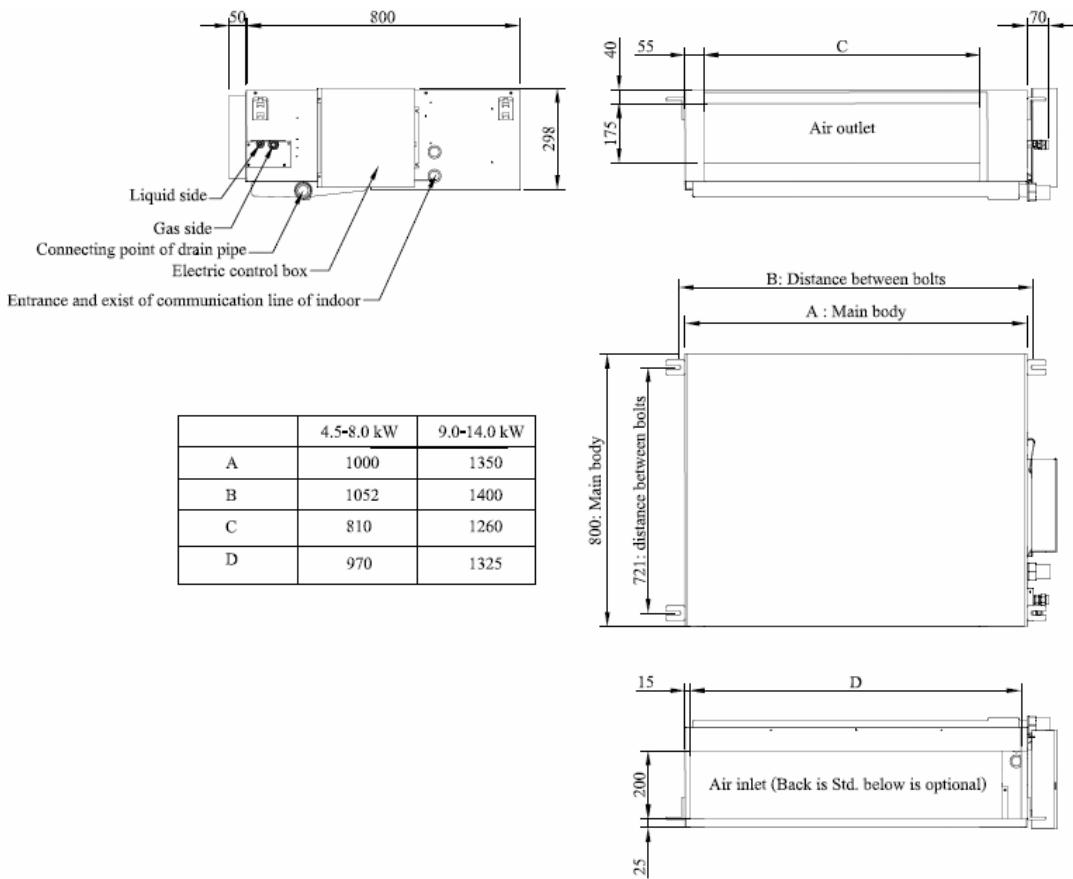
Indoor Unit size (kW)	Outdoor temperature	Indoor temperature °DB					
		16	18	20	21	22	24
		TC	TC	TC	TC	TC	TC
		°CDB	°CWB	kW	kW	kW	kW
14	-15	-14.7	9.45	9.45	9.45	9.45	9.45
	-13	-12.6	10.05	10.05	10.05	10.05	10.05
	-11	-10.5	10.50	10.50	10.50	10.50	10.50
	-10	-9.5	10.95	10.95	10.95	10.95	10.95
	-9.1	-8.5	11.25	11.25	11.25	11.25	11.25
	-7.6	-7	11.40	11.40	11.40	11.40	11.40
	-5.6	-5	11.85	11.85	11.85	11.85	11.85
	-3.7	-3	12.45	12.45	12.45	12.45	12.45
	-0.7	0	13.35	13.35	13.35	13.35	12.60
	2.2	3	14.10	14.10	14.10	14.10	12.60
	4.1	5	14.55	14.55	14.55	13.80	12.60
	6	7	15.00	15.00	15.00	13.80	12.60
	7.9	9	15.45	15.45	15.00	13.80	12.60
	9.8	11	15.90	15.90	15.00	13.80	12.60
	11.8	13	16.50	16.20	15.00	13.80	12.60
	13.7	15	16.95	16.20	15.00	13.80	12.60

4. Dimensions

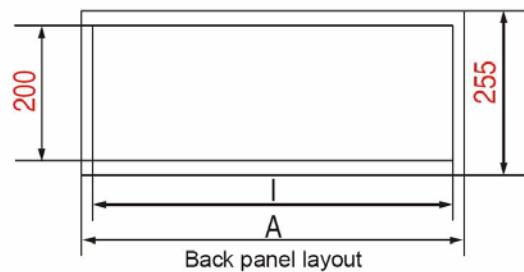
4.1) YDS-22-36UC



4.2 YDS-45-140UC

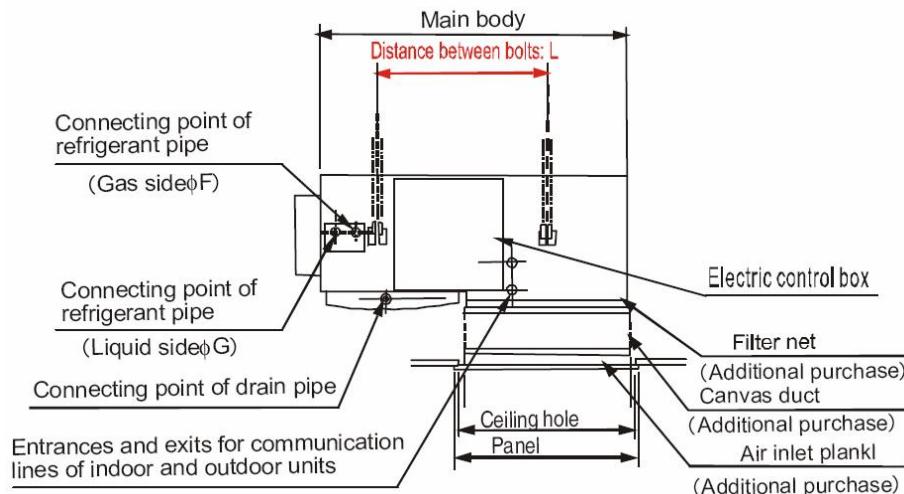


When using a back-air installation, please refer to the following:

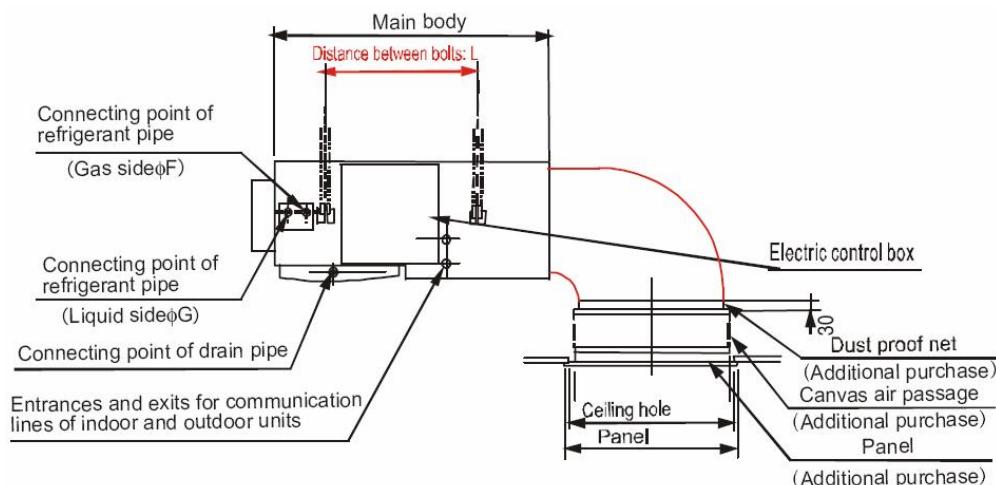


Install the main body:

1) Below air inlet:



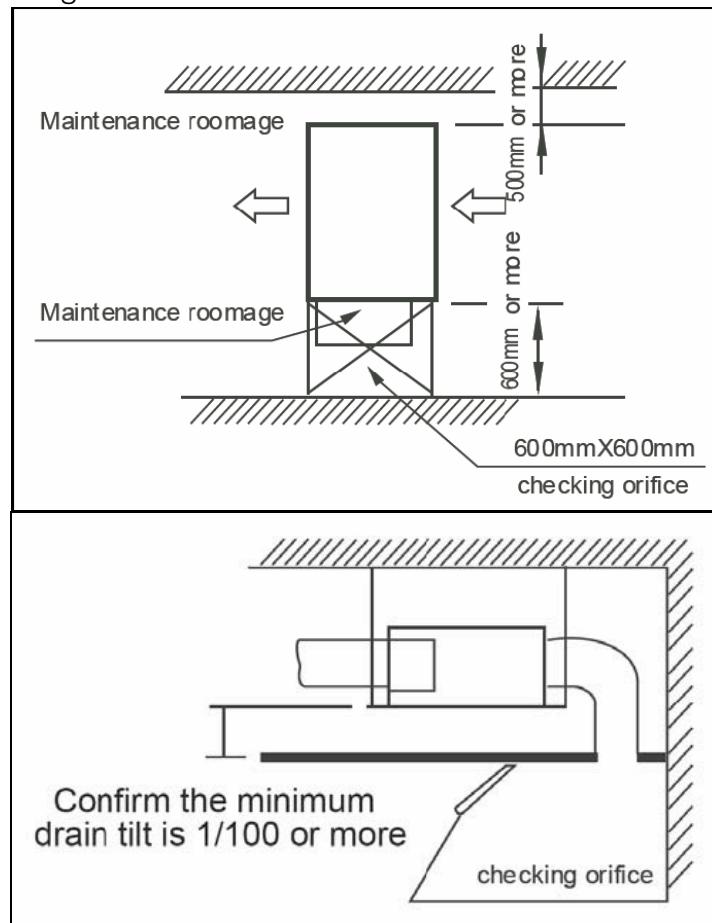
2) Back air inlet



Model	L(mm)	F	G
2.2 kW	268	$\Phi 12.7$	$\Phi 6.4$
2.8-3.6 kW		$\Phi 15.9$	$\Phi 9.5$
4.5-8.0 kW	721		
9.0-14.0 kW			

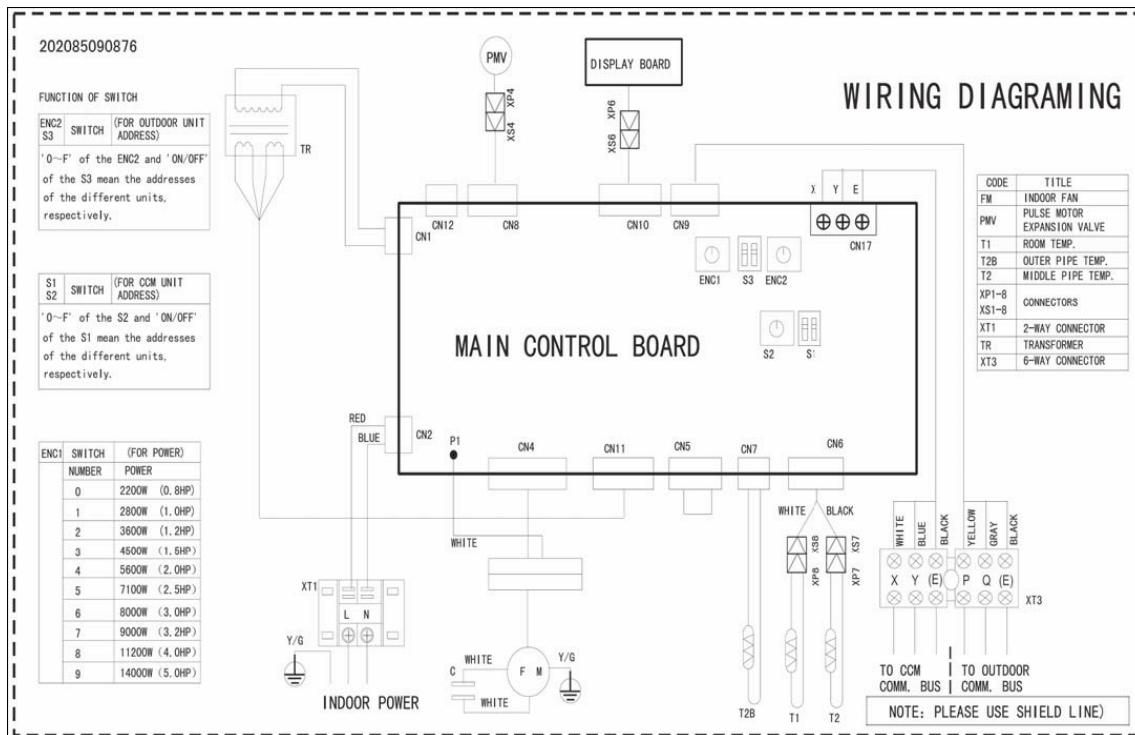
5. Service space.

Confirm that there is enough room for installation and maintenance.

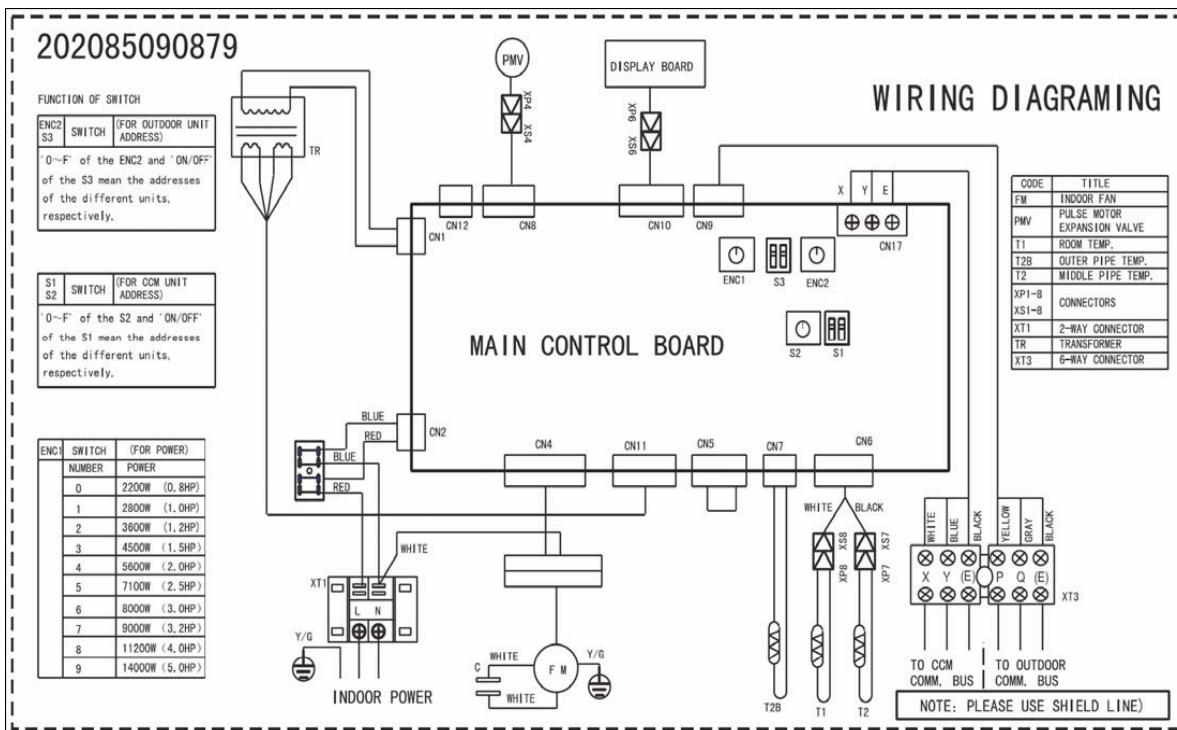


6. Wiring diagrams

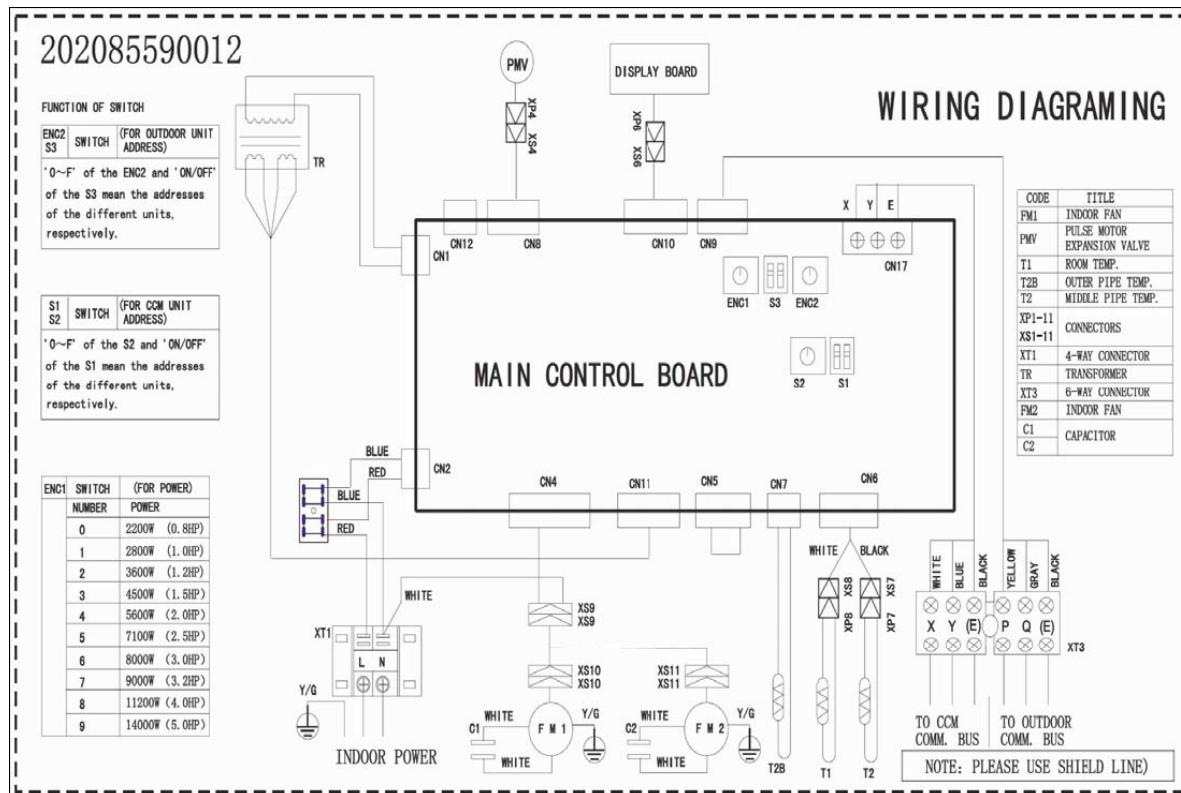
6.1) YDS-22-36UC



6.2) YDS-45-80UC

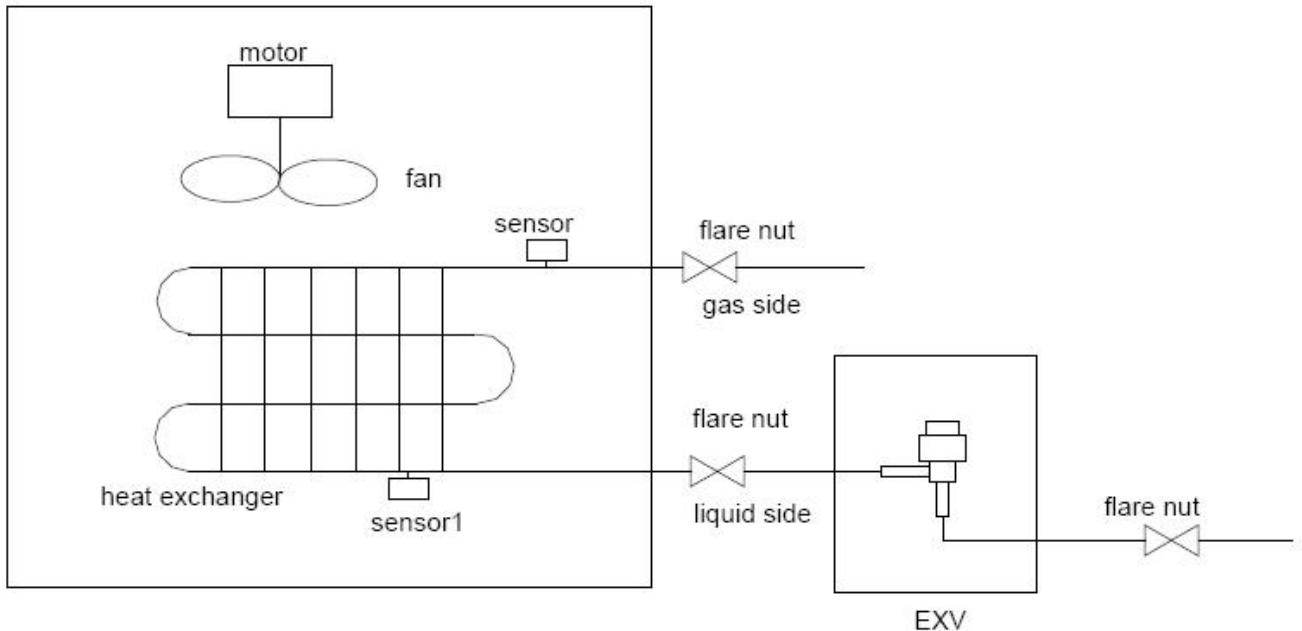


6.3) YDS-90-140UC

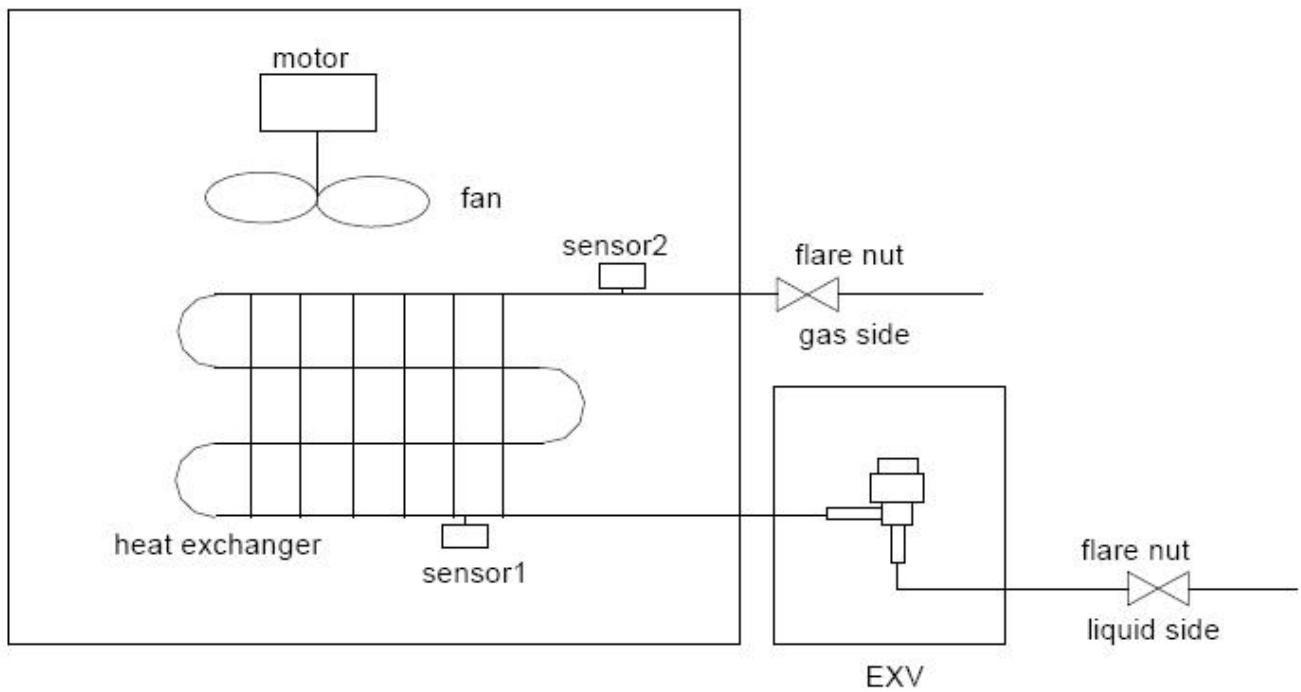


7. Refrigerant system diagram

7.1) YDS-22-36UC

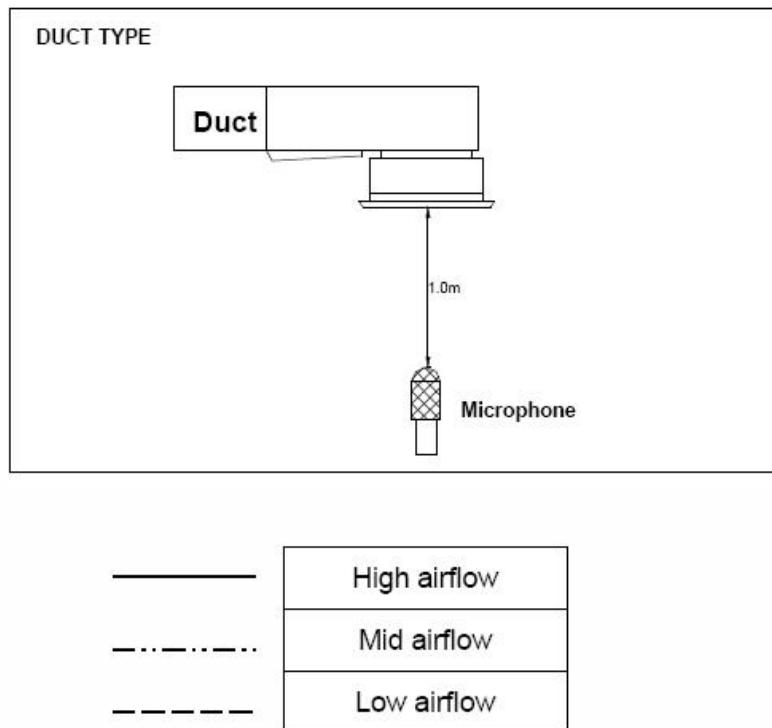


6.2 YDS-45-140UC



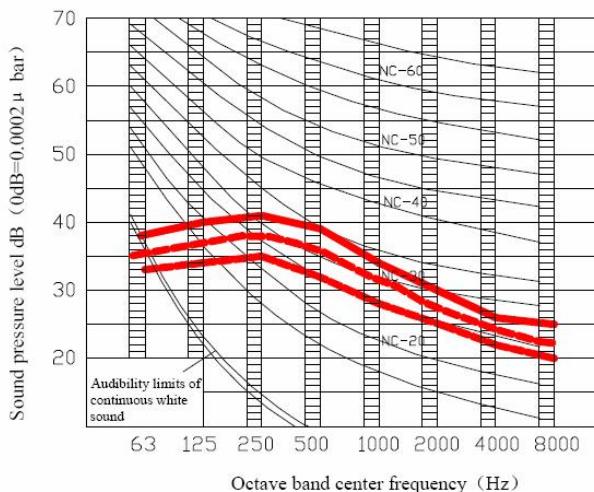
8. Noise level

8.1) Test condition

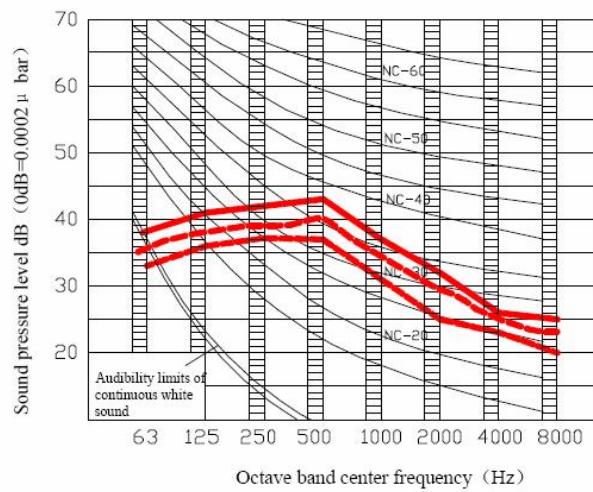


8.2) Noise spectrum

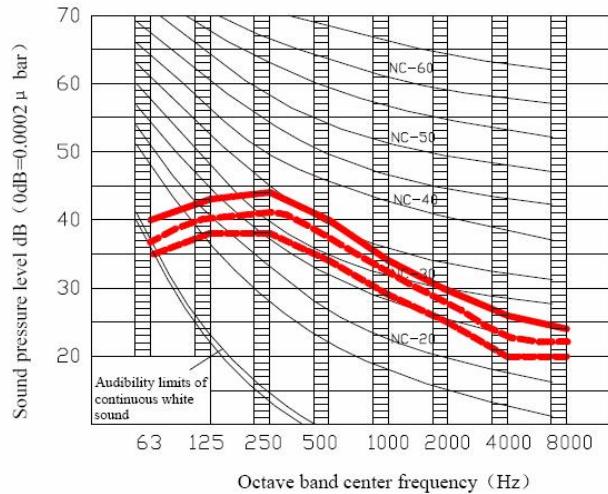
YDS-22-36UC



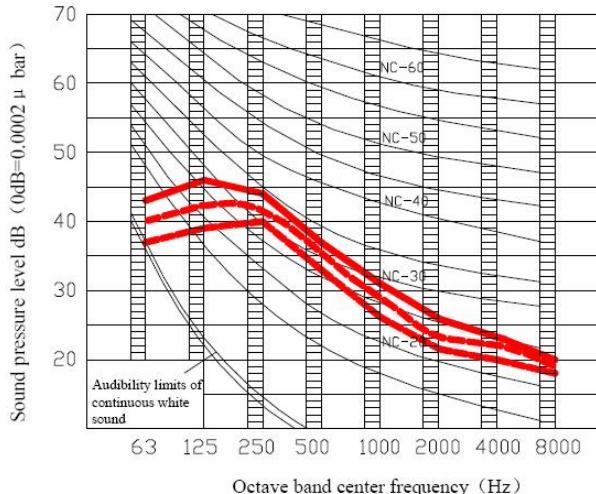
YDS-45-56UC



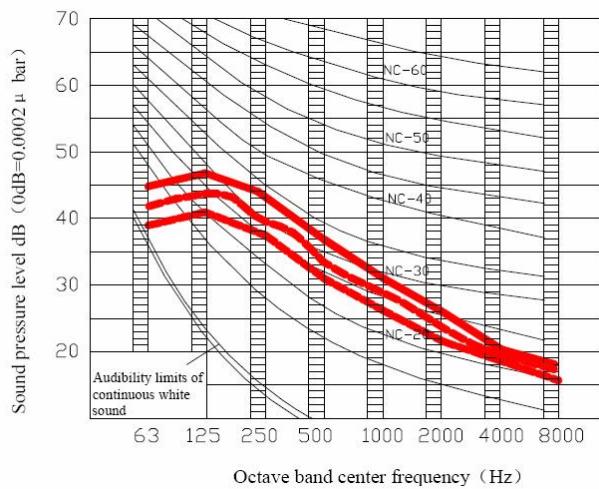
YDS-71-90UC



YDS-112UC

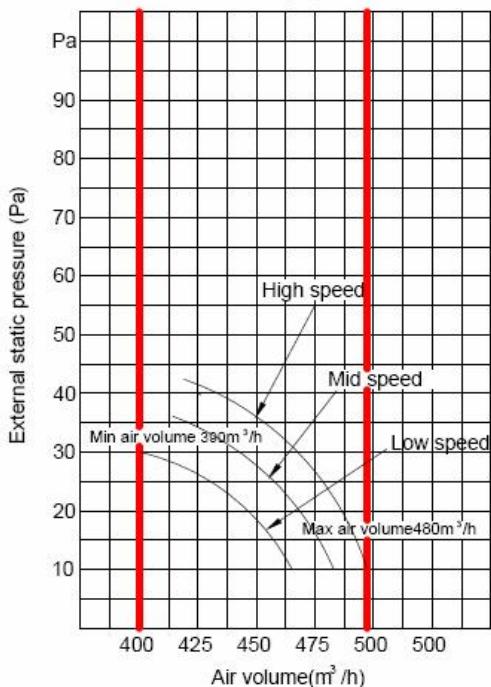


YDS-140UC

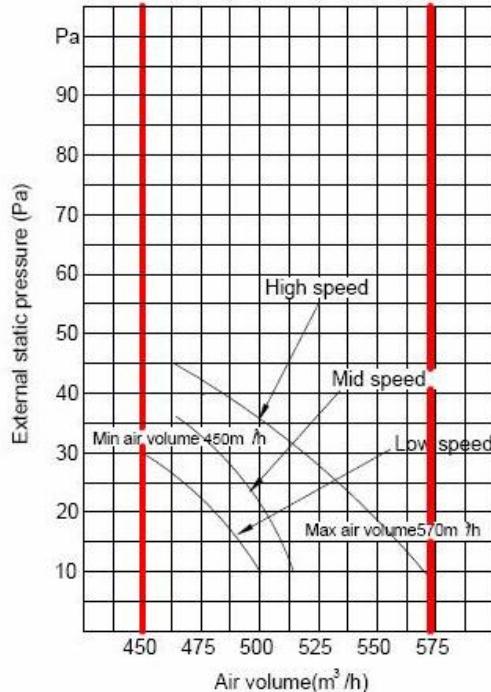


9. Static pressure curve

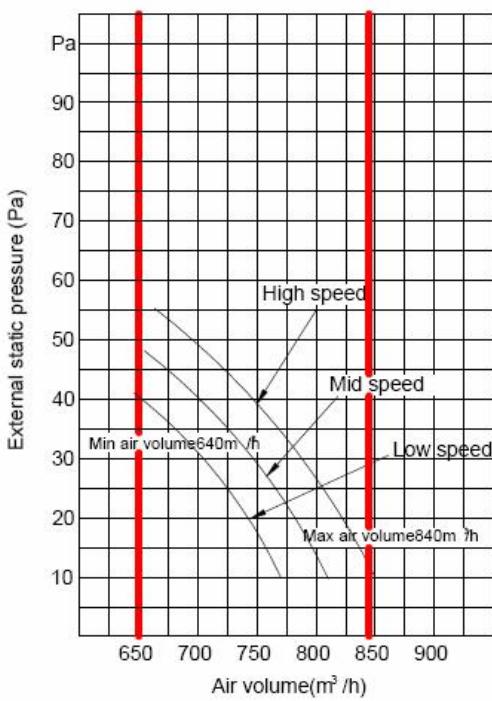
YDS-22UC



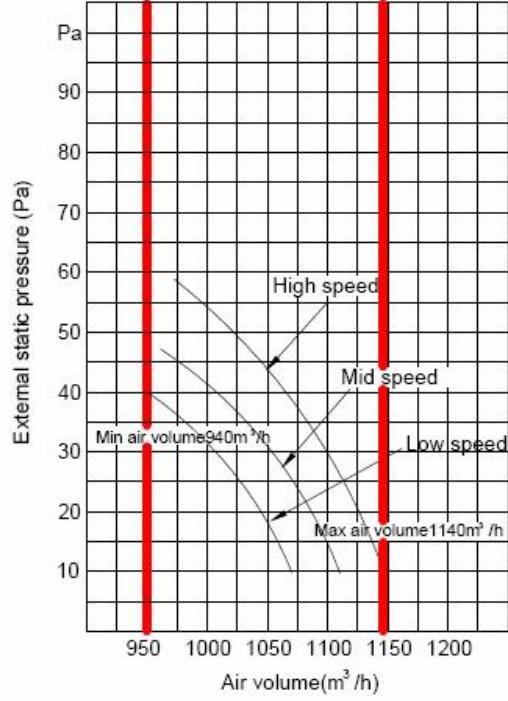
YDS-28-36UC



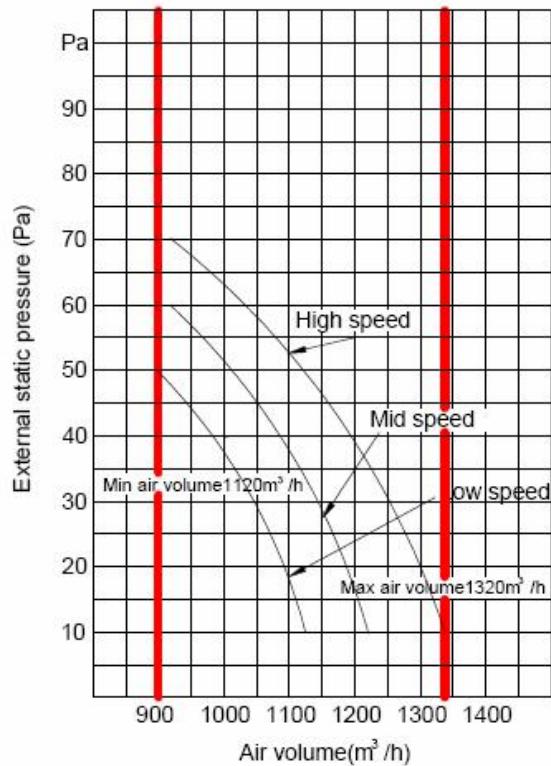
YDS-45-56UC



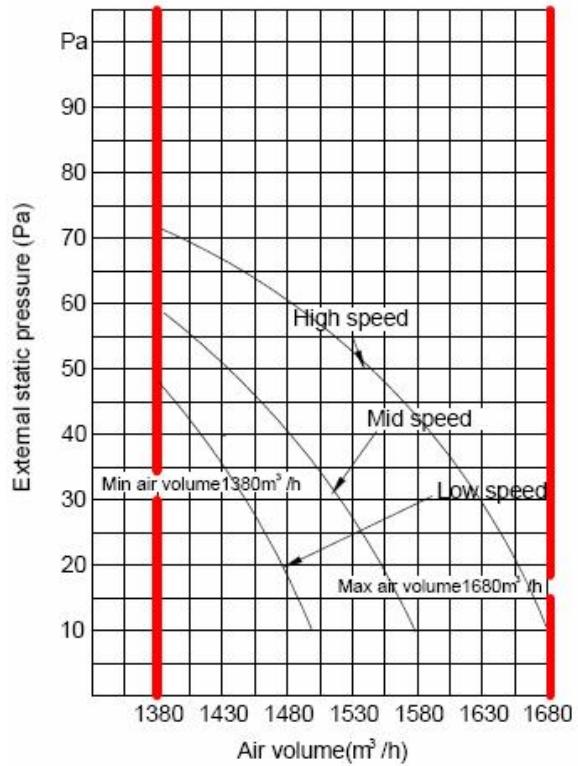
YDS-70-80UC



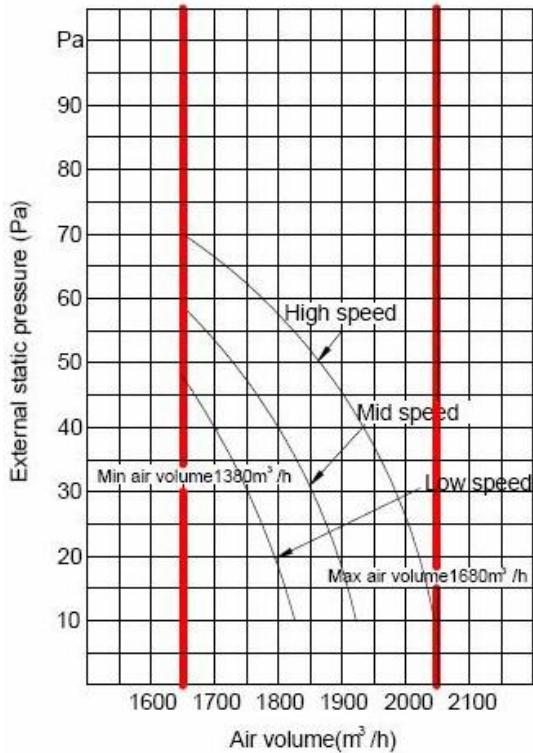
YDS-90UC



YDS-112UC



YDS-140UC



10. Function parts & safety device

Model YDS-		22UC	28UC	36UC	45UC	56UC
Safety Device	PC board fuse	5A	5A	5A	5A	5A
	Fan motor thermal protector	BW130°	BW130°	BW130°	BW130°	BW130°
Functional Device	Electronic throttle kit	DZJLBJ03-A	DZJLBJ03-A	DZJLBJ03-A	DZJLBJ03-A	DZJLBJ03-A

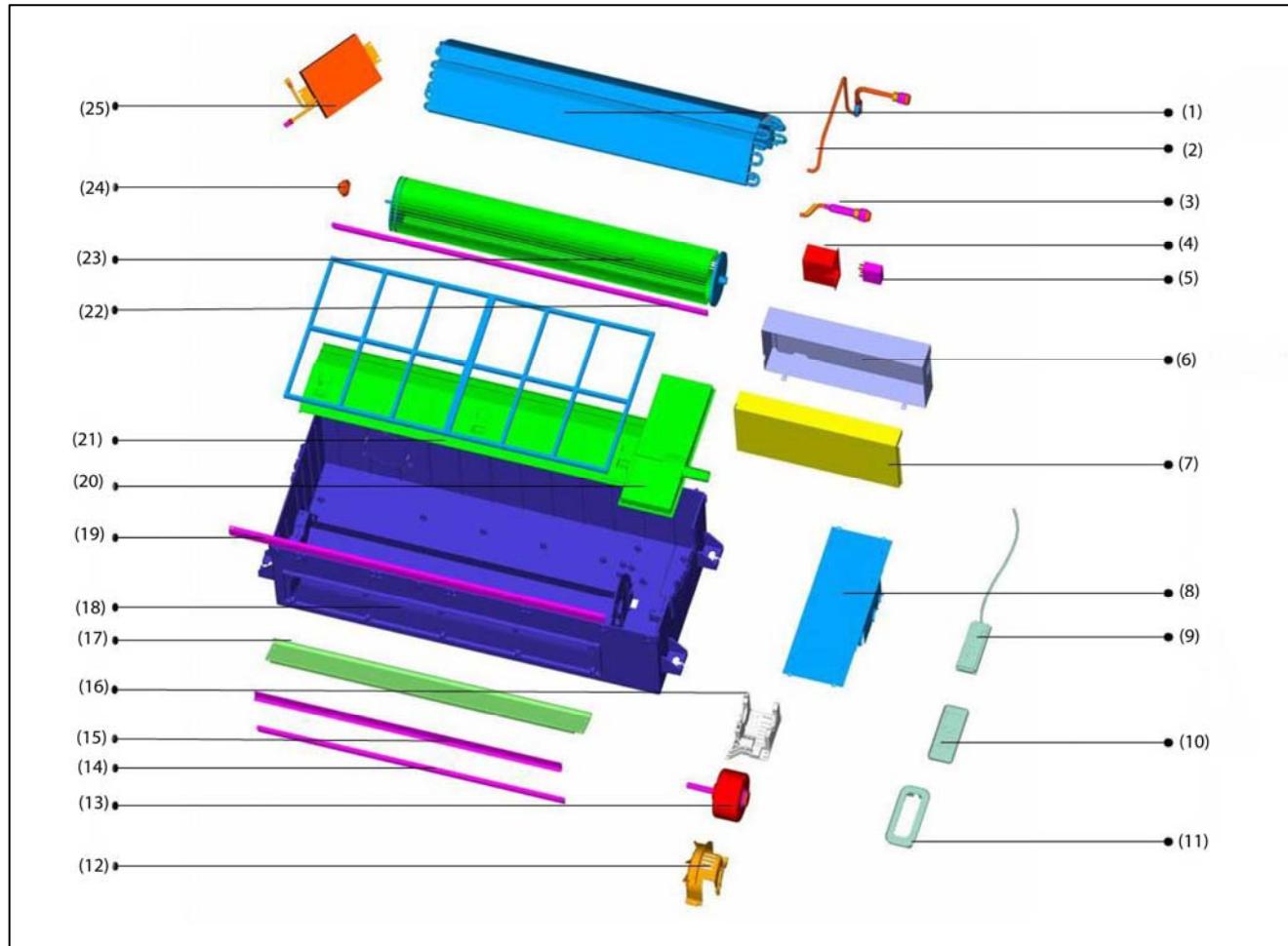
Model YDS-		71UC	80UC	90UC	112UC	140UC
Safety Device	PC board fuse	5A	5A	5A	5A	5A
	Fan motor thermal protector	BW130°	BW130°	BW130°	BW130°	BW130°
Functional Device	Electronic throttle kit	DZJLBJ03-A	DZJLBJ03-A	DZJLBJ03-A	DZJLBJ04	DZJLBJ04

Remark: BW130 -cut off at 130 ±15 and recover at 85 ±15

11. Explode view and spare part list

MODEL YDS-22-36UC15IA

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	2.2 kW	2.8 kW	3.6 kW			
1	201M585090031	201M585110010		Evaporator ass'y	1	
-		202M440500002		Evaporator temp. sensor Ass'y	1	
-		202M301300303		Evaporator temp. sensor	1	
-		202M440500003		Room temp sensor ass'y	1	
2	201M685090054	201M670100010		Inlet pipe ass'y	1	
3	201M685030120	201M685030140		Outlet pipe ass'y	1	
4		201M280000024		Capacitor box	1	
5	202M401100960	202M401100004		Motor capacitor	1	
6		203M385090041		E-part box ass'y	1	
-		202M300900109		Transformer (TT2-B35+D90-1F)	1	
-		201M385000007		Main controller ass'y	1	
-		202M301450125		Terminal block JX0-B6-D	1	
7		201M280200310		E-part box cover	1	
8		201M285100000		Drainage pan cover	1	
9		203M342090023		Display board ass'y	1	
10		203M3550A1500		Wireless remote,R91/BGE,York brand, Silver	1	
-		201M155090070		Remote holder,R91,York brand,White	1	
11		201M185000303		display box	1	

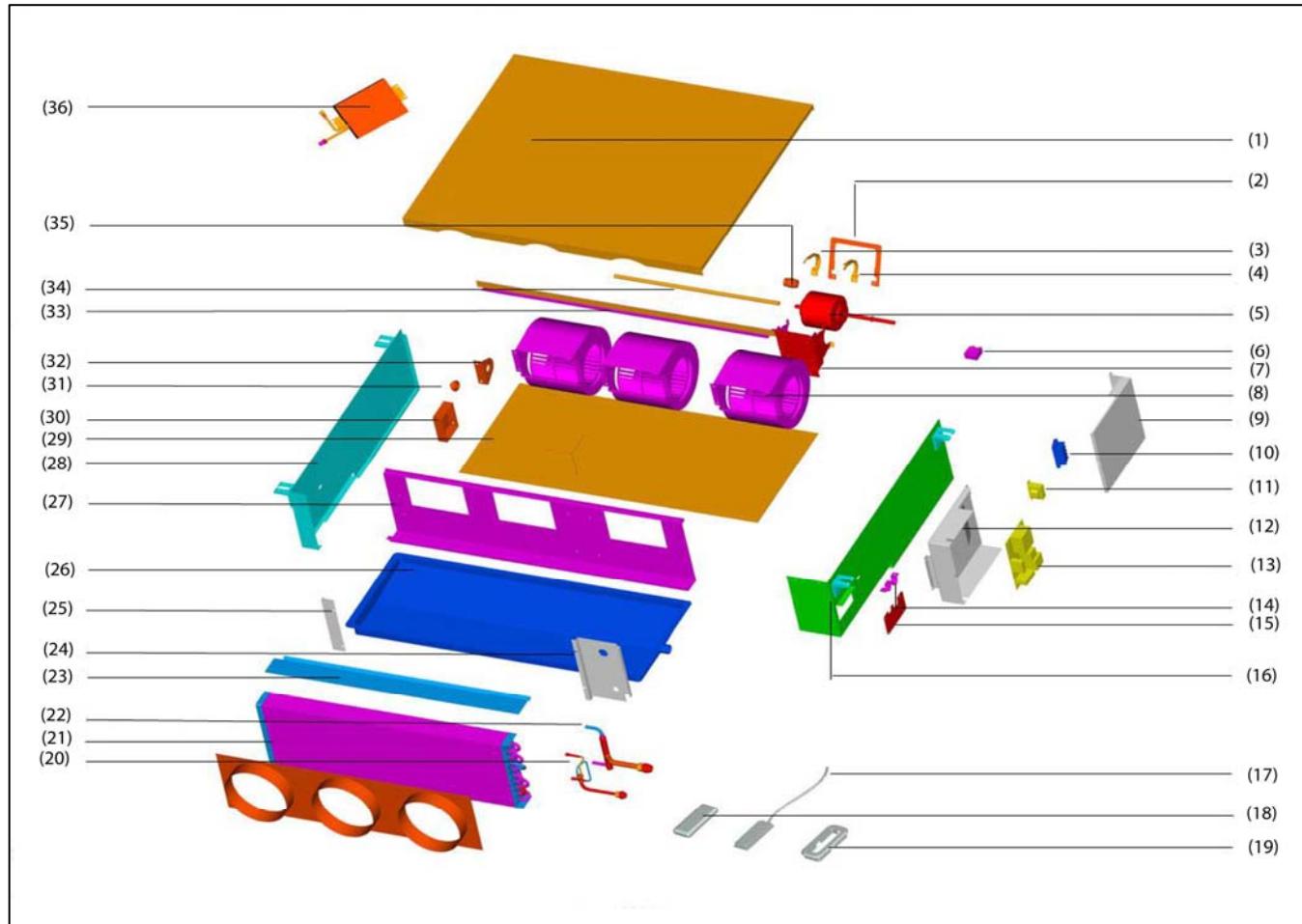
Medium ESP duct

12	201M186150003	motor cover	1	
13	202M400380002	Motor	1	
14	201M286150215	fixing board	1	
15	201M286150214	fixing board	1	
16	201M186150002	motor base	1	
17	201M186150010	Volute shell	1	
18	201M185100034	Base	1	
19	201M286150210	Fixing board	1	
20	201M185100001	Drainage pan	1	
21	201M186150004	Filter	2	
22	201M270000022	Fixing board	1	
23	201M186150005	Fan	1	
24	201M130000004	Bearing	1	
25	201M684090109	Electric throttle ass'y	1	

MODEL

YDS-45-80UC

R-410A 1 Ph 220-240V 50Hz



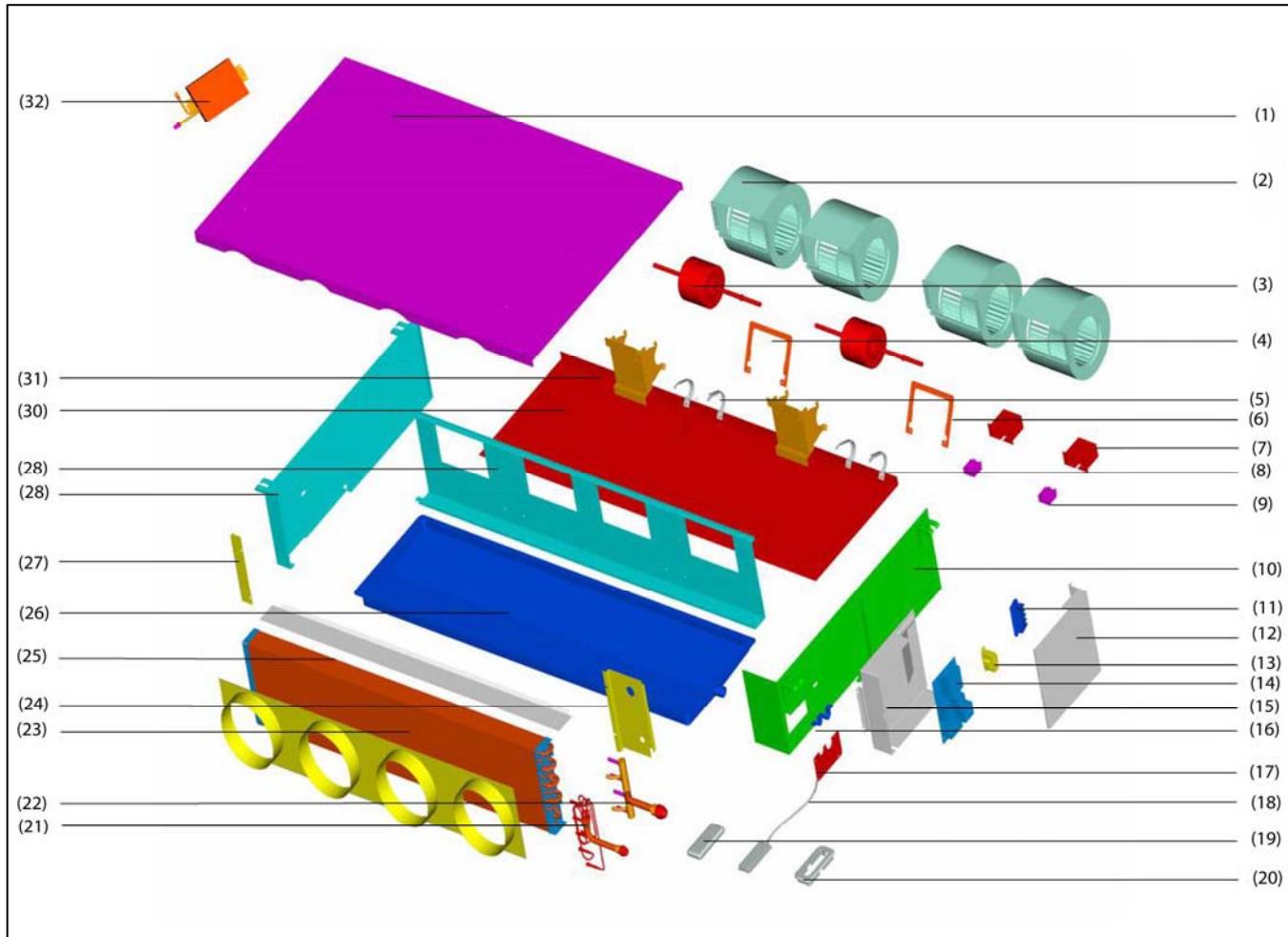
ITEM NO	PART NUMBER				PART NAME	QTY	REMARK
	4.5 kW	5.6 kW	7.1 kW	8.0 kW			
1	201M286090027				Base ass'y	1	
2	201M280200007				board	1	
3	201M280200005				motor clamp	1	
4	201M280200006				motor clamp	1	
5	202M400410633	202M400420617			Fan motor	1	
6	202M401100353	202M401190042			Motor capacitor	1	
7	201M284400004				Motor bracket	1	
8	201M286090056				Fan ass'y	3	
9	201M286000011				E-Part box cover	1	
10	202M301450125				Terminal block JX0-B6-D	1	
11	202M300900109				Transformer (TT2-B35+D90-1F)	1	
12	203M385290000				E-part box ass'y	1	
-	201M285290000	201M286090073			E-part box	1	
13	201M385000007				Main controller ass'y	1	
14	201M286040414				Pipe clamp	1	
15	201M286090050				Sealed board ass'y	1	
16	201M285490002				Left clapboard ass'y	1	
17	203M342090023				Display board ass'y	1	
18	203M3550A1500				Wireless remote, R91/BGE, York brand, Silver	1	
-	201M155090070				Remote holder, R91, York brand, White	1	
19	201M185000303				display box	1	
20	201M684290007	201M686090143	201M686090132		Inlet pipe ass'y	1	

21	201M586090040	201M586090041	Evaporator ass'y	1	
-	202M440500003		Room temp sensor ass'y	1	
-	202M440500002		Evaporator temp. sensor Ass'y	1	
-	202M301300303		Evaporator temp. sensor	1	
22	201M684290009	201M686090127	201M686090125	Outlet pipe ass'y	1
23	201M286000404		Evaporator base board	1	
24	201M286090035		Evaporator left clapboard ass'y	1	
25	201M286090038		Evaporator right clapboard ass'y	1	
26	201M286000455		Drain pan ass'y	1	
27	201M286090033		Middle beam	1	
28	201M285490001		Right cover ass'y	1	
29	201M286000456		Rear cover ass'y	1	
30	202M730500001		Bearing base	1	
31	201M130000004		Bearing	1	
32	201M284400003		Bearing base	1	
33	201M286090026		Rear beam	1	
34	201M200200008		Connecting shaft	1	
35	202M984400001		Coupling	1	
36	201M609891501	201M609890035	Electric throttle ass'y	1	

MODEL

YDS-90-140UC

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	90.0 kW	11.2 kW	14.0 kW			
1	201M286090063			Base ass'y	1	
2	201M286090056			Fan ass'y	4	
3	202M400410838			motor	2	
4	201M280200007			board	2	
5	201M280200005			motor clamp	2	
6	201M284400004			Motor bracket	2	
7	201M280000024			Capacitor box	2	
8	201M280200006			motor clamp	2	
9	202M401100407			Motor capacitor	1	
10	201M285490002			Left clapboard ass'y	1	
11	202M301450125			Terminal block JX0-B6-D	1	
12	203M385590000			E-part box ass'y	1	
-	201M285290000			E-part box	1	
13	202M300900109			Transformer (TT2-B35+D90-1F)	1	
14	201M385000007			Main controller ass'y	1	
15	201M286000011			E-Part box cover	1	
16	201M286040414			Pipe clamp	1	
17	201M286090050			Sealed board ass'y	1	
18	203M342090023			Display board ass'y	1	

Medium ESP duct

19	203M3550A1500	Wireless remote,R91/BGE,York brand, Silver	1	
-	201M155090070	Remote holder,R91,York brand, White	1	
20	201M185000303	display box	1	
21	201M686090141	Inlet pipe ass'y	1	
22	201M686090131	Outlet pipe ass'y	1	
23	201M586090035	Evaporator ass'y	1	
-	202M440500003	Room temp sensor ass'y	1	
-	202M440500002	Evaporator temp. sensor Ass'y	1	
-	202M301300303	Evaporator temp. sensor	1	
24	201M286090035	Evaporator left clapboard ass'y	1	
25	201M285700014	Evaporator base board	1	
26	201M286000062	Drain pan ass'y	1	
27	201M286090038	Evaporator right clapboard ass'y	1	
28	201M285490001	Right cover ass'y	1	
29	201M286090067	Middle beam	1	
30	201M286000068	Rear cover ass'y	1	
31	201M286090062	Rear beam	1	
32	201M609890040	Electric throttle ass'y	1	

Part 4.5 Expose & Conceal Floor-standing

Contents

1. Features.....	185
2. Specifications.....	186
3. Capacity table.....	190
4. Dimensions.....	196
5. Service space.....	197
6. Piping diagram.....	198
7. Wiring diagrams.....	198
8. Electrical characteristic.....	199
9. Noise level.....	200
10. Accessories.....	201
11. Exploded view parts.....	202

1. Features



Expose



Concealed

- 1 Two intake directions: front and below.



Exposed version with air intake from front(F1 series)



Exposed version with air intake from below(F2 series)

- 2 Built-in the electronic throttle kit
- 3 Three speeds
- 4 Low noise operation.
- 5 Easy installation and maintenance.
- 6 Air filter easily removed and cleaned
- 7 Removable blades for easy and effective cleaning
- 8 Streamlined appearances, flowing lines.
- 9 All metal parts are made of commercial grade galvanized steel, providing maximum protection against corrosion.

2. Specifications

Expose Floor-Standing YDS-22-80FC15IA-A/B R-410A 50Hz

Model		YDS-22SC15IA-A		YDS-28SC15IA-A																																											
		YDS-22SC15IA-B		YDS-28SC15IA-B																																											
Power supply		V-Ph-Hz		1 Ph- 220-240 V-50 Hz																																											
Nominal Capacity																																															
<table> <tr> <td>Cooling</td> <td>Capacity</td> <td>kW</td> <td>2.2</td> <td>2.8</td> <td>3.6</td> </tr> <tr> <td></td> <td>Input</td> <td>W</td> <td>40.0</td> <td>46.0</td> <td>35.0</td> </tr> </table>						Cooling	Capacity	kW	2.2	2.8	3.6		Input	W	40.0	46.0	35.0																														
Cooling	Capacity	kW	2.2	2.8	3.6																																										
	Input	W	40.0	46.0	35.0																																										
<table> <tr> <td>Heating</td> <td>Capacity</td> <td>kW</td> <td>2.6</td> <td>3.2</td> <td>4.0</td> </tr> <tr> <td></td> <td>Input</td> <td>W</td> <td>40.0</td> <td>46.0</td> <td>35.0</td> </tr> </table>						Heating	Capacity	kW	2.6	3.2	4.0		Input	W	40.0	46.0	35.0																														
Heating	Capacity	kW	2.6	3.2	4.0																																										
	Input	W	40.0	46.0	35.0																																										
Motor																																															
<table> <tr> <td>Input</td> <td>W</td> <td colspan="2">42/37/34</td><td colspan="2">49/40/34</td></tr> <tr> <td>Capacitor</td> <td>μF</td> <td colspan="2">0.8</td><td colspan="2">1</td></tr> <tr> <td>Speed (Hi/Me/Lo)</td> <td>r/min</td> <td colspan="2" rowspan="3">935/810/720</td><td colspan="2" rowspan="3">820/745/600</td></tr> </table>						Input	W	42/37/34		49/40/34		Capacitor	μF	0.8		1		Speed (Hi/Me/Lo)	r/min	935/810/720		820/745/600																									
Input	W	42/37/34		49/40/34																																											
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Speed (Hi/Me/Lo)	r/min	935/810/720		820/745/600																																											
Coils																																															
<table> <tr> <td>a. Number of rows</td> <td></td> <td></td> <td>2</td> <td>3</td> <td></td> </tr> <tr> <td>b. Tube pitch(a)x row pitch(b)</td> <td>mm</td> <td></td> <td colspan="3">25.4x22</td></tr> <tr> <td>c. Fin spacing</td> <td>mm</td> <td></td> <td colspan="3">1.8</td></tr> <tr> <td>d. Fin type (code)</td> <td></td> <td></td> <td colspan="3">Hydrophilic aluminum</td></tr> <tr> <td>e. Tube outside dia.and type</td> <td>mm</td> <td></td> <td>φ9.53</td> <td colspan="2">Inner groove tube</td></tr> <tr> <td>f. Coil length x height x width</td> <td>mm</td> <td colspan="2">568 x254 x44</td><td colspan="2" rowspan="4">768 x254 x66</td></tr> <tr> <td>g. Number of circuits</td> <td></td> <td></td> <td colspan="3" rowspan="3">3</td></tr> </table>						a. Number of rows			2	3		b. Tube pitch(a)x row pitch(b)	mm		25.4x22			c. Fin spacing	mm		1.8			d. Fin type (code)			Hydrophilic aluminum			e. Tube outside dia.and type	mm		φ9.53	Inner groove tube		f. Coil length x height x width	mm	568 x254 x44		768 x254 x66		g. Number of circuits			3		
a. Number of rows			2	3																																											
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d. Fin type (code)			Hydrophilic aluminum																																												
e. Tube outside dia.and type	mm		φ9.53	Inner groove tube																																											
f. Coil length x height x width	mm	568 x254 x44		768 x254 x66																																											
g. Number of circuits			3																																												
Performance																																															
<table> <tr> <td>Air flow (Hi/Me/Lo)</td> <td>m³/h</td> <td>530/456/400</td> <td>569/485/421</td> <td>624/522/375</td> <td></td> </tr> <tr> <td>Noise level (Hi/Me/Lo)</td> <td>dB(A)</td> <td>37/35/33</td> <td></td> <td>39/37/35</td> <td></td> </tr> <tr> <td>Piping size</td> <td>Liquid/ Gas side</td> <td>mm</td> <td>φ6.35/φ12.7</td> <td></td> <td></td> </tr> </table>						Air flow (Hi/Me/Lo)	m³/h	530/456/400	569/485/421	624/522/375		Noise level (Hi/Me/Lo)	dB(A)	37/35/33		39/37/35		Piping size	Liquid/ Gas side	mm	φ6.35/φ12.7																										
Air flow (Hi/Me/Lo)	m³/h	530/456/400	569/485/421	624/522/375																																											
Noise level (Hi/Me/Lo)	dB(A)	37/35/33		39/37/35																																											
Piping size	Liquid/ Gas side	mm	φ6.35/φ12.7																																												
Containerization																																															
<table> <tr> <td>Dimensions</td> <td>Unit (WxHxD)</td> <td>mm</td> <td>1000×220×625</td> <td>1200×220×625</td> <td></td> </tr> <tr> <td></td> <td>Packing (WxHxD)</td> <td>mm</td> <td>1089X722X312</td> <td>1289X722X312</td> <td></td> </tr> <tr> <td></td> <td>Net/Gross weight</td> <td>kg</td> <td>30/35</td> <td>37/43</td> <td></td> </tr> </table>						Dimensions	Unit (WxHxD)	mm	1000×220×625	1200×220×625			Packing (WxHxD)	mm	1089X722X312	1289X722X312			Net/Gross weight	kg	30/35	37/43																									
Dimensions	Unit (WxHxD)	mm	1000×220×625	1200×220×625																																											
	Packing (WxHxD)	mm	1089X722X312	1289X722X312																																											
	Net/Gross weight	kg	30/35	37/43																																											
Qty per 20'/40'/40'HQ		Pieces	119/236/273	93/190/190																																											

Notes:

- 1 Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
- 2 Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)

Model			YDS-45SC15IA-A	YDS-56SC15IA-A	YDS-71SC15IA-A	YDS-80SC15IA-A		
			YDS-45SC15IA-B	YDS-56SC15IA-B	YDS-71SC15IA-B	YDS-80SC15IA-B		
Power supply		V-Ph-Hz	1 Ph- 220-240 V-50 Hz					
Nominal Capacity								
Cooling	Capacity	kW	4.5	5.6	7.1	8.0		
	Input	W	49.0	88.0	130.0	130.0		
Heating	Capacity	kW	5.0	6.3	9.0	9.0		
	Input	W	49.0	88.0	130.0	130.0		
Motor								
Input		W	49/40/34	95/77/67	138.5/119/97			
Capacitor		μF	1.2	2.5	3			
Speed (Hi/Me/Lo)		r/min	820/745/600	915/770/660	1120/1020/880			
Coils								
a. Number of rows			3	2	3			
b. Tube pitch(a)x row pitch(b)		mm	25.4x22					
c. Fin spacing		mm	1.8					
d. Fin type (code)			Hydrophilic aluminum					
e. Tube outside dia.and type		mm	φ9.53 Inner groove tube					
f. Coil length x height x width		mm	768 x254 x66	1068 x 254 x 44	1068×66×254			
g. Number of circuits			3	4	3			
Performance								
Air flow (Hi/Me/Lo)		m³/h	660/542/440	1150/970/830	1380/1100/870	1332/1212/1023		
Noise level (Hi/Me/Lo)		dB(A)	39/37/35	41/39/37	43/41/38			
Piping size	Liquid/ Gas side	mm	φ6.35/φ12.7	φ9.53/φ15.9				
Containerization								
Dimensions	Unit (WxHxD)	mm	1200×220×625	1500×220×625				
	Packing (WxHxD)	mm	1289X722X312	1589X722X312				
	Net/Gross weight	kg	37/43	44/50				
Qty per 20'/40'/40'HQ		Pieces	93/190/190	72/151/151				

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)

Conceal Floor-Standing YDS-22-80RC15IA R-410A 50Hz

Model		YDS-22RC15IA		YDS-28RC15IA		YDS-36RC15IA			
Power supply		Ph-V-Hz		1 Ph-220-240 V-50 Hz					
Nominal Capacity									
Cooling	Capacity	W	2.2	2.8	3.6				
	Input	W	40.0	46.0	35.0				
Heating	Capacity	W	2.6	3.2	4.0				
	Input	W	40.0	46.0	35.0				
Motor									
Input		W	42/37/34			49/40/34			
Capacitor		μF	0.8	1	1.2				
Speed (Hi/Me/Lo)		r/min	935/810/720	935/810/720	820/745/600				
Coils									
a. Number of rows			2		3				
b. Tube pitch(a)x row pitch(b)		mm	25.4x22						
c. Fin spacing		mm	1.8						
d. Fin type (code)			Hydrophilic aluminum						
e. Tube outside dia.and type		mm	φ9.53						
			Inner groove tube						
f. Coil length x height x width		mm	568 x254 x44			768 x254 x66			
g. Number of circuits			3						
Performance									
Noise level (Hi/Me/Lo)		dB(A)	37/35/33			39/37/35			
External static pressure		Pa	12						
Air flow (Hi/Me/Lo)		m³/h	530/456/400	569/485/421	624/522/375				
Piping size	Liquid side/ Gas side	mm	Φ6.4/Φ12.7						
Containerization									
Dimensions	Unit (WxHxD)	mm	840×212×544			1036×212×544			
	Packing (WxHxD)	mm	939X639X305			1139X639X305			
	Net/Gross weight	kg	26/29.5			29.5/34			
Qty per 20'/40'/40'HQ		Pieces	119/236/273			93/190/190			

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)

Model			YDS-45RC15IA	YDS-56RC15IA	YDS-71RC15IA	YDS-80RC15IA
Power supply		Ph-V-Hz	1 Ph-220-240 V-50 Hz			
Nominal Capacity						
Cooling	Capacity	W	4.5	5.6	7.1	8.0
	Input	W	49.0	88.0	130.0	130.0
Heating	Capacity	W	5.0	6.3	8.0	9.0
	Input	W	49.0	88.0	130.0	130.0
Motor						
Input		W	49/40/34	95/77/67	138.5/119/97	138.5/119/97
Capacitor		μF		2.5		3
Speed (Hi/Me/Lo)		r/min	820/745/600	915/770/660	1120/1020/880	1120/1020/880
Coils						
a. Number of rows			3	2		3
b. Tube pitch(a)x row pitch(b)		mm		25.4x22		
c. Fin spacing		mm		1.8		
d. Fin type (code)				Hydrophilic aluminum		
e. Tube outside dia.and type		mm		φ9.53		
				Inner groove tube		
f. Coil length x height x width		mm	768 x254 x66	1068 x 254 x 44		1068x66x254
g. Number of circuits			3	4		3
Performance						
Noise level (Hi/Me/Lo)		dB(A)	39/37/35		41/39/37	
External static pressure		Pa		12		
Air flow (Hi/Me/Lo)		m³/h	660/542/440	1150/970/830	1380/1100/870	1332/1212/1023
Piping size	Liquid side/ Gas side	mm	φ6.4/φ12.7		φ9.5/φ15.9	
Containerization						
Dimensions	Unit (WxHxD)	mm	1036×212×544	1336×212×544	1336×212×545	1336×212×545
	Packing (WxHxD)	mm	1139X639X305		1439X639X305	
	Net/Gross weight	kg	29.5/34		36/40	
Qty per 20'/40'/40'HQ		Pieces	93/190/190		72/151/151	

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)

3. Capacity table

3.1) Cooling

TC: Total capacity

Combination , % (Capacity index)	Outdoor temperature(° C DB)	Indoor temperature(°CWB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
2.2	10	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.90	1.70
	12	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	14	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	16	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	18	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.80	1.60
	20	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.70	1.50
	21	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.60	1.70	2.70	1.50
	23	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.70	1.50
	25	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.60	1.50
	27	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.50	1.60	2.60	1.50
	29	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.50	1.50
	31	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.50	1.50
	33	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.40	1.50	2.40	1.50
	35	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.30	1.50	2.40	1.50
	37	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.30	1.70	2.30	1.50	2.30	1.50
	39	1.50	1.40	1.80	1.50	2.10	1.60	2.20	1.60	2.20	1.60	2.30	1.50	2.30	1.50
2.8	10	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.70	2.10
	12	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.10
	14	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.10
	16	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.60	2.00
	18	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.50	2.00
	20	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.40	1.90
	21	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.30	2.10	3.40	1.90
	23	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.10	3.40	1.90
	25	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.00	3.30	1.90
	27	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.20	2.00	3.30	1.90
	29	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.20	1.90
	31	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.20	1.90
	33	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.20	3.10	2.00	3.10	2.00
	35	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.10	2.90	1.90	3.10	2.00
	37	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.90	2.10	2.90	1.90	2.90	1.90
	39	1.90	1.80	2.30	1.90	2.70	2.00	2.80	2.00	2.80	2.00	2.90	1.90	2.90	1.90
3.6	10	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.80	2.80
	12	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70
	14	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.60	2.70
	16	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70
	18	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.50	2.70
	20	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	21	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	23	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.20	2.80	4.40	2.70
	25	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60
	27	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.10	2.70	4.20	2.60
	29	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.50
	31	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.10	2.40
	33	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.90	2.70	4.00	2.60	4.00	2.40
	35	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	4.00	2.40
	37	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.60	3.90	2.30
	39	2.40	2.20	3.00	2.50	3.30	2.70	3.60	2.70	3.70	2.60	3.90	2.70	3.90	2.40

Combination, %(Capacity index)	Outdoor temperature(°C DB)	Indoor temperature(°CWB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW	TC kW	SHC kW
4.5	10	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40
	12	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.90	3.40
	14	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.80	3.30
	16	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20
	18	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.60	3.20
	20	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.50	3.20
	21	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.40	3.20	5.40	3.10
	23	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.40	3.10
	25	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.20	3.20	5.30	3.00
	27	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.30	3.00
	29	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.00	3.00	5.10	2.90
	31	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	5.10	3.00
	33	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.90	2.90
	35	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.80	3.30	5.30	3.50	4.80	2.80
	37	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90
	39	3.10	2.60	3.60	2.90	4.20	3.10	4.50	3.20	4.60	3.20	4.80	3.10	4.80	2.90
5.6	10	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10
	12	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.30	4.10
	14	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.20	4.10
	16	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00
	18	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10
	20	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.10	4.10
	21	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	7.00	4.10
	23	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.60	4.60	6.90	4.00
	25	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.50	4.10	6.80	3.90
	27	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.40	4.00	6.50	3.80
	29	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.30	4.00	6.40	3.70
	31	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.20	3.90	6.30	3.70
	33	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	6.00	3.80	6.30	3.70
	35	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.70	6.20	3.60
	37	3.90	3.20	4.60	3.50	5.20	3.90	5.60	4.00	6.00	4.00	5.90	3.90	6.10	3.50
7.1	10	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.20	4.90
	12	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.10	4.80
	14	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	9.00	4.80
	16	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.90	4.70
	18	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.70	4.70
	20	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.50	4.60
	21	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.40	4.50
	23	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.30	4.50
	25	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.40	4.90	8.20	4.40
	27	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.10	4.90	8.20	4.40
	29	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	8.00	4.80	8.10	4.50
	31	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.90	4.70	7.80	4.40
	33	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.80	4.70	7.80	4.40
	35	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.60	4.60	7.70	4.30
	37	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.50	4.80	7.50	4.50	7.60	4.30
	39	5.00	3.80	5.80	4.20	6.70	4.60	7.10	4.70	7.20	4.60	7.40	4.40	7.60	4.30

Combination , % (Capacity index)	Outdoor temperature(° C DB)	Indoor temperature(°CWB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
8.0	10	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.40	5.60
	12	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.20	5.50
	14	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.20	5.50
	16	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	10.00	5.40
	18	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.80	5.30
	20	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.60	5.20
	21	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.40	5.10
	23	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.40	5.10
	25	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.40	5.50	9.30	5.00
	27	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.40	9.10	5.30	9.20	5.10
	29	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	9.00	5.30	9.10	5.00
	31	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.90	5.20	8.80	4.80
	33	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.80	5.20	8.80	4.80
	35	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.40	5.50	8.60	5.10	8.60	4.80
	37	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.30	5.40	8.40	5.00	8.60	4.90
	39	5.50	4.40	6.60	4.90	7.50	5.30	8.00	5.50	8.10	5.30	8.30	5.00	8.60	4.90

3.2) Heating

TC: Total capacity

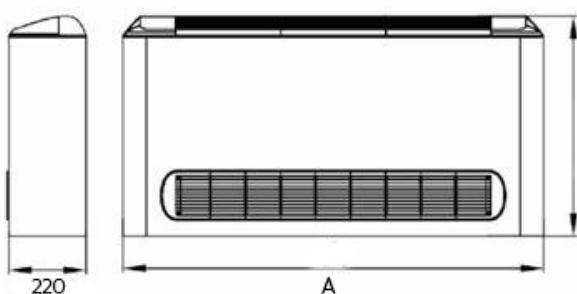
Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °DB					
			16	18	20	21	22	24
	°CDB	°CWB	kW	kW	kW	kW	kW	kW
2.2	-15	-14.7	1.64	1.64	1.64	1.64	1.64	1.64
	-13	-12.6	1.74	1.74	1.74	1.74	1.74	1.74
	-11	-10.5	1.82	1.82	1.82	1.82	1.82	1.82
	-10	-9.5	1.90	1.90	1.90	1.90	1.90	1.90
	-9.1	-8.5	1.95	1.95	1.95	1.95	1.95	1.95
	-7.6	-7	1.98	1.98	1.98	1.98	1.98	1.98
	-5.6	-5	2.05	2.05	2.05	2.05	2.05	2.05
	-3.7	-3	2.16	2.16	2.16	2.16	2.16	2.16
	-0.7	0	2.31	2.31	2.31	2.31	2.31	2.18
	2.2	3	2.44	2.44	2.44	2.44	2.39	2.18
	4.1	5	2.52	2.52	2.52	2.52	2.39	2.18
	6	7	2.60	2.60	2.60	2.52	2.39	2.18
	7.9	9	2.68	2.68	2.60	2.52	2.39	2.18
	9.8	11	2.76	2.76	2.60	2.52	2.39	2.18
	11.8	13	2.86	2.81	2.60	2.52	2.39	2.18
	13.7	15	2.94	2.81	2.60	2.52	2.39	2.18
2.8	-15	-14.7	2.02	2.02	2.02	2.02	2.02	2.02
	-13	-12.6	2.14	2.14	2.14	2.14	2.14	2.14
	-11	-10.5	2.24	2.24	2.24	2.24	2.24	2.24
	-10	-9.5	2.34	2.34	2.34	2.34	2.34	2.34
	-9.1	-8.5	2.40	2.40	2.40	2.40	2.40	2.40
	-7.6	-7	2.43	2.43	2.43	2.43	2.43	2.43
	-5.6	-5	2.53	2.53	2.53	2.53	2.53	2.53
	-3.7	-3	2.66	2.66	2.66	2.66	2.66	2.66
	-0.7	0	2.85	2.85	2.85	2.85	2.85	2.69
	2.2	3	3.01	3.01	3.01	3.01	2.94	2.69
	4.1	5	3.10	3.10	3.10	3.10	2.94	2.69
	6	7	3.20	3.20	3.20	3.10	2.94	2.69
	7.9	9	3.30	3.30	3.20	3.10	2.94	2.69
	9.8	11	3.39	3.39	3.20	3.10	2.94	2.69
	11.8	13	3.52	3.46	3.20	3.10	2.94	2.69
	13.7	15	3.62	3.46	3.20	3.10	2.94	2.69
3.6	-15	-14.7	2.52	2.52	2.52	2.52	2.52	2.52
	-13	-12.6	2.68	2.68	2.68	2.68	2.68	2.68
	-11	-10.5	2.80	2.80	2.80	2.80	2.80	2.80
	-10	-9.5	2.92	2.92	2.92	2.92	2.92	2.92
	-9.1	-8.5	3.00	3.00	3.00	3.00	3.00	3.00
	-7.6	-7	3.04	3.04	3.04	3.04	3.04	3.04
	-5.6	-5	3.16	3.16	3.16	3.16	3.16	3.16
	-3.7	-3	3.32	3.32	3.32	3.32	3.32	3.32
	-0.7	0	3.56	3.56	3.56	3.56	3.56	3.36
	2.2	3	3.76	3.76	3.76	3.76	3.68	3.36
	4.1	5	3.88	3.88	3.88	3.88	3.68	3.36
	6	7	4.00	4.00	4.00	3.88	3.68	3.36
	7.9	9	4.12	4.12	4.00	3.88	3.68	3.36
	9.8	11	4.24	4.24	4.00	3.88	3.68	3.36
	11.8	13	4.40	4.32	4.00	3.88	3.68	3.36
	13.7	15	4.52	4.32	4.00	3.88	3.68	3.36

Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °DB					
			16	18	20	21	22	24
	TC	TC	TC	TC	TC	TC	TC	TC
°CDB	°CWB	kW	kW	kW	kW	kW	kW	kW
4.5	-15	-14.7	3.15	3.15	3.15	3.15	3.15	3.15
	-13	-12.6	3.35	3.35	3.35	3.35	3.35	3.35
	-11	-10.5	3.50	3.50	3.50	3.50	3.50	3.50
	-10	-9.5	3.65	3.65	3.65	3.65	3.65	3.65
	-9.1	-8.5	3.75	3.75	3.75	3.75	3.75	3.75
	-7.6	-7	3.80	3.80	3.80	3.80	3.80	3.80
	-5.6	-5	3.95	3.95	3.95	3.95	3.95	3.95
	-3.7	-3	4.15	4.15	4.15	4.15	4.15	4.15
	-0.7	0	4.45	4.45	4.45	4.45	4.45	4.20
	2.2	3	4.70	4.70	4.70	4.70	4.60	4.20
	4.1	5	4.85	4.85	4.85	4.85	4.60	4.20
	6	7	5.00	5.00	5.00	4.85	4.60	4.20
	7.9	9	5.15	5.15	2.93	4.85	4.60	4.20
	9.8	11	5.30	5.30	5.00	4.85	4.60	4.20
	11.8	13	5.50	5.40	5.00	4.85	4.60	4.20
	13.7	15	5.65	5.40	5.00	4.85	4.60	4.20
5.6	-15	-14.7	3.97	3.97	3.97	3.97	3.97	3.97
	-13	-12.6	4.22	4.22	4.22	4.22	4.22	4.22
	-11	-10.5	4.41	4.41	4.41	4.41	4.41	4.41
	-10	-9.5	4.60	4.60	4.60	4.60	4.60	4.60
	-9.1	-8.5	4.73	4.73	4.73	4.73	4.73	4.73
	-7.6	-7	4.79	4.79	4.79	4.79	4.79	4.79
	-5.6	-5	4.98	4.98	4.98	4.98	4.98	4.98
	-3.7	-3	5.23	5.23	5.23	5.23	5.23	5.23
	-0.7	0	5.61	5.61	5.61	5.61	5.61	5.29
	2.2	3	5.92	5.92	5.92	5.92	5.80	5.29
	4.1	5	6.11	6.11	6.11	6.11	5.80	5.29
	6	7	6.30	6.30	6.30	6.11	5.80	5.29
	7.9	9	6.49	6.49	2.93	6.11	5.80	5.29
	9.8	11	6.68	6.68	6.30	6.11	5.80	5.29
	11.8	13	6.93	6.80	6.30	6.11	5.80	5.29
	13.7	15	7.12	6.80	6.30	6.11	5.80	5.29
7.1	-15	-14.7	5.04	5.04	5.04	5.04	5.04	5.04
	-13	-12.6	5.36	5.36	5.36	5.36	5.36	5.36
	-11	-10.5	5.60	5.60	5.60	5.60	5.60	5.60
	-10	-9.5	5.84	5.84	5.84	5.84	5.84	5.84
	-9.1	-8.5	6.00	6.00	6.00	6.00	6.00	6.00
	-7.6	-7	6.08	6.08	6.08	6.08	6.08	6.08
	-5.6	-5	6.32	6.32	6.32	6.32	6.32	6.32
	-3.7	-3	6.64	6.64	6.64	6.64	6.64	6.64
	-0.7	0	7.12	7.12	7.12	7.12	7.12	6.72
	2.2	3	7.52	7.52	7.52	7.52	7.36	6.72
	4.1	5	7.76	7.76	7.76	7.76	7.36	6.72
	6	7	8.00	8.00	8.00	7.76	7.36	6.72
	7.9	9	8.24	8.24	2.93	7.76	7.36	6.72
	9.8	11	8.48	8.48	8.00	7.76	7.36	6.72
	11.8	13	8.80	8.64	8.00	7.76	7.36	6.72
	13.7	15	9.04	8.64	8.00	7.76	7.36	6.72

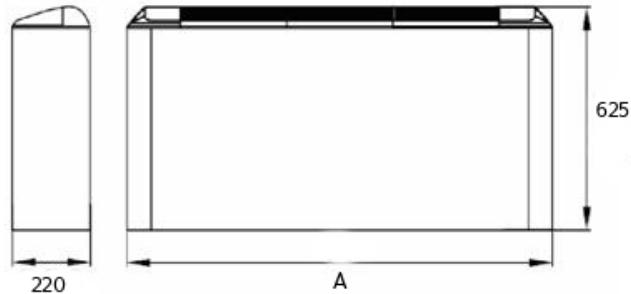
Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °DB					
			16	18	20	21	22	24
	TC	TC	TC	TC	TC	TC	TC	TC
°CDB		kW	kW	kW	kW	kW	kW	kW
8.0	-15	-14.7	5.67	5.67	5.67	5.67	5.67	5.67
	-13	-12.6	6.03	6.03	6.03	6.03	6.03	6.03
	-11	-10.5	6.30	6.30	6.30	6.30	6.30	6.30
	-10	-9.5	6.57	6.57	6.57	6.57	6.57	6.57
	-9.1	-8.5	6.75	6.75	6.75	6.75	6.75	6.75
	-7.6	-7	6.84	6.84	6.84	6.84	6.84	6.84
	-5.6	-5	7.11	7.11	7.11	7.11	7.11	7.11
	-3.7	-3	7.47	7.47	7.47	7.47	7.47	7.47
	-0.7	0	8.01	8.01	8.01	8.01	8.01	7.56
	2.2	3	8.46	8.46	8.46	8.46	8.28	7.56
	4.1	5	8.73	8.73	8.73	8.73	8.28	7.56
	6	7	9.00	9.00	9.00	8.73	8.28	7.56
	7.9	9	9.27	9.27	2.93	8.73	8.28	7.56
	9.8	11	9.54	9.54	9.00	8.73	8.28	7.56
	11.8	13	9.90	9.72	9.00	8.73	8.28	7.56
	13.7	15	10.17	9.72	9.00	8.73	8.28	7.56

4. Dimensions

4.1) Exposed floor standing



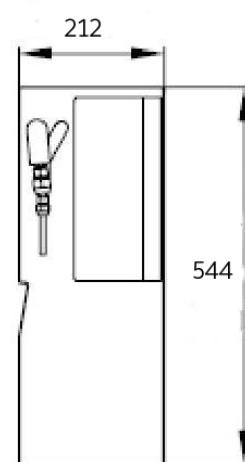
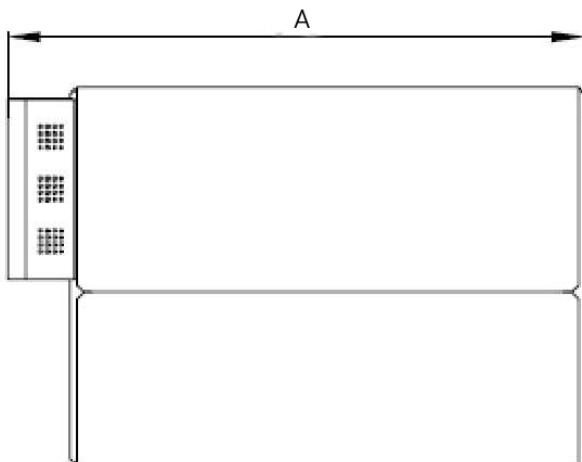
Air inlet from front



Air inlet from below

No	Model	A (mm)
1	YDS-22-28FC	1000
2	YDS-36-45FC	1200
3	YDS-56-80FC	1500

4.2) Concealed floor standing

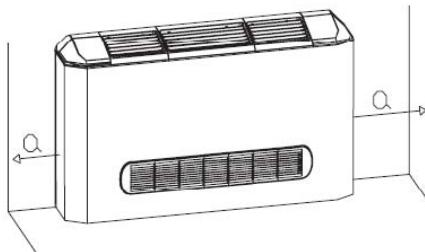


No	Model	A (mm)
1	YDS-22-28RC	840
2	YDS-36-80RC	1036

5. Service Space

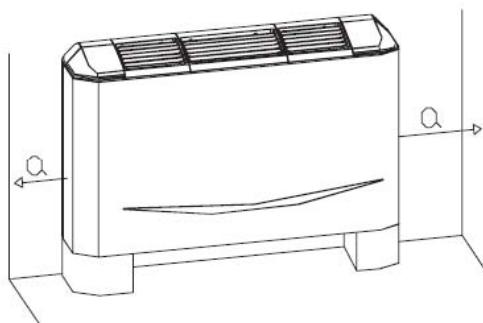
5.1) Version I

Vertical unit with casing, with air intake from front and air outlet on top, for installation on a wall or on feet on the floor.



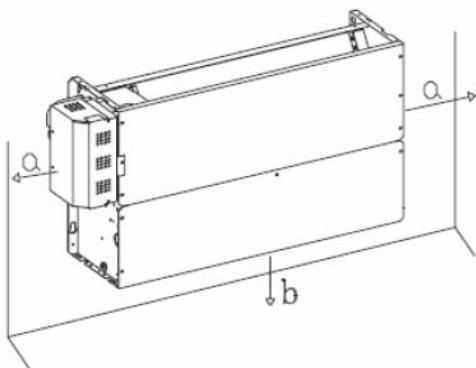
5.2) Version II

Vertical unit with casing, with air intake from below and air outlet on top, for installation on a wall or on feet on the floor.



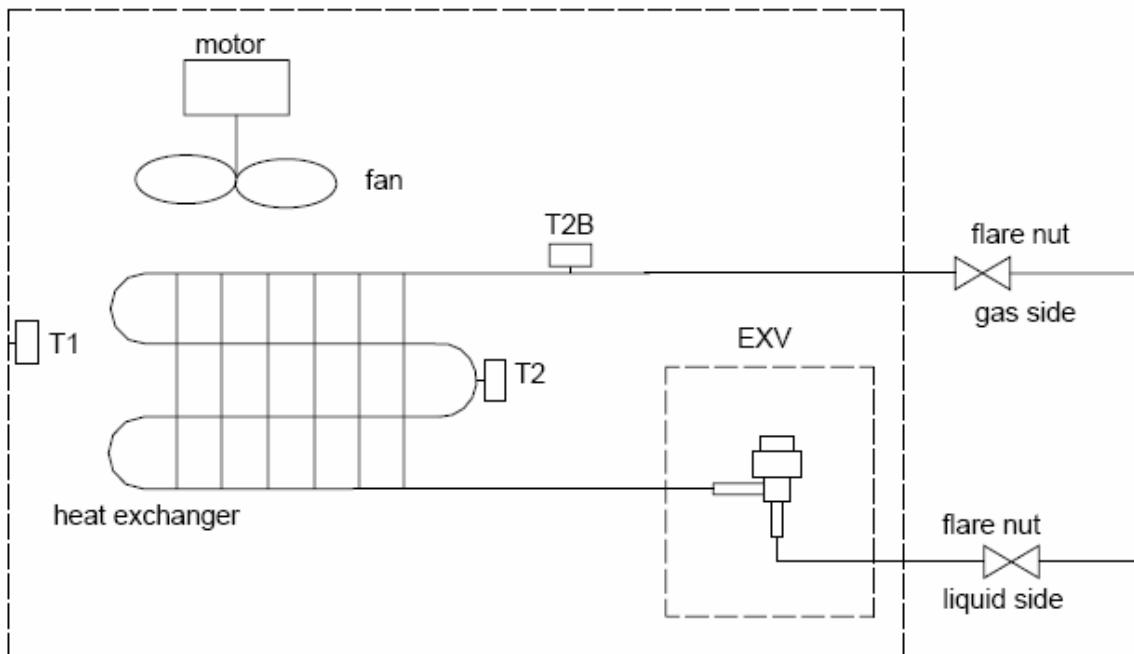
5.3) Version III

Vertical unit for building-in, with air intake from below and air delivery at the top, for installation on a wall.

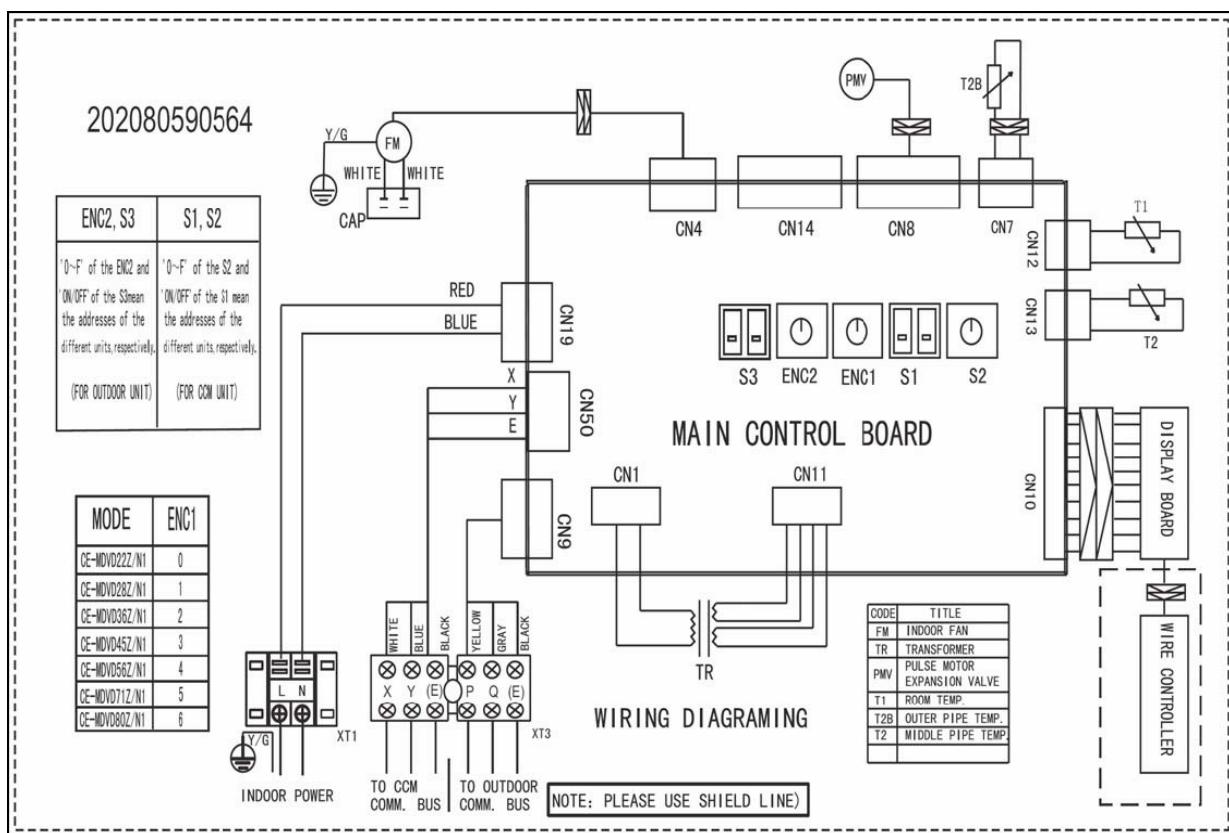


Version	Version I	Version II	Version III
a(mm)	≥ 150	≥ 150	≥ 200
b(mm)	/	/	≥ 80

6. Piping Diagram



7. Wiring Diagram



8. Electric Characteristics

Model	Indoor Unit				Power Supply		IFM	
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
YDS-22-28FC/RC	50	220-240V	198	254	0.25	15	0.02	0.2
YDS-36FC/RC	50	220-240V	198	254	0.3	15	0.02	0.24
YDS-45FC/RC	50	220-240V	198	254	0.4	15	0.02	0.3
YDS-56FC/RC	50	220-240V	198	254	0.6	15	0.028	0.48
YDS-71-80FC/RC	50	220-240V	198	254	0.8	15	0.07	0.62

Remark:

MCA: Min. Current Amps. (A)

MFA: Max. Fuse Amps. (A)

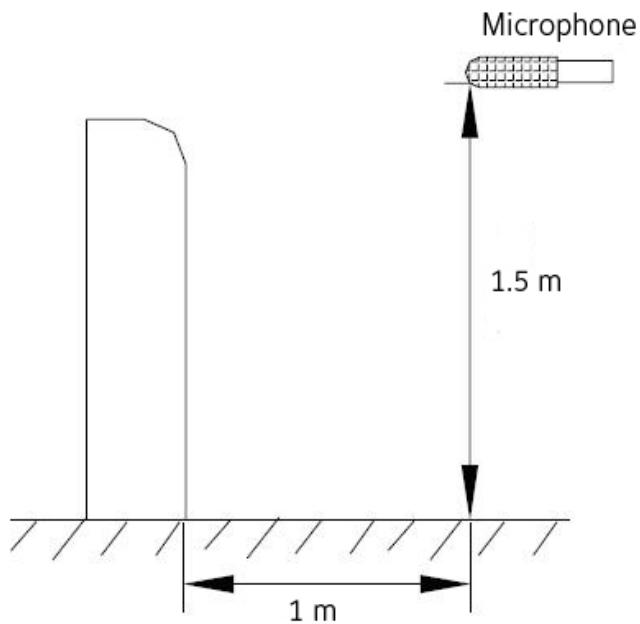
KW: Fan Motor Rated Output (kW)

FLA: Full Load Amps. (A)

IFM: Indoor Fan Motor

9. Sound Levels

9.1) Test condition



9.2) Test value

Model	Noise level under three speeds of fan (dB(A))		
	H	M	L
YDS-22FC/RC	37	35	33
YDS-28FC/RC	37	35	33
YDS-36FC/RC	39	37	35
YDS-45FC/RC	39	37	35
YDS-56FC/RC	41	39	37
YDS-71FC/RC	43	41	38
YDS-80FC/RC	43	41	38

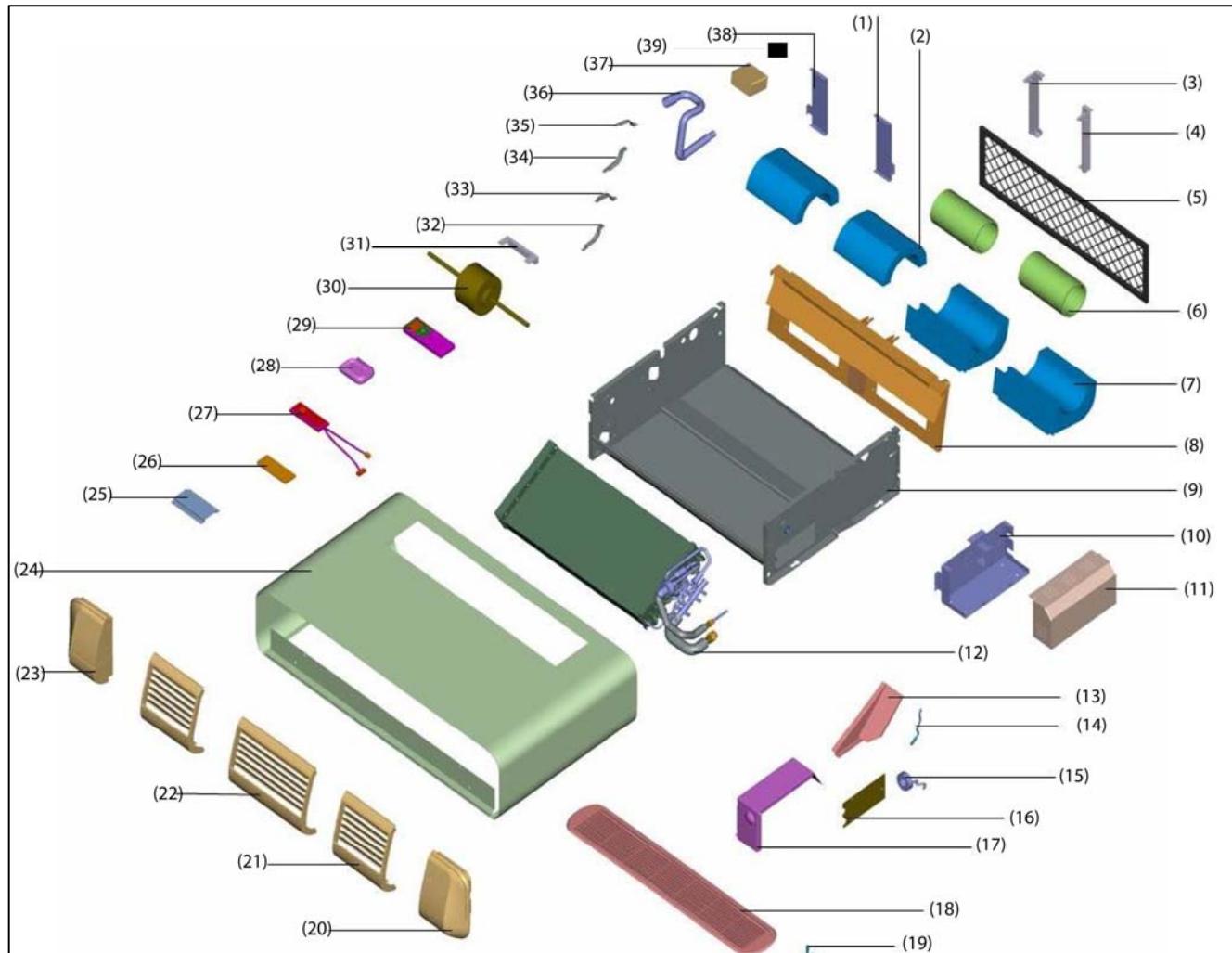
10. Accessories

Name of Accessories	Quantity	Outline	Usage
Owner's manual	1	/	/
Installation manual	1	/	/
Pipe insulation material	2		Heat insulation
Signal receiver display board	1		Receive Signal
Mounting screw (ST3.9x12-C-H)	4		/
Remote controller	1		Control the indoor unit
Frame	1		Hold the remote controller
Mounting screw (ST2.9x10-C-H)	2		/
Alkaline dry batteries(AM4)	2		/

11. Explode view and spare part list

MODEL YDS-22-28FC-A

R-410A 1 Ph 220-240V 50Hz



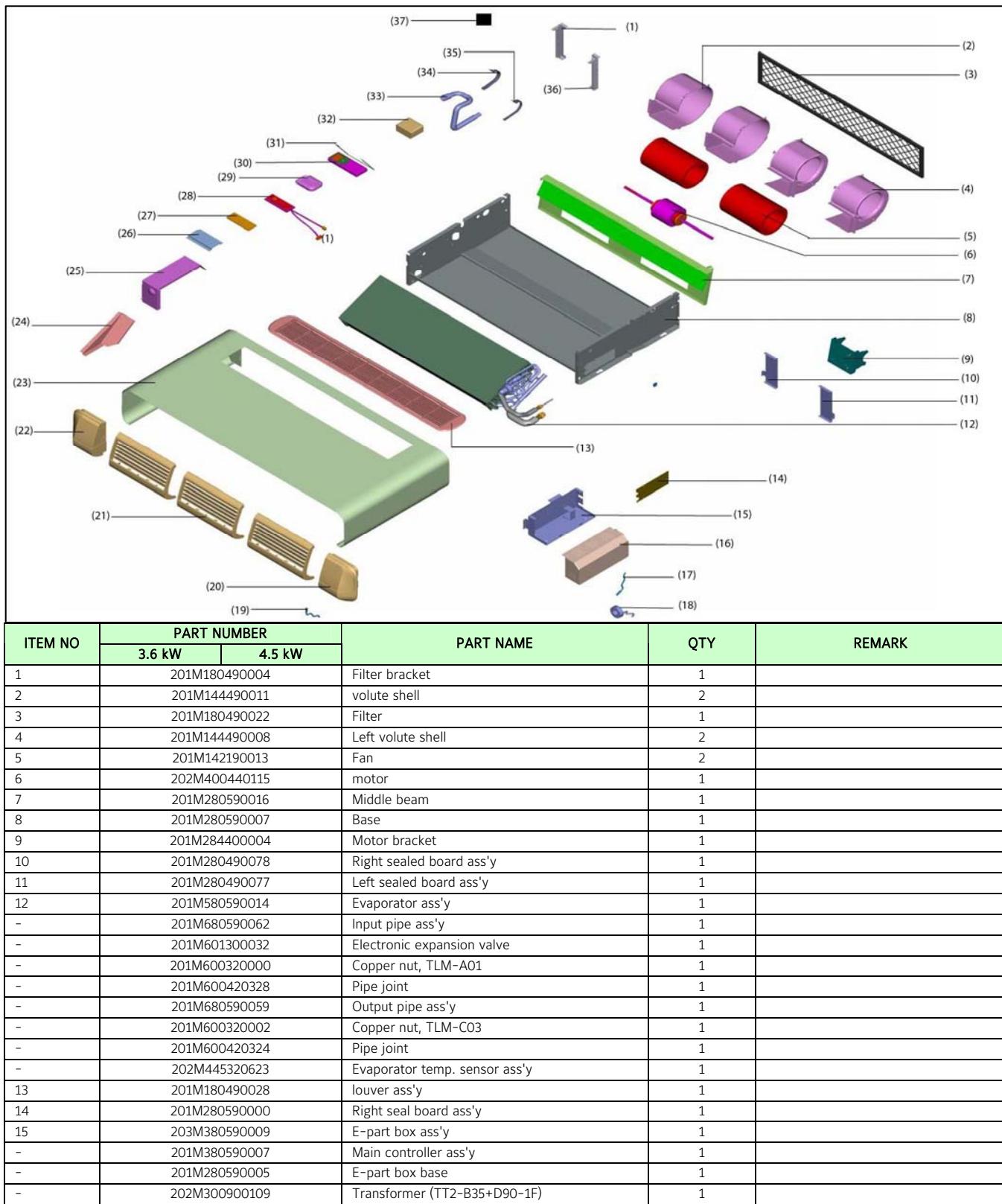
ITEM NO	PART NUMBER		PART NAME	QTY	REMARK
	2.2 kW	2.8 kW			
1	201M280490077		Left sealed board ass'y	1	
2	201M180000010		Volute shell	2	
3	201M180490004		Filter bracket	1	
4	201M180490005		Filter bracket	1	
5	201M180490021		Filter	1	
6	201M180000050		Fan	2	
7	201M180000011		Volute shell	2	
8	201M280590015		Middle beam	1	
9	201M280590003		Base	1	
10	203M380590009		E-part box ass'y	1	
-	201M380590007		Main controller ass'y	1	
-	201M280590005		E-part box base	1	
-	202M300900109		Transformer (TT2-B35+D90-1F)	1	
-	202M301450042		Wire joint, 2p	1	
-	202M301450125		Terminal block JX0-B6-D	1	
11	201M280590004		E-Part box cover	1	
12	201M580590012		Evaporator ass'y	1	
-	201M680590050		Input pipe ass'y	1	
-	201M601300032		Electronic expansion valve	1	

-	201M600320000	Copper nut, TLM-A01	1	
-	201M600420328	Pipe joint	1	
-	201M680590047	Output pipe ass'y	1	
-	201M600320002	Copper nut, TLM-C03	1	
-	201M600420324	Pipe joint	1	
-	202M445320623	Evaporator temp. sensor ass'y	1	
13	201M280590011	Supporting board ass'y	1	
14	202M301300092	Temp. sensor	1	
15	201M601320018	EEV solenoid	1	
16	201M280590000	Right seal board ass'y	1	
17	201M280590002	Evaporator connection board ass'y	1	
18	201M180490030	louver ass'y	1	
19	202M440500004	Evaporator temp. sensor ass'y	1	
20	201M180490025	cover ass'y	1	
21	201M180490010	louver ass'y	2	
22	201M180490008	louver ass'y	1	
23	201M180490026	cover ass'y	1	
24	201M280490064	Cabinet ass'y	1	
25	201M285000315	display box installation board	1	
26	201M186000201	E-part box cover	1	
27	201M380590002	Display board ass'y	1	
28	201M155090070	Remote holder,R91,York brand,White	1	
29	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
30	202M400440114	motor	1	
31	201M280000009	strenghten board	1	
32	201M280000065	Fixing board	1	
33	201M280000010	Fixing board	1	
34	201M280000066	Fixing board	1	
35	201M280000012	Fixing board	1	
36	201M101020005	Drain pipe	1	
37	201M280000024	Capacitor box	1	
38	201M280490078	Right sealed board ass'y	1	
39	202M401100960	Motor capacitor	1	

MODEL

YDS-36-45FC-A

R-410A 1 Ph 220-240V 50Hz



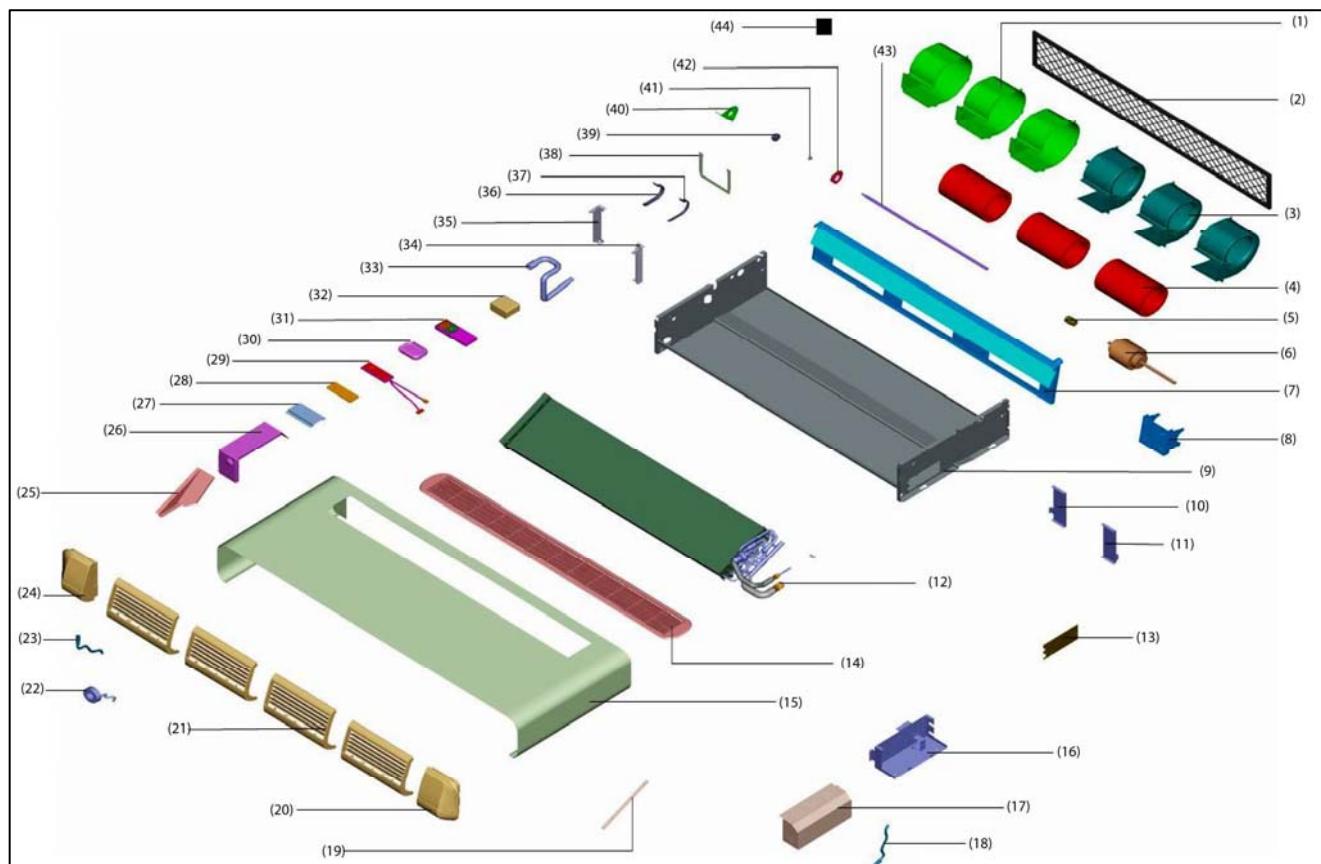
Expose & Conceal Floor Standing

-	202M301450042	Wire joint, 2p	1	
-	202M301450125	Terminal block JX0-B6-D	1	
16	201M280590004	E-Part box cover	1	
17	202M301300092	Temp. sensor	1	
18	201M601320018	EEV solenoid	1	
19	202M440500004	Evaporator temp. sensor ass'y	1	
20	201M180490025	cover ass'y	1	
21	201M180490008	louver ass'y	3	
22	201M180490026	cover ass'y	1	
23	201M280490063	Cabinet ass'y	1	
24	201M280590011	Supporting board ass'y	1	
25	201M280590002	Evaporator connection board ass'y	1	
26	201M285000315	display box installation board	1	
27	201M186000201	E-part box cover	1	
28	201M380590002	Display board ass'y	1	
29	201M155090070	Remote holder,R91,York brand,White	1	
30	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
31	201M280200007	board	1	
32	201M280000024	Capacitor box	1	
33	201M101020005	Drain pipe	1	
34	201M280200006	motor clamp	1	
35	201M280200005	motor clamp	1	
36	201M180490005	Filter bracket	1	
37	202M401100006 202M401190048	Motor capacitor	1	

MODEL

YDS-56-80FC-A

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	5.6 kW	7.1 kW	8.0 kW			
1		201M144490011		volute shell	3	
2		201M180490023		Filter	1	
3		201M144490008		Left volute shell	3	
4		201M142190013		Fan	3	
5		202M984400001		Coupling	1	
6	202M400440117		202M400440118	motor	1	
7	201M280590017			Middle beam	1	
8	201M284400004			Motor bracket	1	
9	201M280590008			Base	1	
10	201M280490078			Right sealed board ass'y	1	
11	201M280490077			Left sealed board ass'y	1	
12		201M580590016	201M580590018	Evaporator ass'y	1	
-		201M680590069	201M680590074	Input pipe ass'y	1	
-	201M601300032	201M600420320	201M601300032	Electronic expansion valve	1	
-		201M680590067	201M680590072	Output pipe ass'y	1	
-		202M445320623		Evaporator temp. sensor ass'y	1	
13		201M280590000		Right seal board ass'y	1	
14		201M180490027		Louver ass'y	1	
15		201M280490062		Cabinet ass'y	1	
16		203M380590009		E-part box ass'y	1	
-		201M380590007		Main controller ass'y	1	
-		201M280590005		E-part box base	1	
-		202M300900109		Transformer (TT2-B35+D90-1F)	1	
-		202M301450125		Terminal block JX0-B6-D	1	

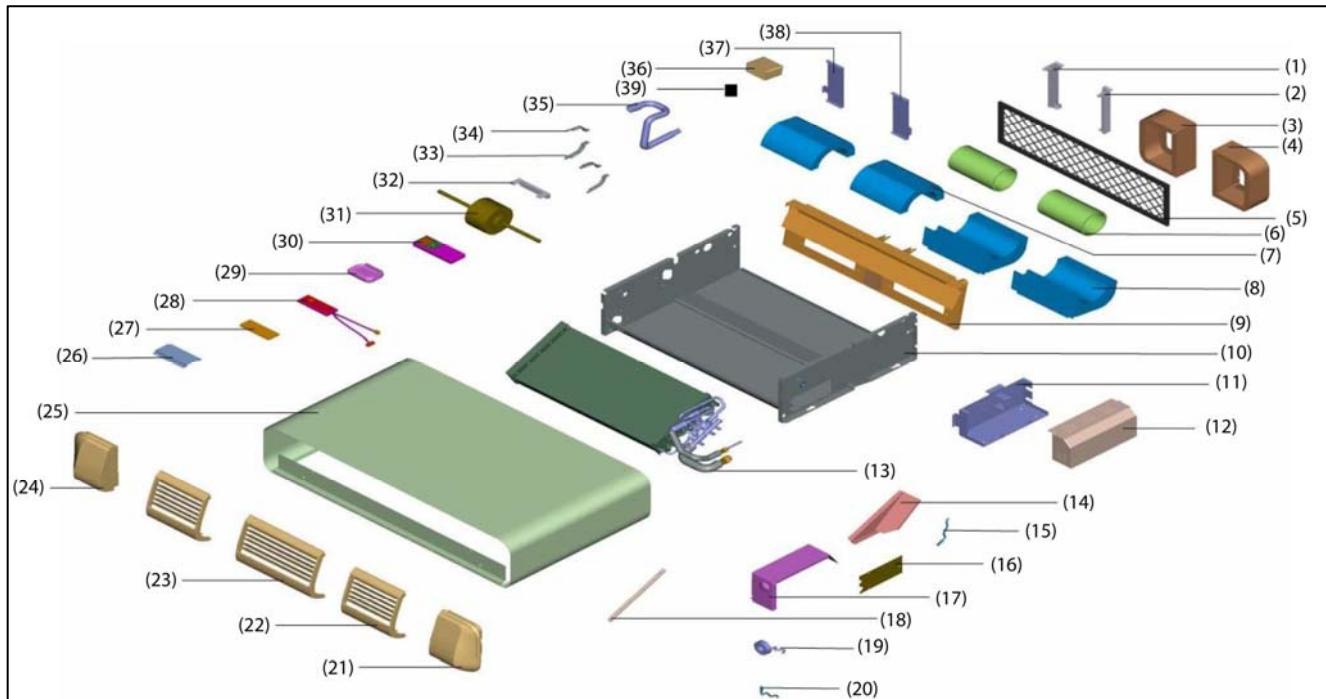
Expose & Conceal Floor Standing

17	201M280590004	E-Part box cover	1	
18	202M301300092	Temp. sensor	1	
19	201M280590014	Baffle	1	
20	201M180490025	cover ass'y	1	
21	201M180490008	louver ass'y	4	
22	201M601320018	EEV solenoid	1	
23	202M440500004	Evaporator temp. sensor ass'y	1	
24	201M180490026	cover ass'y	1	
25	201M280590011	Supporting board ass'y	1	
26	201M280590002	Evaporator connection board ass'y	1	
27	201M285000315	display box installation board	1	
28	201M186000201	E-part box cover	1	
29	201M380590002	Display board ass'y	1	
30	201M155090070	Remote holder,R91,York brand,White	1	
31	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
32	201M280000024	Capacitor box	1	
33	201M101020005	Drain pipe	1	
34	201M180490005	Filter bracket	1	
35	201M180490004	Filter bracket	1	
36	201M280200006	motor clamp	1	
37	201M280200005	motor clamp	1	
38	201M280200007	board	1	
39	202M730500001	Bearing base	1	
40	201M284400003	Bearing base	1	
41	201M130000004	Bearing	1	
42	201M280490071	Bearing Fixing board	1	
43	201M280490070	Connecting shaft	1	
44	202M401190019	202M401100353	Motor capacitor	1

MODEL

YDS-22-28FC-B

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER		PART NAME	QTY	REMARK
	2.2 kW	2.8 kW			
1	201M180490004		Filter bracket	1	
2	201M180490005		Filter bracket	1	
3	201M280490055		Right footing	1	
4	201M280490056		Left footing	1	
5	201M180490021		Filter	1	
6	201M180000050		Fan	2	
7	201M180000010		Volute shell	2	
8	201M180000011		Volute shell	2	
9	201M280590015		Middle beam	1	
10	201M280590003		Base	1	
11	203M380590009		E-part box ass'y	1	
-	201M380590007		Main controller ass'y	1	
-	201M280590005		E-part box base	1	
-	202M300900109		Transformer (TT2-B35+D90-1F)	1	
-	202M301450042		Wire joint, 2p	1	
-	202M301450125		Terminal block JXO-B6-D	1	
12	201M280590004		E-Part box cover	1	
13	201M580590012		Evaporator ass'y	1	
-	201M680590050		Input pipe ass'y	1	
-	201M601300032		Electronic expansion valve	1	
-	201M600320000		Copper nut, TLM-A01	1	
-	201M600420328		Pipe joint	1	
-	201M680590047		Output pipe ass'y	1	
-	201M600320002		Copper nut, TLM-C03	1	
-	201M600420324		Pipe joint	1	
-	202M445320623		Evaporator temp. sensor ass'y	1	
14	201M280590011		Supporting board ass'y	1	
15	202M301300092		Temp. sensor	1	
16	201M280590000		Right seal board ass'y	1	
17	201M280590002		Evaporator connection board ass'y	1	

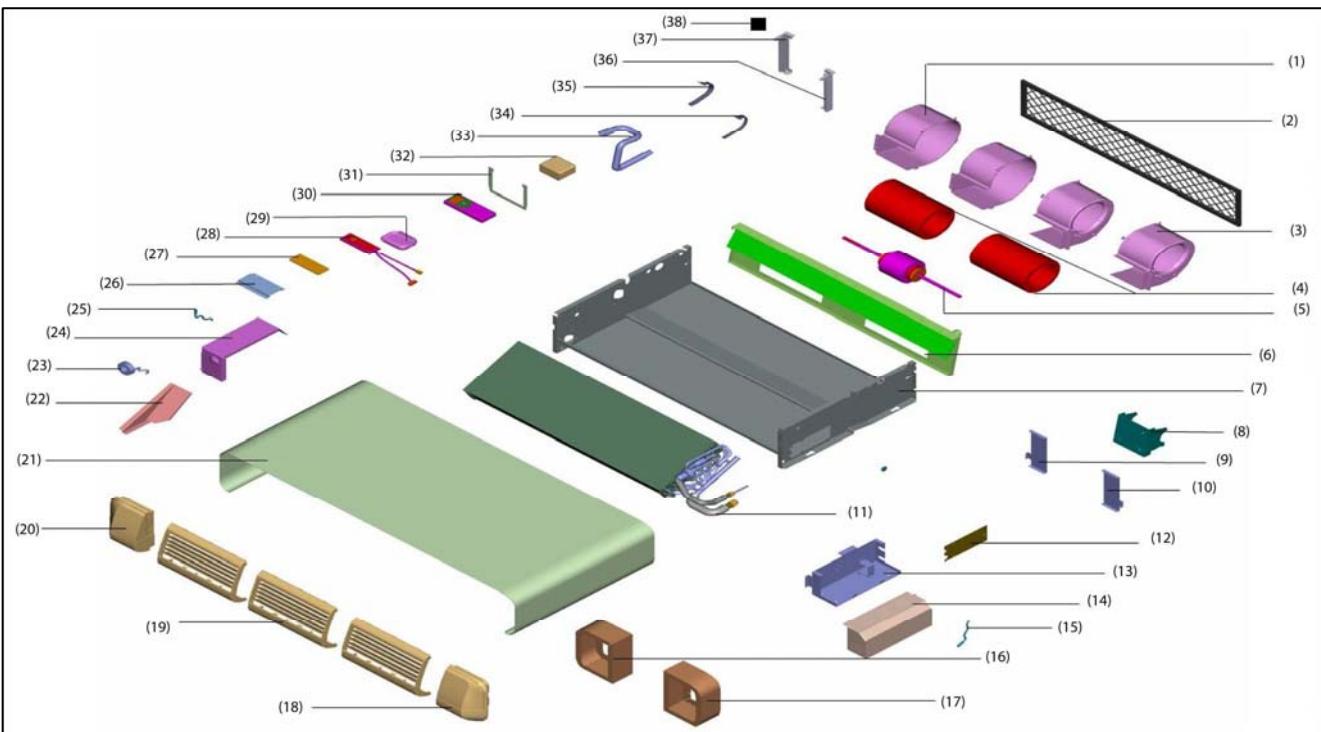
Expose & Conceal Floor Standing

18	201M280590014	Baffle	1	
19	201M601320018	EEV solenoid	1	
20	202M440500004	Evaporator temp. sensor ass'y	1	
21	201M180490025	cover ass'y	1	
22	201M180490010	louver ass'y	2	
23	201M180490008	louver ass'y	1	
24	201M180490026	cover ass'y	1	
25	201M280490054	Cabinet ass'y	1	
26	201M285000315	display box installation board	1	
27	201M186000201	E-part box cover	1	
28	201M380590002	Display board ass'y	1	
29	201M155090070	Remote holder,R91,York brand,White	1	
30	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
31	202M400440114	motor	1	
32	201M280000009	strenghten board	1	
33	201M280000065	Fixing board	1	
34	201M280000010	Fixing board	1	
35	201M101020005	Drain pipe	1	
36	201M280000024	Capacitor box	1	
37	201M280490078	Right sealed board ass'y	1	
38	201M280490077	Left sealed board ass'y	1	
39	202M401100960	Motor capacitor	1	

MODEL

YDS-36-45FC-B

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER		PART NAME	QTY	REMARK
	3.6 kW	4.5 kW			
1	201M144490011		volute shell	2	
2	201M180490022		Filter	1	
3	201M144490008		Left volute shell	2	
4	201M142190013		Fan	2	
5	202M400440115		motor	1	
6	201M280590016		Middle beam	1	
7	201M280590007		Base	1	
8	201M284400004		Motor bracket	1	
9	201M280490078		Right sealed board ass'y	1	
10	201M280490077		Left sealed board ass'y	1	
11	201M580590014		Evaporator ass'y	1	
-	201M680590062		Input pipe ass'y	1	
-	201M601300032		Electronic expansion valve	1	
-	201M600320000		Copper nut, TLM-A01	1	
-	201M600420328		Pipe joint	1	
-	201M680590059		Output pipe ass'y	1	
-	201M600320002		Copper nut, TLM-C03	1	
-	201M600420324		Pipe joint	1	
-	202M445320623		Evaporator temp. sensor ass'y	1	
12	201M280590000		Right seal board ass'y	1	
13	203M380590009		E-part box ass'y	1	
-	201M380590007		Main controller ass'y	1	
-	201M280590005		E-part box base	1	
-	202M300900109		Transformer (TT2-B35+D90-1F)	1	
-	202M301450042		Wire joint, 2p	1	
-	202M301450125		Terminal block JX0-B6-D	1	
14	201M280590004		E-Part box cover	1	
15	202M301300092		Temp. sensor	1	
16	201M280490055		Right footing	1	
17	201M280490056		Left footing	1	

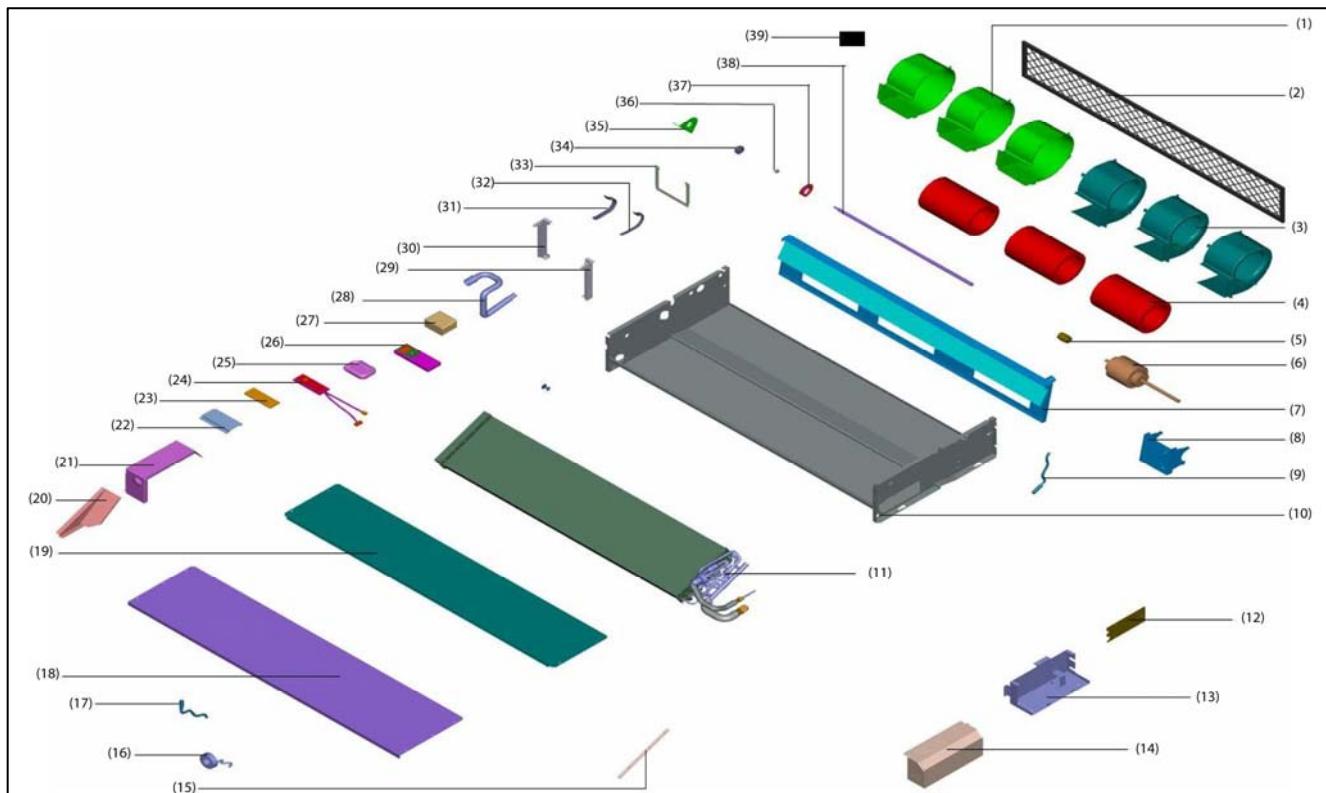
Expose & Conceal Floor Standing

18	201M180490025	cover ass'y	1	
19	201M180490008	louver ass'y	3	
20	201M180490026	cover ass'y	1	
21	201M280490051	Cabinet ass'y	1	
22	201M280590011	Supporting board ass'y	1	
23	201M601320018 202M440500004	EEV solenoid	1	
24	201M280590002	Evaporator connection board ass'y	1	
25	202M440500004 201M601320018	Evaporator temp. sensor ass'y	1	
26	201M285000315	display box installation board	1	
27	201M186000201	E-part box cover	1	
28	201M380590002	Display board ass'y	1	
29	201M155090070	Remote holder,R91,York brand,White	1	
30	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
31	201M280200007	board	1	
32	201M280000024	Capacitor box	1	
33	201M101020005	Drain pipe	1	
34	201M280200005	motor clamp	1	
35	201M280200006	motor clamp	1	
36	201M180490005	Filter bracket	1	
37	201M180490004	Filter bracket	1	
38	202M401100006 202M401190048	Motor capacitor	1	

MODEL

YDS-56-80FC-B

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	5.6 kW	7.1 kW	8.0 kW			
1		201M144490011		volute shell	3	
2		201M180490023		Filter	1	
3		201M144490008		Left volute shell	3	
4		201M142190013		Fan	3	
5		202M984400001		Coupling	1	
6	202M400440117		202M400440118	motor	1	
7		201M280590017		Middle beam	1	
8		201M284400004		Motor bracket	1	
9		202M301300092		Temp. sensor	1	
10		201M280590008		Base	1	
11	201M580590016		201M580590018	Evaporator ass'y	1	
-	201M680590069		201M680590074	Input pipe ass'y	1	
-	201M601300032			Electronic expansion valve	1	
-	201M680590067		201M680590072	Output pipe ass'y	1	
-	202M445320623			Evaporator temp. sensor ass'y	1	
12	201M280590000			Right seal board ass'y	1	
13	203M380590009			E-part box ass'y	1	
-	201M380590007			Main controller ass'y	1	
-	201M280590005			E-part box base	1	
-	202M300900109			Transformer (TT2-B35+D90-1F)	1	
-	202M301450042			Wire joint, 2p	1	
-	202M301450125			Terminal block JX0-B6-D	1	
14	201M280590004			E-Part box cover	1	
15	201M280590014			Baffle	1	
16	201M601320018			EEV solenoid	1	
17	202M440500004			Evaporator temp. sensor ass'y	1	
18	201M280490069			Cover	1	

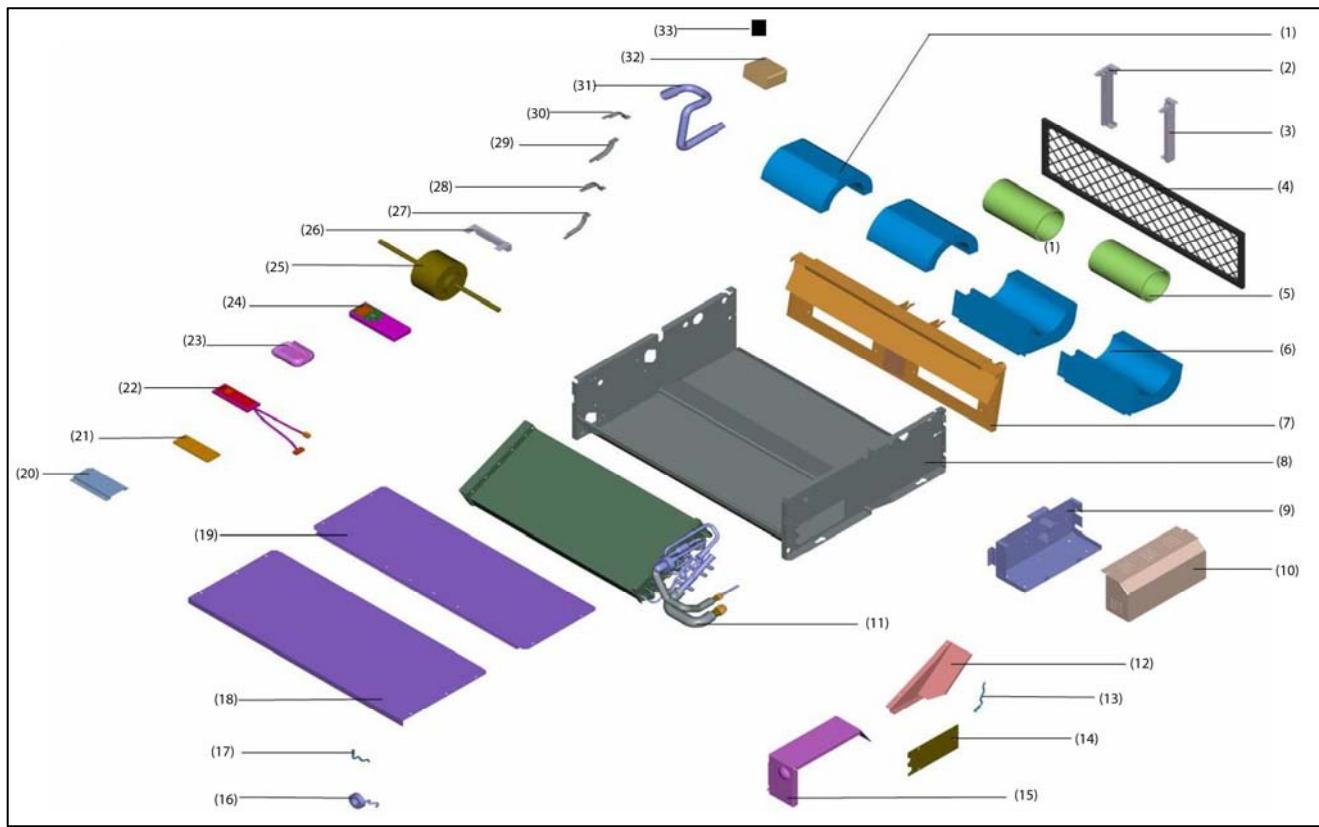
Expose & Conceal Floor Standing

19	201M280490068	Cover	1	
20	201M280590011	Supporting board ass'y	1	
21	201M280590002	Evaporator connection board ass'y	1	
22	201M285000315	display box installation board	1	
23	201M186000201	E-part box cover	1	
24	201M380590002	Display board ass'y	1	
25	201M155090070	Remote holder,R91,York brand,White	1	
26	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
27	201M280000024	Capacitor box	1	
28	201M101020005	Drain pipe	1	
29	201M180490005	Filter bracket	1	
30	201M180490004	Filter bracket	1	
31	201M280200006	motor clamp	1	
32	201M280200005	motor clamp	1	
33	201M280200007	board	1	
34	202M730500001	Bearing base	1	
35	201M284400003	Bearing base	1	
36	201M130000004	Bearing	1	
37	201M280490071	Bearing Fixing board	1	
38	201M280490070	Connecting shaft	1	
39	202M401190019	Motor capacitor	1	
	202M401100353			

MODEL

YDS-22-28RC

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER		PART NAME	QTY	REMARK
	2.2 kW	2.8 kW			
1	201M180000010		Volute shell	2	
2	201M180490004		Filter bracket	1	
3	201M180490005		Filter bracket	1	
4	201M180490021		Filter	1	
5	201M180000050		Fan	2	
6	201M180000011		Volute shell	2	
7	201M280590015		Middle beam	1	
8	201M280590003		Base	1	
9	203M380590009		E-part box ass'y	1	
-	201M380590007		Main controller ass'y	1	
-	201M280590005		E-part box base	1	
-	202M300900109		Transformer (TT2-B35+D90-1F)	1	
-	202M301450125		Terminal block JX0-B6-D	1	
10	201M280590004		E-Part box cover	1	
11	201M580590012		Evaporator ass'y	1	
-	201M680590050		Input pipe ass'y	1	
-	201M601300032		Electronic expansion valve	1	
-	201M680590047		Output pipe ass'y	1	
-	202M445320623		Evaporator temp. sensor ass'y	1	
12	201M280590011		Supporting board ass'y	1	
13	202M301300092		Temp. sensor	1	
14	201M280590000		Right seal board ass'y	1	
15	201M280590002		Evaporator connection board ass'y	1	
16	201M601320018		EEV solenoid	1	
17	202M440500004		Evaporator temp. sensor ass'y	1	

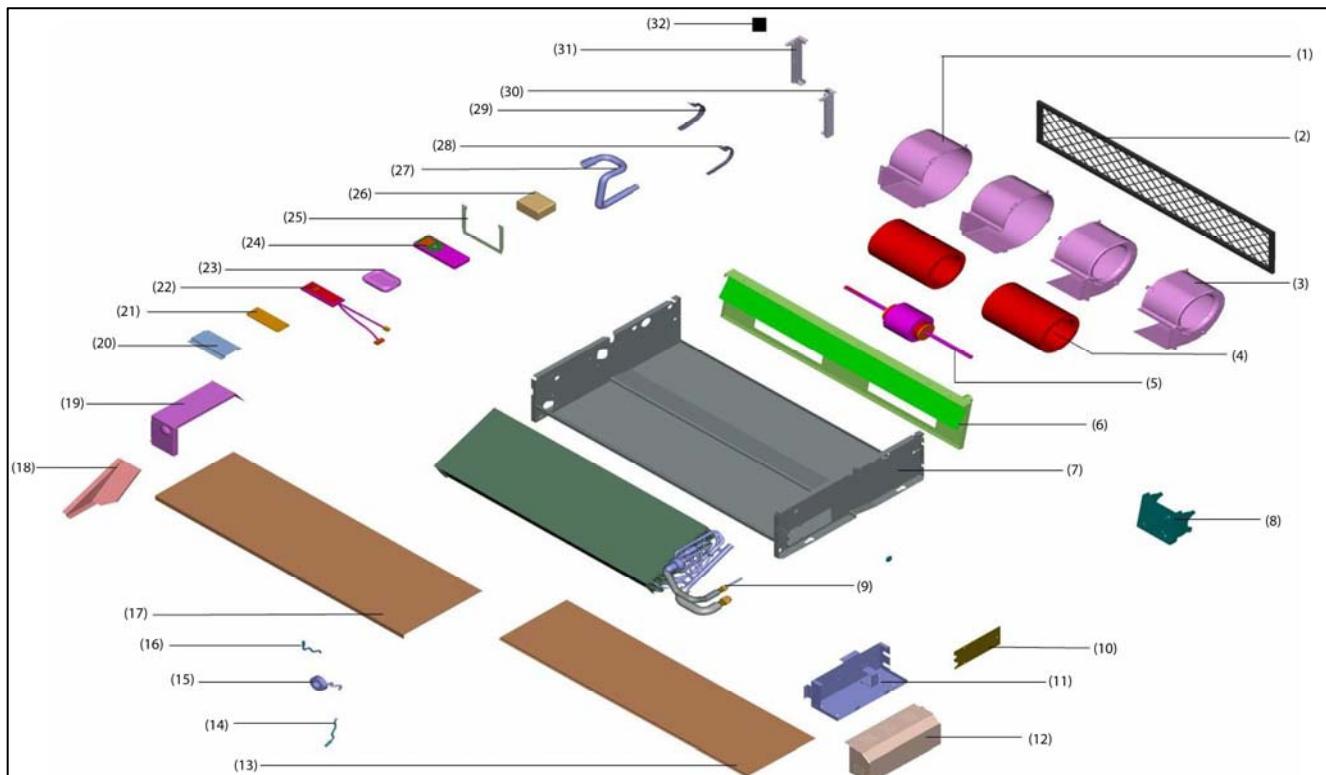
Expose & Conceal Floor Standing

18	201M280490053	Cover	1	
19	201M280490052	Cover	1	
20	201M285000315	display box installation board	1	
21	201M186000201	E-part box cover	1	
22	201M380590002	Display board ass'y	1	
23	201M155090070	Remote holder,R91,York brand,White	1	
24	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
25	202M400440114	motor	1	
26	201M280000009	strenghten board	1	
27	201M280000065	Fixing board	1	
28	201M280000010	Fixing board	1	
29	201M280000066	Fixing board	1	
30	201M280000012	Fixing board	1	
31	201M101020005	Drain pipe	1	
32	201M280000024	Capacitor box	1	
33	202M401100960	Motor capacitor	1	

MODEL

YDS-36-45RC

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER		PART NAME	QTY	REMARK
	3.6 kW	4.5 kW			
1	201M144490011		volute shell	2	
2	201M180490022		Filter	1	
3	201M144490008		Left volute shell	2	
4	201M142190013		Fan	2	
5	202M400440115		motor	1	
6	201M280590016		Middle beam	1	
7	201M280590007		Base	1	
8	201M284400004		Motor bracket	1	
9	201M580590014		Evaporator ass'y	1	
-	201M680590062		Input pipe ass'y	1	
-	201M601300032		Electronic expansion valve	1	
-	201M680590059		Output pipe ass'y	1	
-	202M445320623		Evaporator temp. sensor ass'y	1	
10	201M280590000		Right seal board ass'y	1	
11	203M380590009		E-part box ass'y	1	
-	201M380590007		Main controller ass'y	1	
-	201M280590005		E-part box base	1	
-	202M300900109		Transformer (TT2-B35+D90-1F)	1	
-	202M301450125		Terminal block JX0-B6-D	1	
12	201M280590004		E-Part box cover	1	
13	201M280490060		Cover	1	
14	202M301300092		Temp. sensor	1	
15	201M601320018		EEV solenoid	1	
16	202M440500004		Evaporator temp. sensor ass'y	1	
17	201M280490061		Cover	1	
18	201M280590011		Supporting board ass'y	1	
19	201M280590002		Evaporator connection board ass'y	1	

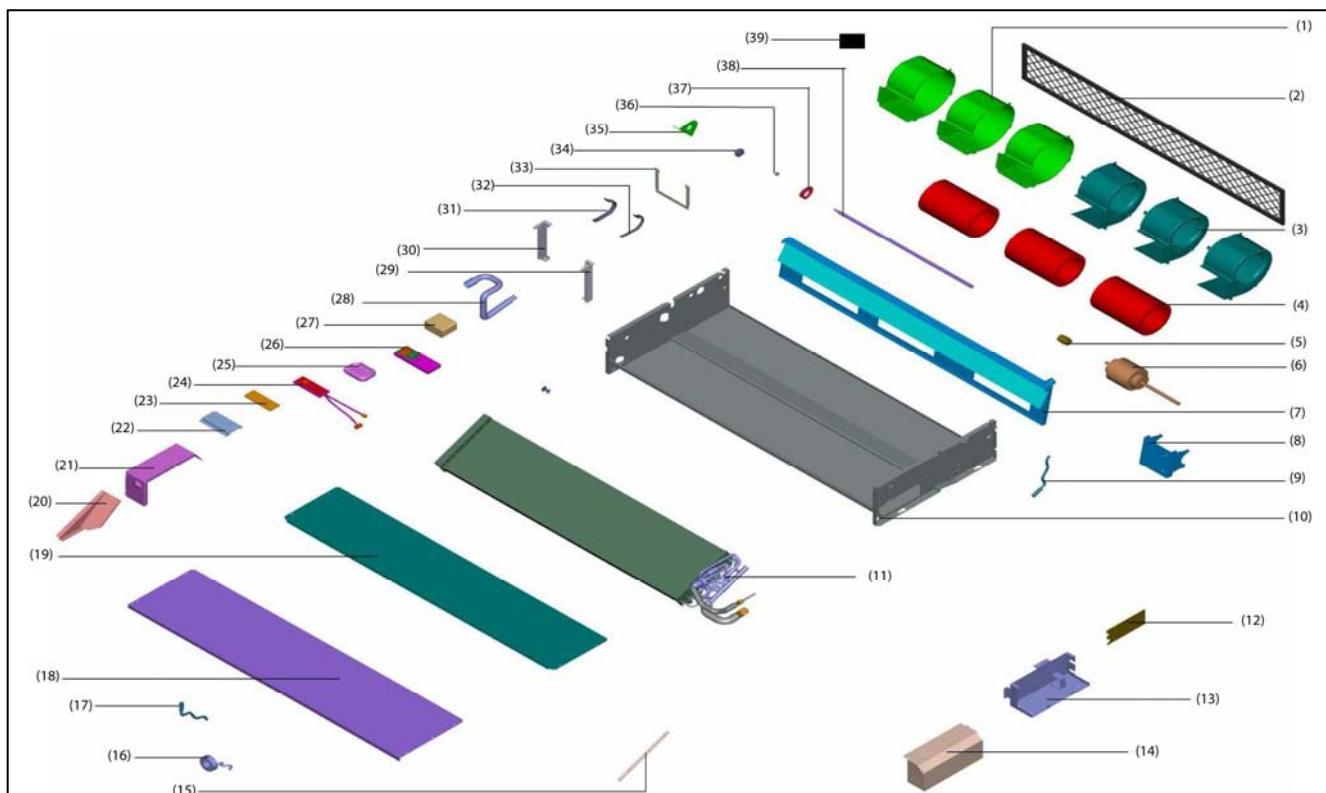
Expose & Conceal Floor Standing

20	201M285000315	display box installation board	1	
21	201M186000201	E-part box cover	1	
22	201M380590002	Display board ass'y	1	
23	201M155090070	Remote holder,R91,York brand,White	1	
24	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
25	201M280200007	board	1	
26	201M280000024	Capacitor box	1	
27	201M101020005	Drain pipe	1	
28	201M280200005	motor clamp	1	
29	201M280200006	motor clamp	1	
30	201M180490005	Filter bracket	1	
31	201M180490004	Filter bracket	1	
32	202M401100006 202M401190048	Motor capacitor	1	

MODEL

YDS-56-80RC

R-410A 1 Ph 220-240V 50Hz



ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	5.6 kW	7.1 kW	8.0 kW			
1		201M144490011		volute shell	3	
2		201M180490023		Filter	1	
3		201M144490008		Left volute shell	3	
4		201M142190013		Fan	3	
5		202M984400001		Coupling	1	
6	202M400440117		202M400440118	motor	1	
7		201M280590017		Middle beam	1	
8		201M284400004		Motor bracket	1	
9		202M301300092		Temp. sensor	1	
10		201M280590008		Base	1	
11	201M580590016		201M580590018	Evaporator ass'y	1	
-	201M680590069		201M680590074	Input pipe ass'y	1	
-	201M601300032			Electronic expansion valve	1	
-	201M680590067		201M680590072	Output pipe ass'y	1	
-	202M445320623			Evaporator temp. sensor ass'y	1	
12	201M280590000			Right seal board ass'y	1	
13	203M380590009			E-part box ass'y	1	
-	201M380590007			Main controller ass'y	1	
-	201M280590005			E-part box base	1	
-	202M300900109			Transformer (TT2-B35+D90-1F)	1	
-	202M301450125			Terminal block JX0-B6-D	1	
14	201M280590004			E-Part box cover	1	
15	201M280590014			Baffle	1	
16	201M601320018			EEV solenoid	1	
17	202M440500004			Evaporator temp. sensor ass'y	1	
18	201M280490069			Cover	1	
19	201M280490068			Cover	1	

Expose & Conceal Floor Standing

20	201M280590011	Supporting board ass'y	1	
21	201M280590002	Evaporator connection board ass'y	1	
22	201M285000315	display box installation board	1	
23	201M186000201	E-part box cover	1	
24	201M380590002	Display board ass'y	1	
25	201M155090070	Remote holder,R91,York brand,White	1	
26	203M3550A1510	Wireless remote,R92 HP,York brand,White	1	
27	201M280000024	Capacitor box	1	
28	201M101020005	Drain pipe	1	
29	201M180490005	Filter bracket	1	
30	201M180490004	Filter bracket	1	
31	201M280200006	motor clamp	1	
32	201M280200005	motor clamp	1	
33	201M280200007	board	1	
34	202M730500001	Bearing base	1	
35	201M284400003	Bearing base	1	
36	201M130000004	Bearing	1	
37	201M280490071	Bearing Fixing board	1	
38	201M280490070	Connecting shaft	1	
39	202M401190019	Motor capacitor	1	

Part 4.6 High static pressure duct

Contents

1. Feature.....	222
2. Specifications.....	223
3. Capacity table.....	224
4. Dimensions.....	226
5. Wiring diagrams.....	227
6. Refrigeration system diagram.....	228
7. Noise level.....	228
8. Static pressure curve.....	229
9. Electrical characteristic.....	230
10. Troubleshooting.....	231
11. Accessories.....	236
12. Exploded view parts.....	237

1. Features

(1) In case the ceiling is super-high.

-Blowing pressure of Indoor Unit can reach 196Pa. The air conditioner delivers cold wind to every indoor corner even the ceiling is super-high.

-The max. distance of air supply is about 14m, the height of air supply is 6.5m.

(2) Multi-blowing outlets

To satisfy your fitment's needs.

(3) Fresh air supply.

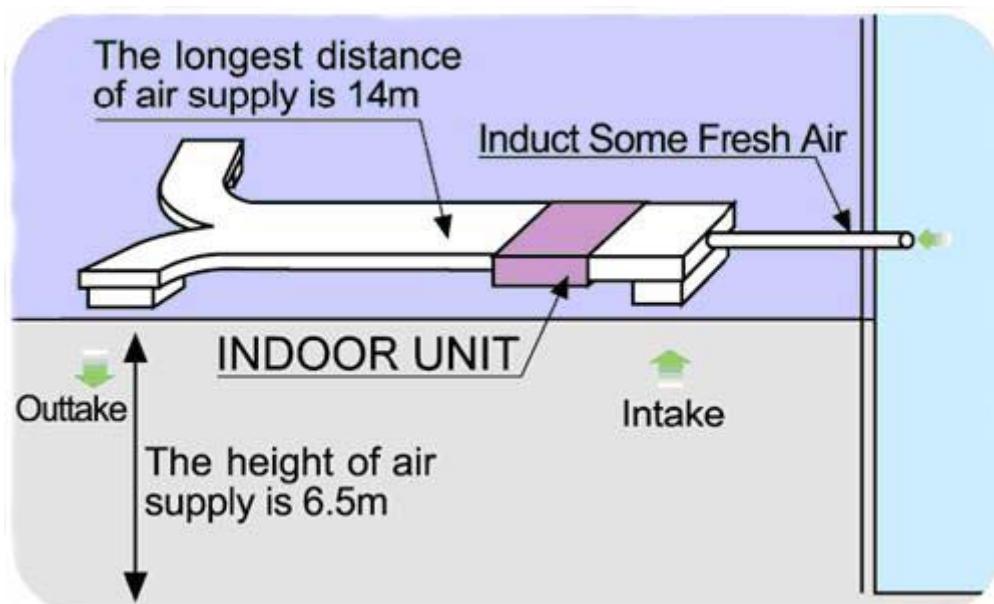
Fresh air can be drawn in by the Indoor Unit, which improves the Indoor Air Quality greatly.

(4) Wired control and group control available.

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

(6) Innovative air supply, which provides homogeneous conditioning of the room temperature.

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



2. Specification

Technical specification: High ESP duct YDS-200-250TC15IA R-410A 50Hz

Model		YDS-200TC15IA		YDS-250TC15IA		YDS-280TC15IA			
Power supply		Ph-V-Hz		1 Ph-220-240V-50Hz					
Nominal capacity									
Cooling	Capacity	kW	22.0	25.0	28.0				
	Input	kW	9.4	9.6	10				
Heating	Capacity	kW	22.6	27.5	31.1				
	Input	kW	9.4	9.6	10				
Motor									
Input		W	900/820/630(×2)						
Capacitor		uF	12(×2)			15(×2)			
Speed (Hi/Me/Lo)		r/min	1300/1100/900(×2)						
Coil									
a. Number of rows			4						
b. Tube pitch(a) x row pitch(b)		mm	25.4×22						
c. Fin spacing		mm	1.8						
d. Fin type (code)			Hydrophilic aluminum						
			9.52						
e. Tube outside dia. and type		mm	Inner groove tube						
f. Coil length x height x width		mm	1125×512×88						
g. Number of circuits			20						
Performance									
Noise level (Hi/Me/Lo)		dB(A)	61/58/55						
External static pressure		Pa	196						
Air flow (Hi/Me/Lo)		m ³ /h	4180/3820/3200			4400/3940/3300			
Piping size	Liquid/ Gas side	mm	φ9.5/φ15.9						
Containerization									
Dimensions	Unit (WxHxD)	mm	1425×928×500						
	Packing(WxHxD)	mm	1509×964×570						
	Net/Gross weight	Kg	122/128						
Qty per 20'/40'/40'HQ		Pieces	24/48/48						

Notes:

1. Nominal cooling capacities are based on the following conditions: return air temperature: 27°CDB, 19°CWB, and outdoor temperature: 35°CDB, equivalent ref. piping: 8m (horizontal)
2. Nominal heating capacities are based on the following conditions: return air temperature: 20°CDB, outdoor temperature: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
3. Capacities are net, not including a deduction for cooling (an addition for heating) for indoor fan motor heat

3. Capacity table

3.1) Cooling

TC: total capacity SHC: sensible capacity

Indoor Unit size (KW)	Outdoor temperature °C Db	Indoor temperature (°WB)													
		14/20		16/23		18/26		19/27		20/28		22/30		24/32	
		TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20.0	10.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	23.60	15.30	26.40	15.30
	12.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	23.60	15.30	25.80	15.00
	14.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	23.60	15.30	25.80	15.00
	16.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	23.60	15.30	25.40	14.50
	18.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	23.60	15.30	25.00	14.30
	20.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	23.60	15.30	24.20	13.80
	21.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	23.60	15.30	24.20	13.80
	23.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	22.80	14.80	24.20	13.80
	25.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	22.80	14.60	23.60	13.70
	27.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	22.80	14.60	23.60	13.70
	29.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	22.00	14.10	22.80	13.50
	31.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	22.00	14.10	22.80	13.70
	33.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.50	22.00	14.10	22.10	13.90
	35.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.30	20.80	13.30	22.10	13.90
	37.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	21.00	15.30	20.80	13.30	21.00	13.70
	39.0	13.60	12.60	16.40	13.60	19.00	14.40	20.00	14.60	20.00	14.60	20.80	13.30	21.00	13.70
25.0	10.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	29.50	19.20	33.00	19.10
	12.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	29.50	19.20	32.30	18.70
	14.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	29.50	19.20	32.30	18.70
	16.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	29.50	19.20	31.80	18.10
	18.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	29.50	19.20	31.30	17.80
	20.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	29.50	19.20	30.30	17.20
	21.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	29.50	19.20	30.30	17.20
	23.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	28.50	18.50	30.30	17.20
	25.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	28.50	18.20	29.50	17.10
	27.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	28.50	18.20	29.50	17.10
	29.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	27.50	17.60	28.50	16.80
	31.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	27.50	17.60	28.50	17.10
	33.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.40	27.50	17.60	27.70	17.40
	35.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.20	26.00	16.60	27.70	17.40
	37.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	26.30	19.20	26.00	16.60	26.30	17.10
	39.0	17.00	15.80	20.50	17.00	23.80	18.10	25.00	18.30	25.00	18.30	26.00	16.60	26.30	17.10
28.0	10.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	33.00	21.50	37.00	21.40
	12.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	33.00	21.50	36.10	20.90
	14.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	33.00	21.50	36.10	20.90
	16.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	33.00	21.50	35.60	20.30
	18.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	33.00	21.50	35.00	20.00
	20.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	33.00	21.50	33.90	19.30
	21.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	33.00	21.50	33.90	19.30
	23.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	31.90	20.70	33.90	19.30
	25.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	31.90	20.40	33.00	19.20
	27.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	31.90	20.40	33.00	19.20
	29.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	30.80	19.70	31.90	18.80
	31.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	30.80	19.70	31.90	19.20
	33.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.80	30.80	19.70	31.00	19.50
	35.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.50	29.10	18.60	31.00	19.50
	37.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	29.40	21.50	29.10	18.60	29.40	19.10
	39.0	19.00	17.70	23.00	19.10	26.60	20.20	28.00	20.40	28.00	20.40	29.10	18.60	29.40	19.10

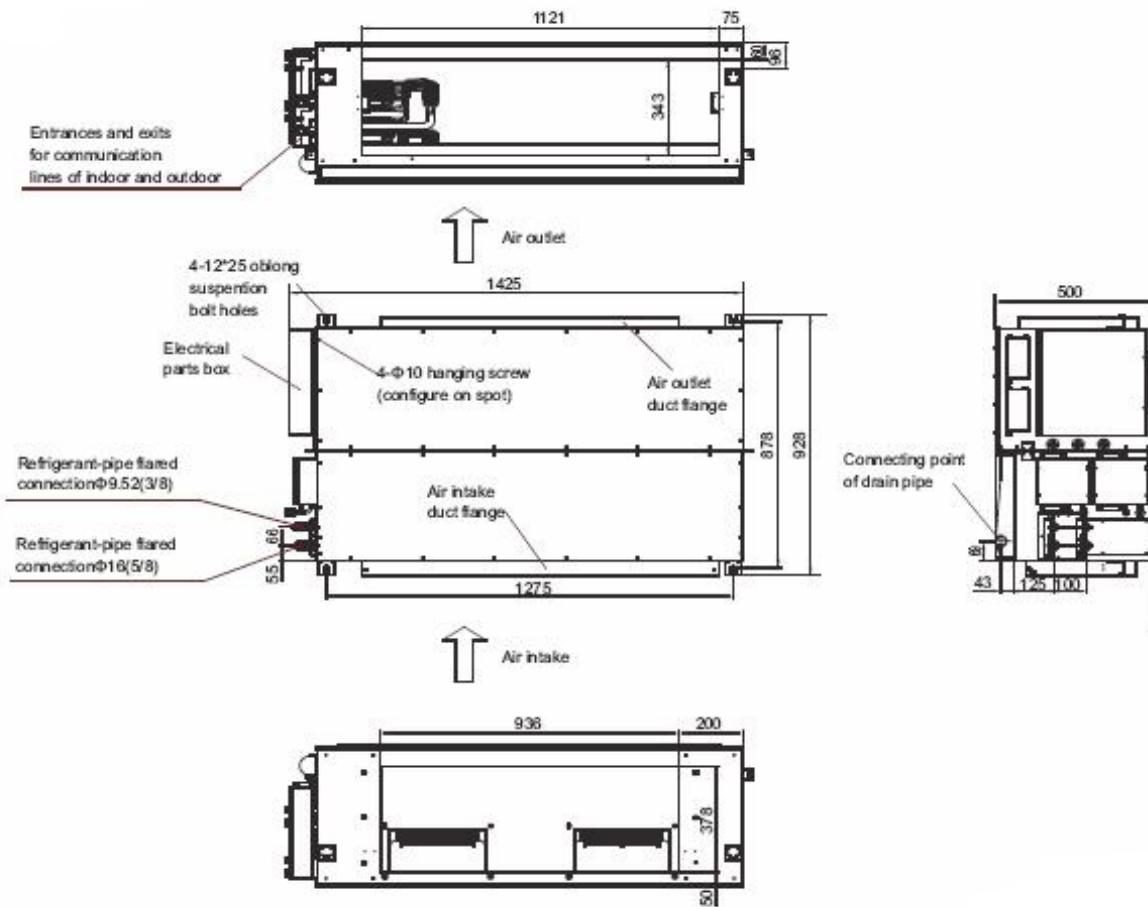
3.2) Heating

TC: total capacity

Indoor Unit size (KW)	Outdoor temperature		Indoor temperature °DB					
			16	18	20	21	22	24
	°CDB	°CWB	kW	kW	kW	kW	kW	kW
20.00	-15	-14.7	14.24	14.24	14.24	14.24	14.24	14.24
	-13	-12.6	15.14	15.14	15.14	15.14	15.14	15.14
	-11	-10.5	15.82	15.82	15.82	15.82	15.82	15.82
	-10	-9.5	16.50	16.50	16.50	16.50	16.50	16.50
	-9.1	-8.5	16.95	16.95	16.95	16.95	16.95	16.95
	-7.6	-7	17.18	17.18	17.18	17.18	17.18	17.18
	-5.6	-5	17.85	17.85	17.85	17.85	17.85	17.85
	-3.7	-3	18.76	18.76	18.76	18.76	18.76	18.76
	-0.7	0	20.11	20.11	20.11	20.11	20.11	18.98
	2.20	3.00	21.24	21.24	21.24	21.24	20.79	18.98
	4.10	5.00	21.92	21.92	21.92	21.92	20.79	18.98
	6.00	7.00	22.60	22.60	22.60	21.92	20.79	18.98
	7.90	9.00	23.28	23.28	22.60	21.92	20.79	18.98
	9.80	11.00	23.96	23.96	22.60	21.92	20.79	18.98
	11.80	13.00	24.86	24.41	22.60	21.92	20.79	18.98
	13.70	15.00	25.54	24.41	22.60	21.92	20.79	18.98
25.00	-15	-14.7	17.33	17.33	17.33	17.33	17.33	17.33
	-13	-12.6	18.43	18.43	18.43	18.43	18.43	18.43
	-11	-10.5	19.25	19.25	19.25	19.25	19.25	19.25
	-10	-9.5	20.08	20.08	20.08	20.08	20.08	20.08
	-9.1	-8.5	20.63	20.63	20.63	20.63	20.63	20.63
	-7.6	-7	20.90	20.90	20.90	20.90	20.90	20.90
	-5.6	-5	21.73	21.73	21.73	21.73	21.73	21.73
	-3.7	-3	22.83	22.83	22.83	22.83	22.83	22.83
	-0.7	0	24.48	24.48	24.48	24.48	24.48	23.10
	2.20	3.00	25.85	25.85	25.85	25.85	25.30	23.10
	4.10	5.00	26.68	26.68	26.68	26.68	25.30	23.10
	6.00	7.00	27.50	27.50	27.50	26.68	25.30	23.10
	7.90	9.00	28.33	28.33	27.50	26.68	25.30	23.10
	9.80	11.00	29.15	29.15	27.50	26.68	25.30	23.10
	11.80	13.00	30.25	29.70	27.50	26.68	25.30	23.10
	13.70	15.00	31.08	29.70	27.50	26.68	25.30	23.10
28.00	-15	-14.7	19.53	19.53	19.53	19.53	19.53	19.53
	-13	-12.6	20.77	20.77	20.77	20.77	20.77	20.77
	-11	-10.5	21.70	21.70	21.70	21.70	21.70	21.70
	-10	-9.5	22.63	22.63	22.63	22.63	22.63	22.63
	-9.1	-8.5	23.25	23.25	23.25	23.25	23.25	23.25
	-7.6	-7	23.56	23.56	23.56	23.56	23.56	23.56
	-5.6	-5	24.49	24.49	24.49	24.49	24.49	24.49
	-3.7	-3	25.73	25.73	25.73	25.73	25.73	25.73
	-0.7	0	27.59	27.59	27.59	27.59	27.59	26.04
	2.20	3.00	29.14	29.14	29.14	29.14	28.52	26.04
	4.10	5.00	30.07	30.07	30.07	30.07	28.52	26.04
	6.00	7.00	31.00	31.00	31.00	30.07	28.52	26.04
	7.90	9.00	31.93	31.93	31.00	30.07	28.52	26.04
	9.80	11.00	32.86	32.86	31.00	30.07	28.52	26.04
	11.80	13.00	34.10	33.48	31.00	30.07	28.52	26.04
	13.70	15.00	35.03	33.48	31.00	30.07	28.52	26.04

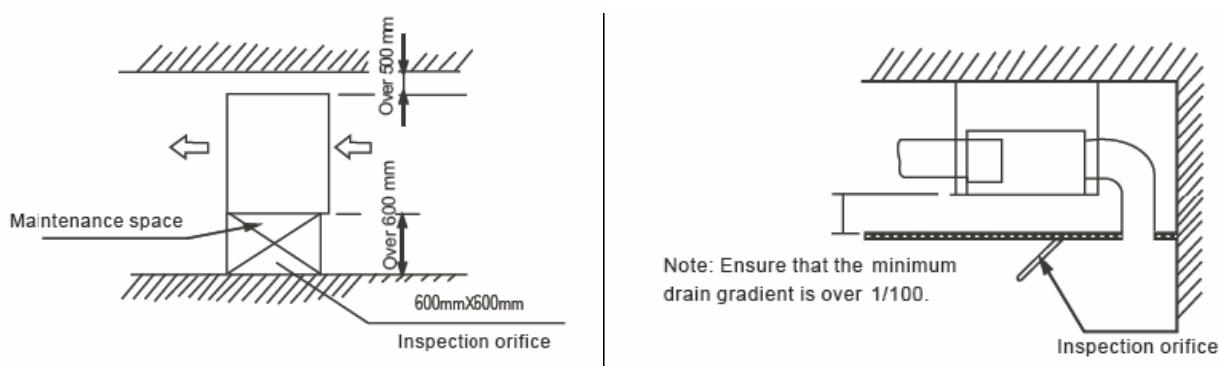
4. Dimensions

4.1) Unit dimensions, YDS-200-280TC

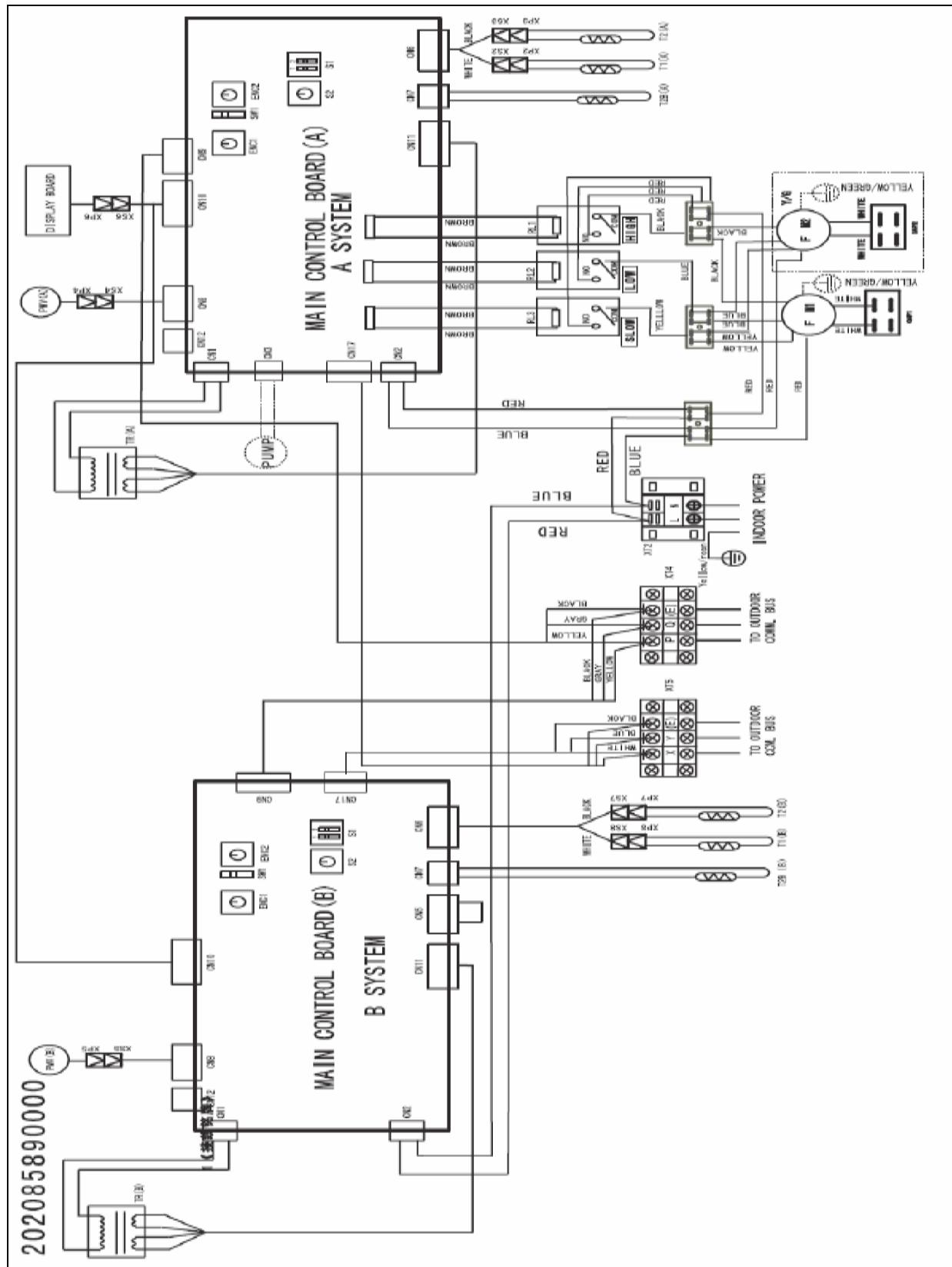


4.2) Service Space

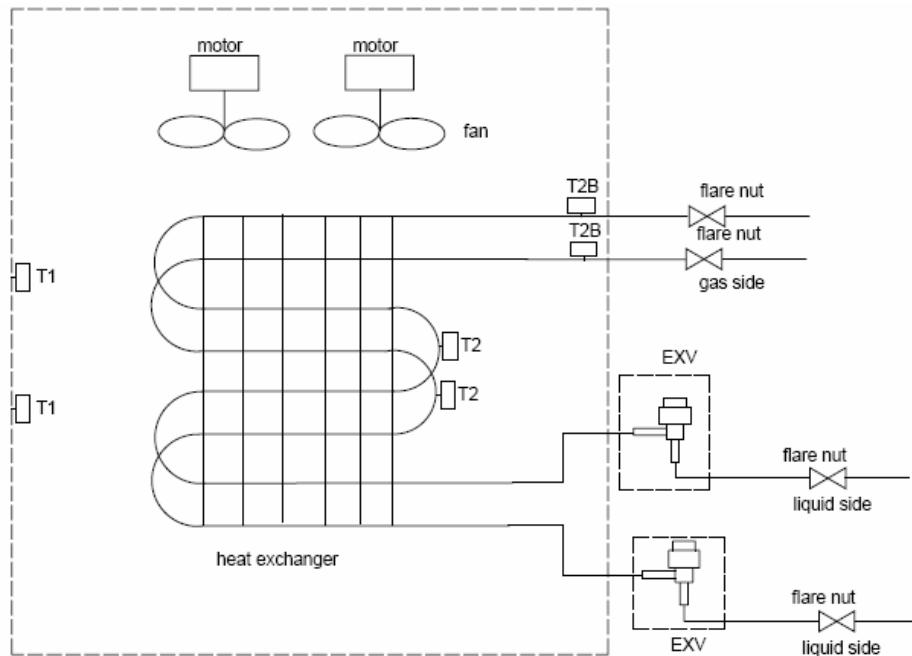
Ensure enough space required for installation and maintenance.



5. Wiring diagrams

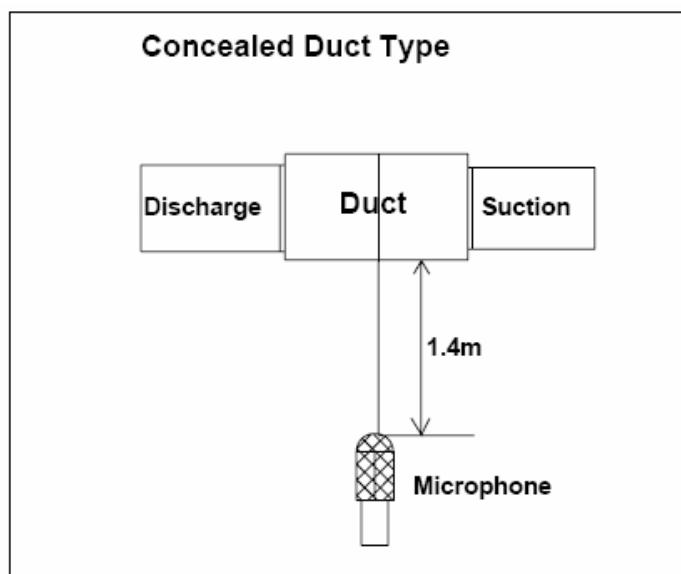


6. Refrigerant system diagram



7. Noise level

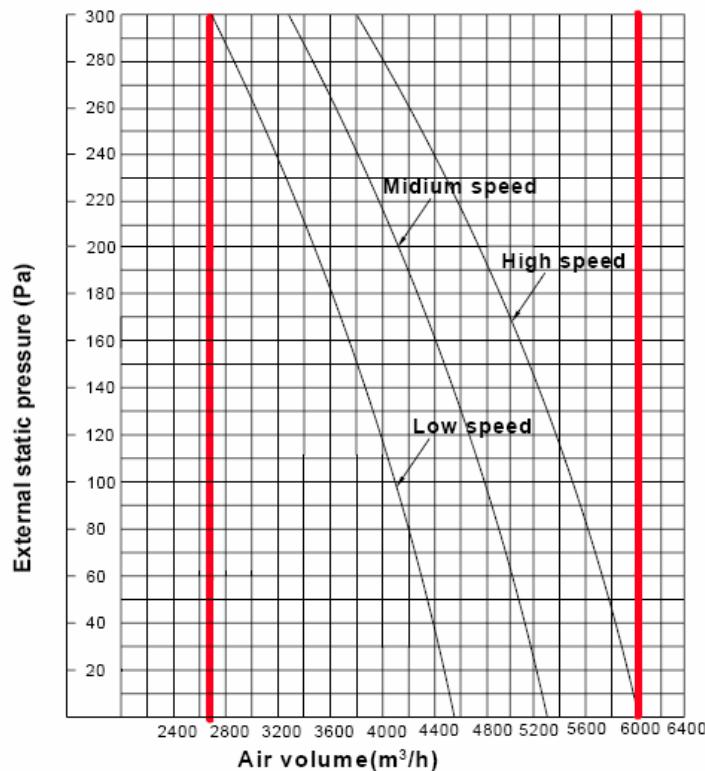
Test condition



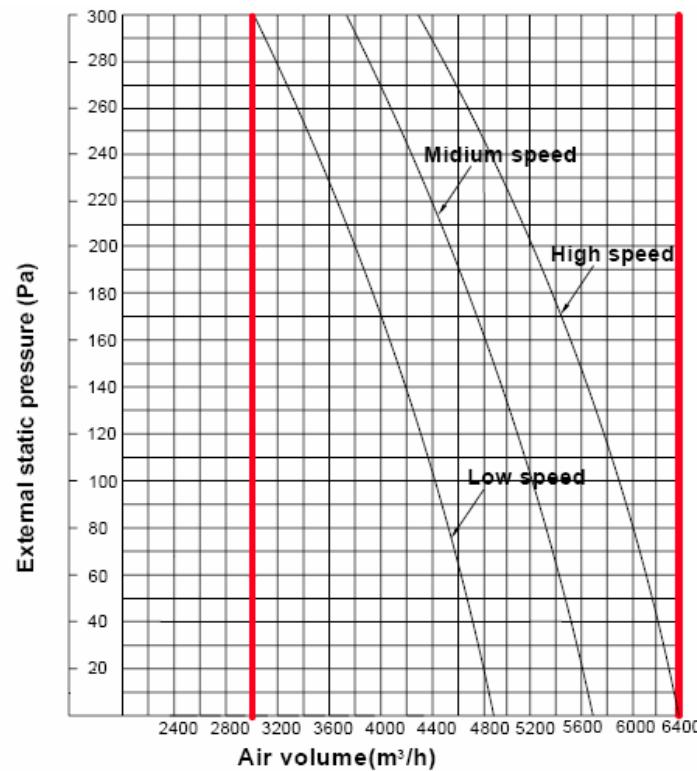
Unit Number	Model	Noise level under three speeds of fan (dB(A))		
		H	M	L
1	YDS-200TC	61	58	55
2	YDS-250TC	61	58	55
3	YDS-280TC	61	58	55

8. Static Pressure

YDS-200-250TC



YDS-280TC



9. Electric Characteristics

Model	Indoor Unit				Power Supply		IFM	
	Hz	Voltage	Min.	Max.	MCA	MFA	KW	FLA
YDS-200TC	50	220-240V	198V	254V	9.93	20	0.55 (×2)	7.94
YDS-250TC	50	220-240V	198V	254V	9.93	20	0.55 (×2)	7.94
YDS-280TC	50	220-240V	198V	254V	10	20	0.55 (×2)	8

Remark:

MCA: Min. Current Amps. (A)

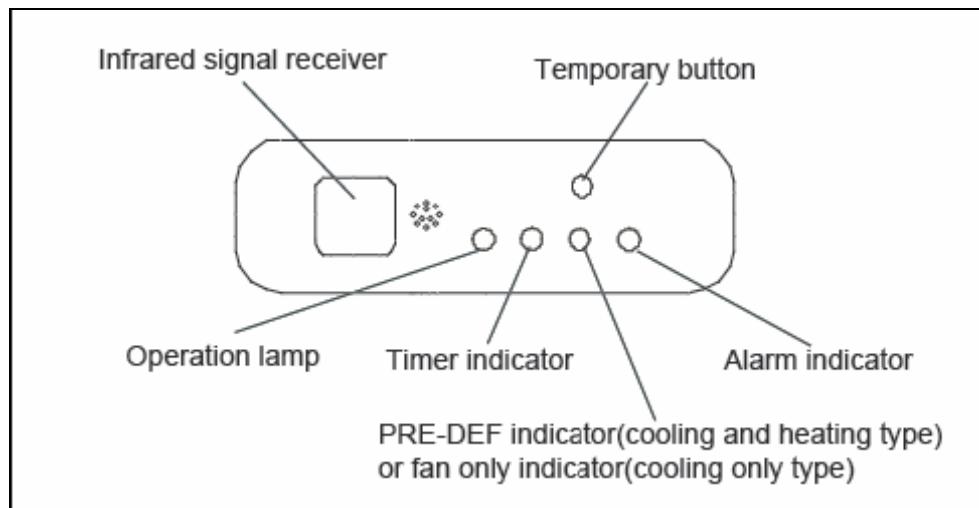
MFA: Max. Fuse Amps. (A)

KW: Fan Motor Rated Output (KW)

FLA: Full Load Amps. (A)

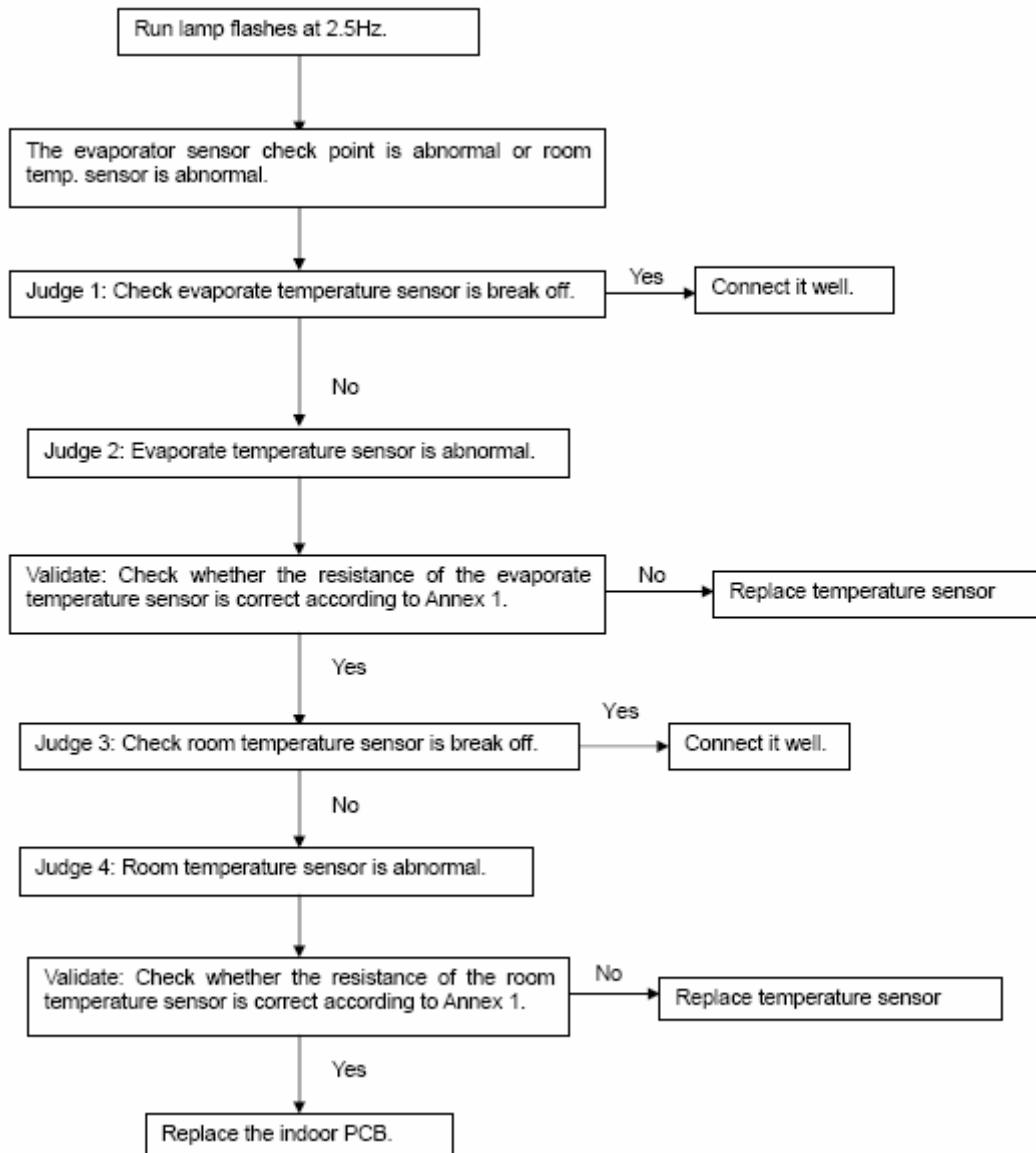
IFM: Indoor Fan Motor

10. Troubleshooting

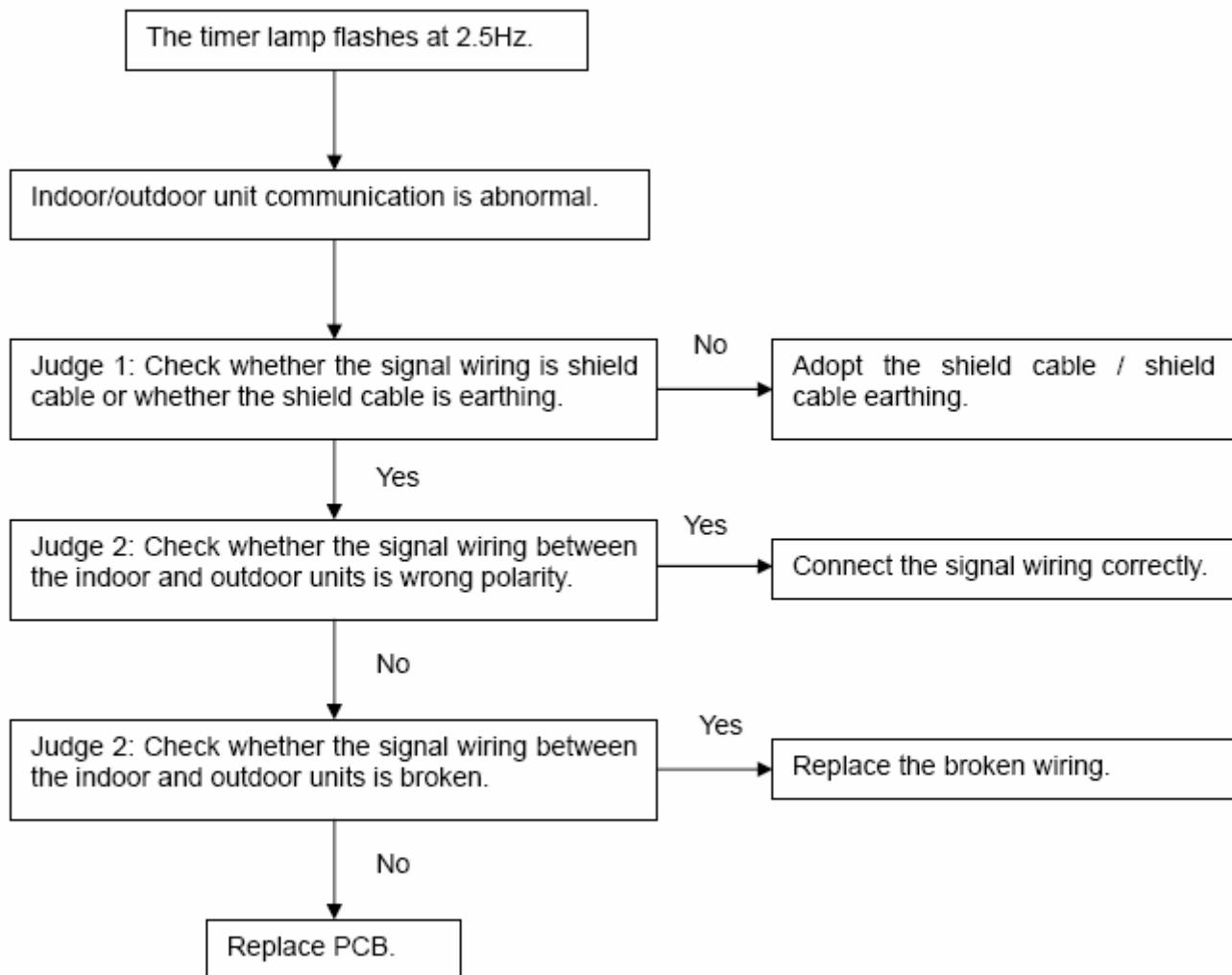


No	Type	Contents	LED Lamp flash	Remarks
1	Malfunction	The evaporator sensor check point is abnormal or room temp. sensor is abnormal.	Run lamp flashes at 2.5Hz.	
2	Malfunction	Indoor/outdoor unit communication is abnormal.	The timer lamp flashes at 2.5Hz.	After the malfunctions disappear, it restores automatically.
3	Malfunction	Condenser sensor check point is abnormal or outdoor temp. sensor is abnormal.	All the indoor alarm lamps flash at 0.5Hz.	
4	Alarm	Mode conflict	Defrost lamp flashes at 2.5Hz.	When the indoor unit turns to heating mode or is turned off, the alarm will disappear.

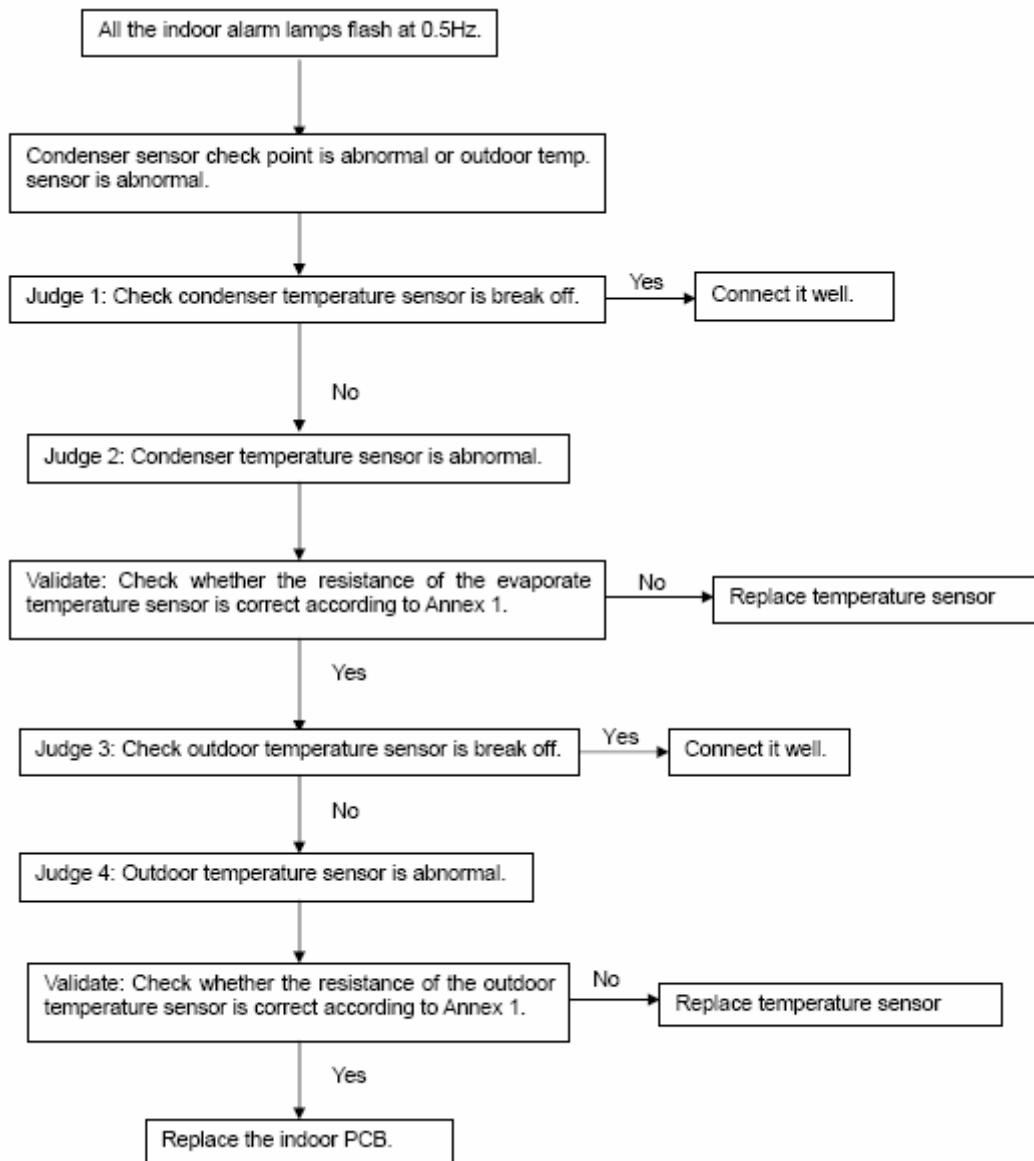
Operation lamp flashes:



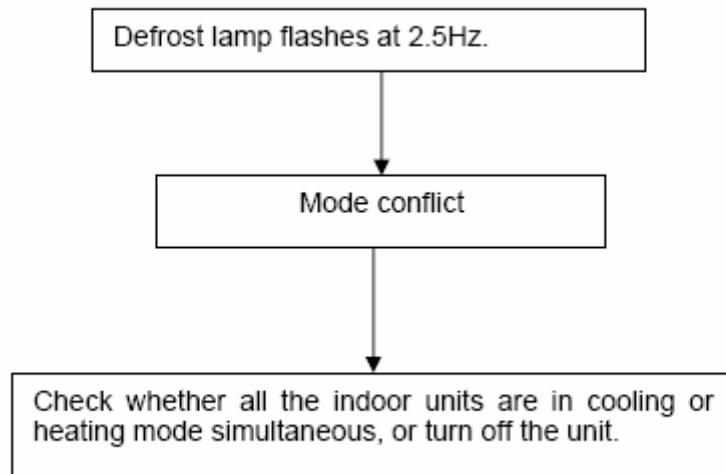
Operation lamp flashes:



Operation lamp flashes:

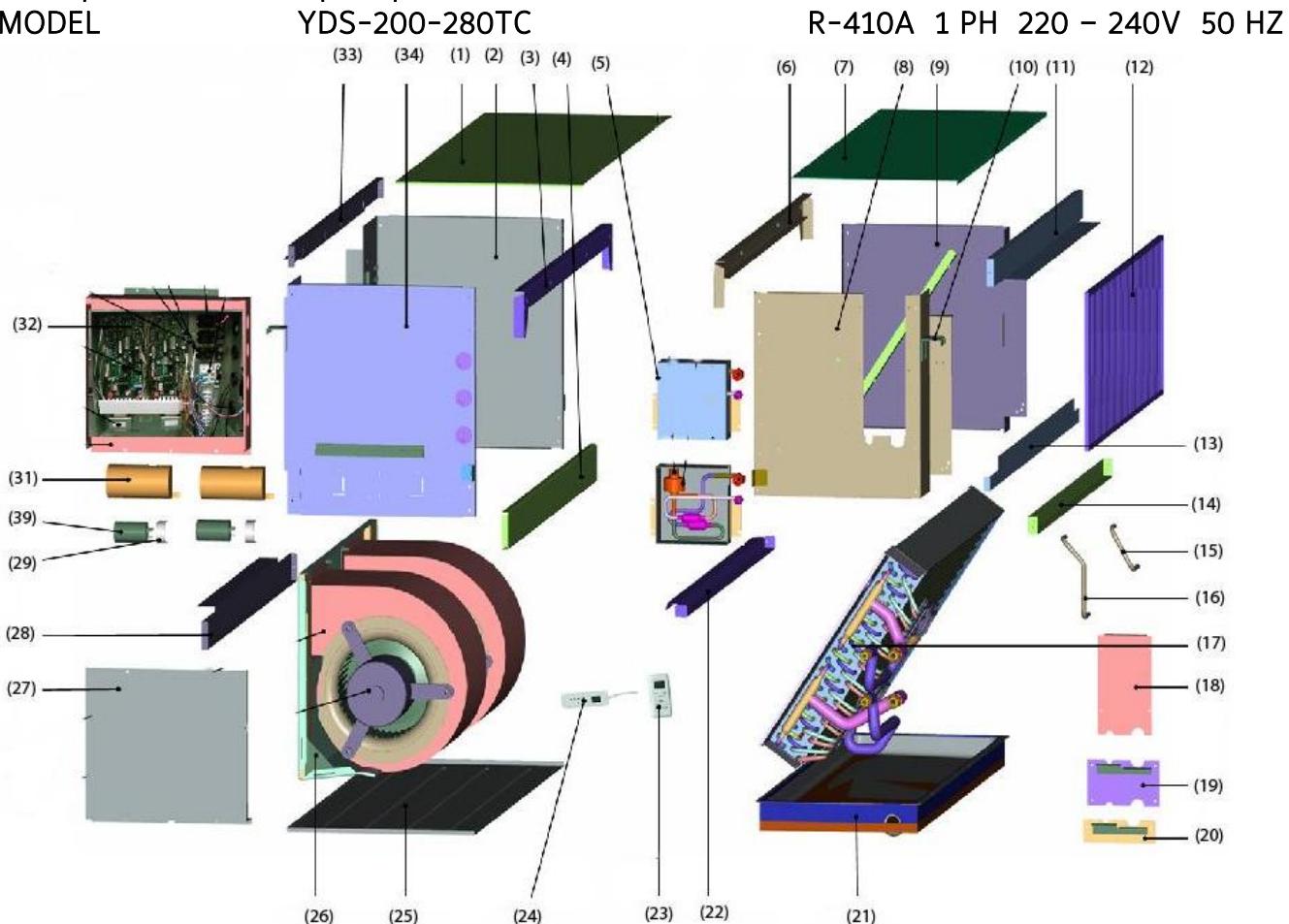


Operation lamp flashes:



11. Accessories

Name	Quantity	Function
Installation manual	1	/
Pipe insulation material	2	Heat insulation
Accessory drain pipe	1	To connect drain pipe
Adhesive tape for seal	1	To connect drain pipe
Adhesive tape for seal	1	To connect refrigerant pipe
Remove controller	1	Remote controller the air-conditioner
Connective pipe	2	To connect electrical restriction assembly
Remote controller manual	1	/

12. Explode view and spare part list
MODEL YDS-200-280TC


ITEM NO	PART NUMBER			PART NAME	QTY	REMARK
	20.0 kW	25.0 kW	28.0 kW			
1	201M285890058			Top cover ass'y	1	
2	201M285890098			Left clapboard ass'y	1	
3	201M285890066			Up connecting board ass'y	1	
4	201M285890062			Below connecting board ass'y	1	
5	201M609890046			Electric throttle ass'y	2	
-	201M601300018			Electronic expansion valve	1	
-	201M601320018			EEV solenoid	1	
6	201M285890101			Up connecting board ass'y	1	
7	201M285890053			Top cover ass'y	1	
8	201M285890068			Right cover ass'y	1	
9	201M285890075			Left clapboard ass'y	1	
10	201M285890104			Hook	4	
11	201M285890064			Up flange ass'y	1	
12	201M101100012			Air filter	1	
13	201M285890083			Fixing board ass'y	1	
14	201M285890105			Below flange	1	
15	201M685890044			Connection pipe ass'y	1	
16	201M685890045			Connection pipe ass'y	1	
17	201M585890002			Evaporator ass'y	1	
18	201M285890049			Pipe clamp ass'y	1	
19	201M286900301			Pipe clamp	1	
20	201M286900302			Pipe clamp	1	
21	201M285890080			Drainage pan ass'y	1	
22	201M285890051			Connection board ass'y	1	
23	203M3550A1500			Wireless remote, R51/E, Midea, White	1	
-	201M155090070			Remote holder, R51, York brand, White	1	
24	203M342090023			Display & Receiver board, 4-ways cassette old panel	1	
25	201M285890055			Base ass'y	1	

26	201M285890086	Installation board ass'y	1	
-	202M400410853	Fan motor	2	
-	201M200300202	Volute shell ass'y	2	
27	201M285890039	E-Part box cover	1	
28	201M285890092	Below flange ass'y	1	
29	201M200100005	Capacitor clamp	2	
30	202M401010101 201M226190015	Motor capacitor	2	
31	201M226190015	Compressor capacitor box	2	
32	203M385890003	E-part box ass'y	1	
-	202M300900109	Transformer (TT2-B35+D90-1F)	2	
-	201M385890000	Main controller ass'y	2	
-	202M470600001	Cable	2	
-	202M485890003	Cable	2	
-	202M440500002	Evaporator temp. sensor Ass'y	4	
-	202M485890002	Cable	2	
-	202M301310063	Temp sensor	2	
-	202M300800071	Relay	3	
-	202M301450122	Wire joint	3	
33	201M285890060	Up flange ass'y	1	
34	201M285890094	Right cover ass'y	1	

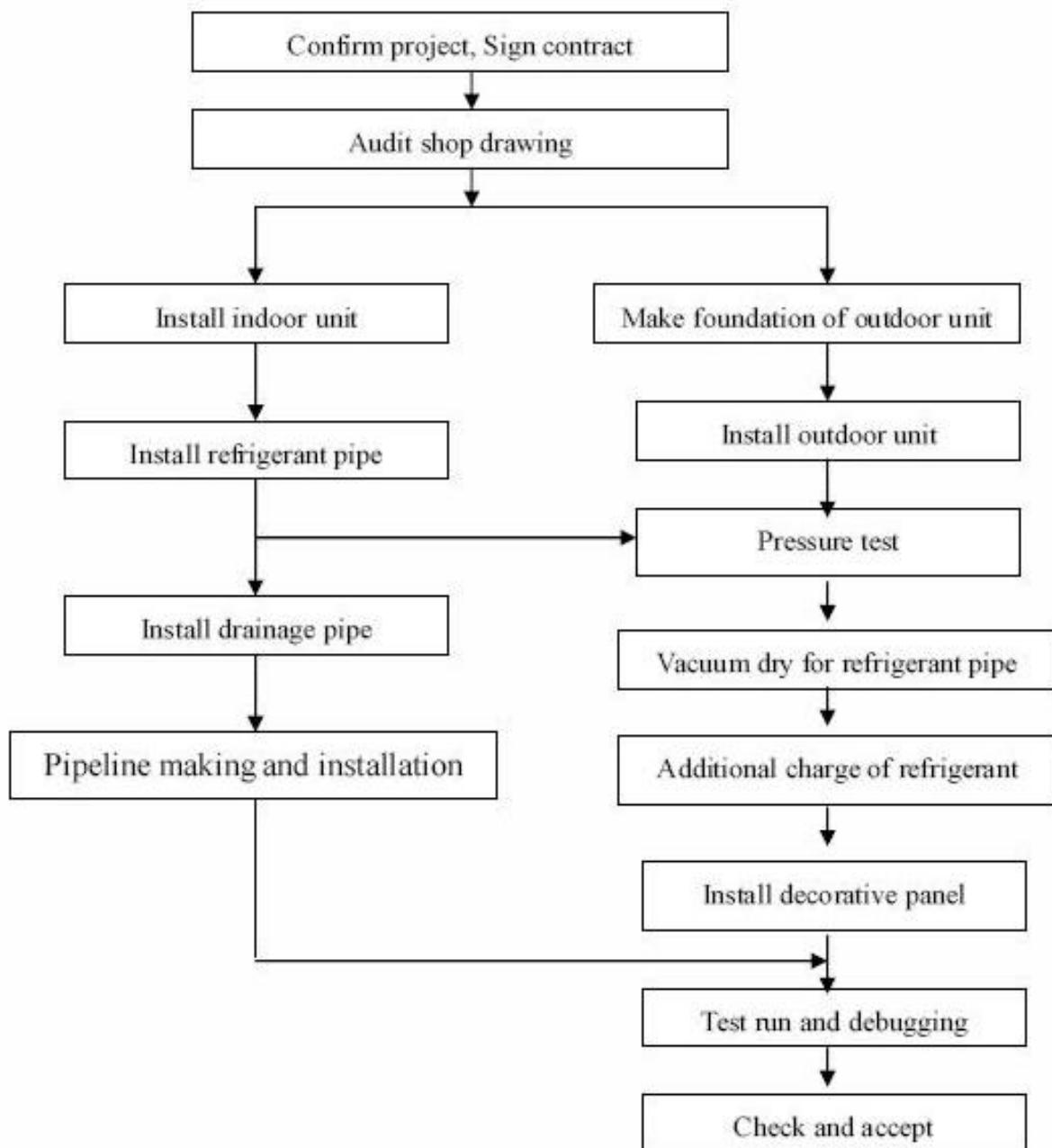
Part 5 Installation

Contents

1. Summarize of Installation.....	241
2. Installation of outdoor unit	245
3. Installation of indoor unit	246
4. Installation of refrigerant pipe	247
5. Processing & installation of drainage pipe.....	268
6. Insulation work.....	271
7. Pipeline installation.....	274
8. Electric installation.....	278

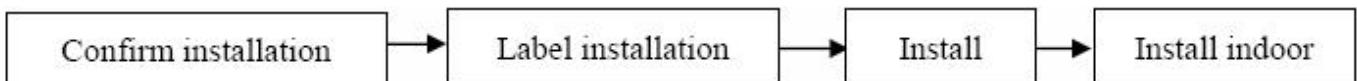
1. Summarize of installation

1.1) Installation procedure



1.2) Install indoor units

Procedure:

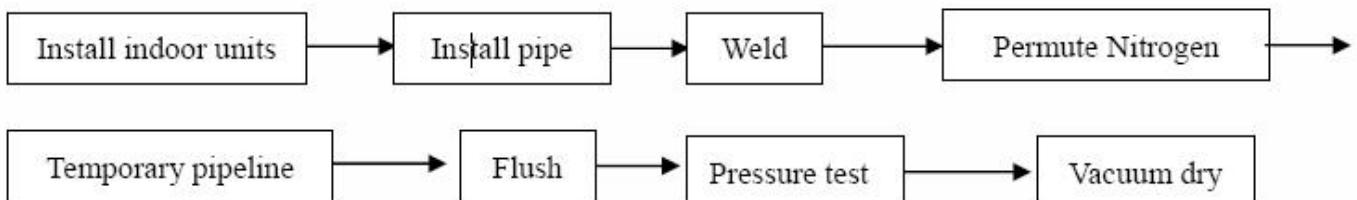


Note:

1. The hook must strong enough to sustain the weight of indoor unit.
2. Check the models of indoor units before installation.
3. Pay attention to the main devices, such as the pipeline.
4. Hold enough places for maintenance.
5. Hold service port (400x400).

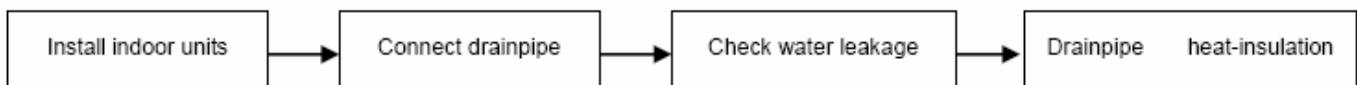
1.3) Refrigerant pipe

Procedure:



1.4) Drainage pipe

Procedure:



Note: It is no need to insulate the drainpipe if you choose the plastic pipe as drainpipe.

1.5) Electric wiring

1. Communication wire: must use STP (Shielded twist-pair) as the communication wire and pay attention to the consistency. When wiring parallel to the power wire, please keep certain distance (about 300mm) to prevent interfering signal.

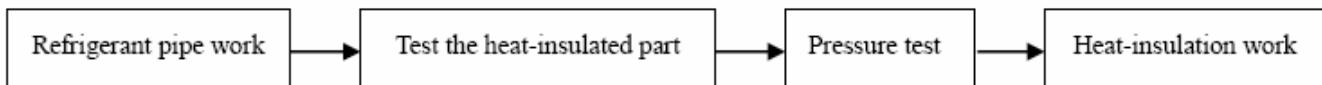
2. Power wire: please pay attention to select correctly the breaker switch, dimension of wire and so on. And both indoor units and outdoor units should be grounded well. The power wire and signal wire can't be enlaced together.

1.6) Lay the indoor pipeline

Note: Collocate the air-outlet reasonably to prevent airflow short-circuit. Check the static pressure whether in the allowable range. The air filters should be easy to unpick and wash. Do pressure test on pipeline.

1.7) Heat-insulation

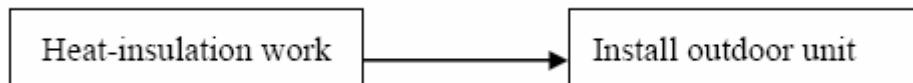
Procedure:



Note: For welding part, flare part and branch pip, heat-insulation work must be done after finished the pressure test.

1.8) Install outdoor unit

Procedure:

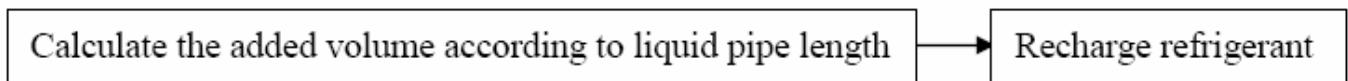


Note: 1. Gutter must be set around the foundation to drain the condensation water.

2. When installing outdoor units at the housetop, please check the strength of the housetop and pay attention not to destroy the waterproof of the housetop.

1.9) Recharge refrigerant

Procedure:



Note: Please must use the correct formula that we supplied and the calculation results must be correct.

1.10) Main points of test running and debugging

Please check the following issues before turning on the power:

1. Vacuum dry: make sure the vacuum degree accord with our requirement about 10-5.

2. Wiring: includes the power wiring and control wiring; Recheck the connection according to our corresponding wire diagrams. Especially, please remember our communication wire is polar; it means you must connect the communication wire correspondingly to the terminal block.

3. Additional charge of refrigerant: Recheck the calculation formula and recalculate the total recharge volume according to our supplied formula.

4. Open the stop-valve of gas and liquid pipe with Allen key; Check leakage of stop-valve with soap water.

5. Test insulation; Turn on all of the indoor units and set the temperature in 17degree with high speed in cooling mode first, after the system operated, test following system operation parameters, including indoor units and outdoor units parameters.

Indoor unit's parameter:

1. Air-inlet and air-outlet temperature of indoor units: Generally, the temperature difference between them should be 10 degree according to and depended on the outdoor ambient temperature, we think it is normal.

2. Fan speed of air-outlet of indoor units: Generally, for the duct type indoor units, the fan speed of air-outlet should be 3m/s roughly.

3. Noise level: for the indoor units should be 40dB roughly.

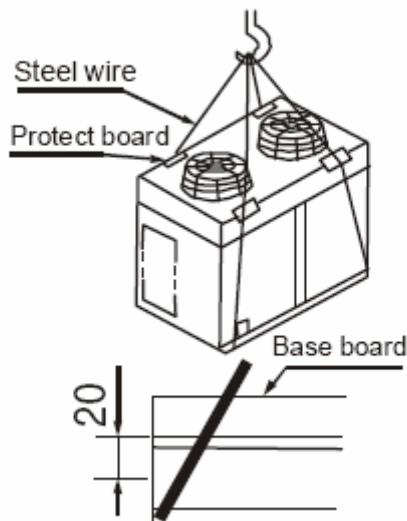
Outdoor unit's parameter:

Ambient temperature; Air-outlet of units; Air-outlet of units; Discharge temperature of compressor; voltage; current; discharge pressure; air-inlet pressure; air-inlet pipe temperature and compressor current. After tested all of the cooling parameters, transfer the cooling mode to heating mode, then repeat the above process.

2. Installation of outdoor unit

2.1) Hanging and transportation

- (1) Sling the outdoor unit and carry it in with 4 steel wires (_6mm or more)
- (2) Use soft board to protect the unit surface from scratch and distortion where contact the steel wire.



2.2) Required installation place and installation dimensions

Please refer to the Outdoor Units.

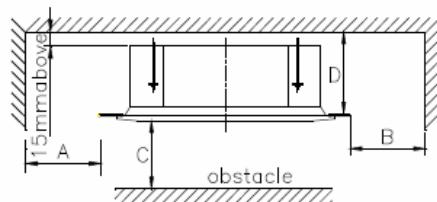
3. Installation of indoor unit

3.1) Hanging and transportation

Please refer to Indoor unit Installation Manual.

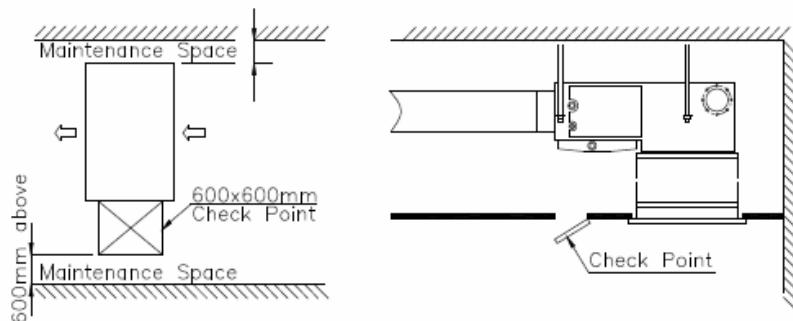
3.2) Required installation place

(1) Cassette type

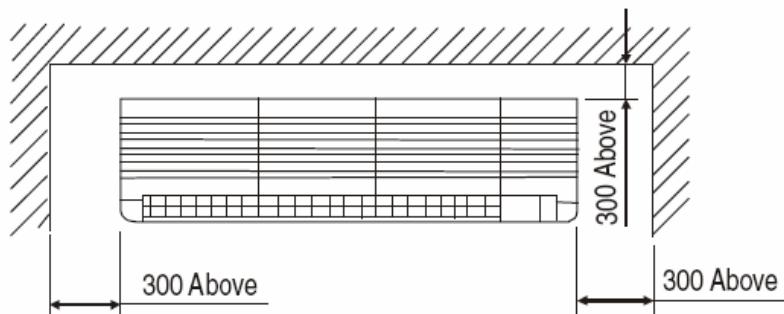


	A	B	C
One-way Cassette	1000mm above		
Four-way Cassette	1000mm above		2300mm above

(2) Duct type



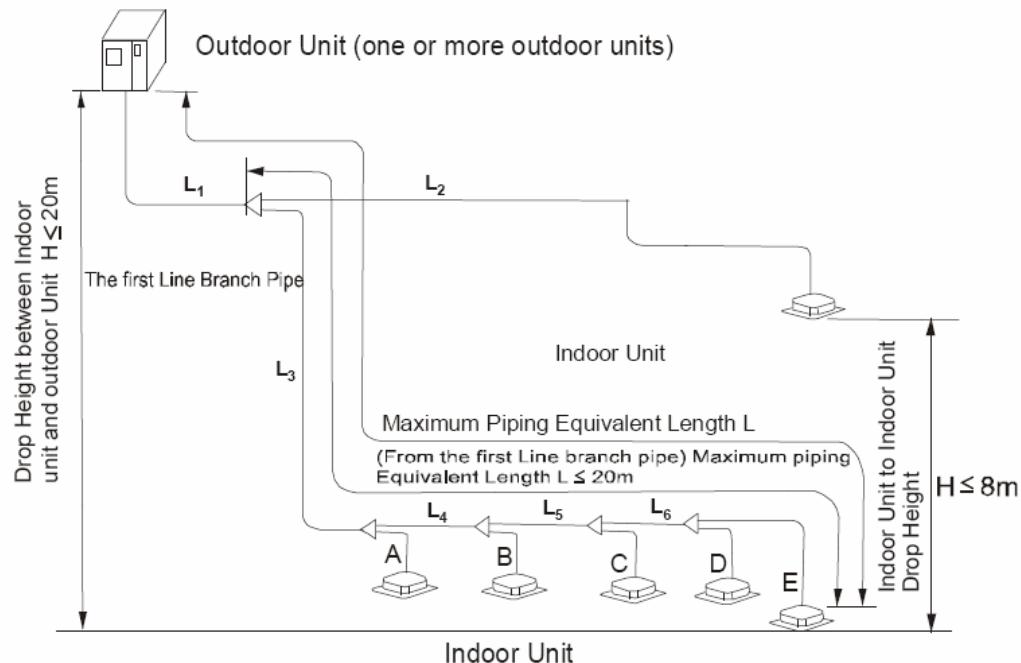
(3) Wall mounted type



4. Installation of Refrigerant Pipe

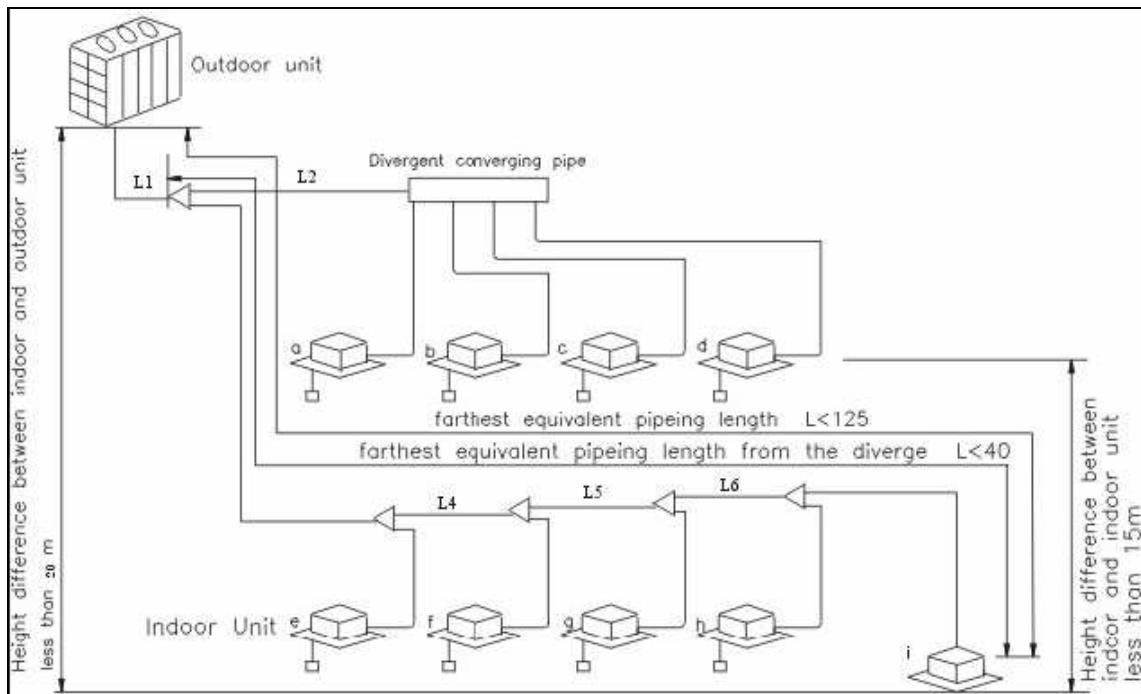
4.1) The permitted length and drop difference of refrigerant pipe.

10-14 kW



		Digital scroll	Pipe
Pipe length	Pipe total length (actual length)	≤100m	$L_1+L_2+L_3+L_4+L_5+L_6+A+B+C+D+E$
	Farthest pipe length(m)	Actual length	10 kW ≤45m
			14 kW ≤60m
	Equivalent length	10 kW ≤55m	$L_1+L_3+L_4+L_5+L_6+E$
Drop height	Equivalent length L of pipe from the first branch to the farthest one (m)	≤20m	$L_3+L_4+L_5+L_6+E$
	Drop height between indoor unit and outdoor unit	Outdoor unit up	≤20m
		Outdoor unit down	≤20m
	Drop height between indoor unit and indoor unit	≤8m	--

28 kW



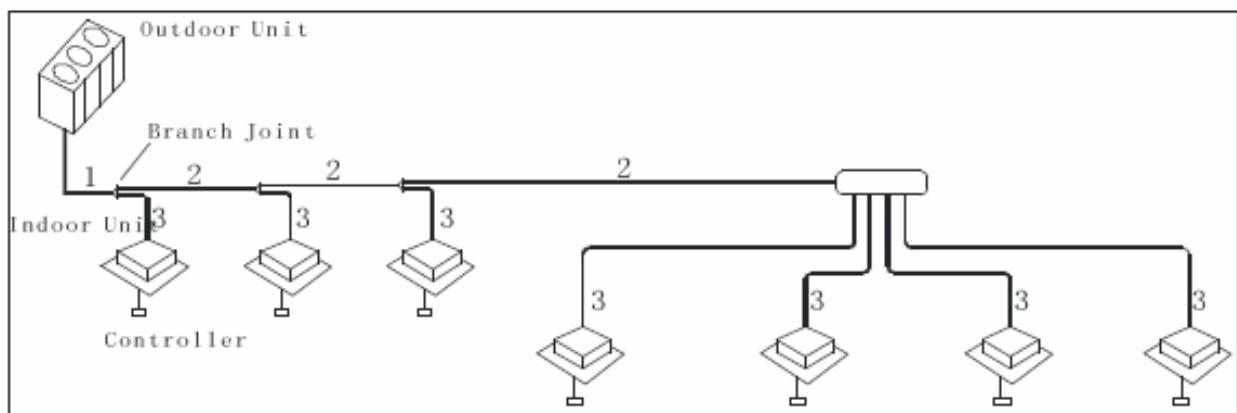
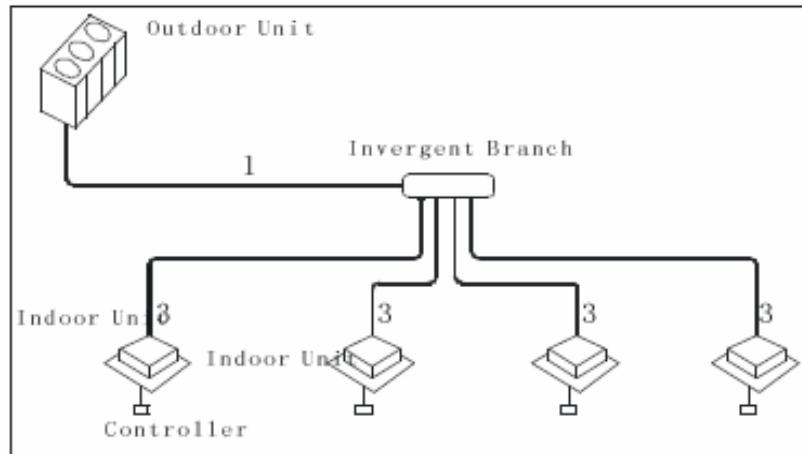
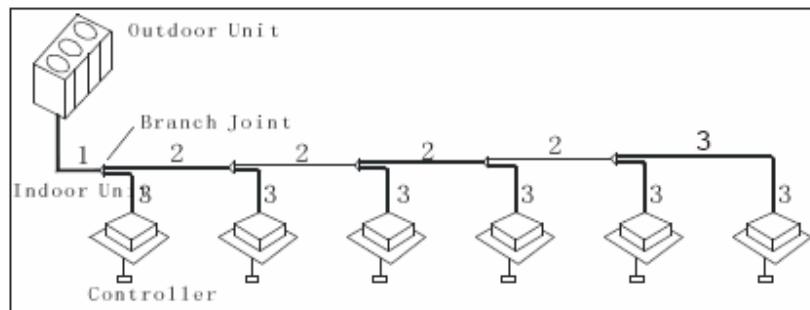
		Permitted length	Pipe
Pipe length	Pipe total length (actual length)	$\leq 250 \text{ m}$	$L1+L2+L3+L4+L5+L6 +L7 + a+b+..i$
	Farthest pipe length(m) Actual length	$\leq 150 \text{ m}$	$L1+L3+L4+L5+L6+i$
	Equivalent length L of pipe from the first branch to the farthest one (m)	$\leq 40 \text{ m}$	$L3+L4+L5+L6+i$
Drop height	Drop height between indoor unit and outdoor unit Outdoor unit up	$\leq 50 \text{ m}$	--
	Outdoor unit down	$\leq 30 \text{ m}$	--
	Drop height between indoor unit and indoor unit	$\leq 15\text{m}$	--

- Conversion of the equivalent length: Convert into the direct pipe length. According to branch Junction 0.5m/l and branch header pipe 1.0m/l.

4.2) Pipe size selection

4.2.1 Selection of the refrigerant pipe

Type of the pipe	Connecting part	No.
Main pipe	Between outdoor unit and the first branch part	1, 2
	Between the branch part and branch part	
Branch pipe	Between the branch part and indoor unit	3



4.2.2 Outdoor connecting pipe

Model(kW)	Liquid side	Gas side	Connecting method
10-14	Φ9.53	Φ19	Flare, Digital scroll
28	Φ12.7	Φ28.6	Welding

4.2.3 Dimensions of indoor main pipe (1, 2)

Refrigerant	Capacity(kW)	Indoor main pipe	Branch joint
		Gas/Liquid	
R-410A	A<16.8	Φ15.9 / Φ9.5	YDSA/FQ01
	16.8≤A<22.4	Φ19.1 / Φ9.5	YDSA/FQ02
	22.4≤A<33.0	Φ22.2 / Φ9.5	

4.2.4 Dimensions of indoor connecting pipe (3)

Refrigerant	Type (A)	Connecting pipe	
		Liquid	Gas
R-410A	A≤4.5 kW	Φ6.4	Φ12.7
	5.6 kW ≤ A	Φ9.5	Φ15.9

4.2.5 Connecting method

10-14 kW

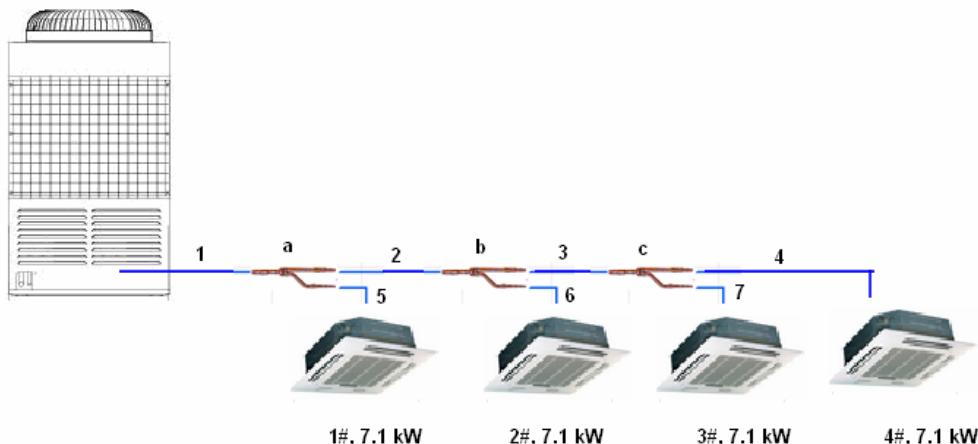
	Gas side	Liquid side
Outdoor unit	Flaring nut	Flaring nut
Indoor unit	Flaring nut	Flaring nut
Branch part	Welding	Welding
BS device	Flaring nut	Flaring nut

28 kW

	Gas side	Liquid side
Outdoor unit	Welding	Flaring nut
Indoor unit	Flaring nut	Flaring nut
Branch part	Welding	Welding

4.2.5 Example as 28 kW

28 kW



(1). Selection the refrigerant pipe

Type of pipe	No.
Main pipe	(1) or (2) or (3)
Branch pipe	4-7

(2). Selection the dimension of main pipe

No.	Indoor units below main pipe	Total kW of indoor units below main pipe	A (kW)	Pipe dimension (Gas/Liquid)	Branch joint
(1) main pipe	1#-4#	$4 \times 7.1 = 28.4 \text{ kW}$	$22.4 \leq A < 33.0$	$\Phi 22.2 / \Phi 9.5$	YDSA/FQ02
(2) main pipe	2#-4#	$3 \times 7.1 = 21.3 \text{ kW}$	$16.8 \leq A < 22.4$	$\Phi 19.1 / \Phi 9.5$	
(3) main pipe	3#-4#		$A < 16.8$	$\Phi 15.9 / \Phi 9.5$	YDSA/FQ01

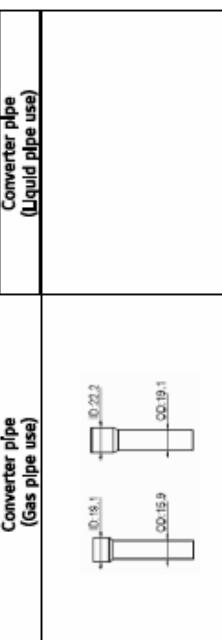
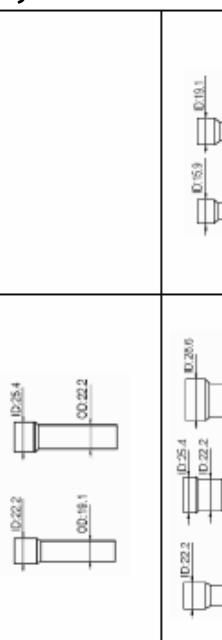
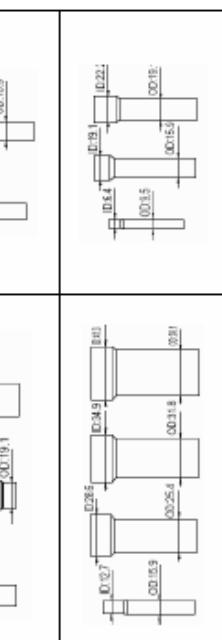
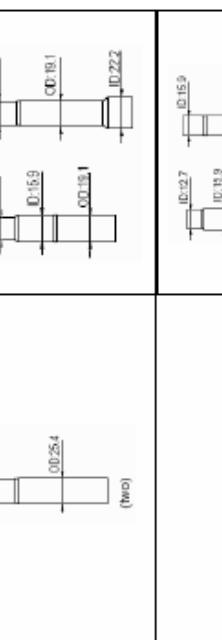
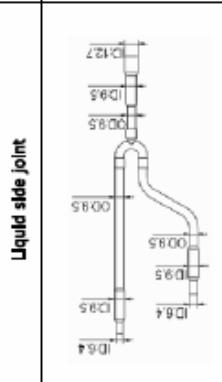
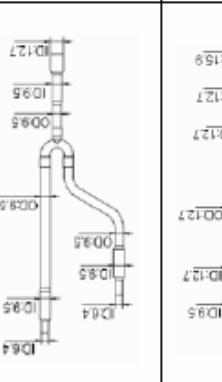
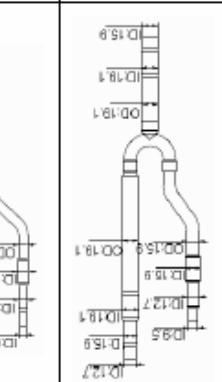
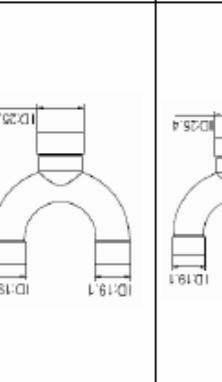
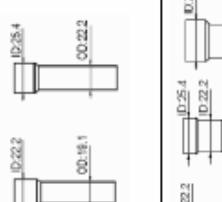
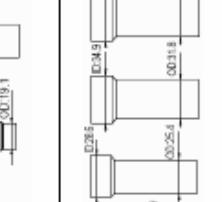
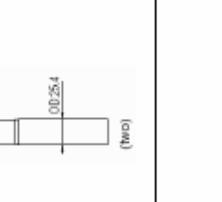
(3) Selection the dimensions of branch pipe

Branch pipe	Pipe dimension (Gas/Liquid)
4-7	According to 4.2.4

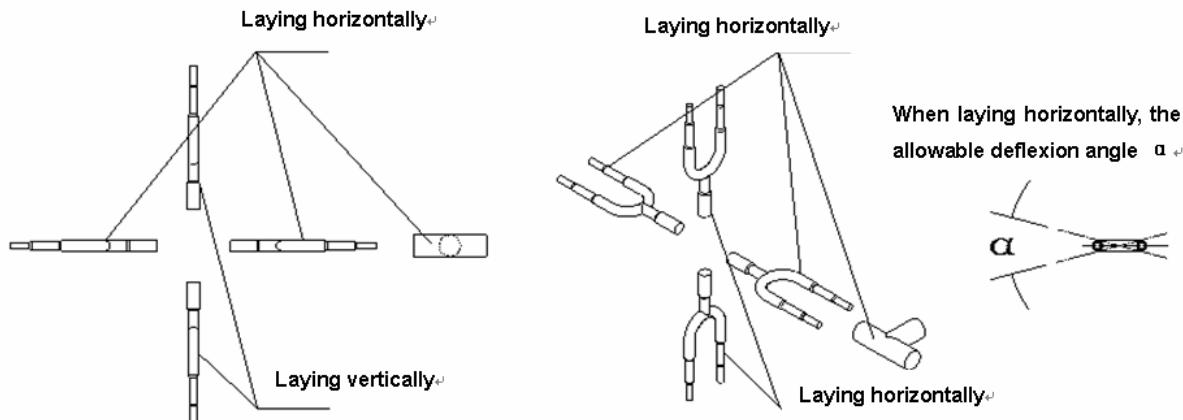
(4) Selection connection method

	Gas side	Liquid side
Outdoor unit	Welding	Welding
Indoor unit	Flaring nut	Flaring nut
Branch part(a-c)	Welding	Welding

4.2.6 Dimension of branch joint

	YDSA/FQ01	YDSA/FQ02	YDSA/FQ03	YDSA/FQ04	YDSA/FQ05	YDSA/FQ06
Gas side joint						
Liquid side joint						
Converter pipe (Liquid pipe use)						
Converter pipe (Gas pipe use)						

4.3) The laying of branch part:



At the same system, the laying form of shunt-wound outdoor units: the outdoor units are on the same level, the branch joints for the outdoor units are on the same level, the T-shaped pipes for connecting the balance pipes are installed vertically.

The laying form of Y-shaped branch pipes for shunt-wound outdoor units: Laying horizontally.
 The laying form of T-shaped branch pipes for shunt-wound outdoor units: Laying horizontally.

The laying form of Y-shaped branch pipes for indoor units:

- 1) Laying horizontally. (the allowable deflection angle $\alpha=30^\circ$ ($-15^\circ \sim +15^\circ$))
- 2) Laying horizontally

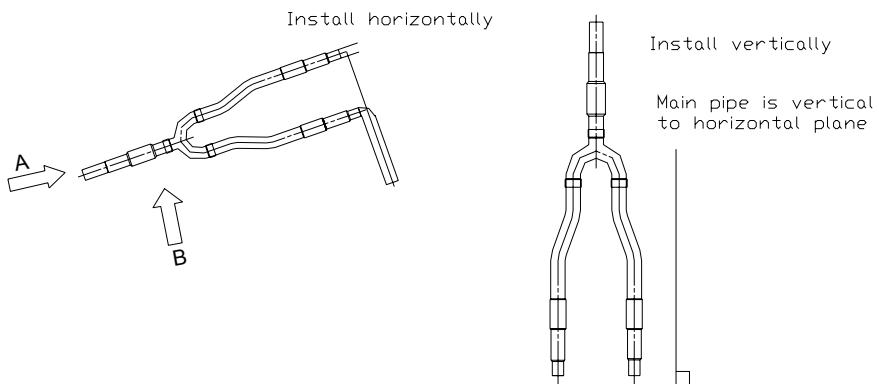
4.4) Size of tubing connection

Capacity of indoor units(HP)	Gas side	Liquid side
≥ 56	$\Phi 15.9$ (Flaring nut)	$\Phi 9.5$ (Flaring nut)
≤ 45	$\Phi 12.7$ (Flaring nut)	$\Phi 6.4$ (Flaring nut)

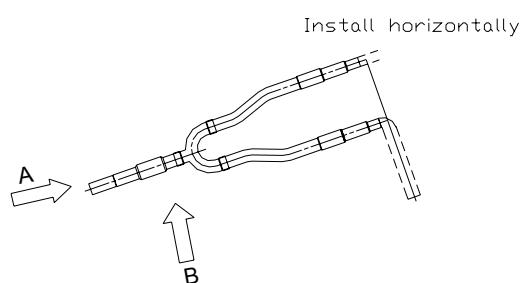
4.5) Precautions:

4.5.1 Refrigerant pipe must use the pipe with specified diameter.

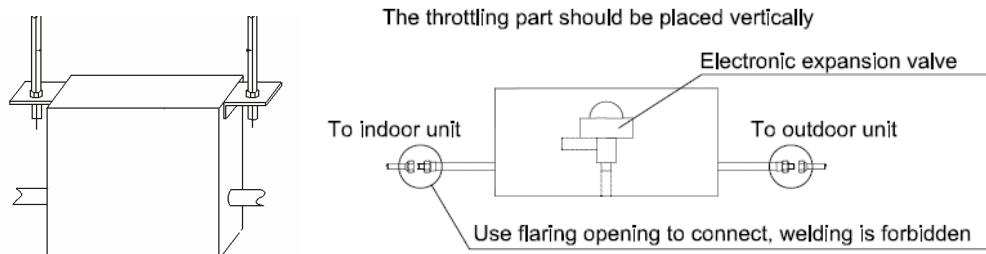
4.5.2 Branch Part should be installed in horizontal mode or vertical mode.



4.5.2 Y shape three-way pipe should be installed in horizontal mode with ground.



4.5.4 Horizontal installation of throttling unit (throttling unit is an external unit, so it need be connected on site)



Caution:

- Install the throttling part upright, and ensure that it does not incline or is reversed.
- Use two spanners to connect the electronic throttling part with the pipes of the indoor and outdoor units, so as to avoid the copper pipe from deforming or getting broken.
- Use flaring opening to connect the electronic throttling part with the pipes of the indoor and outdoor units. Do not use welding for the connection, because the heat caused during the welding process will be transferred to the electronic expansion valve via the copper pipe, which may damage the electronic expansion valve.
- Pay attention to the connection direction (refer to the label on the electronic throttling part).
- For the installation size of the electronic throttling part, see the above figure.

4.5.5 Refrigerant fastness, the Refrigerant fastness, the distance between the supports of the cross direction tube (copper tube):

Nominal diameter	Below 16	16–25	Above 32
Max. Distance (m)	1.0	1.5	2.0

4.5.6 Calculation of the pipe length

- (1) Available length of pipe = pipe length + the amounts of branch × branch equivalent length +the amounts of elbow × elbow equivalent length.
- (2) Conversion of the branch equivalent length: Convert into the direct pipe length according to branch part 0.5m/l
- (3) Conversion of elbow equivalent length.

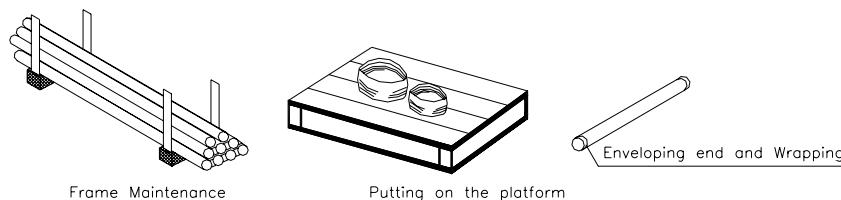
Liquid pipe dimension	Φ6.35	Φ9.5	Φ12.7	Φ15.9	Φ19.0	Φ22.0	Φ25.0	Φ28.6	Φ38.0	Φ45.0	Φ54.0	Φ67
Junction(90°elbow)	0.1	0.15	0.2	0.25	0.3	0.4	0.45	0.5	0.55	0.6	0.65	0.7

4.6) Installation work of Refrigerant pipe

4.6.1 Protection of Refrigerant pipe material

1) Transportation and storing of refrigerant pipe

When transporting the pipes, please protect the pipes from wending and distortion. Please place a cap at the open end of the pipe in order to prevent water and mud entering, and store in the appointed site.

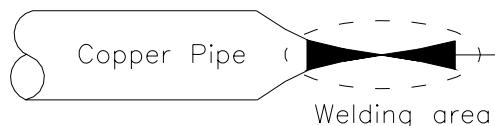


- 3) All the open tips of the pipes need to be protected. The best feasible means is Enveloping End, and you can select the easy means of Wrapping. Refer to the following table to select the means used in different sites.

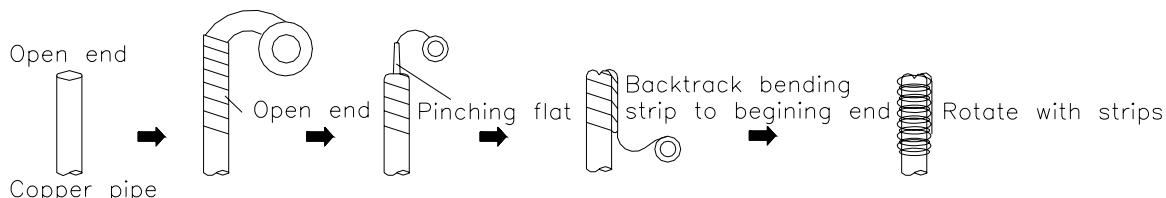
4)

Site	Period	Maintenance Means
Outdoor	Above three months	Envelop End
	Below three months	Envelop End or Wrapping
Indoor	No limit	Envelop End or Wrapping

- ♦ Envelop End: Welding the leak while clamping the end of the pipe.

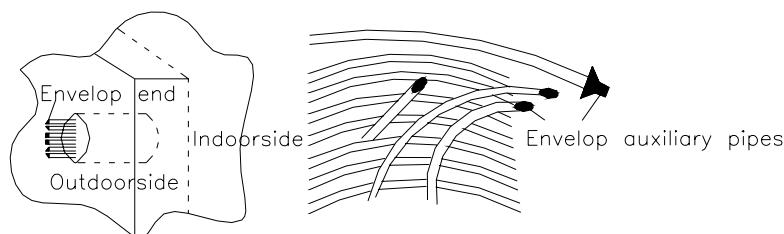


- ♦ Wrapping: Wrapping the pipe with polyethylene insulation tape.



- ♦ The following operation should be noted:

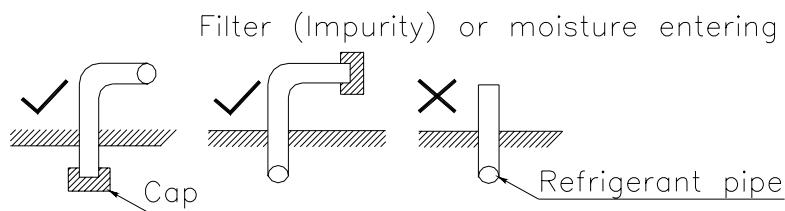
- When putting the pipe through the hole, filth can easily enter into the pipe.



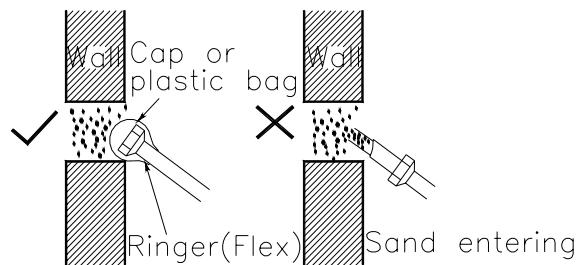
- When the pipe is outside, rainwater can easily enter into the pipe, especially when the Pipe is placed vertically.

Precautions:

- Protect the open end of the pipe against moisture, dust and litter.
- Before finishing pipe connection, place a cap at the open end of the pipe.
- Try to make the open end of the pipe thwart or downward.



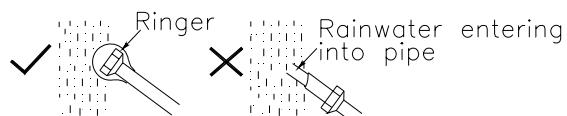
- A cap must be placed on the end of the pipe when the pipe crosses the hole in the wall.



- Don't place the pipe on the ground directly or scratch with the ground.

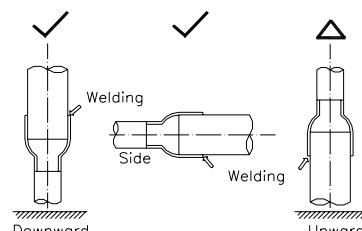


- Cut the pipe and remove burrs with the cut surface downward.
- Be sure to place a cap when raining.



4.6.2 Welding

- 1) Be sure to weld horizontally or downward, not upward.

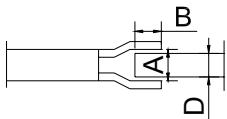


- 2) Pay attention to the installation direction and angle to prevent oil-return or oil-accumulation.
 - 3) It's necessary to charge nitrogen when welding.
- Be far away from fire and prepare fire extinguishers and water to prevent fire on field.
 - Be careful not to injure people.
 - Confirm the proper clearance between pipe and connector.
 - Check if the supporting structural members are strong enough.
 - The traverse distances between supporting structural members are as follows:

Diameter (mm)	Below 20	25~40	50
Max. Distance (m)	1.0	1.5	2.9

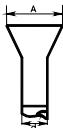
- Min. inserting depth and clearance between connectors.

Unit: mm

	Out .Diameter. (D)	Min. Inserting depth (B)	Clearance (A~D)
	5 < D < 8	6	0.050~0.21
	8 < D < 12	7	
	11 < D < 16	8	0.050~0.27
	16 < D < 25	10	
	25 < D < 35	12	0.050~0.35
	35 < D < 45	14	

4.6.3 Flare Connection

- 1) Before flaring, the auxiliary pipe must be annealed.
- 2) Use incision machine.
- 3) Dimension:

Shape	Diameter	O.D.	A
	3/8"	9.53	0.05—0.21
	1/2"	12.7	
	5/8"	15.88	0.05—0.27
	3/4"	19.05	

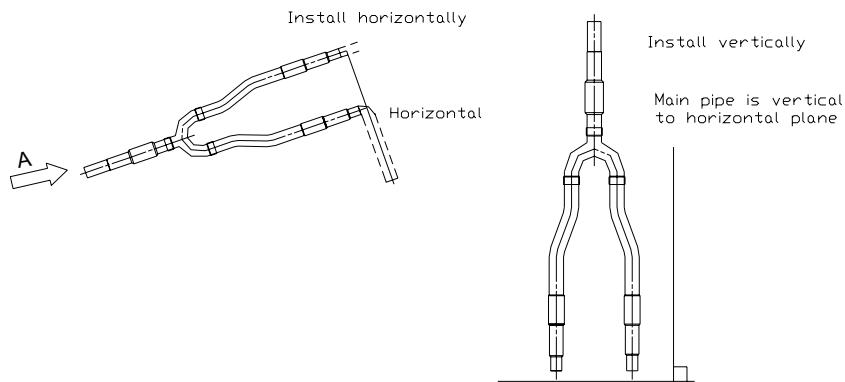
- 4) Smear oil at flaring part.
 - ◆ Be careful to get rid of burr.
 - ◆ Use two torques.
 - ◆ Use proper torque to fasten nut.

Dimension	Torque	
	(kgf ·m)	(N·cm)
1/4"(Φ6.4)	144—176	1440—1720
3/8"(Φ9.5)	133—407	3270—3990
1/2"(Φ12.7)	504—616	4950—6030
5/8"(Φ15.9)	630—770	6180—7540
3/4"(Φ19.0)	990—1210	9270—11860

4.6.4 Laying

- 1) Laying the refrigerant pipes
 - ◆ Mark the system clearly in every distance to prevent wrong connection.
 - ◆ The plane where the two branches locate should be parallel to the horizontal plane, or the

Main pipe of the branch part is vertical to the horizontal plane, which can avoid bad effect due to uneven distribution of gas and liquid.



2) Protection of outdoors refrigerant pipes

Sudden dandification also should be considered except heat-insulated layer. If the length of bare part is over 1m, a buckle-board must be added to the bare part.

3) Laying principle of YDS refrigerant pipes

- ◆ Centralized laying, lying along the wall, and trying to make full of use of corridor.
- ◆ After finishing lying, binding up the refrigerant pipes with white binding-strap. After finishing winding-up every pipe separately, please try to binding up all pipes together according to the diameters and the degree of tightness should be based on no feeling of flexible.
- ◆ When installing the connection pipes and electric wires (power wire, control wire), they should be laid along the wall, turn the corner logically, flat and straight, parallel with each other and packed together. And try to avoid striding over and blocking the traffic.
- ◆ The connection pipes and electric wires should be as short as possible.
- ◆ Try to bind up all pipes and no barenness is allowed at the connecting part.

4) Precautions about laying refrigerant pipes

- ◆ Pulling pipe: mark the system No. in the pipes to prevent wrong connection.
- ◆ Make sure the support of the pipes is firm enough.

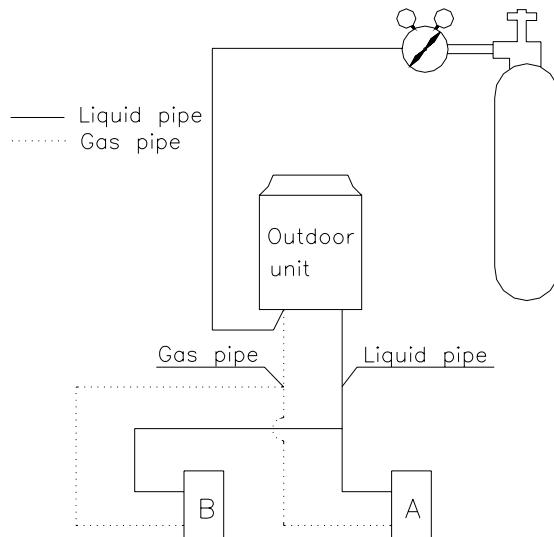
4.6.5 Refrigerant pipe flushing

Refrigerant pipe flushing is a method to eliminate filter. It has three main functions:

- When nitrogen is insufficient, flushing can eliminate oxide air bubble.
- When the end of the pipe can't seal well, flushing can eliminate filter and humidity.
- Flushing can check the indoor/outdoor pipe connection.

Main procedure is as the following:

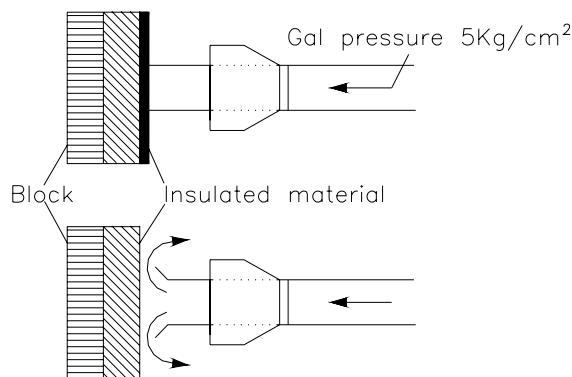
- 1) Install pressure modulation valve at the nitrogen cylinder. And the gas used must be nitrogen. Carbon Dioxide will probably condense. And Oxygen will probably cause explosion.
- 2) Use charge pipe to connect pressure modulation valve and outdoor liquid pipe.



- 3) Jam well all the connection part in liquid side except indoor unit A.
- 4) Open the valve of nitrogen cylinder to 5kgf/cm².
- 5) Check if there is nitrogen in liquid pipe of indoor unit A.
- 6) Flushing

◆ Use the insulating material in hand to resist the nozzle of gas main pipe of the indoor unit.

◆ When the pressure can't be resisted, release the insulating material quickly (flushing for the first time), then use the insulating material to resist the nozzle again (flushing for the second time).



◆ The dunghill can be checked by putting a piece of cloth in the nozzle loosely. Occasionally, some dampness can be found, please dry the pipe thoroughly. Do as follows:

◆ Scouring the inner part of the pipes with nitrogen until no dampness.

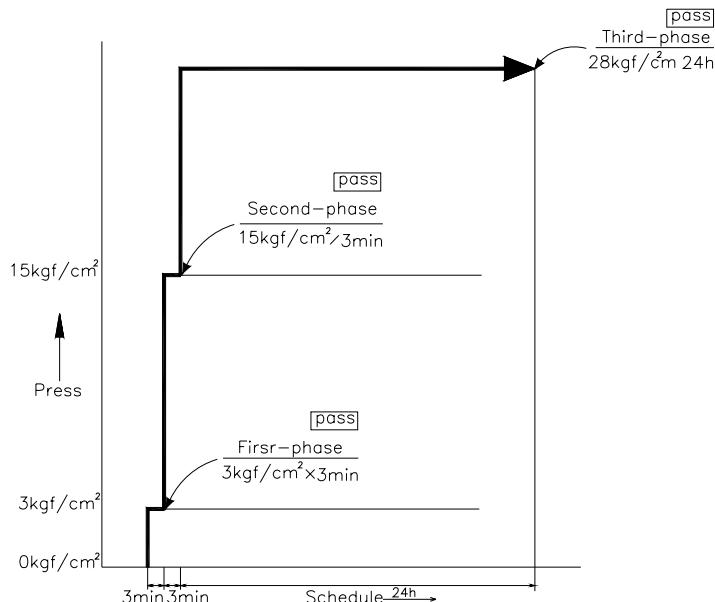
◆ Do the vacuum drying procedure (see the YDS refrigerant pipes vacuum drying in detail)

- 7) Close the nitrogen main valve.
- 8) Repeat the above operations.
- 9) After finishing flushing the liquid pipes, then flushing the gas pipes.

4.6.6 Refrigerant pipe Pressure Test

1. Adding pressure operation

- (1) During pressure test, the valves on gas side and liquid side should be full-closed. Because nitrogen may enter into the outdoor circulation system, strengthening the valves before adding pressure operation.
- (2) For every refrigerant system, add pressure slowly and orderly from gas and liquid side.
- (3) And the gas used must be nitrogen. Carbon Dioxide will probably condense. And Oxygen will probably cause explosion.
- (4) The time must be over 24h in the third-phase of adding pressure.
- (5) Sketch map of adding pressure.



2. Control diagram for adding pressure by stages0.

No.	Phase (add pressure by stages)	Standard
1	Add pressure 3.0kgf/cm ² G for more than 3 minutes to check big leakage.	No pressure falling
2	Add pressure 15.0kgf/cm ² G for more than 3 minutes to check big leakage.	
3	Add pressure 28.0kgf/cm ² G for more than 24 hours to check small leakage.	

3. Observe the pressure

● Add and keep pressure 28.0kgf/cm²G for more than 24 hours, pass if there's no pressure drop. If the pressure falls, it should be corrected. After that, if the pressure is still lower than that when adding pressure, the leakage should be checked out and corrected.

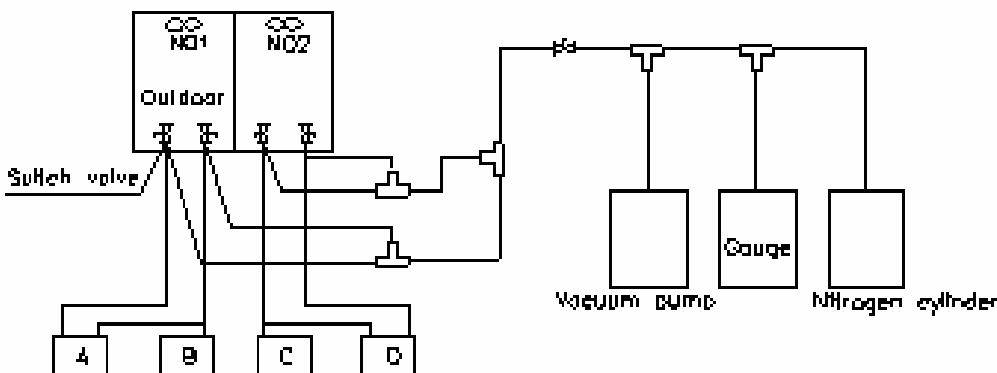
● Correcting method

If there's 1°C difference in temperature, there will be 0.1kgf/cm² difference in pressure.

Correcting formula: actual value = pressure in the stage of adding pressure +(temperature in the stage of adding pressure – observed temperature) x 0.1 kgf/cm²

Compare the correcting value and adding pressure value to see whether the pressure falls.

- Look up the leakage point in three phases when the pressure falls.
- Check the leakage by ears---can hear loud noise of the leakage.
- Check the leakage by hands---put the hands in the pipe connection to check the leakage.
- Check the leakage by suds---the leakage point will emit air bubble.
- Check the leakage by halogen detector.
- Use halogen detector when finding the tiny leakage point or pressure falls but no leakage point can be found during the adding pressure test.
- Place the nitrogen under 3.0 kgf/cm².
- Add fluorine to the point 5.0 kgf/cm² (mixed state of fluorine and nitrogen).
- Check by halogen detector, alkyl detector, electric detector and so on.
- If no leakage can be found, continue to add pressure to 28.0 kgf/cm², then check again.

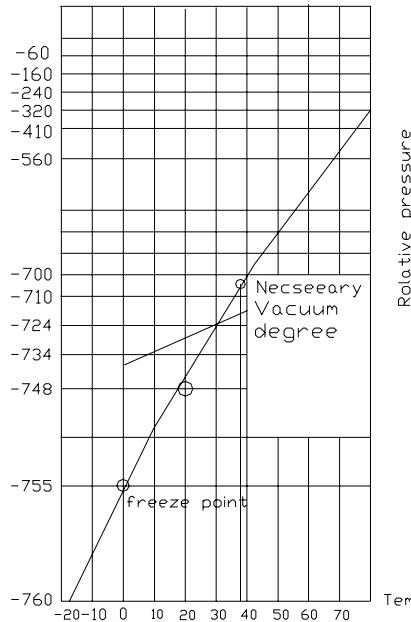


4. Precautions

- The maximum pressure in gas proof test should not exceed 28.0 kgf/cm².
- If the pipe is too long, check by sections.
- Indoor side
- Indoor side + Vertical pipe
- Indoor side+ Vertical pipe +Outdoor side

4.6.7 Vacuum dry for refrigerant pipe

1) Vacuum Dry: use vacuum pump to change the moisture (liquid) into steam (gas) in the pipe and discharge it out of the pipe to make the pipe dry. Under one atmospheric pressure, the boiling point of water (steam temperature) is 100°C. Use vacuum pump to make the pressure in the pipe near vacuum state, the boiling point of water falls relatively. When it falls under outdoor temperature, the moisture in the pipe will be vaporized.



2) Selection of vacuum pump

- ◆ Select the vacuum pump. (Normally the anticipative demand achieves -755mmHg)
- ◆ Big discharge volume (over 40l/min). Check the vacuum calculator before operation to make sure its measure range achieve below -755mmHg.

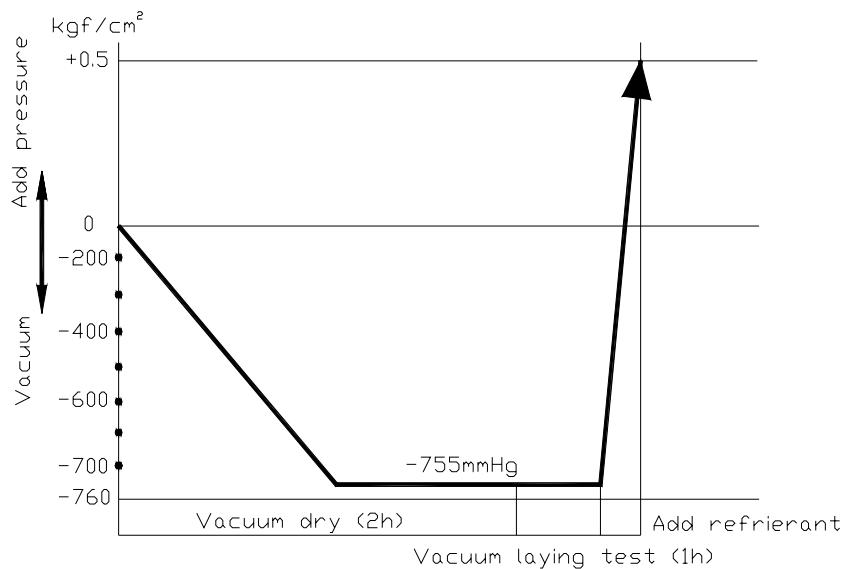
Boiling point of water (°C)	Gas pressure (mmHg)	Vacuum degree (mmHg)
40	55	-705
30	36	-724
26.7	25	-735
24.4	23	-737
22.2	20	-740
20.6	18	-742
17.8	15	-745
15.0	13	-747
11.7	10	-750
7.2	8	-752
0	5	-755

3) Vacuum dry procedure

There are two methods of vacuum dry due to different construction environment:
common vacuum dry, special vacuum dry.

Common vacuum dry procedure

- Vacuum dry (for the first time)---connect the all-purpose detector to the inlet of liquid pipe and gas pipe, and run the vacuum pump more than two hours (the vacuum pump should be below -755mmHg)
 - If the pump can't achieve below -755mmHg after pumping 2 hours, moisture or leakage point will still exist in the pipe. At this time, it should be pumped 1 hour more.
 - If the pump can't achieve -755mmHg after pumping 3 hours, please check if there's some leakage points.
 - Vacuum placement test: place 1 hour when it achieves -755mmHg, pass if the vacuum watch shows no rising. If it rises, it shows there's moisture or leakage point.
 - Vacuuming from liquid pipe and gas pipe at the same time.
 - Sketch map of common vacuum dry procedure.



Special vacuum dry procedure

- This vacuum dry method is used in the following conditions:
 - There's moisture when flushing the refrigerant pipe.
 - Rainwater may enter into the pipe.
- Vacuum dry for the first time 2h pumping
- Vacuum destroy for the second time Fill nitrogen to 0.5Kgf/cm² because nitrogen is for drying gas, it has vacuum drying effect during vacuum destroy. But if the moisture is too much,

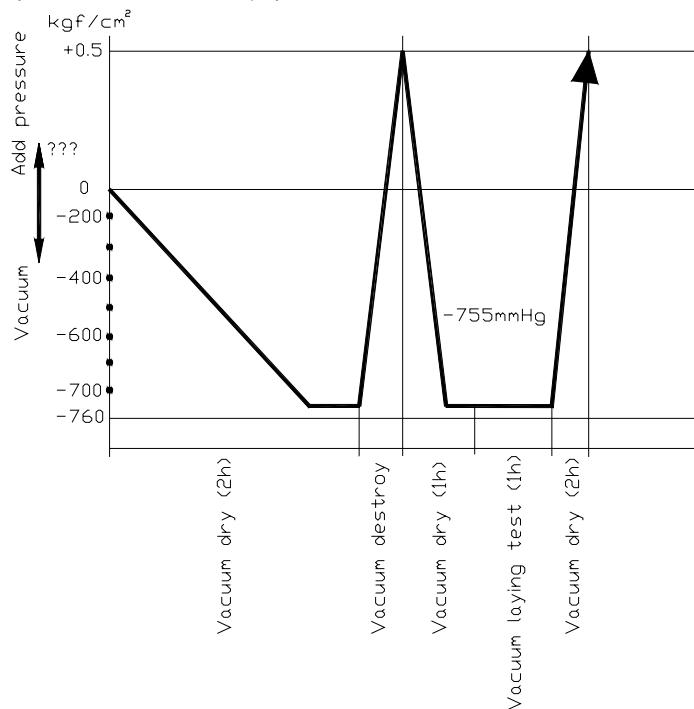
this method can't dry thoroughly. So, please pay more attention to prevent water entering and forming condensation water.

- Vacuum dry for the second time 1h pumping

Determinant: Pass if achieving below -755mmHg. If -755mmHg can't be achieved in 2h, repeat procedure ③ and ④.

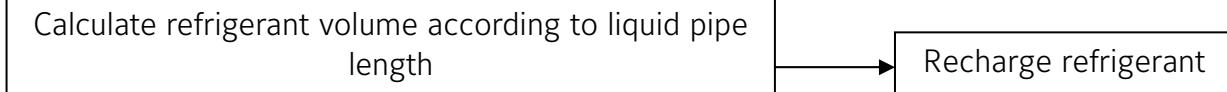
- Vacuum placing test · 1h

- Sketch map of special vacuum dry procedure



4.7) Additional charge of refrigerant

Procedure



1. The refrigerant needed by the pipes installed on fields is not filled in the factory.

After finishing installation, add refrigerant when the length of liquid pipe on field is over 0 m.

2. Calculate the refrigerant to be supplemented in light of the connecting length of liquid pipe of indoor unit and outdoor unit and pipe diameter.

Calculation

Diameter of Liquid Pipe	R-410A
	Equivalent Refrigerant for Pipe Length of 1m (kg/m)
Φ6. 4	0.022
Φ9. 5	0.060
Φ12. 7	0.110
Φ15. 9	0.170
Φ19. 1	0.250
Φ22. 2	0.350
Φ25. 4	0.520
Φ28. 6	0.680

Calculating formula of refrigerant to be recharged (R410A):

Local refrigerant to be recharged R (Kg) = (L1×0. 022 kg/m) + (L2×0. 060 kg/m) + (L3×0. 110 kg/m) + (L4×0.170 kg/m) + (L5×0. 250 kg/m) + (L6×0. 350 kg/m) + (L7×0. 520kg/m) + (L8×0. 680kg/m)

Note: Conversion of the equivalent length: Convert into the direct pipe length According to branch Junction 0.5m/l.

Where:

L1—Actual total length of Φ6.4 liquid pipe (m) L2—Actual total length of Φ9.5 liquid pipe (m)
 L3—Actual total length of Φ12.7 liquid pipe (m) L4—Actual total length of Φ15.9 liquid pipe (m)
 L5—Actual total length of Φ19.1 liquid pipe (m) L6—Actual total length of Φ22.2 liquid pipe (m)
 L7—Actual total length of Φ25.4 liquid pipe (m) L8—Actual total length of Φ28.6 liquid pipe (m)

Caution:

For different series of air conditioning system, the calculating formula of refrigerant to be supplemented might be different, so it is necessary to checkup the "formula in installation

information" attached with outdoor unit. Formula in installation information is superior to prevent error.

- ◆ Write the added volume in the outdoor nameplate.
- ◆ The added volume must be measured with electron scale.
- ◆ The total real length includes two parts: one is total pipe length; the other is the equivalent length of curves or elbows.

5. Processing & Installation of drainage pipe

5.1) Gradients and Supporting

5.1.1 Keep the drainpipe sloping downwards at a gradient of at least 1/100. Keep the drainpipe as short as possible and eliminate the air bubble.

5.1.2 The horizontal drainpipe should be short. When the pipe is too long, a prop stand must be installed to keep the gradient of 1/100 and prevent bending. Refer to the following table for the specification of the prop stand.

	Diameter	Distance between the prop stands
Hard PVC pipe	25~40mm	1.5~2m

5.1.3 Precautions

5.1.3.1 The diameter of drainpipe should meet the drainage requirement at least.

5.1.3.2 The drainpipe should be heat-insulated to prevent atomization.

5.1.3.3 Drainpipe should be installed before installing indoor unit. After powering on, there is some water in water-receiver plate. Please check if the drain pump can act correctly.

5.1.3.4 All connection should be firm.

5.1.3.5 Wipe color on PVC pipe to note connection.

5.1.3.6 Climbing, horizontal and bending conditions are prohibited.

5.1.3.7 The dimension of drainpipe can't less than the connecting dimension of indoor drainpipe.

5.1.3.8 Heat-insulation should be done well to prevent condensation.

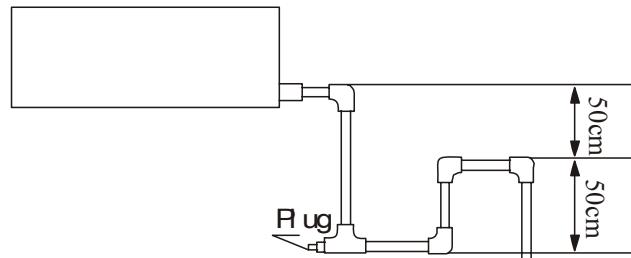
5.1.3.9 Indoor units with different drainage type can't share one convergent drainpipe.

5.2) Drainpipe Trap

5.2.1 If the pressure at the connection of the drainpipe is negative, it needs to design drainpipe trap.

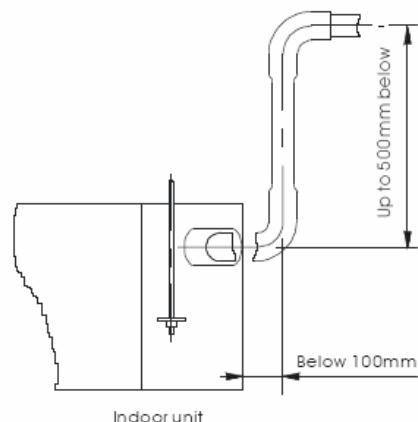
5.2.2 Every indoor unit needs one drainpipe trap.

5.2.3 A plug should be designed to do cleaning.



5.3) Upward drainage (drain pump)

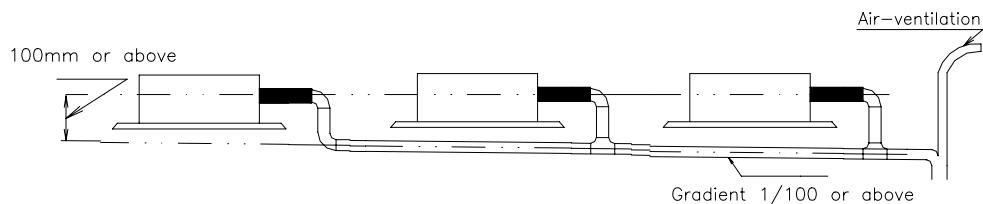
To ensure the gradient 1/100, the drainpipe can be lifted to 340mm. After upwards, place downwards, or it will cause malfunction to drain pump.



5.4) Convergent drainage

5.4.1 The number of indoor units should be as small as possible to prevent the traverse main pipe overlong.

5.4.2 Indoor unit with drain pump and indoor unit without drain pump should be in different drainage system.



5.4.3 Selection the diameter

Number of connecting indoor units → Calculate drainage volume → Select the diameter
 Calculate allowed volume = Total cooling capacity of indoor units (HP) × 2 (l/ hr)

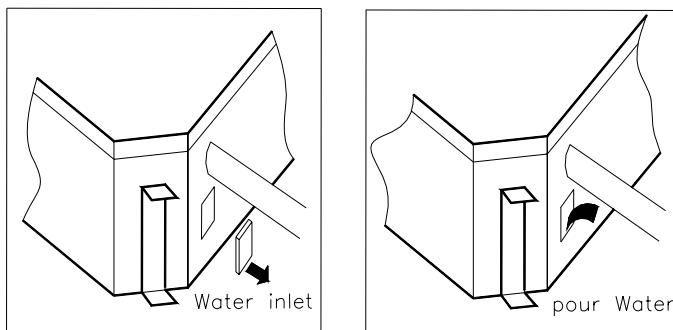
5.5) Drainage test

5.5.1 Drainage without drain pump

After finishing drainpipe installation, pour some water into the water plate to check if the water flows smoothly.

5.5.2 Drainage with drain pump

5.5.2.1 Poke the Water Level Switch, remove the cover, and use water pipe to pour 2000ml water into the water plate through the water inlet.



5.5.2.2 Turn on the power to cooling operation. Check the pump's operation and switch on the Water Level Switch. Check the pump's sound and look into the transparent hard pipe in the outlet at the same time to check if the water can discharge normally.

5.5.2.3 Stop the air conditioner running, turn off the power, and put back the cover.

- Stop the air conditioner. After 3 minutes, check if it has abnormality. If the collocation of drainpipes is illogical, the water will flow back overfull, which will cause the alarm lamp flashes, even circumfluence from the water plate.
- Keep on pouring water until it gives an alarm signal for high water level, check if the pump drains water at once. If the water level can't fall below the alarmed water level after 3 minutes, the air conditioner will stop (means this indoor unit stops, stand-by, but the outdoor unit still work if there is capacity requirement). Turn off the power and drain the remained water, and then turn on the air conditioner.

Note: the drain stopper in the main water plate is for maintenance. Stuff up the drain stopper to prevent water leakage.

6. YDS insulation work

6.1 Insulation material and thickness

6.1.1 Insulation material

Insulation material should adopt the material, which is able to endure the pipe's temperature: no less than 70 °C in the high-pressure side, no less than 120 °C in the low-pressure side (For the cooling type machine, no requirements at the low-pressure side.)

Example: Heat pump type----Heat-resistant Polyethylene foam (withstand above 120 °C)
 Cooling only type---- Polyethylene foam (withstand above 100 °C)

6.1.2 Thickness choice for insulation material

Insulation material thickness is as follows:

	Pipe diameter (mm)	Adiabatic material thickness
Refrigerant pipe	Φ6.4–Φ25.4	10mm
	Φ28.6–Φ38.0	15mm
	Φ38.0–Φ67.0	20mm
Drainage pipe	Inner diameterΦ20–Φ32	6mm

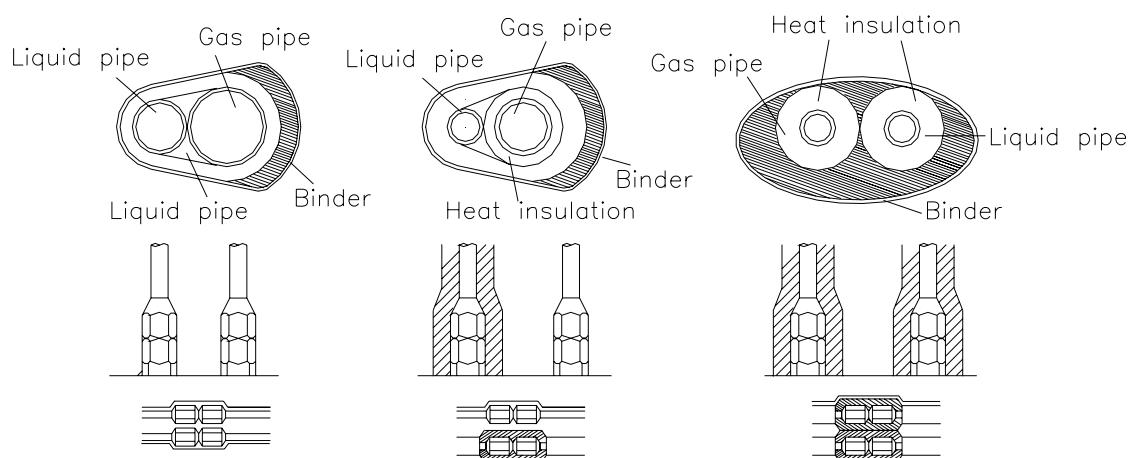
6.2) Refrigerant pipe insulation

6.2.1 Work Procedure

6.2.1.1 Before laying the pipes, the non-jointing parts and non-connection parts should be heat insulated.

6.2.1.2 After the gas proof test is eligible, the jointing area, expanding area and the flange area should be heat insulated

6.2.2 Insulation for non-jointing parts and non-connection parts

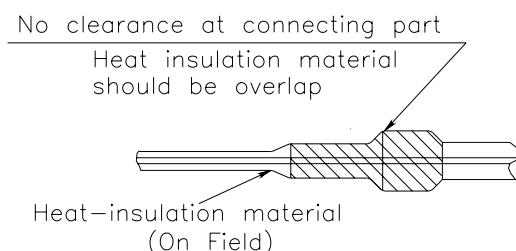


For construction convenience, before laying pipes, use insulation material to insulate the pipes to be dealt with, at the same time, at two tips of the pipe, remains some length not to be insulated, in order to be welded and check the leakage after laying the pipes.

6.2.3 Insulate for the jointing area, expanding area and the flange area

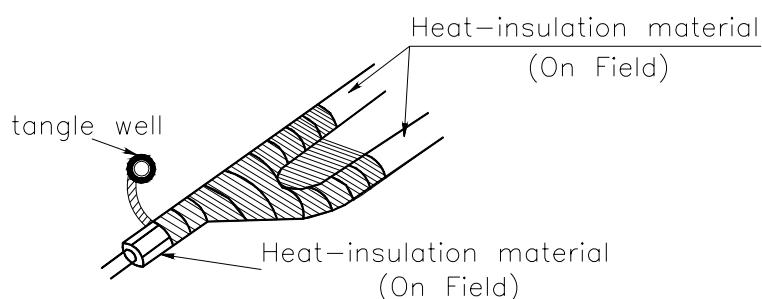
6.2.3.1 Insulate for the jointing area, expanding area and the flange area should be done after checking leakage of the pipes

6.2.3.2 Make sure there's no clearance in the joining part of the accessorial insulation material and local preparative insulation material.



6.2.4 Enswathe disposal

After insulation of the pipes, do the enswathe disposal with binding belt, make sure it's tight.



6.3) Drainage pipe insulation

The connection part should be insulated, or else water will be condensing at the non-insulation part.

6.4) Note

- (1)The jointing area, expanding area and the flange area should be heat insulated after passing the pressure test
- (2) The gas and liquid pipe should be heat insulated individually, the connecting part should be heat insulated individually.
- (3) Use the attached heat-insulation material to insulate the pipe connections (pipes' tie-in, expand nut) of the indoor unit.

7. Pipeline installations

7.1) Pipeline feature

7.1.1 The material of the pipeline

Standard: lubricity inside; small friction resistance; not absorbing moisture; incombustibility; erosion resistance; longevity; lightness; good sealing; no accumulation; easily cleaning. Normally, we can select galvanization steel, aluminum, and plastic. For short pipeline, we can also select aluminum foil board.

7.1.2 The process of the piping

The process of the piping should meet the requirements of the design. The process can be done in subsection. And every subsection's length is about between 1.8m and 4m. In order to improve the pipeline's rigid, a rib often be added at the outer surface. The pipeline usually adopts the flange to connect and add the asbestos washer with thickness 3mm to prevent air leakage. At present, the sealant and adhesive tape are also used to seal.

7.1.3 The shape of the pipeline

7.1.3.1 Type of the pipeline

The pipeline has ground and directs shape. The compare is as follows:

Ground pipeline	Square pipeline
less material, need large space, its' bending pipe and three-way pipe need long distance	need small space, can be equipped easily, adopt direct pipeline with the rate below 2.5 between length and width

7.1.3.2 Specification of the pipeline

Ground pipeline should first adopt the basic series; the ratio of the long side and the short side of the direct pipeline should not be larger than 4:1. Pipeline should be outer diameter or outer border. Brick and concrete pipeline should be inner diameter or inner border.

Pipeline diameter					
Basic series	Accessorial series	Basic series	Accessorial series	Basic series	Accessorial series
100	80/90/100	300	300/320	900	850/900
120	110/120	360	340/360	1000	950/1000
140	130/140	400	380/400	1120	1060/1120
160	150/160	450	420/450	1250	1180/1250
180	170/180	500	480/500	1400	1320/1400
200	190/200	560	530/560	1600	1500/1600
220	210/220	630	600/630	1800	1700/1800
250	240/250	700	670/700	2000	1900/2000
280	260/280	800	750/800		

7.1.4 The thickness of the pipeline

The following table takes steel pipeline as an example, the other thickness of the pipeline material can be looked up in the correlative standard of the book <construction and accept criterion>

Type Pipeline Diameter (long border) dimension	Ground pipeline	Square pipeline 600/630	
		Middle and low pressure system	High pressure system
80–320	0.5	0.5	0.8
340–450	0.6	0.6	
480–630	0.8	0.6	
670–1000	0.8	0.8	
1120–1250	1.0	1.0	
1320–2000	1.2	1.0	
2500–4000	1.2	1.2	

7.2) Pipeline Installation

7.2.1 When the pipeline and its accessories pass through wall, board and roof, holes should be reserved in advance, and the dimension and location should meet the design demand.

7.2.2 The configure of the spot pipeline connection should not reduce its valid section.

7.2.3 The hanger can't be set at the air-outlet, valve, and examination-port and automatic control machine. And the suspender isn't suitable to be fixed at the flange.

7.2.4 The configure of the spot pipeline connection should not reduce its valid section.

	Horizontal installation	Vertical installation
Unconcealed	$\delta \leq 3\text{mm}/\text{m}$ $\Delta \leq 20\text{mm}$	$\delta \leq 2\text{mm}/\text{m}$ $\Delta \leq 20\text{mm}$
Concealed Installation	Installation correct, no obvious tolerance	

δ —tolerance /meter **Δ** —total tolerance

7.2.5 The hanger of insulated pipeline should set outside the insulation layer and can't injure the insulation layer.

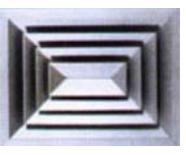
7.2.6 The distance between hangers:

	Diameter (long border) dimension < 400mm	Diameter (long border) dimension ≥ 400mm
Horizontal distance	≤4mm	≤3mm
Vertical distance	≤4mm , the part for fixing of every vertical pipeline should not less than 2	

7.3) Posit the air-outlet

7.3.1 Type

Familiar outlet type: Louver outlet, disperser and linear outlet.

	Linear outlet
	 

7.3.2 Specification

The specification of the air-outlet should be based on outer-diameter and outer-line.

7.3.2.1 Allowed tolerance of round air-outlet (mm)

Diameter	≤250	>250
Allowed tolerance	0 ~ -2	0 ~ -3

7.3.2.2 Allowed tolerance of rectangle air-outlet (mm)

Diameter	<300	300 ~ 800	>800
Allowed tolerance	0 ~ -1	0 ~ -2	0 ~ -3
Diagonal length	<300	300 ~ 500	>500
Two diagonal	≤1	≤2	≤3

Air-outlet:

In the design and construction, no matter cooling and heating, cooling and heating are sent to places through air-outlet, so it's important to select the right air-outlet.

Many factors limit the selection of air-outlet, for example:

- Indoor fitment
- Airflow in the room
- Installation and connection type of the air-outlet

The following issues should be noted:

- Try to assure the equality of the indoor parameters (especially the temperature)
- Prevent short-circuit of the air-inlet and air-outlet
- Prevent bolding cold air directly to people in summer

Air-inlet:

- The air-inlet shouldn't be set at places where people stays long to prevent short-circuit and open-circuit. If adopting side-sending, it is suitable to set at the same side of the air-outlet.
- For side air-inlet, normally, it is set under the same side. If adopting parallel air-sending, the air-inlet also is set underside mostly. In order to avoid dust and filter, the height from the underline of the air-inlet to the ground should at least keep 0.15m. For high big workshops, it is suitable to add air-inlet or discharge air-let to discharge surplus-heat.
- The distance from the air-inlet of the scatter setting to the wall should not less than half of the space between scatter settings.

Fresh air-let:

- Fresh air-let should be set at clean places and far away from discharge air-let.
- Fresh air-let should be set upside the discharge air-let.
- Fresh air-let should be set in the shade and avoid roof and west-wall. The distance from the ground is at least 2m and 1m in case of green ground. And shutter is needed under the air-let.

7.3.3 Fature and installation

7.3.3.1 Please use YDS inlet panel.

7.3.3.2 Set a static-pressure box in the outlet to eliminate some noise

7.3.3.3 Pay attention to the insulation of pipeline and the condensing water in the outlet.

7.3.3.4 The appearance of the air-outlet hasn't obvious impress, nick and spot. The color should be consistent and welding points should be lubricous.

7.3.3.5 The match between inner sphere and outer sphere of spheroid air-outlet should rotate freely and isn't flexible after orientation.

7.3.3.6 The diffusing loop and modulation loop of the scatter setting should be at the same axis and space distributing in radial direction should be even.

8. Electric installations

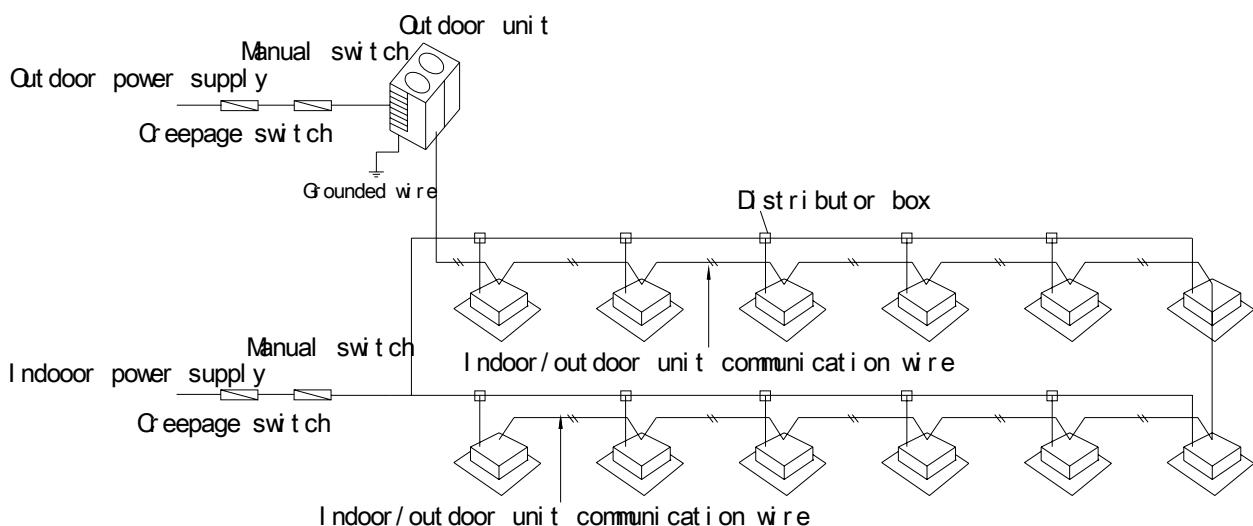
- Electric installation must be carried out according to National Standard.
- This chapter is just for reference.

8.1) Brief Introduction

- 8.1.1 All wires, parts and material must conform to concerning national standards.
- 8.1.2 All wiring work must be done by qualified person.
- 8.1.3 Grounded well.

8.2) Power circuitry installation

8.2.1 Sketch map of power wiring



8.2.2 Selection creep age breaker

8.2.2.1 The creep age protection switch consists of creep age, zero-phase current mutual inductance and automatic switch. It is applicable to AC 60Hz, single-phase, 220V or three-phase, 380V. It can prevent person from getting an electric shock and protect device from creep age. In normal case, it can provide conversion for circuit.

8.2.2.2 Selection creep age breaker

Selecting the creep age breaker according to 1.5-2 times of the sum of loading rated current.

8.2.2.3 Selection Manual Switch

When the power doesn't supply separately, selection the manual switch and fuse capacity according to the total capacity.

Total capacity (kW)	Manual switch (A)	Fuse (A)
25–40	100	75
40–53.2	100	100
53.2–78.5	150	150
78.5–101	200	200
101–130	300	250
130–140.5	300	300

8.2.2.4 Selection wiring specification

The following wiring specification just aim at Fluorine resinous insulating wire, if use others, please refer to the concerning national standard.

8.2.2.4.1 Normal Fluorine resinous insulating wire

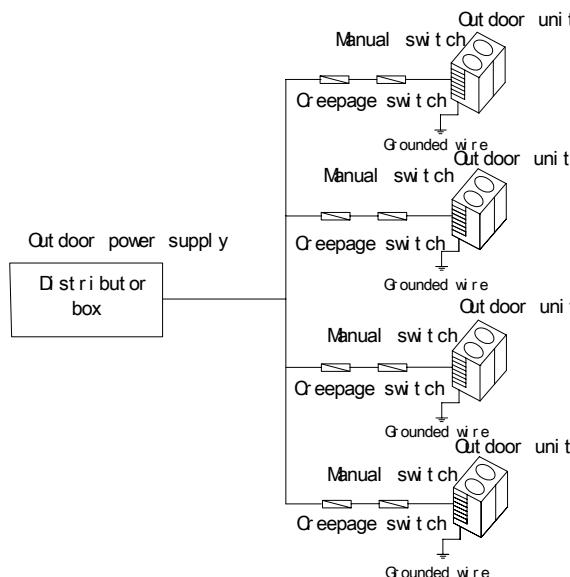
Model	Name
BV	Fluorine resinous insulating wire, copper-core
BLV	Fluorine resinous insulating wire, aluminum-core
BVR	Fluorine resinous insulating soft wire, copper-core
BVV	Fluorine resinous insulating wire, copper-core, round-type
BLVV	Fluorine resinous insulating wire, aluminum-core, round-type
BVVB	Fluorine resinous insulating wire, copper-core, flat-type
BLVVB	Fluorine resinous insulating wire, aluminum-core, flat-type
BV-105	Fluorine resinous insulating wire, copper-core, heat-endurance 105 °
RV	Fluorine resinous insulating connecting soft wire, copper-core
RVB	Fluorine resinous insulating connecting wire, copper-core, flat-type
RVS	Fluorine resinous insulating connecting wire, copper-core, twist-type
RVV	Fluorine resinous insulating connecting soft wire, copper-core, round-type
RVVB	Fluorine resinous insulating connecting soft wire, copper-core, flat-type
RV-105	Fluorine resinous insulating connecting soft wire, copper-core, heat-endurance 105 °

8.2.2.4.2 Indoors power supply wiring

Item Model	Power supply	The minimal dimension of wiring (mm ²)		Manual switch (A)		Creepage breaker
		Continuous wire length ≤20m (≤50m)	Ground wire	Capacity	Fuse	
All indoor units	220V 1N-50/60Hz	2.5 (3.5)	φ1.6mm	30	15	30mA under 0.1sec

8.2.2.4.3 Outdoors power supply wiring

- Sketch map of outdoor wiring

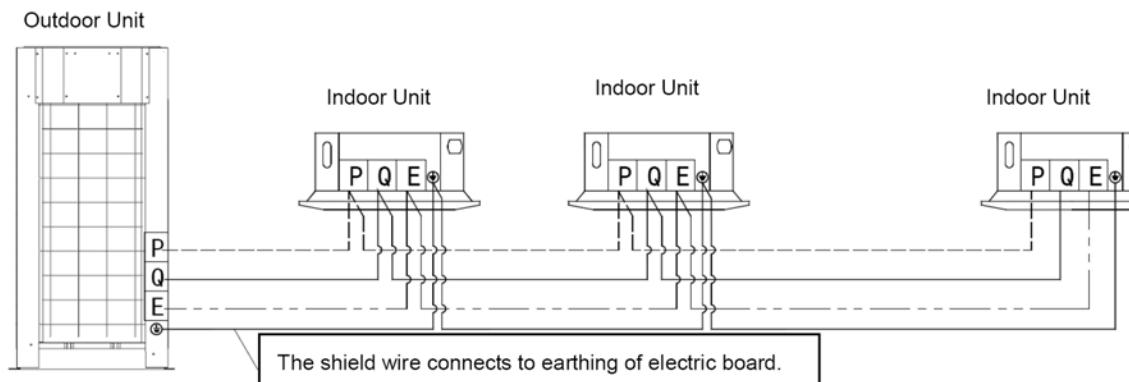


MODEL	Power source	Minimum wire diameter(mm ²)		Manual switch(A)		Leakage protector
		A (Dimension(m)) (continuous length)	Grounding	Capacity	Fuse	
10-16kW	220-240V 1N 50/60Hz	3×10	10	100	50	100mA 0.1sec or less
	380-415V 3N~ 50Hz	5×2.5	10	100	16	
28	220/380V 3N~ 50Hz	16(A≤29) 25(29 < A≤46) 35(46 < A≤78)	16	60	50	

Note: For 56 kW and 84 kW, wiring separately according to 28 kW outdoors power wiring specification.

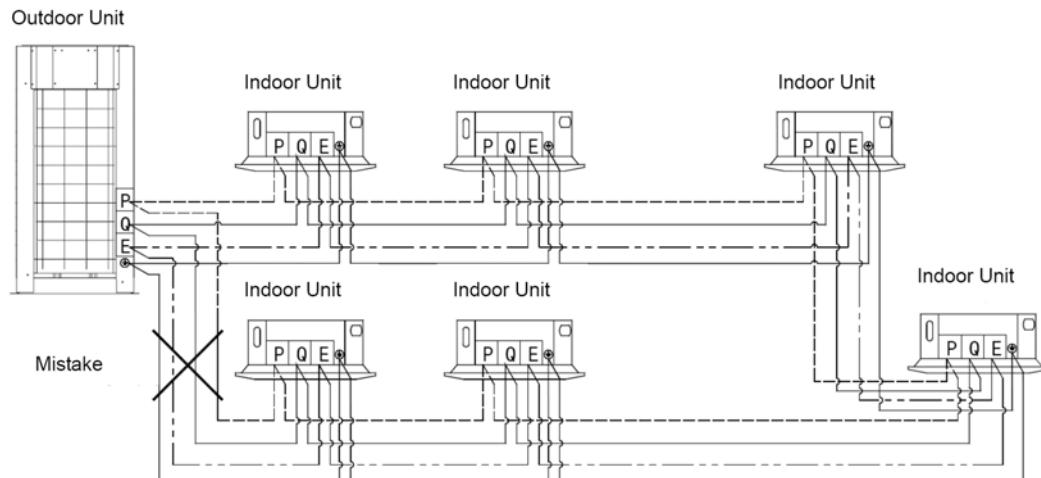
8.3) Control Wiring Connection Method

1) Correct connection



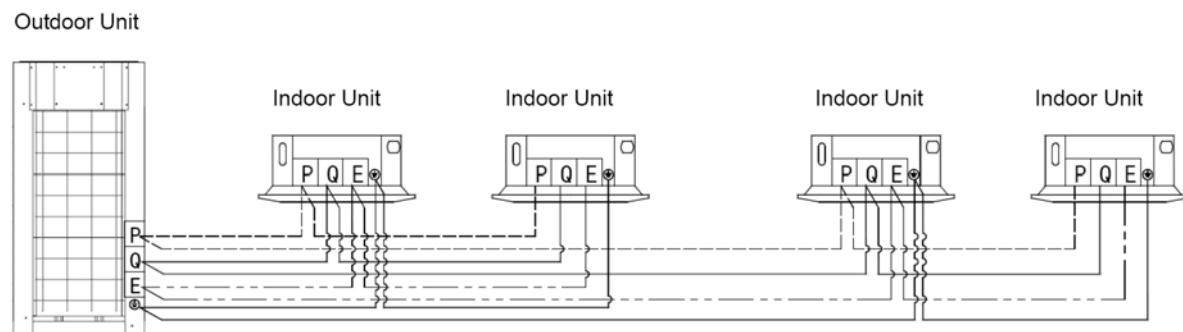
2) Typical wrong connection

a. Annular connection of signal line



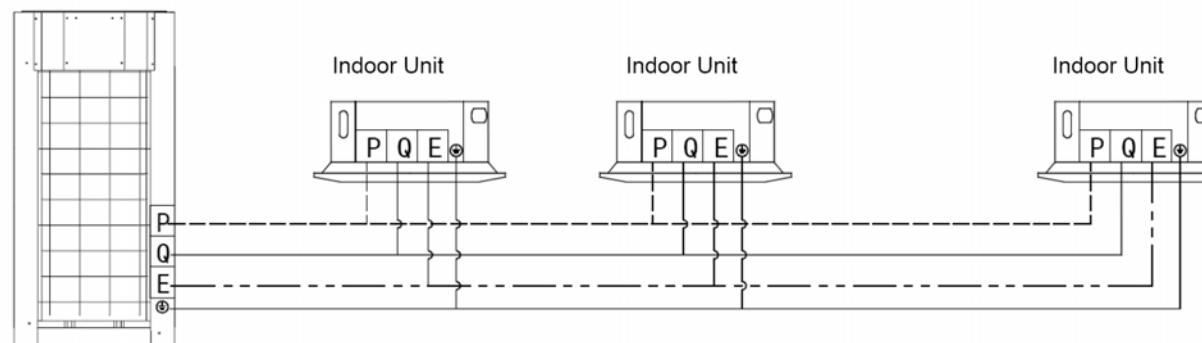
b. Star connection of signal line

-Star connection of part signal line



Star connection of all signal line

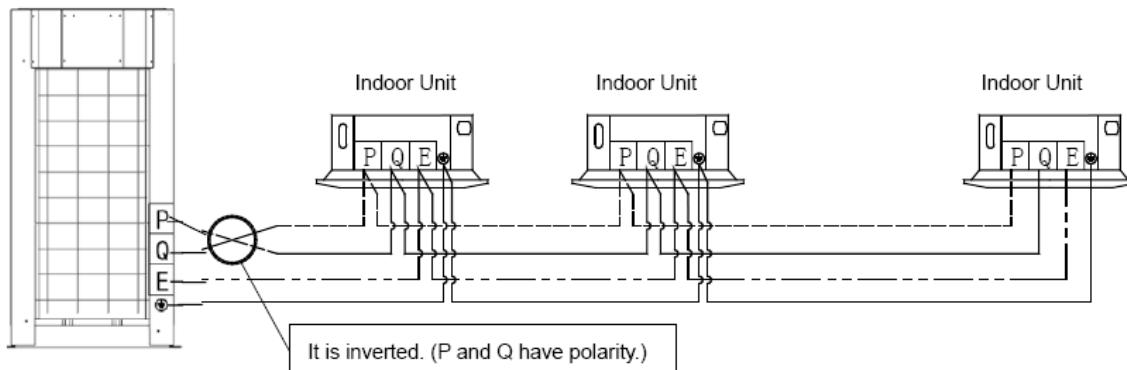
Outdoor Unit



c. Reverse connection of signal line

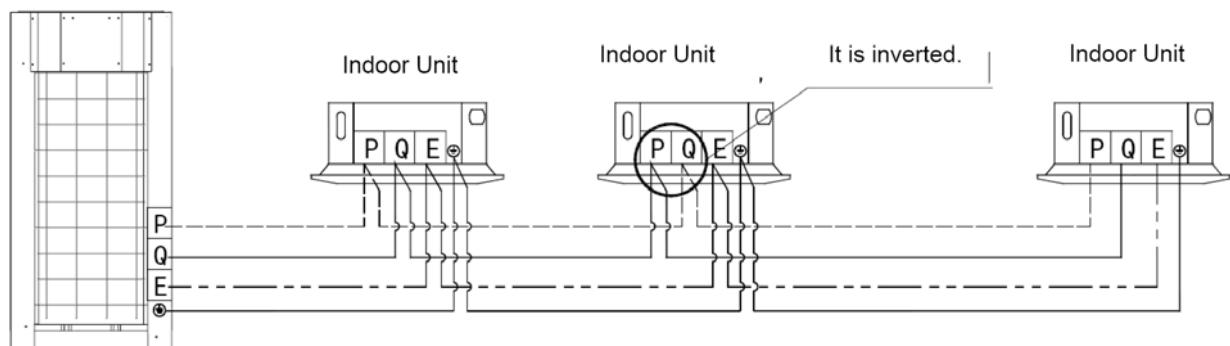
Outdoor unit – indoor unit

Outdoor Unit



Indoor unit – indoor unit

Outdoor Unit



Caution: shielded layer shall be connected to electrical panel.

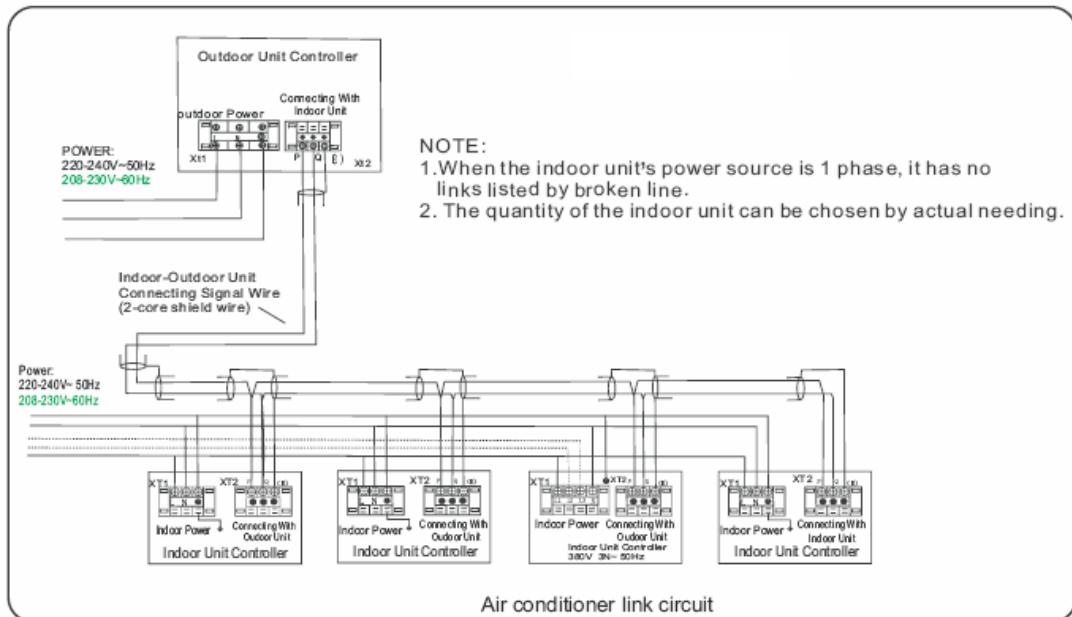
8.3.2 Specification of control wiring

Normal shield wires is as following:

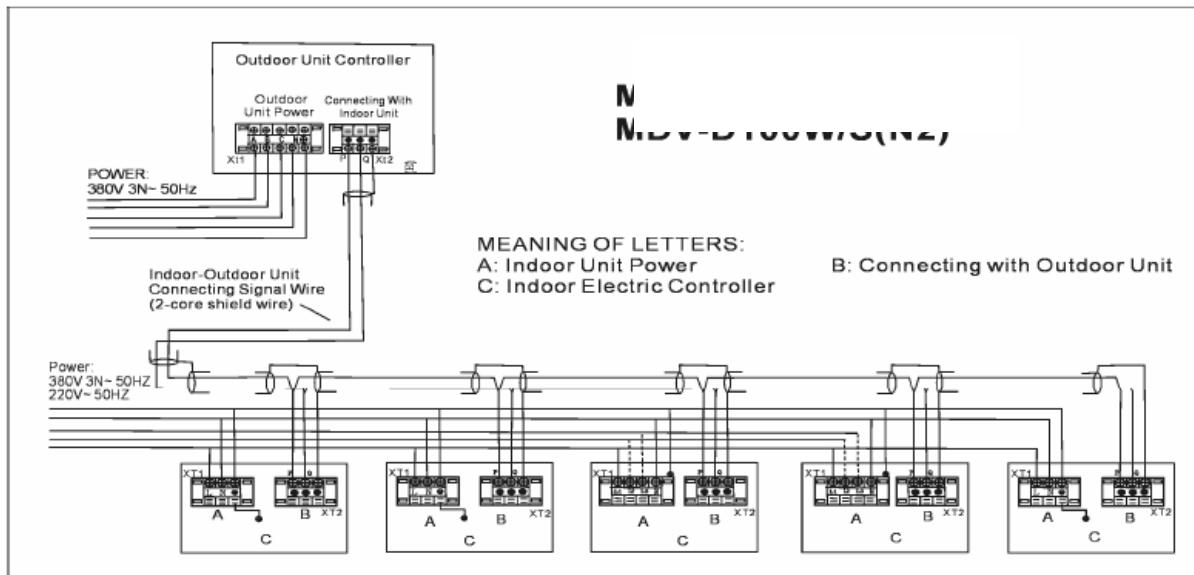
Model	Item
AVP	Fluorine resinous insulating shield wire, copper-core
AVP-105	Fluorine resinous insulating shield wire, copper-core, heat-
RVP	Fluorine resinous insulating shield wire, copper-core
RVP-105	Fluorine resinous insulating shield wire, copper-core, heat-
RVVP	Fluorine resinous insulating shield soft wire, copper-core
RVVP1	Fluorine resinous insulating twist shield soft wire, copper-core

8.4 Wiring Diagram (Indoor/Outdoor)

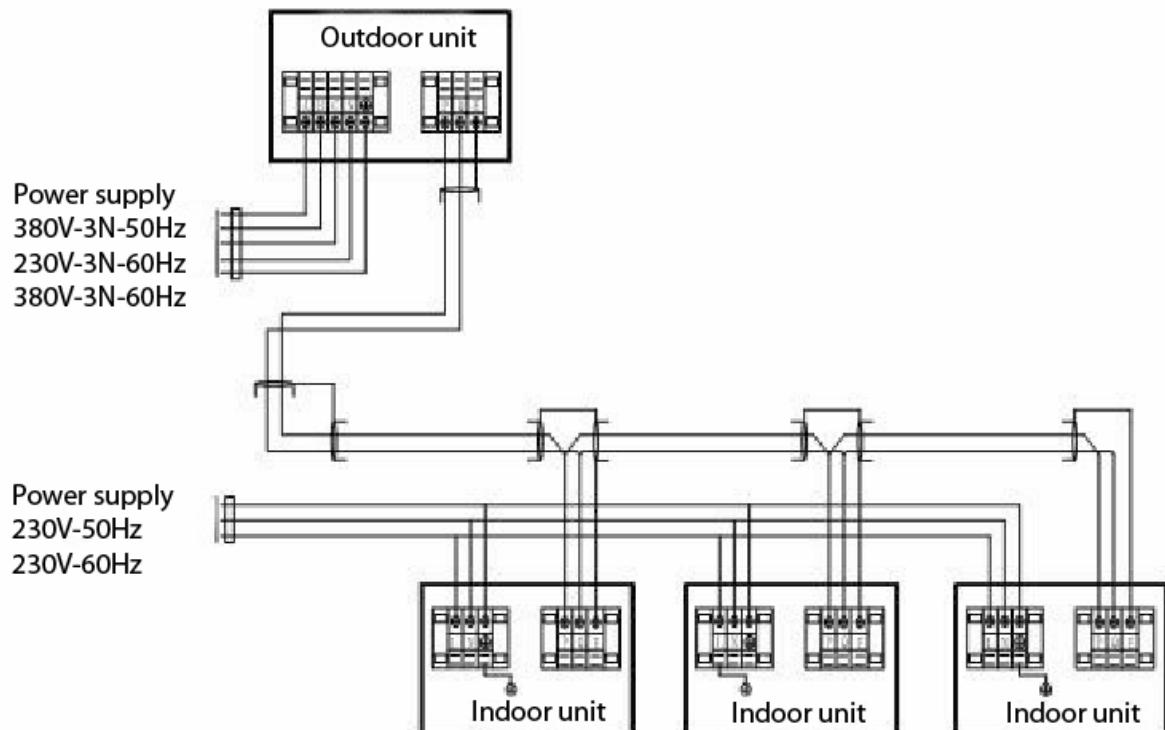
8.4.1. 10-14 kW Single phase



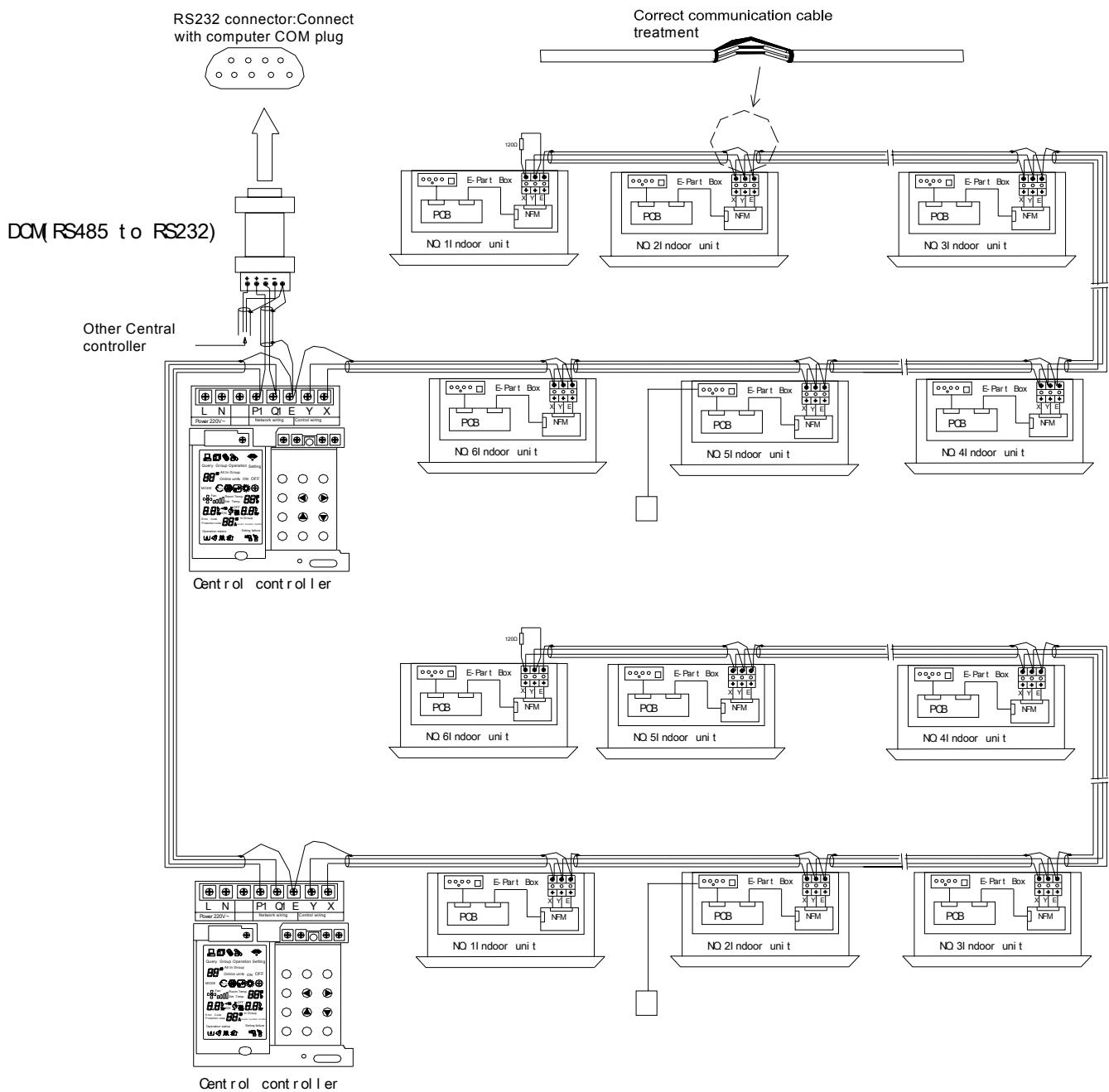
8.4.2. 10-14 kW Three phase



8.4.3. 28 kW



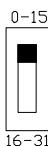
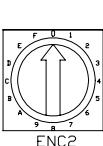
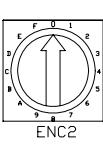
8.5 Wiring Diagram (Indoor/CCM)



Note: The 120 ohm resistance can be cancelled because we have strengthened the anti-interfere capacity in the program.

8.6) Address Setting

8.6.1 Address setting of indoor units

	Address setting of indoor units	Indoor unit	ENC2
Indoor unit No.0-15	 	No. 1	0
		No. 2	1
		No. 3	2
	
		No. 16	15
Indoor unit No.16-31	 	No. 17	0
		No. 18	1
		No. 19	2
	
		No. 32	15

8.6.2 Network address setting (S1/S2)

It must set address before using NIM. Every air-conditioner in network has only one network address to distinguish each other. Address code of air-conditioner in LAN is set by code switch on NIM, and the set range is 0-63.

Address Set	Address Code
  	00 ~ 15
  	16 ~ 31
  	32 ~ 47
  	48 ~ 63

Part 6 Control System

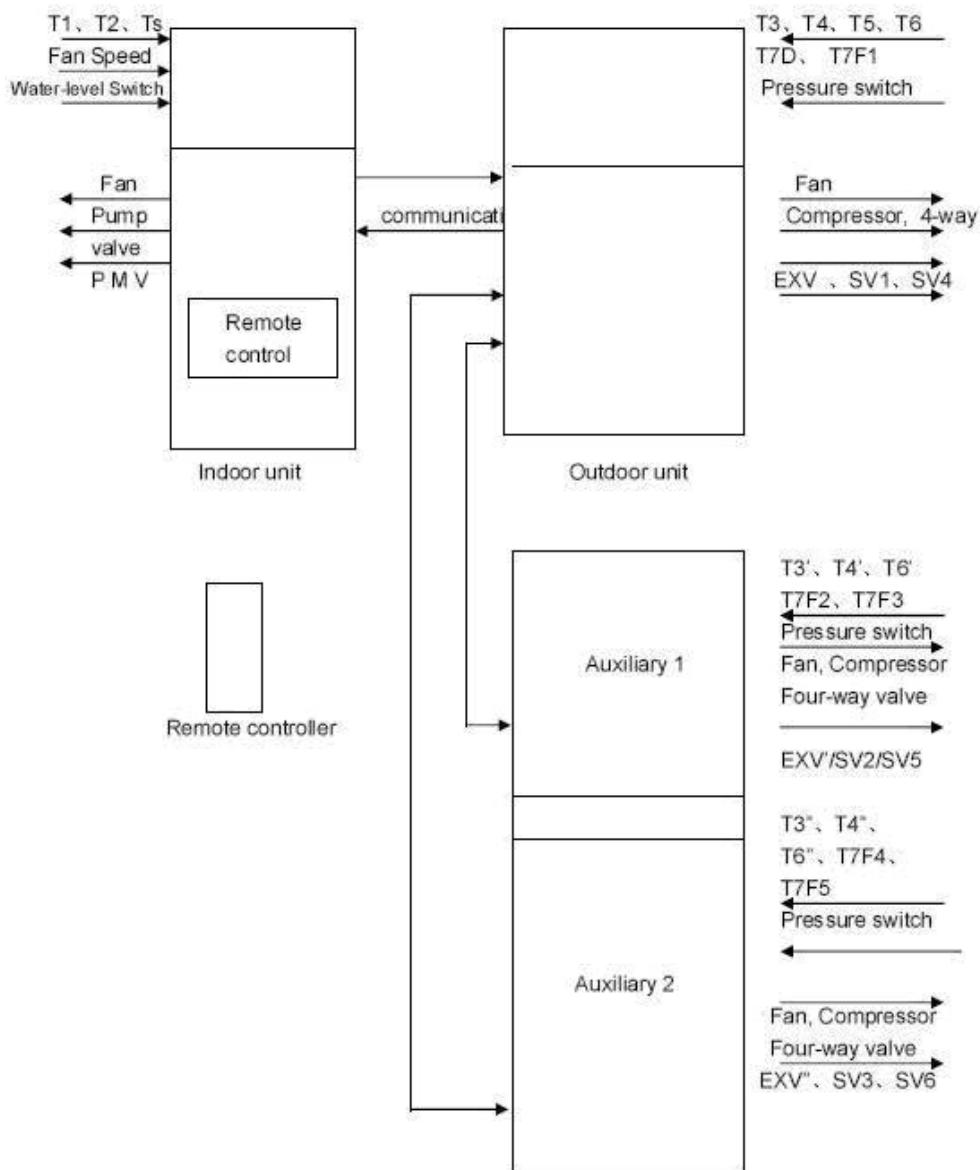
Contents

1. Control system.....	290
2. Indoor unit central control monitor system	301
3. Outdoor unit central monitor system.....	319
4. 3rd intelligent network control & monitor system.....	325
5. Remote controller.....	364
6. Receiver display.....	381

1. Control system

1.1) Brief introduction about controlling system

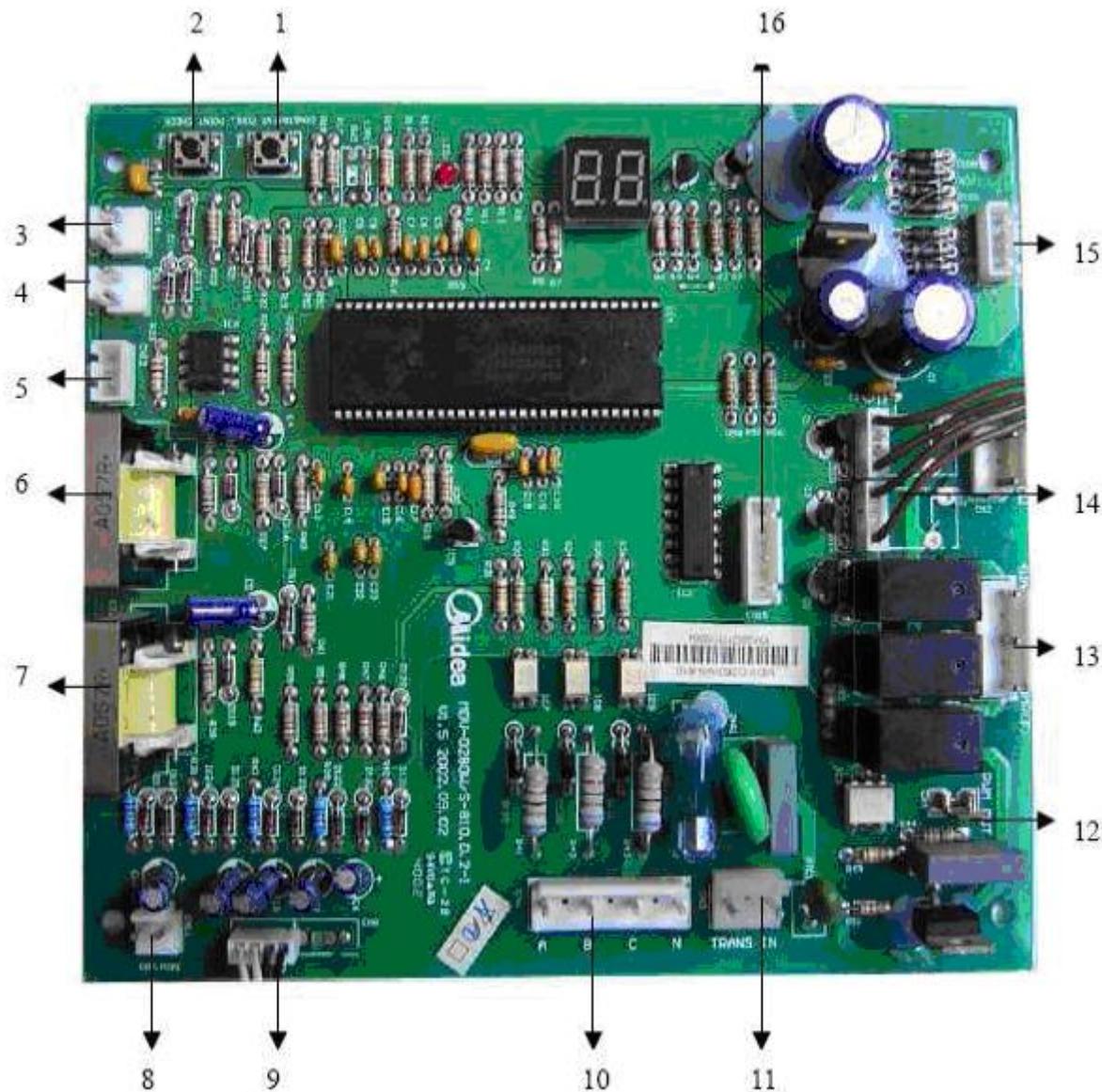
The control system adopts modular design, that is, all indoor units communicate with outdoor units, refer to the following figures for the control structure between indoor units and outdoor units. In the structure, the indoor control board receives the information from users (for exam. set temp., fan speed etc.) and environment (ex, indoor coil temp., indoor temp. etc.) ,and organize it to control the action of relevant parts such as EXV, four-way valve etc , then transmits the signals to outdoor control board through the following communication circuit. Outdoor main control board can deal with the information from indoor unit and figure out the best running mode, and then transfer the instruction to the outdoor Slave units and indoor units to carry out it.



Remark:

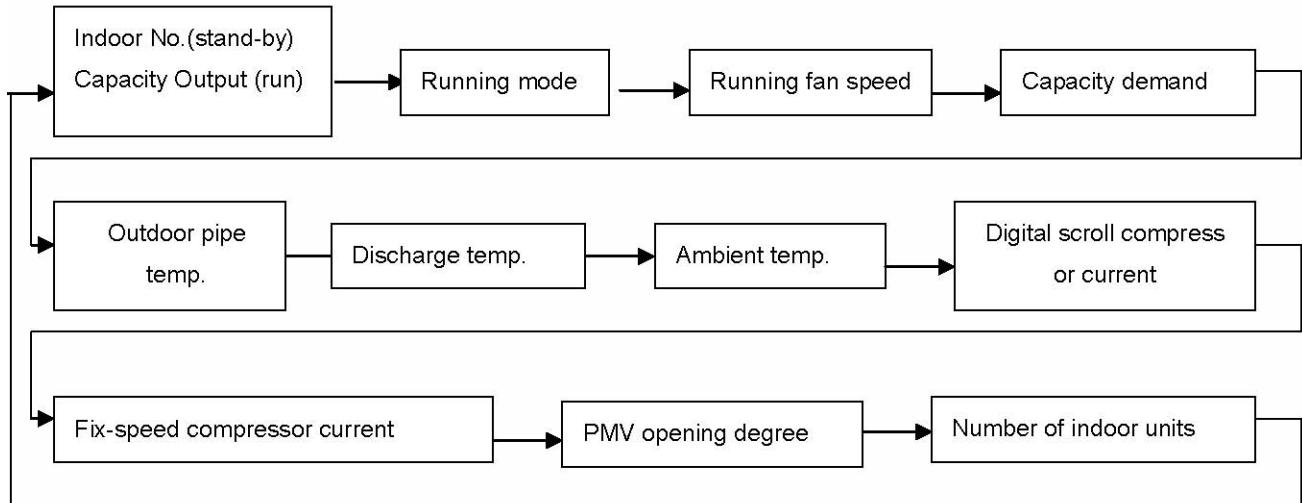
T1	Indoor ambient temp.
T2	Indoor evaporator middle part temp.
T2B	Indoor evaporator outlet temp.
Ts	Indoors setting temp.
T3	Outdoor heat-exchanger outlet temp. (Cooling mode)
T3'	No.1 auxiliary outdoor heat-exchanger outlet temp. (Cooling mode)
T3''	No.2 auxiliary outdoor heat-exchanger outlet temp. (Cooling mode)
T4	Outdoor ambient temp.
T5	Digital scroll compressor discharge temp.
T6	Outdoor heat-exchanger inlet temp. (Cooling mode)
T6'	No.1 auxiliary outdoor heat-exchanger inlet temp. (Cooling mode)
T6''	No.2 auxiliary outdoor heat-exchanger inlet temp. (Cooling mode)
T7D	Digital scroll compressor discharge temp.
T7F	Fix-speed Compressor F1 discharge temp. Fix-speed
T7F	Fix-speed Compressor F2 discharge temp.
T7F	Fix-speed Compressor F3 discharge temp.
T7F	Fix-speed Compressor F4 discharge temp.
T7F	Fix-speed Compressor F5 discharge temp.

1.2) Outdoor electric control board (Take 28 kW as sample)



1. Forced cooling: After pressing this button, the indoor and outdoor units start, and indoor/outdoor fan operate with high speed, and EXV open at a fix degree. (Normally it is not recommended to use this button, because in this condition the open degree of EXV is not adjustable, so there will be different operation temperature and pressure compared to normally operation)

2. Check, the check procedure is as follows:



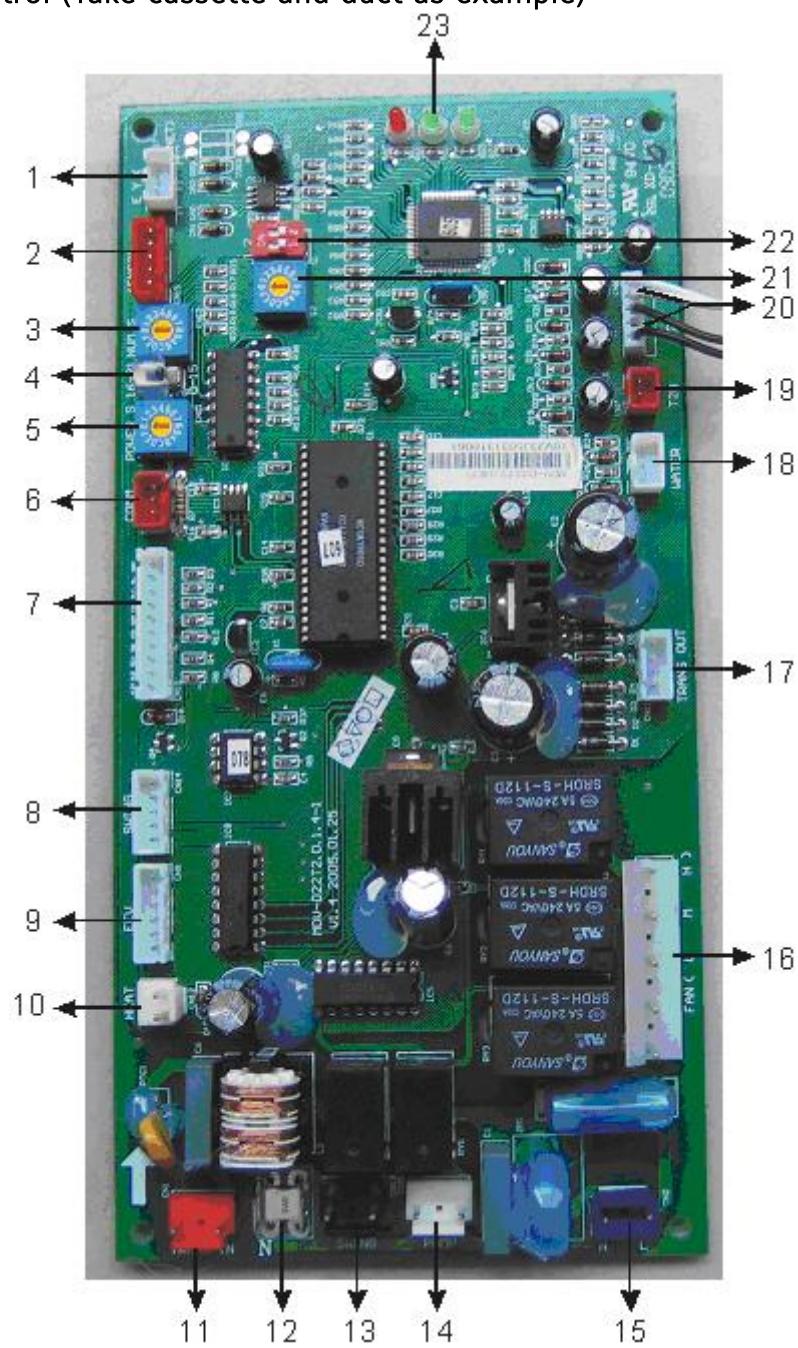
3. CN14 , Low pressure protection (L-PRO) , Check with +5vweak electric signal;
4. CN13 High pressure protection H-PRO, Check with +5vweak electric signal;
5. CN12 , Inter-communication between indoor and outdoor units, RS-485 signal (COM).The digital pipe will display "E2" malfunction when the indoor and outdoor units can't communicate for 1 minute.
6. Current protector, the one-phase current of fixed-speed compressor will pass this current protector and when the current is more than 16A, it will cut the power supply immediately to protect the compressor.
7. Current protector, the one-phase current of digital scroll compressor will pass this current protector and when the current is more than 16A, it will cut the power supply immediately to protect the compressor.
8. CN11 , Discharge temperature sensor of digital compressor COM.PIPE) , which inside in the digital compressor, the relevant temperature to sensor please see the appendix 2. If the discharge temperature is more than 140 ° C, the compressor and all of the system will stop and restart until the malfunction is eliminated.
9. CN6 , Three-phase power supply input , only check the phase-sequence or loss-sequence for the first time power on. The digital pipe display "E1" when first power on, the system will recover until there is no phase-sequence or loss-sequence occur. If there is no phase-sequence or loss-sequence occur for the first power on, the system will not check the phase-sequence or loss-sequence until power on over again.

-
10. CN5 , Transformer input (TRANS IN) , 220V input.
11. CN4 PWM OUT. Modulate the digital scroll compressor capacity.
12. CN3 Output the control signal to control the four-way valve, digital scroll and fixed-speed compressor, 220V output
13. CN2 –Outdoor High/Low fan speed. Use 12V DC to drive relay to output 220V AC.
14. CN1 Transformer output
15. CN15 –Outdoor EXV. When powering on for the first time, the EXV will close totally then open 350p staying in the waiting and open to a fixed degree according to the requirement after the compressor operated.

Malfunction Code of Outdoor unit

Display	Malfunction or Protection
E1	Phase sequence error
E2	Communication malfunction between indoor/outdoor units
E3	T3 temperature sensor malfunction
E4	T4 temperature sensor malfunction
E5	T5 temperature sensor malfunction
E6	Water-level alarm malfunction
P	High pressure protection
P	Low pressure protection
P	Compressor current protection
P	Compressor discharge temperature protection
P	Condenser high temperature protection

1.3) Indoor electric control (Take cassette and duct as example)



1. EXY (NET) — Net control socket

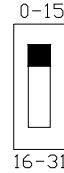
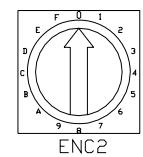
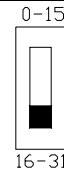
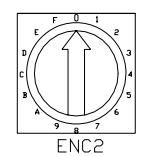
X, Y, E of all air-conditioners are connected together in Bus to the X, Y, E of CCM.

2. CN15 (ENC2) — Number Setting port from outside

It has same function as ENC2 ((NUM_S) — Number Setting (for outdoor), the difference is that it is suitable for some special indoor unit such as one-way cassette (compact), which has no enough space to operate ENC2 ((NUM_S) — Number Setting (for outdoor), so we support this port to extend Number Setting Switch outside.

3. ENC2 (NUM_S) — Number Setting (for outdoor)

The present address setting has been put outside the electric control board for convenient setting. The range is 0-F. Before indoor units are power on, the address setting must be finished and the address setting of indoor units that match with the same outdoor unit can't be repeated, or it may cause compressor jumping-down, indoor EXV can't open, indoor fan motor jumping-down, and so on. After finishing address setting, indoor units must be power on again and address setting must be checked again to ensure no repeated setting. The checking method is as follows: press the button on the display board for 5 seconds, the display board will display address setting, continue to press for 5 seconds, the display board will display power setting. The setting is as follows:

Operation lamp	Timer lamp	Defrosting lamp	Alarm lamp	Communication Address	Indoor kW
OFF	OFF	OFF	OFF	  0 ENC2	2.2 kW
OFF	OFF	OFF	ON	1	2.8 kW
OFF	OFF	ON	OFF	2	3.6 kW
OFF	OFF	ON	ON	3	4.5 kW
OFF	ON	OFF	OFF	4	5.6 kW
OFF	ON	OFF	ON	5	7.1 kW
OFF	ON	ON	OFF	6	7.2 kW
OFF	ON	ON	ON	7	9.0 kW
ON	OFF	OFF	OFF	8	11.2 kW
ON	OFF	OFF	ON	9	14.0 kW
ON	OFF	ON	OFF	10	
ON	OFF	ON	ON	11	
ON	ON	OFF	OFF	12	
ON	ON	OFF	ON	13	
ON	ON	ON	OFF	14	
ON	ON	ON	ON	15	
OFF	OFF	OFF	OFF	  16 ENC2	2.2 kW
OFF	OFF	OFF	Flash	17	2.8 kW
OFF	OFF	Flash	OFF	18	3.6 kW
OFF	OFF	Flash	Flash	19	4.5 kW
OFF	Flash	OFF	OFF	20	5.6 kW
OFF	Flash	OFF	Flash	21	7.1 kW
OFF	Flash	Flash	OFF	22	7.2 kW
OFF	Flash	Flash	Flash	23	9.0 kW

Flash	OFF	OFF	OFF	24	11.2 kW
Flash	OFF	OFF	Flash	25	14.0 kW
Flash	OFF	Flash	OFF	26	
Flash	OFF	Flash	Flash	27	
Flash	Flash	OFF	OFF	28	
Flash	Flash	OFF	Flash	29	
Flash	Flash	Flash	OFF	30	
Flash	Flash	Flash	Flash	31	

4. SW1 (0-15 OR 16-31) — Number Setting Switch (for outdoor)

Match with NUM_S, when switch down, number setting range is 0-15; when switch up, number setting range is 16-31.

5. ENC1 (POWER_S) — Power Setting

The range is 0~9. In normal case, the power setting of indoor units has been set well.

The matching capacity of indoor units is as follows:

Power setting	Capacity of indoor units (kW)
0	2.2
1	2.8
2	3.6
3	4.5
4	5.6
5	7.1
6	8.0
7	9.0
8	11.2
9	14.0

6. CN9 — Communication port (COM)

The indoor and outdoor units adopt RS-485 communication standard. P and Q are for communication and have polarity. E is shield layer and is connected to +5V on the display board to strengthen the anti-jamming ability of the communication wire. When the indoor and outdoor units can't communicate for 1 minute, it will display communication malfunction.

Indoor LED Malfunction Code

Display Contents	Explanation of Malfunction
All lamps are off	Standing-by
Operation lamp is on	ON
PRE./DEF. lamp is on	Anti-cooling or Defrosting
Timer lamp is on	Timer function is on
Timer lamp flashes	Indoor/outdoor communication
Operation lamp flashes	Indoors temp. Sensor abnormal
Alarm lamp flashes quickly	Water-level switch abnormal
DEF. Lamp flashes	Mode-confliction malfunction
Alarm lamp flashes slowly	Outdoor malfunction

7. CN10—Display board socket

The display board in digital scroll system is just to display running conditions and malfunction information. The manual button is just to check the address code and power code of indoor units

8. CN14—SWING

9. CN8 —Indoor EXV

12V weak-electricity control. After the compressor starts, the EXV of the matching indoor units under ON mode will be open at certain opening-degree and the EXV of the matching indoor units under OFF, standing-by, Fan mode or Mode confliction will be close.

When forced-cooling, all indoor EXV will be forced open.

The action of EXV can be seen from a 5-core or 6-core step-motor that is connected here to replace EXV.

10. CN12—Auxiliary electric-heater, 12V DC.

11. CN1—Transformer input socket (TRANS IN), 220V strong-electricity.

The power supply of 220V passes the fuse, anti-jamming inductance and PTC protector and then connects to the terminal in the PCB.

12. N — Zero-wire output socket.

Supply to indoor fan motor that needs separate zero-wire.

13. CN13—SWING

Output 220 V. Use 220V synchronization swing-motor. The action is as same as CN14 step-motor.

14. CN3—PUMP

220 V output. When indoor unit starts to cooling operation, the pump starts at once and running continue until stopping this mode. At any time, if the water-level in the water receiver raises to the position point of the water-level switch, that is, the water-level switch signal is cut down, the pump will start at once and forced running. If the water level falls to below the alarm water-level (the drain pump delay 1 minute to be off), operation recovers according to former setting mode. On the otherwise, after 3 minutes, indoor unit stops (Including pump) and display water-level alarm signal, and indoor unit takes part in the whole system operation according to standing-by mode. When again checking the water-level alarm signal is off, the protection will be released and recover operation according to former setting.

15. CN2—Power input 220V (L, N)

16. CN4—Indoor Fan output

220 V output. There are four relays in the electric control board and four-speed output (High/Middle/Low/breeze). The Low speed and Breeze speed have been short-connected, and the indoor breeze speed have been deleted, so even the relay of breeze speed suck-in, the indoor fan motor still operates in Low speed. That is, all indoor units have only three fan speeds; even operate in Low speed in heating anti-cooling and oil-return period

17. CN11—Transformer output (TRANS OUT)

16 V AC output. Input 220V AC to transformer, then output 16V AC, and then input to the electric board. There are two commute filter circuits, one is 7805, output 5V to the chip, the other one is 7812, output 12V to 2003 and relays.

18. CN5—Water-level switch (WATER)

Disconnect when full of water and be close when water level recovers normal. For indoor units without water-level switch, this switch needs be short connected.

19. CN7—Evaporator outlet temp. (T2B)

20. CN6—T1, T2

21. S2 —Address setting (for CCM)

This setting presents the address relative to a CCM, match with S1 switch, the address range is 0-63, Before using a CCM to group control indoor units or using YDS Intelligent Network Air-Condition Control& Monitor System to control indoor units, the address setting must be finished and the address setting of indoor units that match with the same CCM can't be repeated.

22. S1 —Address Setting Switch (for CCM)

Match with S2 — Address Setting (for CCM), setting indoor unit address relative to a CCM.

Address Set	Address Code	
	 ~ 	00 ~ 15
	 ~ 	16 ~ 31
	 ~ 	32 ~ 47
	 ~ 	48 ~ 63

23. LED's for Intelligent A/C control and monitor system.

From the left side:

LED1 (Run): When the AC communicated well with the NIM, it will be light; otherwise it will be extinguished. But when the system stayed in the remote controller lock mode and mode lock state, it will flash with frequency of 1Hz.

LED2 (Link): It will be light when there is any communication between the AC and Intelligent A/C control and monitor system including any receiving and sending the signal.

LED3 (ERR):It will flash with frequency of 1Hz when the communication malfunction occurs between the AC and Intelligent A/C control and monitor system or other malfunctions come from the NIM. It will extinguish in normality.

2. Indoor unit Central Control System

2.1) Network Interface Module



Suit to indoor unit which PCB hasn't network function.

(1) Basic Requirements

- Applicable Power Voltage Range: Input Voltage 220VAC±10%.
- AC Input Power Frequency: 50Hz/60Hz.
- Working Ambient Temp: -10 ° C ~ +43 ° C
- Working Ambient Humidity: RH40%~RH90%.

(2) Function Description of NIM

NIM means network interface monitor, it is integrated in the indoor PCB.

The CCM, Electric Control of air-conditioners, PC and Communication Wire together compose the network control system of air-conditioners. The CCM can connect up to max 64 indoor units, which together compose one LAN (Local Area Network), thus the CCM can central control to all air-conditioners in the LAN, including sending every kind of control order to every air-conditioner and setting running states of every air-conditioner. And the control signal of CCM can arrive to the farthest 1200 meters, which can meet various control requirements for customers.

(3) AUTORESTART function

It's a standard function of digital scroll system.

- ◆ System will not carry out the AUTORESTART function for the first time power on.
- ◆ During operating or stand-by, if power failure occurs, previous settings will restore after supplying power again.
- ◆ The following settings can be restored after power failure occurs: ON/OFF, MODE, FAN SPEED, and TEMP. LOCK by CCM and so on. And the following can't be remembered: ECONOMIC, TIMER ON, TIMER OFF, SLAVE Function and so on.

- ◆ AUTORESTART is only valid to the remote control signal receiving through NIM or information set by distance-control. It doesn't remember the operation by manual button and forced button. If power failure occurs and the air-conditioners are in operation by manual button or forced button, after supplying power again, no AUTORESTART signal will be sent to air-conditioners and the air-conditioners will be in stand-by.
- ◆ AUTORESTART has time-delay start function, which can avoid all air-conditioners start at the same time when power on. The delay time is decided according to the address code in LAN. And the calculation formula is $180s+n*2s$, where, n means the address code and the effective range is 0-63, and "s" means time unit Second. When the set delay time is arrived, send AUTORESTART signal to PCB.
- ◆ During AUTORESTART time-delay, if the air-conditioners receive the Mode set operation by users, including distance-control and local-control, the air-conditioners will cancel AUTORESTART and run according to the present operation by users.

(4) Communicating with CCM RS485 and Data Treatment

The CCM RS485 and NIM adopt main-Slave response communication. All NIM that connect with air-conditioners in network are Slave unit, and CCM is main unit. The NIM first deals with the order from CCM then send signal to PCB. The CCM can lock the running mode of air-conditioners by sending signal to NIM to avoid mode confliction (focus on commercial multi system).

(5) Communicating with PCB

The NIM receives communication data sent by PCB and adopt asynchronous serial communication. In normal case, the PCB doesn't send data. Only when the remote control signal interface receives the remote control signal from NIM, the PCB will reply response data at once.

(6) Receiving and treatment of remote control signal

The NIM can receive the remote control signal that conforms to the criterion of R51 Series Remote Controller. At the same time, NIM will deal with the data of remote control signal, then send signal to PCB.

(7) Malfunction Warning

If the signal sent by CCM can't be received for 1 minute, it thinks communication malfunction between NIM and CCM and malfunction code will be sent when responding to the communication data of PC. The malfunction will relieve after receiving the response information from PCB.

(8) Forced by outside

Air-conditioners can be forced ON/OFF through sending Forced ON/OFF to NIM by PC in network.

(9) CCM Lock

- ◆ If receiving CCM Lock information from PC, the air-conditioners can only be central controlled by PC. The NIM will not transfer and distinguish all remote control signals, but reject directly. And the remote control signal from remote controller and wire controller can't control the running state of air-conditioners.
- ◆ For operation by manual switch and forced button of air-conditioner that don't pass the passage of remote controller, the CCM Lock is invalid.
- ◆ When receiving CCM Unlock information from PC, the NIM will restore to deal with and transfer the remote control signal.

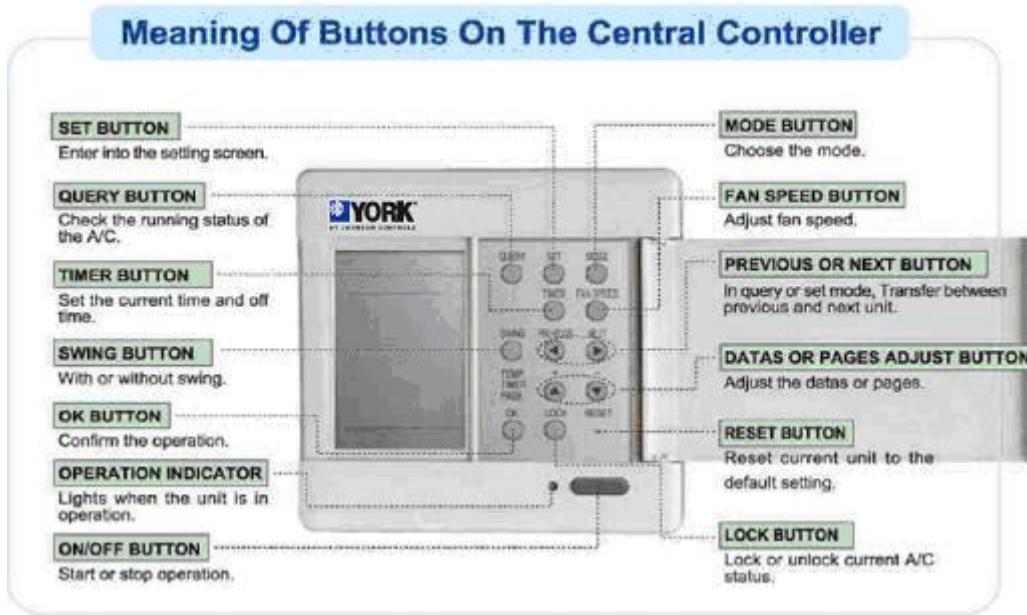
(10) Operation and State Indication of NIM Address Setting

It must be set address before using NIM. Every air-conditioner in CCM has only one CCM address to distinguish each other. Address code of air-conditioner in CCM is set by code switch S1 port on PCB, and the set range is 0-63.

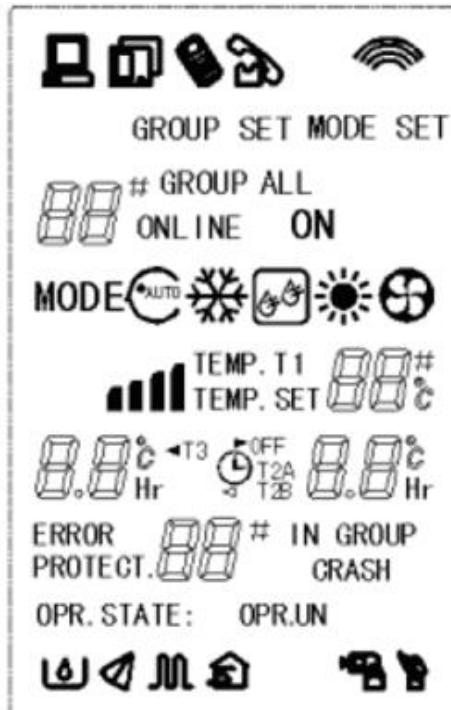
Address Set	Address Code
	00 ~ 15
	16 ~ 31
	32 ~ 47
	48 ~ 63

2.2) Central controller module

2.2.1 AMR03M Indoor central controller



Name and Function of Indicators on CCM LCD Screen



1) Common Display Data

Common display data will be indicated in all display pages.

- a. Figure  means CCM is in network control with PC or Gateway.
- b. Figure  means CCM is in communication connection with Function Module.
- c. Figure  means CCM is in communication connection with Message Remote Control Module.
- d. Figure  means CCM is in communication connection with Telephone Remote Control Module.
- e. If CCM is in normal communication with NIM, then (Blank), ,   will be displayed in dynamic circulation. Otherwise, no any display.
- f. Lock Symbol  means the CCM is in Lock state or the buttons are in Lock state. ON means the buttons are in Lock state or both CCM and Buttons are in Lock state, and 0.5 second flash means the CCM is in Lock state.
- g. When setting page layout, if the selected air-conditioner is in Remote Controller Lock state (in case that several air-conditioners are in operation, if only one is in Remote Controller Lock state, then that means in Lock state.), symbol  will display steadily. If in Mode Lock state, symbol  will flash in 0.5Hz. If Remote Controller Lock state and Mode Lock state exist at the same time, symbol  will display steadily.

2) Display Data Treatment

Data Display area adopts 7-segment code, and there are 5 groups of 2-digital 7-segment display.

a. TEMP. Display

TEMP. Display is applicable to the following: Set Temp. Ts (17-30°C), Indoor Return Air Temp. T1, Evaporator Pipe Temp. T2A, Evaporator Middle Pipe Temp. T2B, Condenser Pipe Temp. T3. And the allowable data display range is 0°C--99°C. If higher than 99°C, then display 99°C. If lower than 0°C, then display 0°C. What's more, the real display range also has relationship with the PCB temperature checking range. If no effective data, then display “-” and Unit symbol °C will be ON.

b. CURRENT Display

CURRENT display is applicable to Compressor Current. The allowable range is 0A-99A. If no effective data, then display “-” and Unit symbol mp  will be ON.

c. TIMER Display

TIMER is used to display the time of TIMER ON and TIMER OFF. The unit symbol Hr will be ON at the same time.

d. ERROR code display

ERROR is used to display malfunction warning data of the air-conditioner or the CCM. The display range of ERROR code is E0-EF, where, E means ERROR; 0-F means ERROR code, or Network ERROR display 00-OF#. If no ERROR, then display "E-" and # will be ON.

e. PROTECT. Code display

PROTECT. Is used to display malfunction warning data of the air-conditioner or the CCM. The display range of PROTECT. Code is P0-PF, where, P means PROTECT, 0-F means PROTECT. Code. If no PROTECT, then display "P-" and # will be ON.

f. ADDRESS display

ADDRESS is used to display the ADDRESS code of the present selected air-conditioner. The display range is 0-63, and at the same time will be ON.

g. Number Display of Online air-conditioners and ON/OFF air-conditioners

It is used to display the number of online air-conditioners in LAN and ON/OFF air-conditioners at present. The display range is 0-64.

h. Auxiliary function display

 Means ECONOMIC RUNNING,  means SWING,  means Auxiliary Heater,  means VENT.

i. Mode Confliction Display

Function Confliction display will flash at interval 1 second.

3) Stand-by Page Display

Stand-by page data consist of several pages and the page number is not fixed.

Stand-by page can display the total number of air-conditioners in network, under ON state and under OFF state. If one or more air-conditioners in network have malfunction, or the CCM checks other malfunctions, the Stand-by page will display the first ERROR Code from small to big according to the number. Other malfunctions can be queried by buttons "+" and "-". If no malfunction and one or more online air-conditioners in network are in ON state, the Stand-by page will display present main Running Mode, Set Temp. And Indoor Fan Speed. If no malfunction and all air-conditioners in network are in OFF state, ERROR Code nor Running mode will not be displayed.

4) Query Page Display

Query Page data consist of several pages and the page number is not fixed.

- When first entering into Query Page Display, the address of the first online air-conditioner will be selected in default and the data of the first page will be displayed.
- The data of other pages can be displayed in circulation by pressing buttons "+" or "-".

c. The running state data of different air-conditioners can be queried by pressing "Previous" or "Next" to select the address.

5) Running Mode Setting Page Display

Running Mode Setting Display only has one page. And display the selected mode, auxiliary function and the selected operation state.

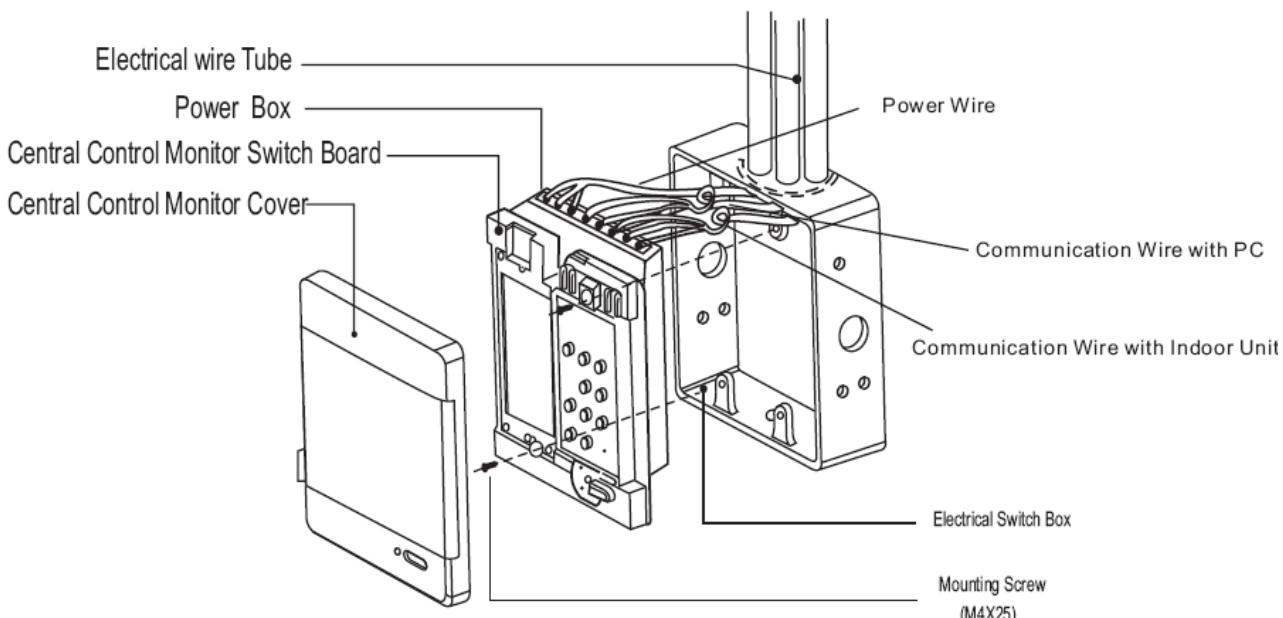
6) Installation

1. Adopt Electrical Switch Box

The diameter of Central Control Monitor wire must be suitable for its length.

Electrical wiring tube must be suitable for the wires.

Turn a screwdriver at the concave on bottom panel of the Central Control Monitor to remove the cover.



NOTE

- Never turn screws too tightly, otherwise the cover would be dented, or the Liquid Crystal would be broken.
- Do not cut wires when installing the cover of Central Control Monitor.

2. Installation

Terminals P, Q, E at the back of CCM are connected to the terminal P, Q, E of PC.

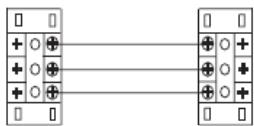
- The CCM power connects 220V~ 50Hz power directly to the terminal L, N,  At the back of wire controller.
- 1) The communication cable of CCM and power cable should not be placed in the same electrical wire tube and the two tubes should have 300-500mm distance.
 - 2) The length of CCM communication cable should not exceed 1200m.

- 3) The shield cable should try to avoid middle transfer connector. If have connectors, it had better to connect by terminal block.
- 4) After finishing connection, do not use Megger to have the insulation check to the signal wire.

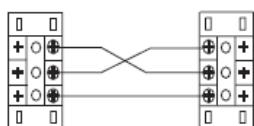
3. Wiring Method of CCM and NIM

The communication port between CCM and NIM has polarity, and terminal X, Y, E must connect to the responding X, Y, E. It is the same for the port between CCM and module of Rs485 to Rs232.

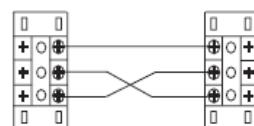
Correct connection



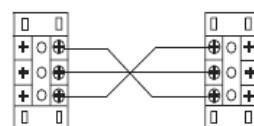
Incorrect connection



Incorrect connection



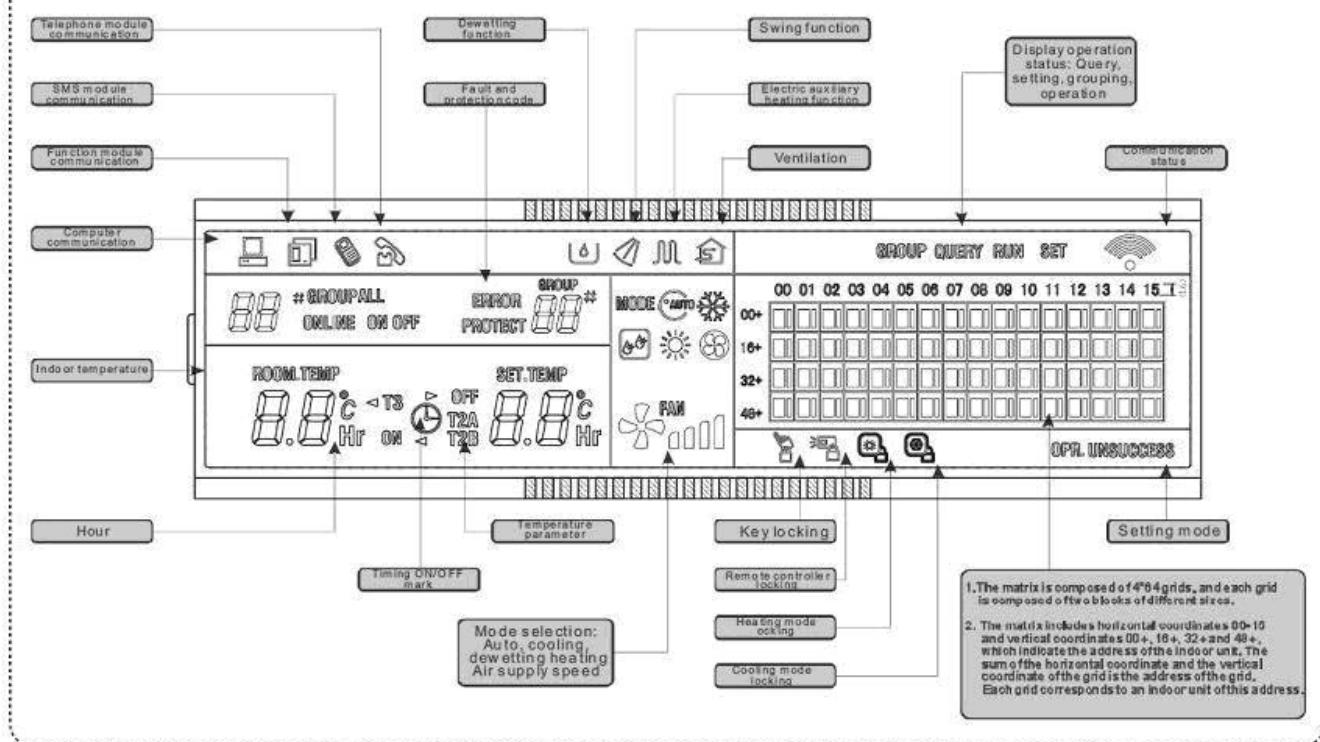
Incorrect connection



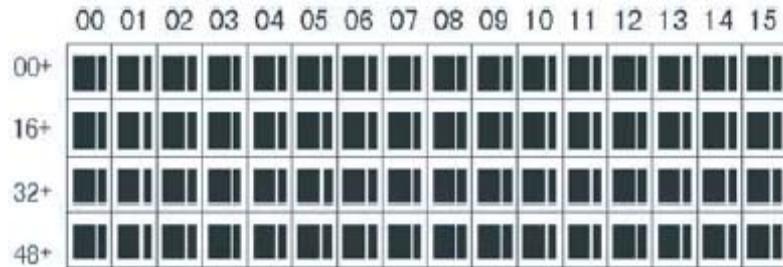
2.2.2 AMR03Y Indoor central controller



Full display of LCD



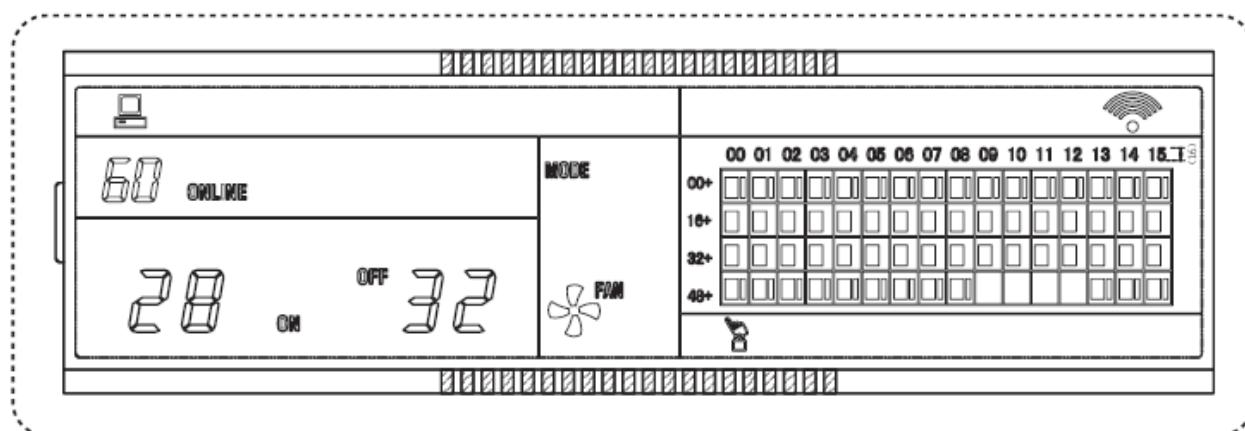
Liquid crystal matrix display description:



1. The liquid crystal matrix is composed of 4*64 grids, and each grid is composed of two blocks of different sizes (as shown in the above figure).
2. The matrix includes horizontal coordinates 00-15 on the upper side and vertical coordinates 00+, 16+, 32+ and 48+ on the left side, which indicate the address of the indoor unit. The sum of the horizontal coordinate and the vertical coordinate of the grid is the address of the grid. Each grid corresponds to an indoor unit of this address.
3. One grid is composed of two blocks of different sizes. The status

Indication table is as follows:

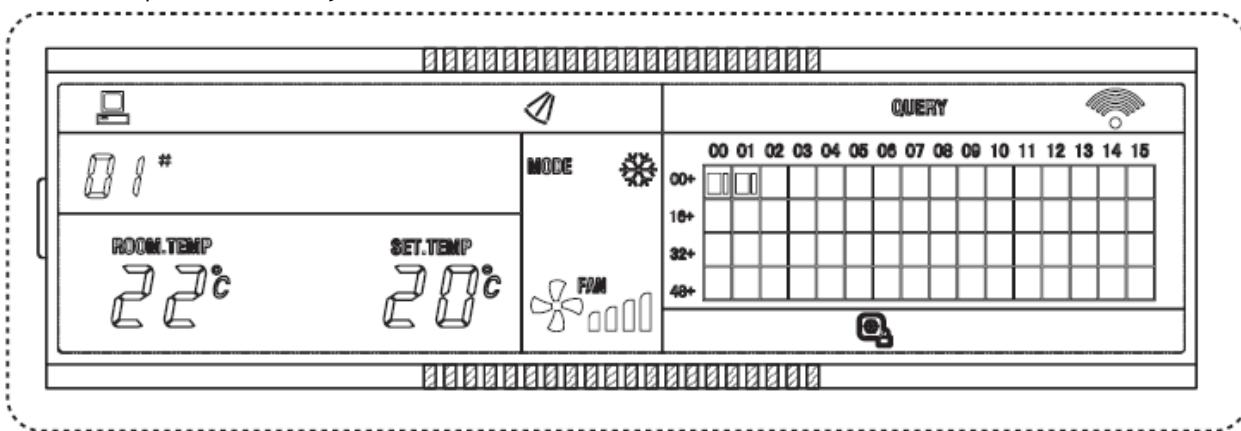
Status Object \ Object	Constantly on	Slow blink		Fast blink
Big black block	In-service	Selected		Out of service
Small black block	Power on		Fault of indoor unit	Power off



LCD display description

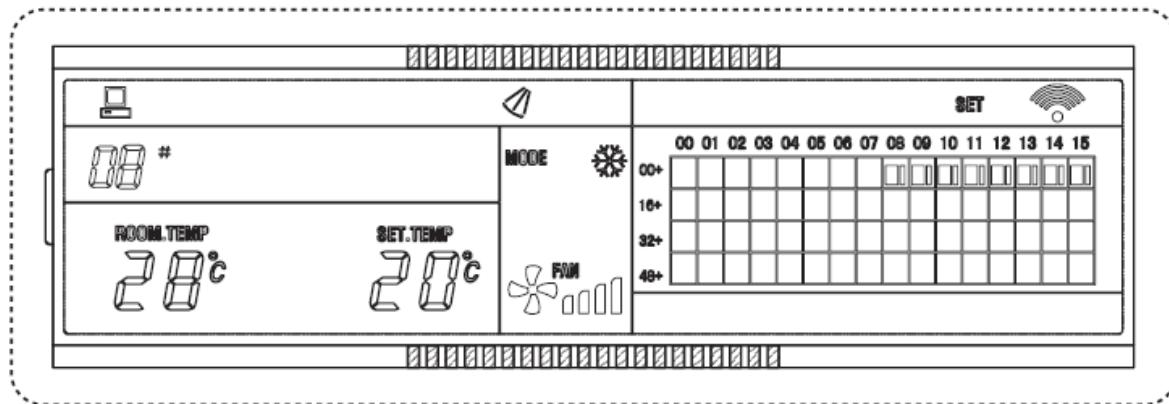
1. Description of the standby page

- 1) The LCD displays the standby page, 60 air conditioners are in service, of which 28 are powered on and 32 off.
- 2) In the matrix, the big dots of (00, 16+) and (15, 32+) are luminous, and the small dots are not luminous. It indicates the 32 air conditioners with the addresses from 16 to 47 are powered off.
- 3) In the matrix, the big and small dots of (09, 48+) and (12, 48+) are not luminous. It indicates the four air conditioners with the addresses from 57 to 60 are outside the network.
- 4) All other big and small dots in the matrix are luminous. It indicates all other air conditioners are in the network and powered on.
- 5) The address of the air conditioner is sum of the coordinates. For example, the address of (09, 48+) is $09+48=57$.
- 6) The centralized controller keypad is locked, and the centralized controller communicates with the computer normally.



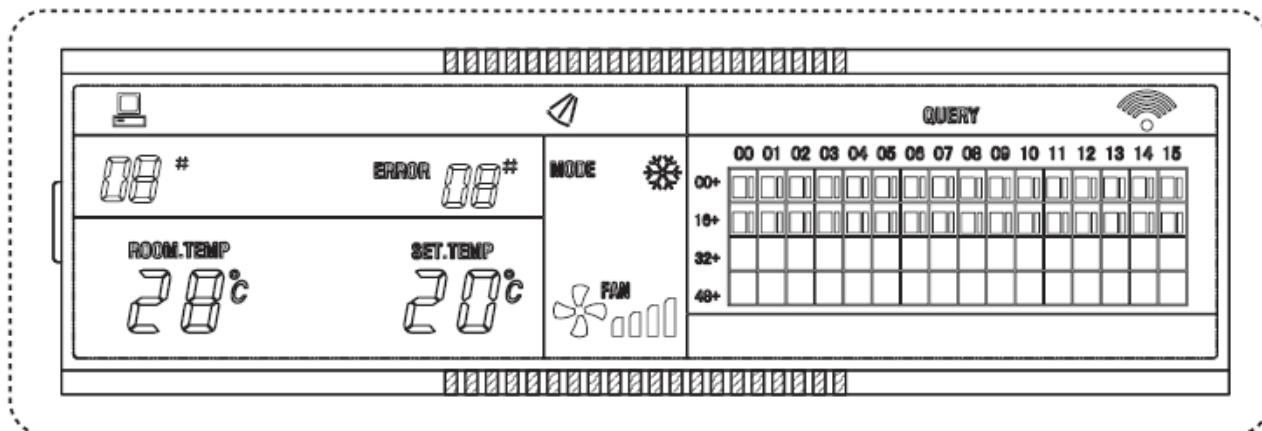
2. Description of the query page

- 1) The LCD displays the query page, and the air conditioner with the address of 08 is being queried. Mode of the air conditioner with the address 01 is: Cooling, strong air, swing on, indoor temperature 22°C, set temperature 20°C, cooling mode "lock".
- 2) In the matrix, only the big and small black dots at (00, 00+) and (01, 00+) are luminous. It indicates the in-service and power-on status of the air conditioners with the addresses of 00 and 01.
- 3) The centralized controller communicates with the computer normally.



Description of the setting page

- 1) The LCD displays the setting page, and queries the air conditioner with the address of 08. The mode of the air conditioner with the address 08 is: Cooling, strong air, swing on, indoor temperature 28°C, set temperature 22°C, cooling.
- 2) In the matrix, only the big black dots from (08, 00+) to (16, 00+) are luminous. It indicates the air conditioners with the addresses from 08 to 16 are in service.
- 3) The centralized controller communicates with the computer normally.



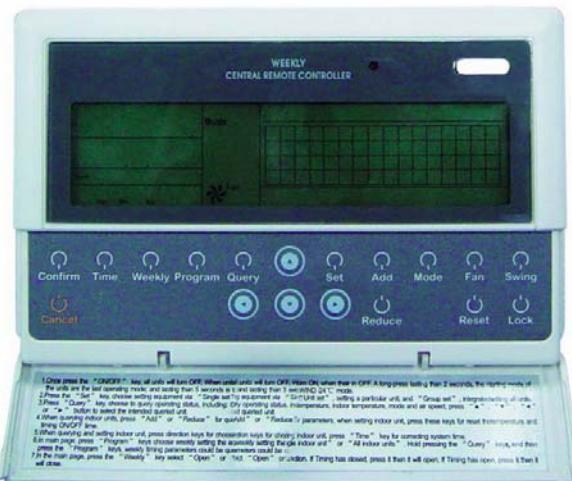
Fault page display description

- 1) Query the air conditioner with the address of 08 in the query page. The air conditioner with the address of 08 is faulty, and the fault code is 08. The big black dot below (08, 0+) blinks.
- 2) In the matrix, only the big and small black dots from (00, 00+) to (16, 15+) illuminate. It indicates the in-service status of the air conditioners with the addresses of 00 and 01.
- 3) The centralized controller communicates with the computer normally.

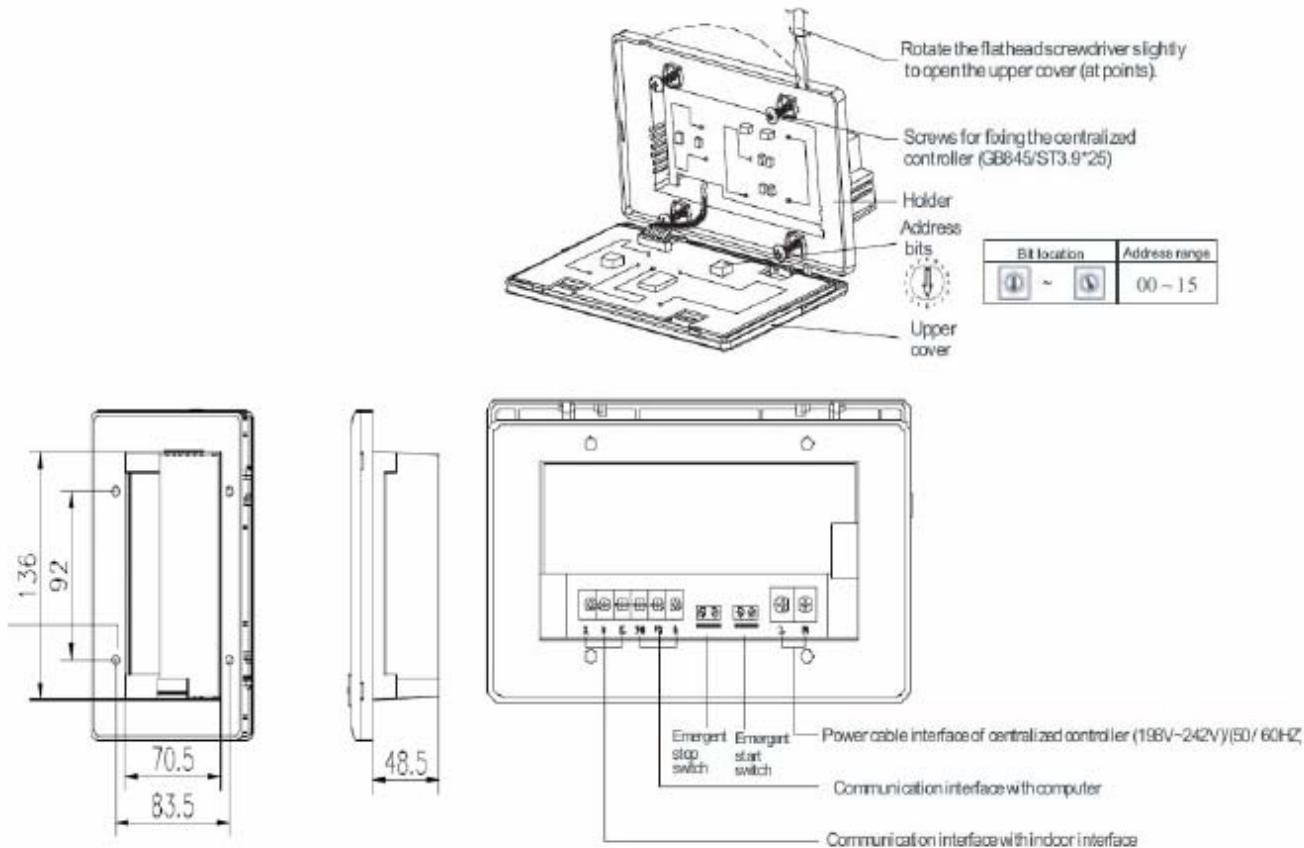
2.2.3 AMR09Y Indoor central controller

Designed base on the CCM03, max. 64 indoor units control, weekly schedule timer function.

Note: It can't be connected to the network control system.

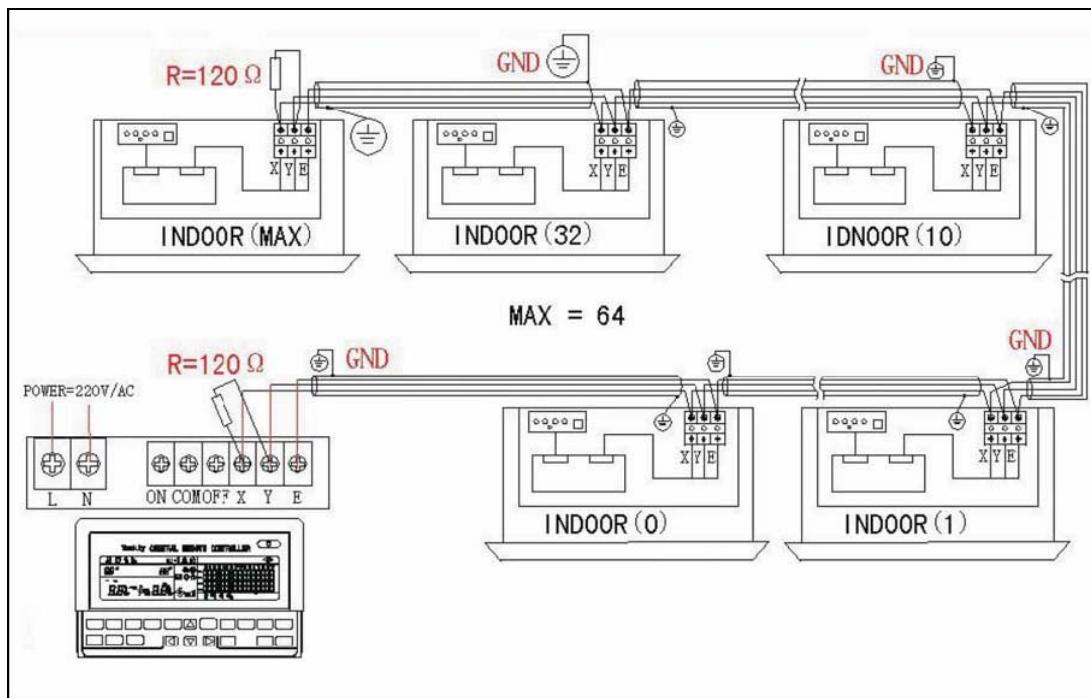


Dimensions

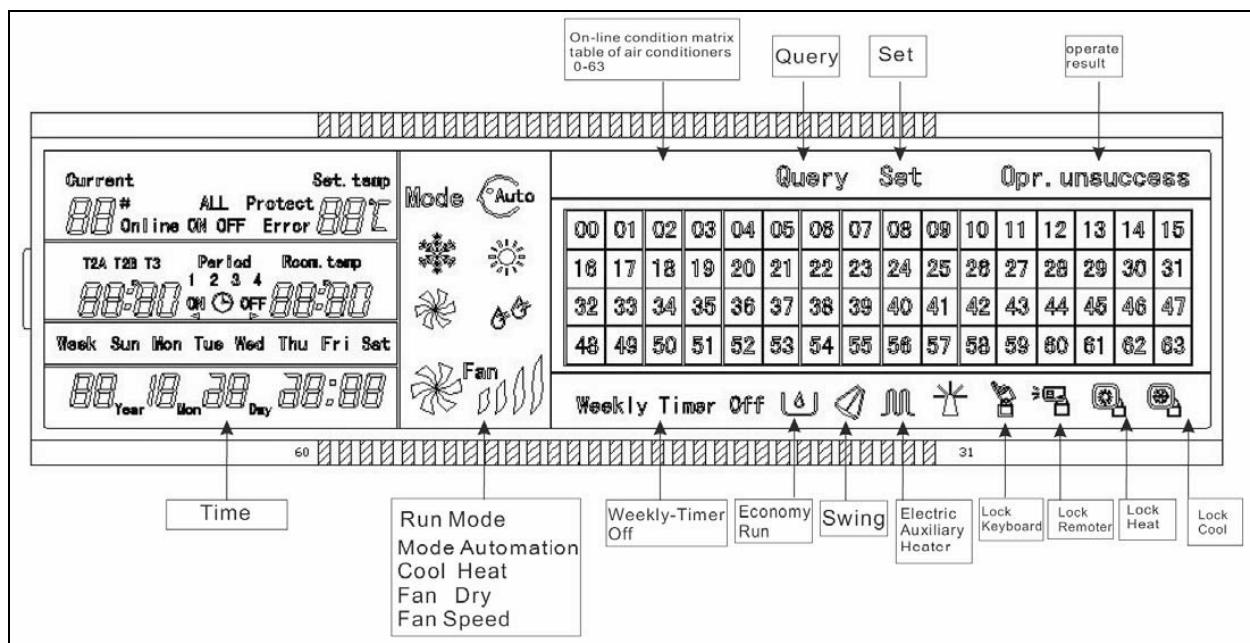


Installation Method:

Connecting diagram of network-based air conditioning system (There are two types of indoor units, namely indoor unit with external network interface module on the main control board or built-in network interface module in the main control board.)



General drawing of the liquid crystal display of the weekly-timer central controller:

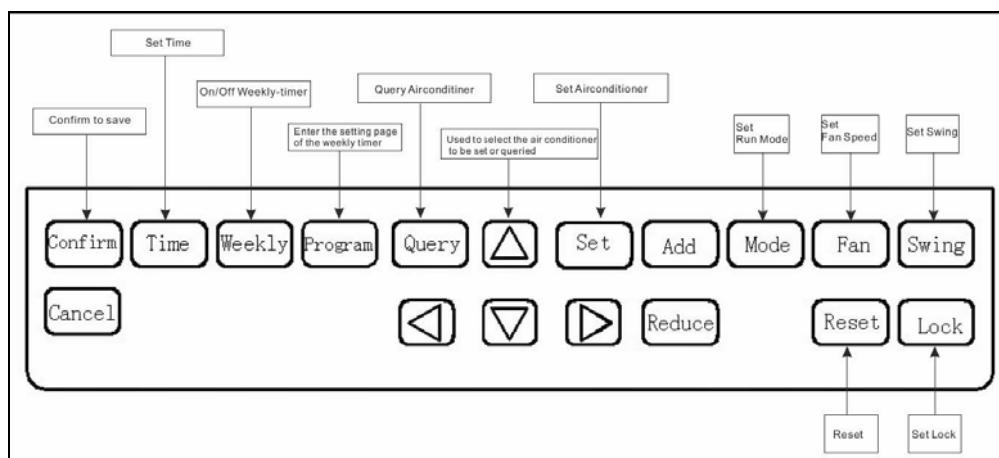


LCD icon description of the weekly-timer central controller:

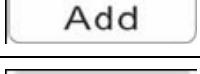
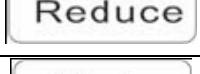
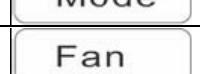
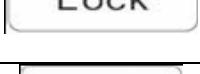
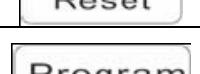
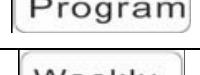
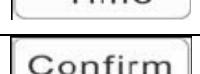
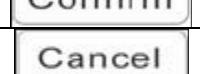
Icon	Meaning	Icon	Meaning
	Automation Mode		Fan Only Mode
	Cool Mode		Dry Mode
	Heat Mode		Fan Speed High/Middle/Low
	Electric Auxiliary Heater		Lock Heat
	Lock Cool		Lock Remote
	Lock Keyboard		Setting
	Querying		Operate Result
	Weely Timer Off		All
	Online		Protecting
	Error		Set Temperature
	Period1、2、3、4		Room Temperature
T2A T2B T3	T2A Indoor pipe Temperature A T2B Indoor pipe Temperature B T3 Outdoor pipe Temperature		Monday
	Tuesday		Wednesday
	Thursday		Friday
	Saturday		Sunday

Key description of the weekly-timer central controller:

General Key layout of the weekly-timer central controller:



Key instructions of the weekly-timer central controller:

Key Name	Usage
	Press the ON/OFF button. All air conditioners will be shut down if they are running; on the contrary, they will be started up. If you press the button for less than 5 seconds, the startup mode is the last running mode of the air conditioner. If you press the button for more than 5 seconds, the startup mode is cooling, high Speed, 24 degrees.
	Press the "SET" button, and then select "set single" or "set all". "Set single" indicates to set the parameter (such as mode/ temperature/Fan speed/ weekly timer) of an selected air conditioner. "Set all" indicates to set the parameter of all air conditioners controlled by the central controller.
	Press the "query" button to query the running condition of the air conditioner, such as on/off, temperature setting, indoor temperature, running mode and Fan speed. Press "up", "down", "Left" and "right" to select the air conditioner that you want to query.
	When querying or setting the indoor unit, press the "up" to select the indoor unit to be set or queried.
	When querying or setting the indoor unit, press "down" to select the indoor unit that you want to set or query.
	When querying or setting the indoor unit, press "Left" to select the indoor unit to be set or queried. In setting the weekly timer, it is used for selecting the day of the week and the time of startup and shutdown.
	When querying or setting the indoor unit, press "right" to select the indoor unit to be set or queried. In setting the weekly timer, it is used for selecting the day of the week and the time of startup and shutdown.
	When querying the indoor unit, press the "Add" button to query more parameter of the indoor unit. In setting the indoor unit, it is for modifying the setting temperature. In setting the weekly timer, it is for modifying the time of startup and shutdown.
	When querying the indoor unit, press the "Reduce" button to query more parameter of the indoor unit. In setting the indoor unit, it is for modifying the setting temperature. In setting the weekly timer, it is for modifying the time of startup and shutdown.
	In setting the indoor unit, it is used for setting the running mode of the indoor unit which includes Automation, Cool, Heat, Fan Only, Dry and Off. You can select among them.
	In setting the indoor unit, it is for setting the wind speed of the indoor unit which includes high speed, middle speed, low speed and automatic speed. You can select among them.
	In setting the indoor unit, it is for setting the swing-function of the indoor unit. The running mode is selected between "swing-on" and "swing-off".
	When setting, press the "Lock" button to lock the remote controller of all or single indoor unit. Press the "Query" button and hold under the main page, then repress the "Lock" button again to lock the keyboard of the central controller; press the "Mode" button and then repress the "Lock" button to lock the running mode.
	The central controller re-scans the indoor unit in the network as recharging after power off.
	Under the main page, press the "Program" button to set the weekly timer of "single indoor unit" or "all indoor units". Press the "Query" button and hold, and then press the "Program" button to query the weekly timer parameters of the indoor unit.
	Under the main page, press the "Weekly" button to start up or shut down the weekly timer function. .
	Under the main page, press the "Time" button for 5 seconds to enter the time-modifying status, and then press "Add" or "Reduce" button to modify the time. Press "Left" or "Right" to select minute/ hour/ day/ month/ year. Finally, press the "Confirm" button to save the modification.
	Save data and send the command required to the indoor unit, such as setting the mode of the air conditioner.
	Cancel the last operation and return to the last interface.

2.2.4 Malfunction and Protection Code Table

ERROR Code	ERROR Contents	PROTECT. Code	PROTECT. Contents
EF	Other malfunction	PF	Other Protection
EE	Water level checking malfunction	PE	Reserve
ED	Outdoor protection	PD	Reserve
EC	Clear malfunction	PC	Reserve
EB	Inverter Module Protection	PB	Reserve
EA	Compressor Over-current (4 times)	PA	Reserve
E9	Communication malfunction between PCB and Display board	P9	Reserve
E8	Fan motor checking out of control	P8	Compressor Over-current
E7	EEPROM malfunction	P7	Power Lack/Over Volt Protection
E6	Over-zero checking malfunction	P6	Discharge Low-pressure Protection
E5	T3 sensor malfunction	P5	Discharge High-pressure Protection
E4	T2B sensor malfunction	P4	Discharge Pipe Temp. Protection
E3	T2A sensor malfunction	P3	Compressor Temp. Protection
E2	T1 sensor malfunction	P2	Condenser High Temp. Protection
E1	Communication malfunction	P1	Anti-cooling or Defrost Protection
E0	Phase sequence or lack of phase	P0	Evaporator Temp. Protection
03#	CCM/PC(gateway) Communication Malfunction		
02#	CCM/Function Module Communication Malfunction		
01#	CCM/NIM Communication Malfunction		
00#	CCM/PCB Communication Malfunction		

2.2.5 Technical Index and Requirement

EMC and EMI should conform to the requirement of CE Certification.

3. Outdoor unit central monitor system AMR02Y



3.1) Summarize of outdoor CCM

The functional only can be realized when the system is in normal operation.

- 1) Central Monitor can realize the central control and data query to outdoor units. One outdoor CCM can connect max. 32 outdoor units by communication ports in outdoor PCB. And it adopts wire-connecting method communication to realize central control to the outdoor units in the same network.
- 2) CCM can communicate with PC through RS485/RS232 converter. One PC can connect max. 16 outdoor CCM and 16 indoor CCM. And PC can realize central control to outdoor units, central control to indoor units. Central control to indoor units and outdoor units, management, status query and so on.
- 3) The CCM and outdoor units, PC and CCM adopt main-Slave communication. In the network of CCM and outdoor units, CCM is the main unit and outdoor units are the Slave units.

3.2) Basic Requirements

- 1) Applicable Power Voltage Range: Input Voltage 220~240V/AC.
- 2) AC Input Power Frequency: 50Hz/60Hz.
- 3) Working Ambient Temp.: -15 °C ~ +43 °C
- 4) Working Ambient Humidity: RH40%~RH90%.

3.3) Operation

1) Key Words and Basic Functions

Power on or restore:

After the CCM is power on or restore, first all display segment on LCD will be on and last 3 seconds. Then all will be off 2 seconds later, the system enters into normal display state, the CCM is in the main page and display the data in the first page.

Network area addresses setting:

The PC or gateway can connect max. 16 sets CCM. Every CCM can be viewed as one network area and be distinguished by address set through the address setting button in keyboard. The setting range is 16-31.

Address setting method:

Pressing the Address set button repeatedly, the address will be increased one by one. When the address is equal MAX. 31 and you press once more; the address will restart from 16.

Indicator Display:

Indicator lamp will be on when the CCM is power on.

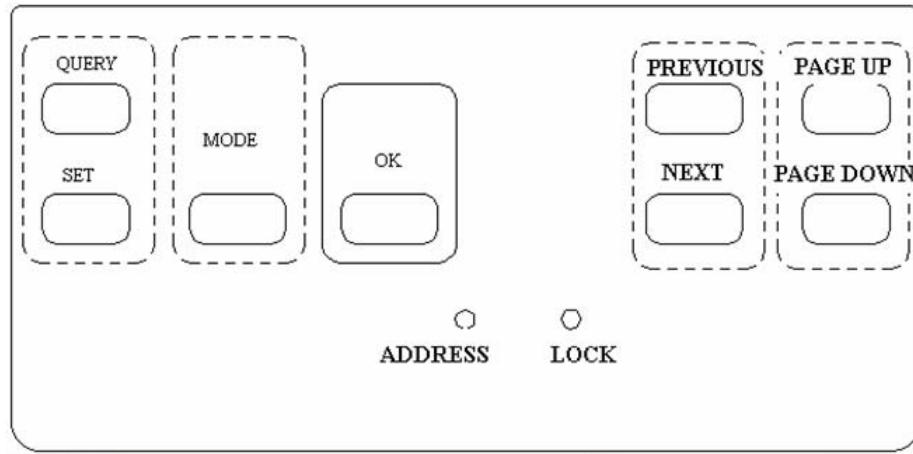
CCM Locked:

All the other button will not be on controlled anytime when pushing the CCM is locked. And unlock happens when receiving the lock.

Electric energy consumption query:

The Electric energy consumption can be queried through CCM when the outdoor unit has its ammeter.

2) Figure and function



2.1 Query Button

Push it to enter into the query state.

2.2 Previous Button

On the query state, push it to query in default the running states of other online air-conditioners.

2.3 Next Button

On the query state, push it to query in default the running states of other online air-conditioners.

2.4 Page Up Button

Pushing the Page Up button when choosing a online air-conditioner on the query state can display the parameters in previous page and this can be cycled.

2.5 Page Down Button

Pushing the Page Down button when choosing a online air-conditioner on the query state can display the parameters in next page and this can be cycled.

2.6 Set Button

Press Set button enter into Set Page.

2.7 Mode Button

Pressing OK button to enter into Mode Set, and select circularly between Forced Cooling and OFF state.

2.8 OK Button

Pressing OK button to confirm all setting and send to the corresponding air-conditioners.

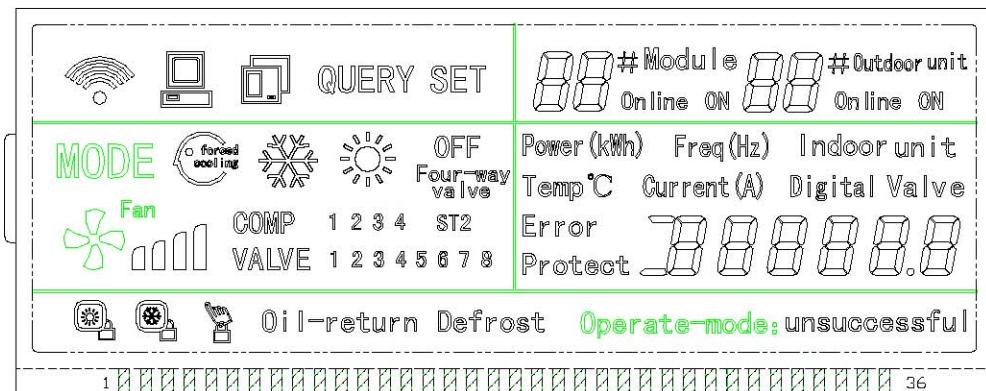
2.9 Lock Button

All the other button will not be on controlled anytime when pushing the button, and unlock happens when push it again.

2.10 Address Set Button

In Set page, pressing the Set button repeatedly, the address will be increased one by one. When the address is equal 31 and you press once more, the address will restart from 16.

3) Data



3.1 Common Display Data:

- ◆ Figure means CCM is sending query order.
- ◆ Figure means CCM is in communication with PC, and it will be off in 20 seconds with no communication.
- ◆ Figure means CCM is in communication connection with outdoor unit, and it will be off in 20 seconds with no communication.
- ◆ Press the OK button in setting page and waiting for 4 seconds, "success" or "fail" will be shown in the operation state area.

3.2 Stand-by Page Display:

- ◆ Figure means Online ON the total number of online modules
- ◆ Figure means Online ON the total number of online units.
- ◆ Stand-by Page can display the address of CCM with the address format of "Address XX", here "XX" equals the real address of CCM plus 16, so the range of "XX" is 16-31.

3.3 Query Page Display:

- ◆ Query Page Display the symbol of query and

◆ Displaying the address of selected outdoor unit with and

- ◆ Mode display:

means cool,

means heat,

means shut off,

means locked cool,



means locked heat.

◆ Fan Speed Display:



means low speed,



means middle speed,



means high speed.

- ◆ Compressor State Display: "COMP. 1 2 3 4 5 6"
- ◆ Electromagnetism Valve Display: "EMV. 1 2 3 4 5 6"
- ◆ 4-Way Valve Display St2
- ◆ Defrost Display: "Defrost"
- ◆ Oil Return Display: "OIL RETURN"
- ◆ Page 0 displays the consumption of electric energy with "ELECTRIC ENERGY kWh" and the number.
- ◆ Page 1 displays the input power frequency with "Frequency Hz" and the number.
- ◆ Page 2 displays the total number of indoor units.
- ◆ Page 3 displays the temperature symbol T3 with "TEMP. ° C", "T3" and the number.
- ◆ Page 4 displays the temperature symbol T4 with "TEMP. ° C", "T4" and the number.
- ◆ Page 5 displays the temperature symbol T6 with "TEMP. ° C", "T6" and the number.
- ◆ Page 6 displays the discharge temperature of compressor symbol C1 with "TEMP. ° C", "C1" and the number.
- ◆ Page 7 displays the discharge temperature of compressor symbol C2 with "TEMP. ° C", "C2" and the number.
- ◆ Page 8 displays the discharge temperature of compressor symbol C3 with "TEMP. ° C", "C3" and the number.
- ◆ Page 9 displays the compressor current symbol 1 with "CURRENT A", "1" and the number.
- ◆ Page 10 displays the compressor current symbol 2 with "CURRENT A", "2" and the number.
- ◆ Page 11 displays the compressor current symbol 3 with "CURRENT A", "3" and the number.
- ◆ Page 12 displays the digital capacity with "DIGITAL CAPACITY" and the number.
- ◆ Page 13 displays the openness of electromagnetism valve symbol 1 with "VALVE OPENNESS", "1" and the number.
- ◆ Page 14 displays the openness of electromagnetism valve symbol 2 with "VALVE OPENNESS", "2" and the number.
- ◆ Page 15 displays the most advanced malfunction with "MALFUNCTION" and the code.
- ◆ Page 16 displays the most advanced protection with "PROTECTION" and the code.

NOTE: The page will increase or decrease by 1 every time you press "PAGE UP" or "PAGE DOWN". Select the online outdoor unit by push the "previous" or "next" freely.

3.4 Set page display:

- ◆ Set page displays "Set"
- ◆ Mode display: Pressing MODE button to enter into MODE set, and select circularly between cooling  and OFF state.
- ◆ Set page displays the address of selected outdoor units and module.
- ◆ Pressing OK button to confirm all setting and send to the corresponding air-conditioners.
- ◆ "Successful" or "Unsuccessful" shown in the operation state area indicates whether the transmission is confirmed or not.

3.4) Malfunction and Protection Code Table

ERROR Code	ERROR Contents	Description	ERROR Code	ERROR Contents	Description
H3	Outdoor adding malfunction (valid for host unit)		PA	Defrost Protection	
H2	Outdoor decreasing malfunction (valid for host unit)		P8	Compressor Current 3rd Protection	
H1	Net communication malfunction		P7	Compressor Current 2nd Protection	
EF	Other malfunction		P5	Condenser High Temp. Protection	
E4T4	Temp. Sensor malfunction		P4	Discharge Pipe Temp. Protection	
E3T3	Temp. Sensor malfunction		P3	Compressor Current 1st Protection	
E2	Sensor malfunction		P2	Discharge Low-pressure Protection	
E1 E0	Communication malfunction Phase sequence or lack of phase		P1 P0	Discharge High-pressure Protection Compressor High Temp. Protection	
PF	Other Protection				
PE	Oil Balance				
PD	Oil Return				

4. 3rd Intelligent Network Control & Monitor System

4.1 Overview of System

1) Third-generation network monitoring and control system

YDS intelligent network air-conditioner management system is upgraded and improved on the basis of the previous YDS network management system. The upgraded system integrates the previous version of network monitoring and control system and network electricity allotment system and is applicable to the second generation of YDS commercial network. YDS and YDV outdoor units are used for the refrigeration system in case of electricity allotment.

2) Applications

This network system is ideal for applications in small and medium-sized buildings and can manage up to 1024 indoor units and 512 outdoor units. It is mainly used for centralized monitoring and controlling of air conditioning system of small and medium-sized buildings.

3) Characteristics

3.1 The system adopts constructive concepts, where the system assigns some properties to the air conditioners so that the air conditioners can contact with outdoor units and sets and meanwhile have billing features during use.

3.2 The system adopts the concept of hierarchical users to ensure the all the operations of users will not influence correctness of system data

3.3 The system pays attention to the operation data of indoor and outdoor units and this provides basis for future maintenance of air conditioners.

3.4 The YDS LON gateway offered by the system can facilitate control of system air conditioners by outside LON.

3.5 The system can select electricity allotment by changing the property of indoor unit.

3.6 The system can rapidly prompt the faults and troubleshooting method of a certain air conditioner within the system.

3.7 The system can fulfill on-line diagnosis service through INTERNET to ensure safe use of your air conditioning system.

4.2 Requirement of network system

1) Hardware Requirement

	Equipment specs	Recommendation	Remarks
PC	CPU : Pentium 4, 2G and above frequency Hard disk : 40G or more Memory : 512M or more Communication ports : Two or more R-232 ports, and three or more USP ports Operating system : WIN2000 or WIN XP	Lenovo, DELL products	
Uninterrupted Power Supply(UPS)	Capacity : 200 ~ 250W/20min Voltage : As per the site requirements Control signal : Power failure signal	APC SU700 series	
Watt hour meter(WHM)	Function : Dynamically change the address of WHM as per the standard and display the reading of WHM as per the dynamic address of main board input	Zhengtai DTS634	Conform to DL/T 645 - 1997 standard
Softdog		Yingdu	
Others	Shielded 2-core twisted-pair		Conform to network air conditioner installation guide

2) Indoor and outdoor CCM

2.1 Indoor centralized controller

2.1.1 The functions of indoor centralized controller include transmission of status information of indoor unit to the computer and of the control and query commands from the computer, and meanwhile it can query for the status of indoor unit and send control commands.

2.1.2 Overview of indoor centralized controller

- ◆ An indoor centralized controller and 64 YDS indoor units of air conditioner form an air conditioner LAN and thus centrally control all the air conditioners within the LAN, where various control commands can be sent to the indoor units and status can be set up to satisfy various control requirements. The control signal of centralized controller can be sent up to 1200m.
- ◆ A centralized controller enables interface with computer or gateway to realize centralized computer control over and parameter setting and status query of all the air conditioners in the network. Furthermore, it enables connection with WAN through the computer or gateway and thus computerized remote control.

2.2 Outdoor centralized controller

2.2.1 The controller enables centralized control over and data query of the outdoor units. Each controller can form a monitoring and controlling network with up to 32 outdoor units through a network interface module. Wired connection is used for communication and to enable centralized control over outdoor units in the network.

2.2.2 The controller can communicate the computer via RS485/RS232 transformation interface. Each computer can connect with 16 outdoor centralized controllers and 16 indoor centralized controllers. The computer enables central control over, management, status query, etc of the outdoor centralized controllers, indoor centralized controllers, indoor units and outdoor units within the monitoring and controlling system.

2.2.3 For communications between controllers and outdoor units, as well as between computers and controllers, the primary machine queries and the secondary machine replies. In the monitoring and controlling network consisting of controller and outdoor units, the controller is the primary machine, while the outdoor unit is the secondary machine.

3) Active watt-hour meter

3.1 Function of watt-hour meter

It is used to measure the electricity consumption of each outdoor unit.

3.2 Requirements on watt-hour meter

3.2.1 The system requires installation of watt-hour meter capable of reading via 485 communication interface and satisfying DL-T645-1997 standards (national standard watt-hour meter regulations)

3.2.2 The watt-hour meter shall conform to the relevant national technical standards and be confirmed by the power supply authorities.

3.2.3 The watt-hour meter shall conform to the technical requirements of GB/T1725-2002: Grade I and Grade II Static AC Active Watt-Hour Meters.

3.2.4 Installation site: Specified work temperature : -25 ° C ~ +55 ° C

Scope of work temperature : -40 ° C ~ +70 ° C Relative humidity : <85%

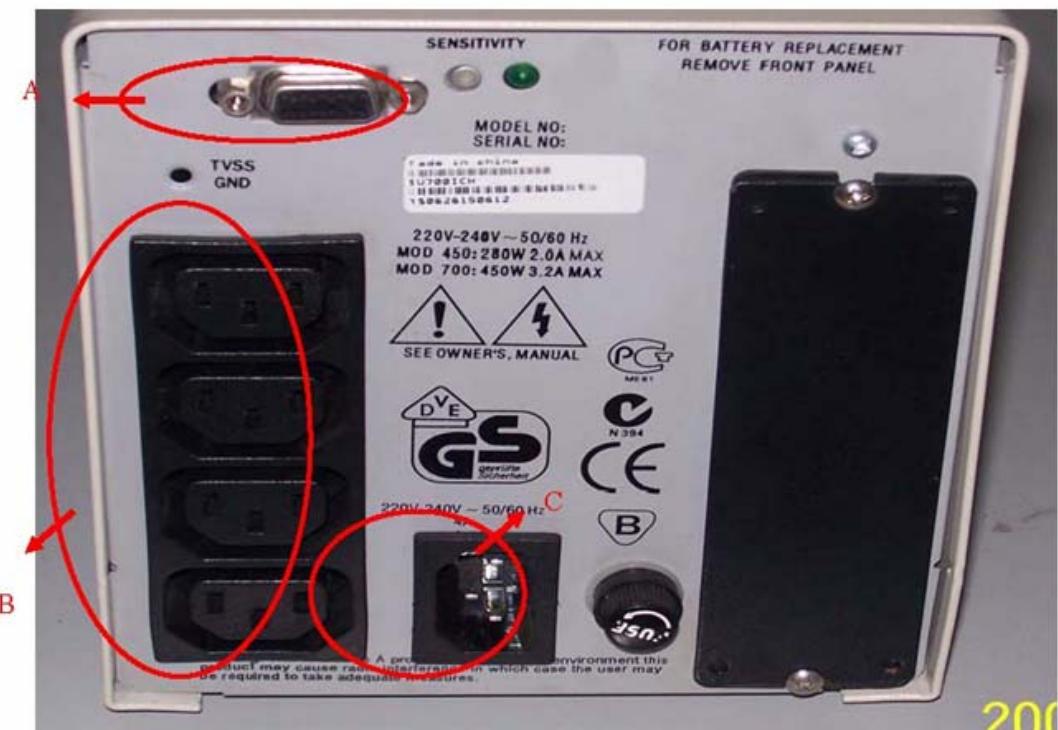
3.2.5 Wiring of watt-hour meter shall be referred to the wiring nameplate supplied with the watt-hour meter.

4) Uninterrupted power supply (UPS APC SU700 option)

Requirement	Performance
Capacity	200 ~ 250w/20minutes
Voltage	220 ~ 240V
Control signal	Power failure signal(from UPS) UPS off signal(to UPS)

4.1 Installation of UPS power

4.1.1 As per the use instructions supplied with APC SU700, connect the power supply line and signal line with the power supply and computer respectively.



- ◆ The signal line connecting UPS and computer may be connected with any serial port of the computer
- ◆ UPS power output port
- ◆ UPS power input port

4.2 Installation of APC SU700 power management software Soft dog

The soft dog is essential in starting the system. Insert the soft dog supplied with the network package purchased into any USB port and it is ready.



4.3 Installation of network system

4.3.1 Overview of system installation

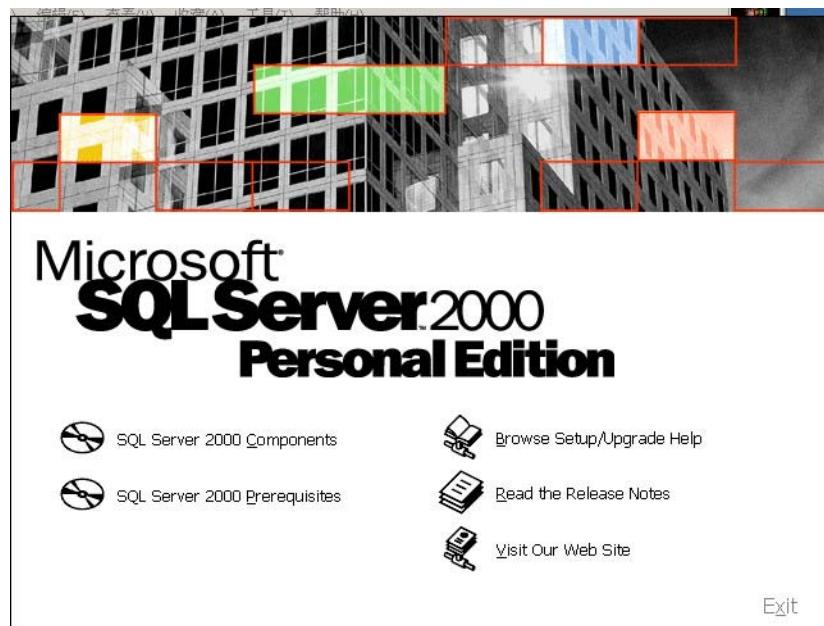
- ◆ Install operating environment of database SQL Server2000 Complete installation of SQL Server2000 as per the database installation in the installation manual.
- ◆ Install the network monitoring and control system.
- ◆ Run the system initiation tool
- ◆ Complete computer setup as per the type of operating system of computer

4.3.2 Installation Process

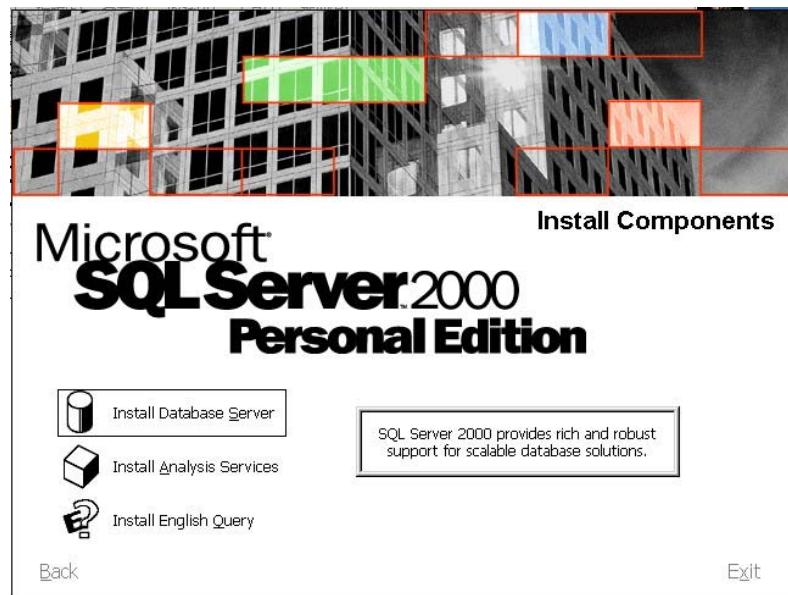
(1) Install Database SQL Server2000

The system adopts Microsoft SQL server 2000 simplified version with the installation process as follows:

- ◆ Double click AUTORUN.EXE to enter the following window :



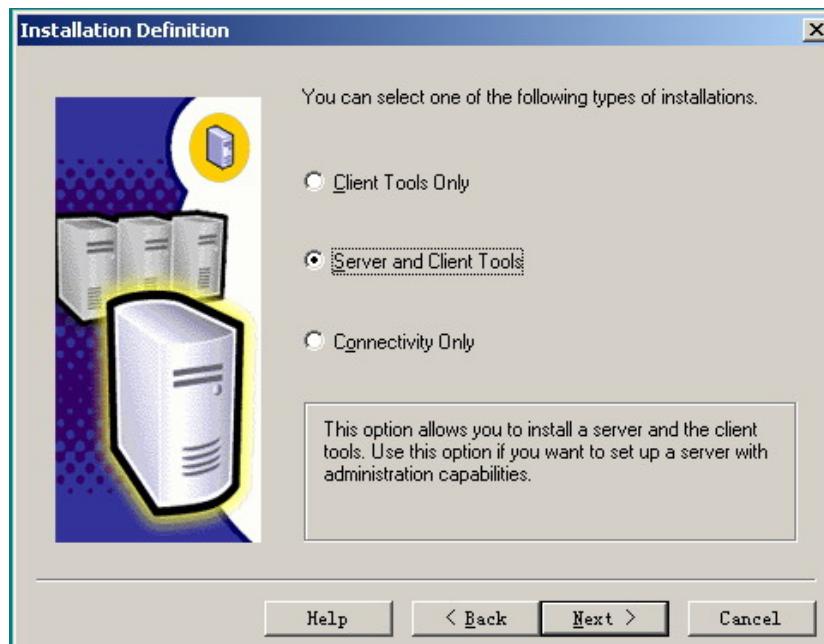
- ◆ Select "Install SQL server 2000 package", then



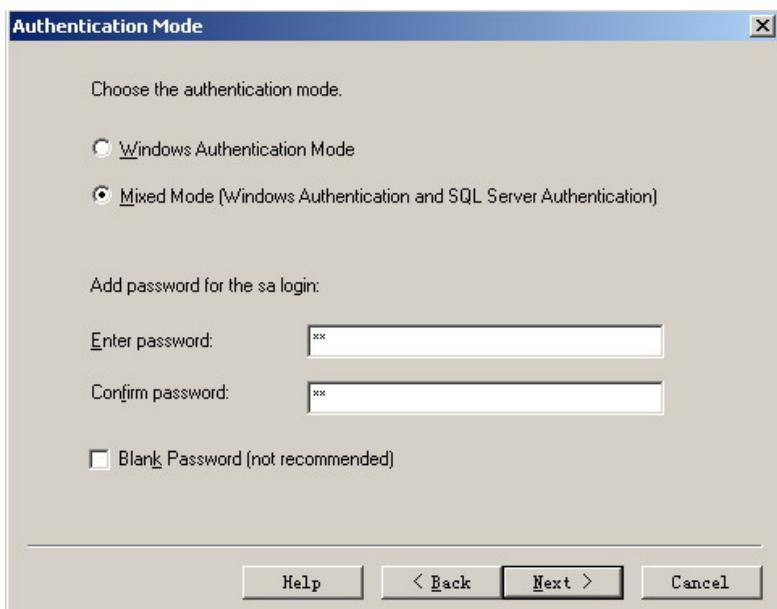
- ◆ Select "Install database server" to enter the formal installation window



- ◆ In case of first time installation of SQL server2000, select "Create a new SQL Server case or install customer tool". Then press "Next"



- ◆ Select the installation type "Server and customer tool"



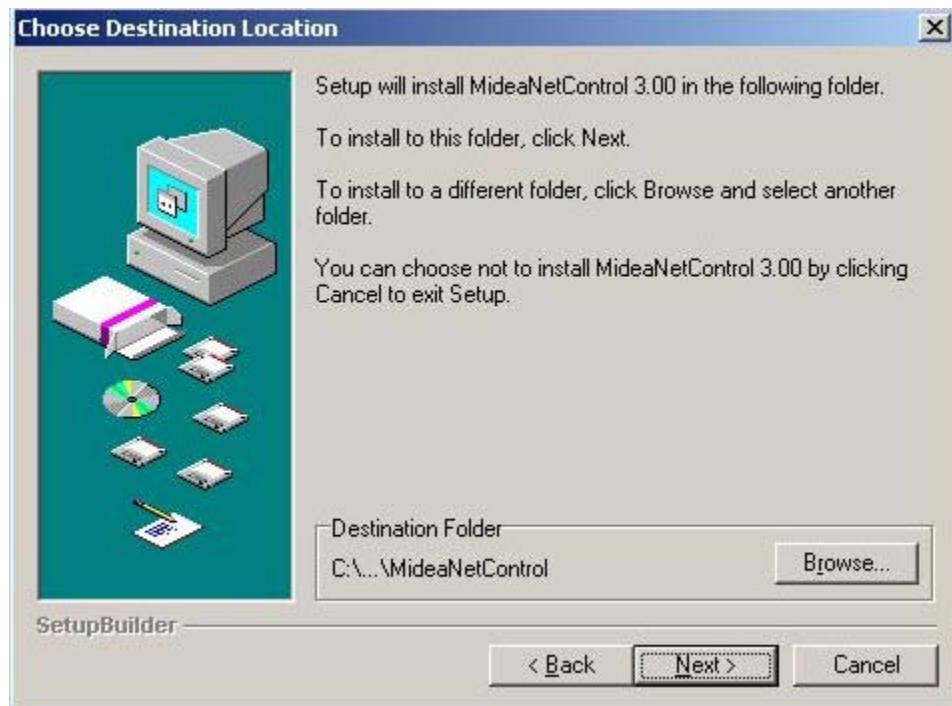
- ◆ Select ID verification "mixed mode" and input the logon password "sa" (As the password for connection between system and database is SA, the logon password must be SA). Then press "Next" to automatically complete installation.

(2) Installation of Network System

- ◆ Run SetupEx.exe in the installation package and then the window below will be displayed :

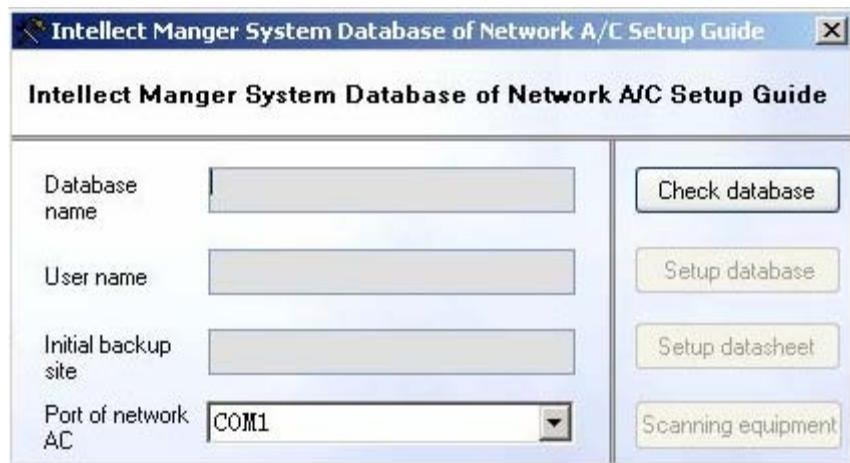


- ◆ Go on pressing "Next" until completion.



◆ System initiation

Before installation of system, it is essential to firstly install Microsoft SQL SERVER2000 (refer Third Generation Network monitoring and control system operation manual for installation process). Then begin system installation and after that run C:\Program Files\SCUT\YDSNetControl\YDSIniting.exe



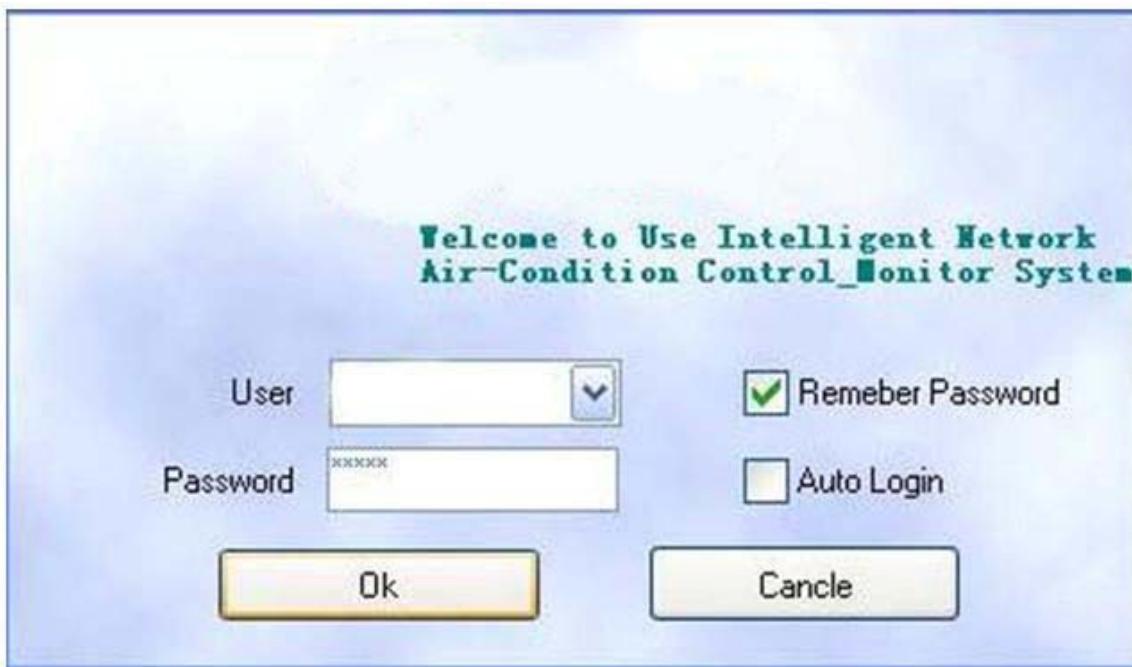
◆ Press "Test Database" and then a password box is prompted. The password is in the installation guide file of the installation CD.

- ◆ Execute the buttons in the window from up to bottom to complete system initiation.
- ◆ After completion of the above process, all the indoor units, outdoor units, indoor centralized controllers and outdoor centralized controllers will be stored in the database according to their addresses.

(3) Operation of system

3.1 User logon

Double click the shortcut icon of new system to display the following window:



3.1.1 User can be created in the database of system and selected through the drop down box of account in this window.

3.1.2 If you select remembering password, you can logon to the system only by press OK each time.

3.1.3 If you select auto logon, you can enter the system by pressing the user name and password each time.

3.1.4 User authorities the users may be divided into super administrator, administrator and user.

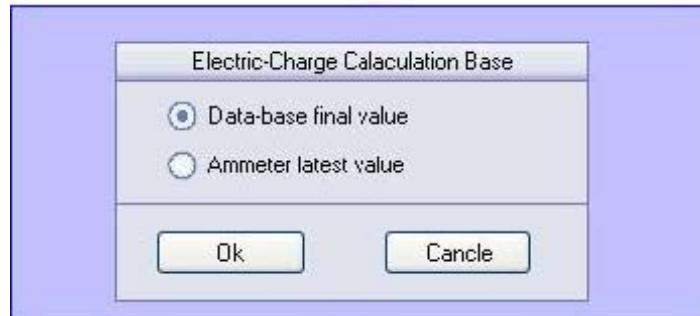
Super administrator has the authority to operate all the pages, including all the authorities such as communication diagnosis, communication status browse, system construction, query and control of air conditioners and centralized controllers, query of outdoor units and group schedule management.

Administrator has all the authorities of super administrator except communication diagnosis and communication status browse, and mainly has the function of site construction of system and system management.

User mainly has the function of main window, uniform setting window, indoor centralized controller window, air conditioner window, group operation, schedule management, report query, etc.

3.2 Electricity billing base reading window

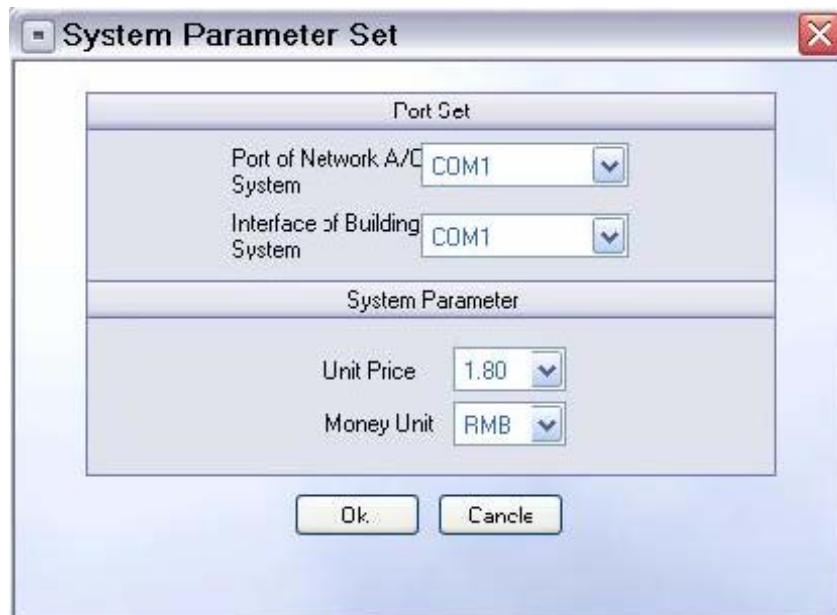
After the user name and password are entered, you can enter the billing base reading selection window, shown as follows :



3.2.1 The system default electricity billing base is the last reading of the database.

3.2.2 If the latest meter reading is selected as the calculation base, the system checks the watt-hour meter in the first cycle during system operation without any calculation. Normally, the last reading of the database shall be used as the calculation base of electricity billing, except watt-hour meter replacement.

3.3 System parameter setting



3.3.1 The port of network air conditioning system may be selected according to the actual condition of computer in use.

3.3.2 Building system interface is the port interfacing with LON gateway and shall be selected as per the actual condition.

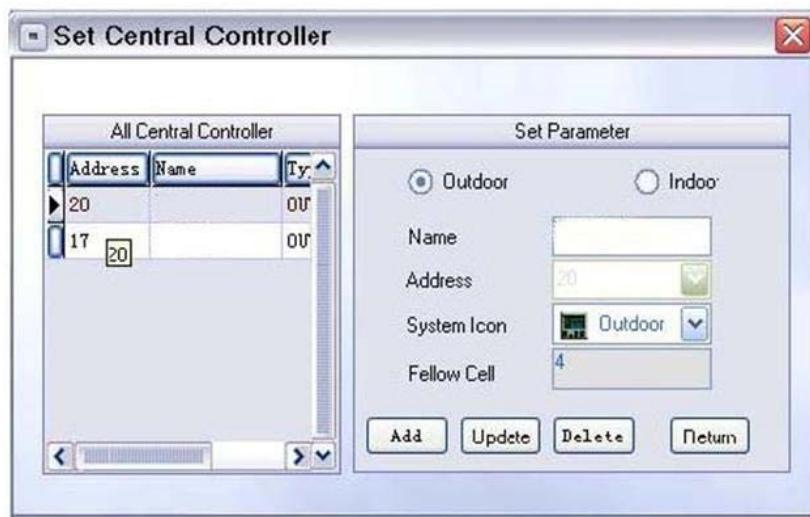
3.3.3 Electricity rate is an important parameter and will be used in the report and actual calculation process.

3.3.4 Currency unit is the unit of money involved in our report.

3.4 System construction

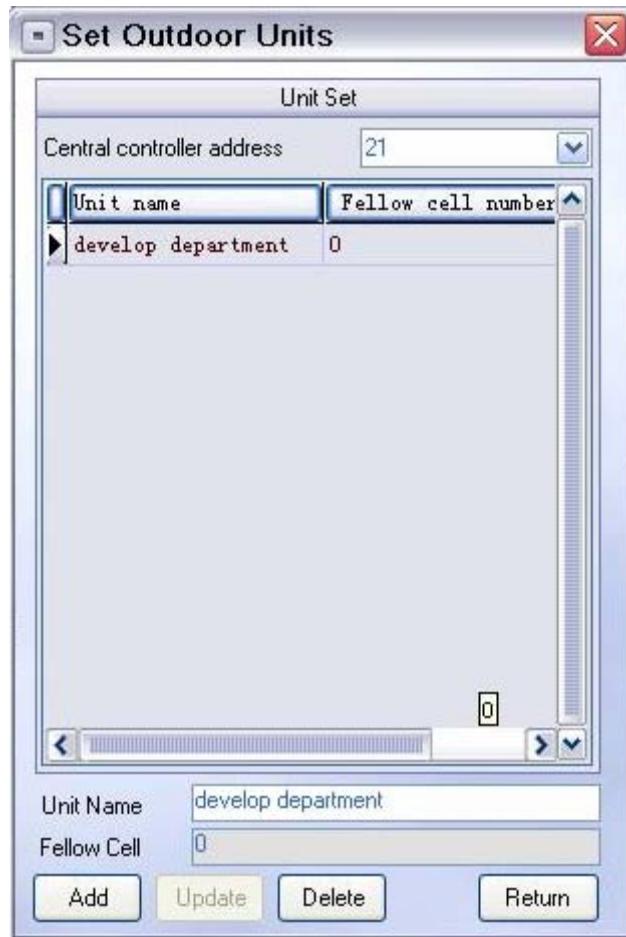
The system construction has the following steps : Input of indoor and outdoor centralized controllers Input of outdoor unit. A set is a collection of outdoor units under the outdoor centralized controller and any outdoor unit shall be under a set. All the outdoor units under a set are under the same centralized controller and so an outdoor set is different from the group of indoor units. Input of indoor unit. After input of indoor centralized controller, outdoor centralized controller, set and indoor unit, the whole system is created. The operations afterward are specific to such components, including system scanning.

3.4.1 Input of outdoor centralized controller



- ◆ Select Outdoor, press "New" and the left list will display a blank line. Select the row and then input the name for centralized controller to be created under the centralized controller name. Select the icon used in the system. Finally, press "Update" to create the centralized controller in the system.
- ◆ After creation, you can select and modify it from the list and then press "Update" button for updating.
- ◆ It can be deleted from the list.

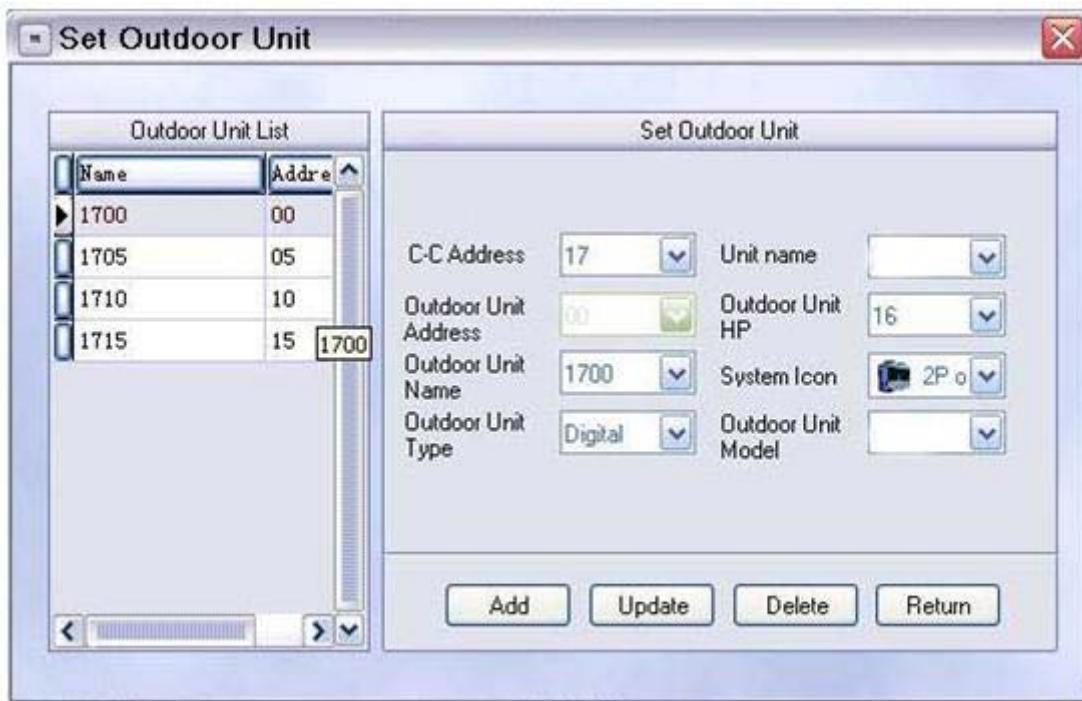
3.4.2 Input of unit



After the outdoor centralized controller is created, a set can be created under the outdoor centralized controller.

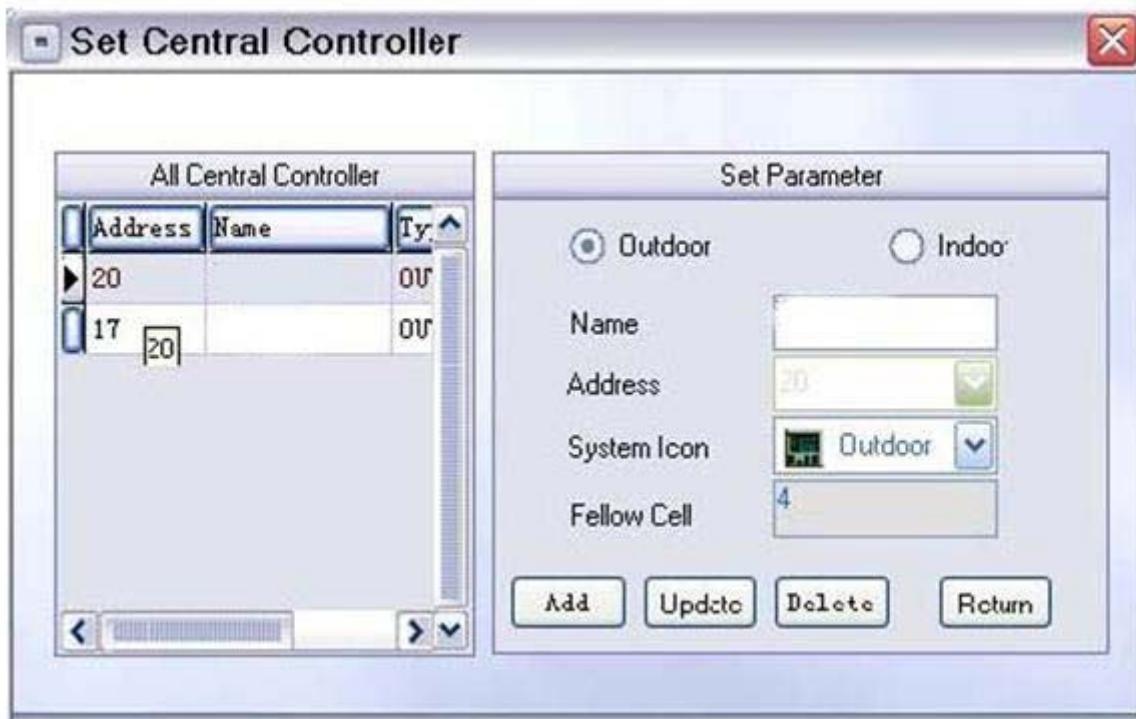
- ◆ Select outdoor centralized controller, and then all the sets under the centralized controller will be displayed in the list.
- ◆ Press "New" and the list will display a blank item. Select it and input the name of set and after that press "Update" button.
- ◆ The set can be deleted if it consists of no outdoor unit. Select the set to be deleted and then press "Delete" to delete the set.

3.4.3 Input of outdoor unit



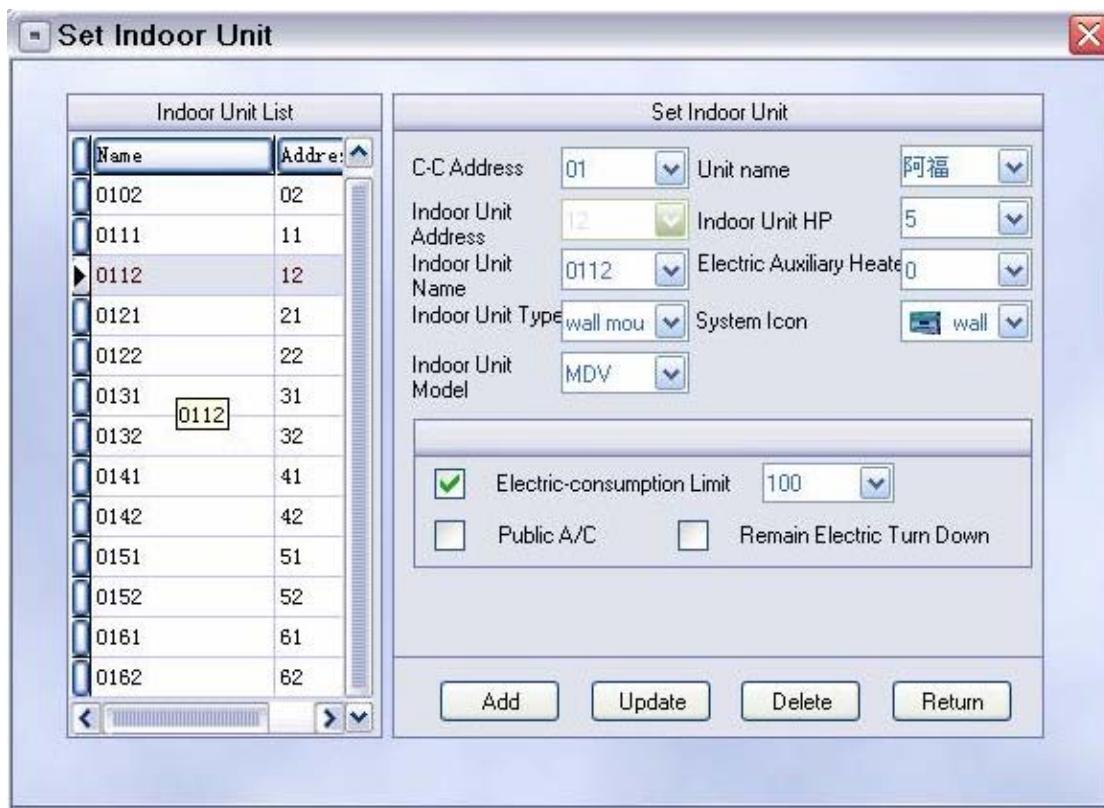
- ◆ To create an outdoor unit, you can select an address from the outdoor centralized controller address drop down box. Then all the outdoor units under the centralized controller are in the list.
- ◆ Press "New" and then the list will display a blank line. Click the blank to input the address, name and model of the outdoor unit and its icon in the system. In the meanwhile select the set. Then press "Update" complete input of outdoor unit.
- ◆ After selecting the address of centralized controller, click the outdoor unit to be modified in the left list. Then you may modify the outdoor unit parameters from the options on the right.
- ◆ If an outdoor unit does not exist, select the outdoor unit and then press "Delete" to delete the outdoor unit.

3.4.4 Input of indoor centralized controller



- ◆ Selects the centralized controller option from the menu to enter the centralized controller setting window. Then select indoor option and the left list will display the created indoor centralized controllers.
- ◆ Press "New" and the list will display a blank. Click the blank and input the name of centralized controller to be created. Select the address of centralized controller and its icon to be used in the system. Then press "Update" and the centralized controller are ready.
- ◆ The centralized controller to be modified may be selected from the left. Then modify the name of centralized controller and its icon in the system from the right options. After modification, press "Update" to update the changes into the database.
- ◆ If an indoor centralized controller has no air conditioner and will not be used, the centralized controller can be deleted. During deletion, select the centralized controller to be deleted from the left list and then press "Delete" button. When the centralized controller still has air conditioners, a prompt box will be displayed that the centralized controller cannot be deleted. A centralized controller can be deleted if it has no air conditioner under control.

3.4.5 Input of indoor air conditioner

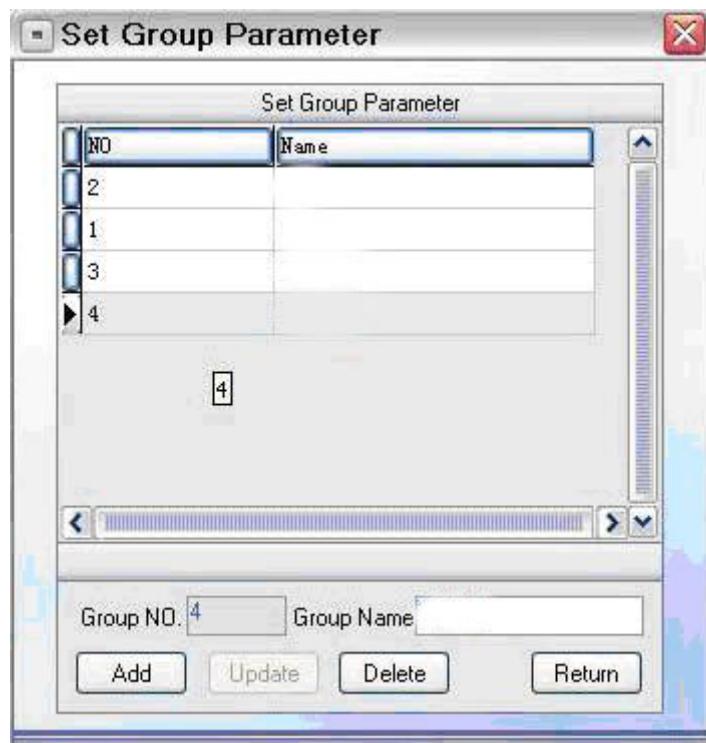


- ◆ If you want to view the indoor units of a centralized controller, you may select the address of centralized controller through the centralized controller address option. So the left air conditioner list will display all the air conditioners under the centralized controller.
- ◆ If an air conditioner needs to be created under the centralized controller, press "New" to display a blank at the bottom of the left list. Click the blank and then input at the right options the name of indoor unit, centralized controller address, air conditioner address, the set connected in the system, capacity of indoor unit, capacity of Slave electric heater for the indoor unit, type of indoor unit, indoor unit model and its icon displayed in the system.
- ◆ When the electricity bill with cost limit is calculated in the system, the electricity limit option may be selected. Then fill in the specific electricity quantity. If electricity balance of a month can be carried over to the next month, the electricity balance carrying over option shall be selected.
- ◆ Air conditioners in public area indicate that they serve the common area, and their electricity costs shall be shared if they are ticked as common air conditioners.
- ◆ After all the options are filled in, directly press "Update" to create the air conditioner.
- ◆ If the basic parameters of an air conditioner shall be changed, select the address of centralized controller of the indoor unit and select the air conditioner from the left list. Then all the information about the air conditioner will be displayed on the right. Modify the parameters

and after that directly press "Update" and the modification is complete.

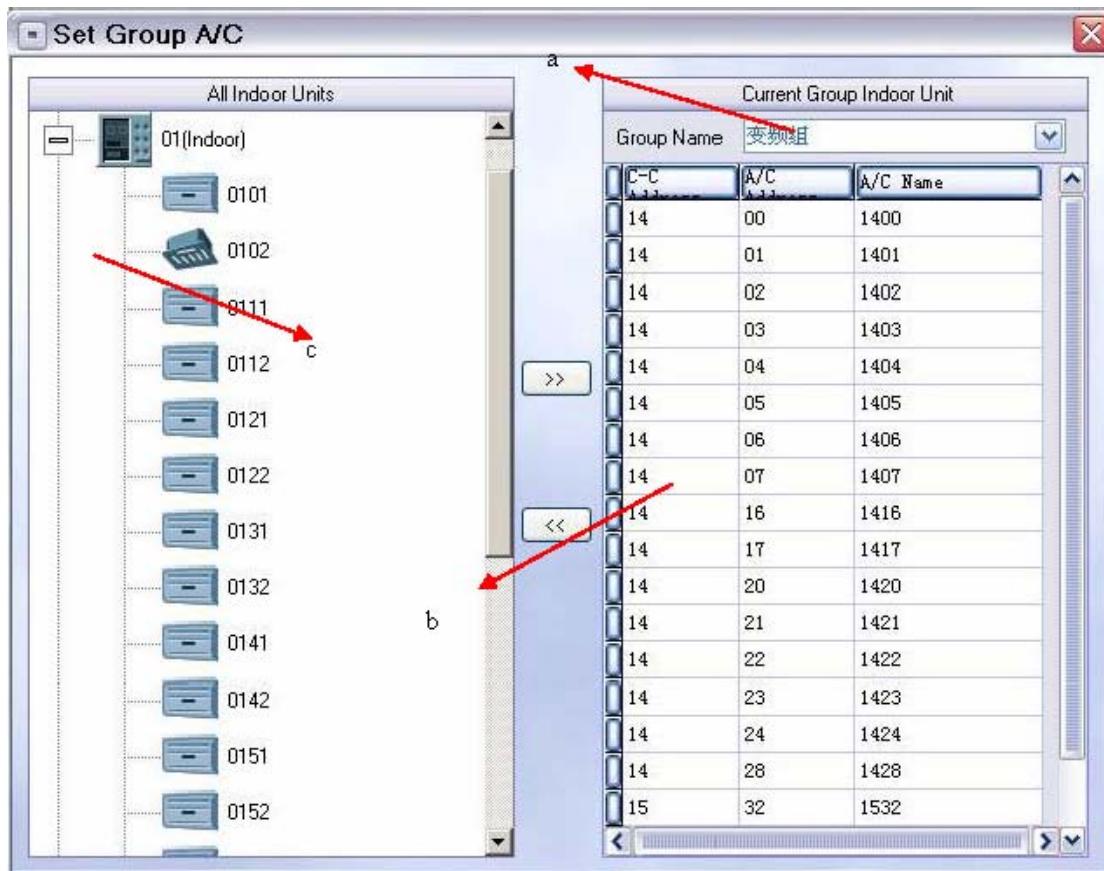
- ◆ When an air conditioner does not actually exist; delete it as per the following steps. Select the centralized controller for the air conditioner to be deleted; select the air conditioner to be deleted from the left list and then press "Delete" directly to delete the air conditioner from the system.

3.4.6 Input of group



- ◆ Create. When entering the group parameter setting window, all the groups of the system will be in the list. To create a new group, press "New" and the list will display a blank. Click the blank and input the name of the new group in the group name box. Then press "Update Group" button and the new group are created.
- ◆ Change of group name. To change the group name, enter the group parameter setting window directly and click the group to be changed. Then input a new name in the group name box and press "Update Group" button. Then the group name is changed.
- ◆ Delete a group. When there is no air conditioner in a group, you can delete the group by selecting it from the list and press "Delete Group" to delete the group.

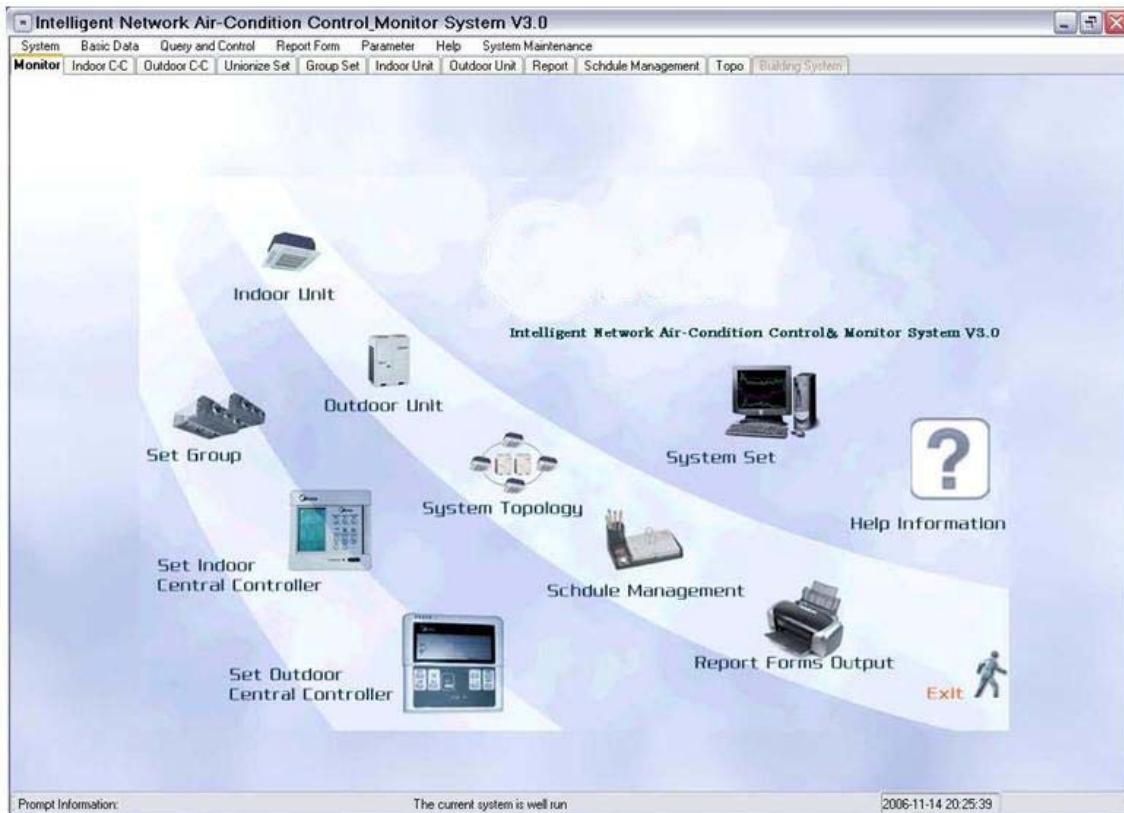
3.4.7 Setting air conditioners of a group



- ◆ Select the group to be maintained in a and all the indoor units of the group will be displayed in list b.
- ◆ Select the indoor unit to be added into the group from tree c and then press " >> ". If the indoor unit is already in the group, it prompts that the indoor unit is already in the group. If the indoor unit is in another group, it will prompt that the indoor unit is in another group and whether to change its group property to add it into this group. If No is chosen, its group properties will not be changed. The indoor unit can join the group directly if it is not in any group.
- ◆ To delete the air conditioners in the group, select the indoor unit in list b and press " << ". Then the selected air conditioner is deleted from the group.

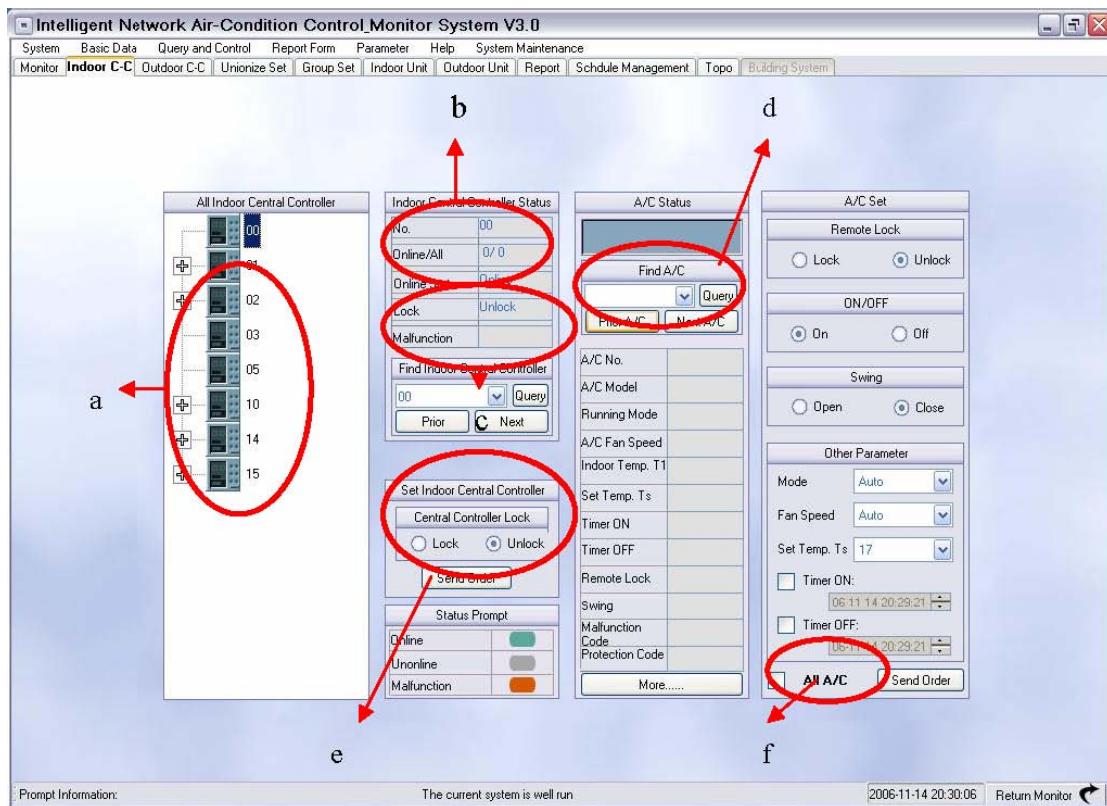
3.5 System operations

3.5.1 Main window



- ◆ An icon represents an operation window in the system.
- ◆ YDS LOGO can be easily changed into other Logos. Double click the LOGO icon in the window and the window of the selected icon will be displayed. Then you can change the LOGO.
- ◆ You can enter the specific function operation window from any icon in the window.

3.5.2 Indoor centralized controller window

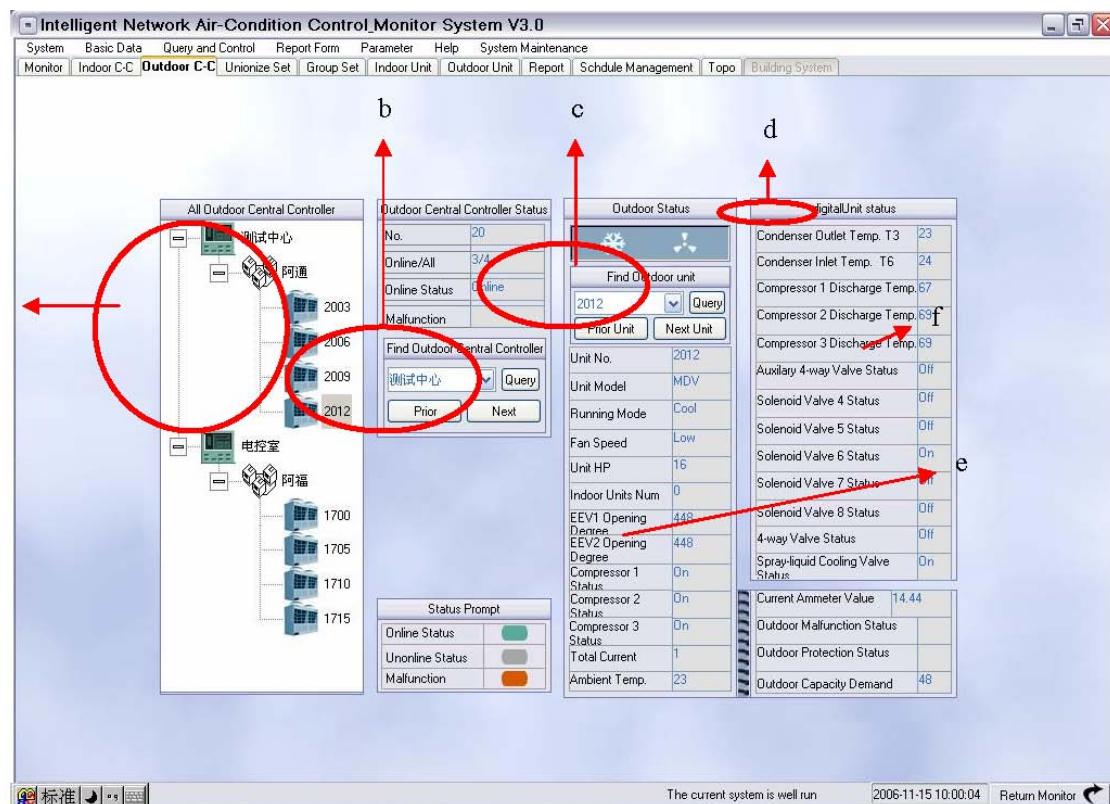


- ◆ In this window, the system automatically builds a tree structure as per the relations between indoor units and centralized controllers, as shown in a. Direct click the icon of centralized controller and the connected indoor units will be displayed. Light green indicates on line and normal operation, but grey indicates off line and reddish brown indicates on line and faults.
- ◆ The centralized controller status display can be referred to b, displaying the centralized controller No. and the number of on-line air conditioners under the centralized controller.
- ◆ c is the centralized controller selection box. The selection box at d on the right is linked with centralized controller selection box and lists all the air conditioner names under the centralized controller selected in the centralized controller selection box.
- ◆ The indoor unit selection box d is linked with c.
- ◆ The centralized controller setting box e can lock and unlock the centralized controller. The centralized controller will be locked upon a locking command being successfully sent. Then the locked icon of centralized controller will be displayed and the air conditioners under it cannot be operated from the centralized controller level. The locked icon of centralized controller will disappear after the unlocking command is successfully sent to the locked controller and then the air conditioners can be operated through the centralized controller.
- ◆ The air conditioner setting boxes can be divided into remote control settings, On/Off settings,

swing setting, mode setting, fan speed setting, temperature setting and timing setting.

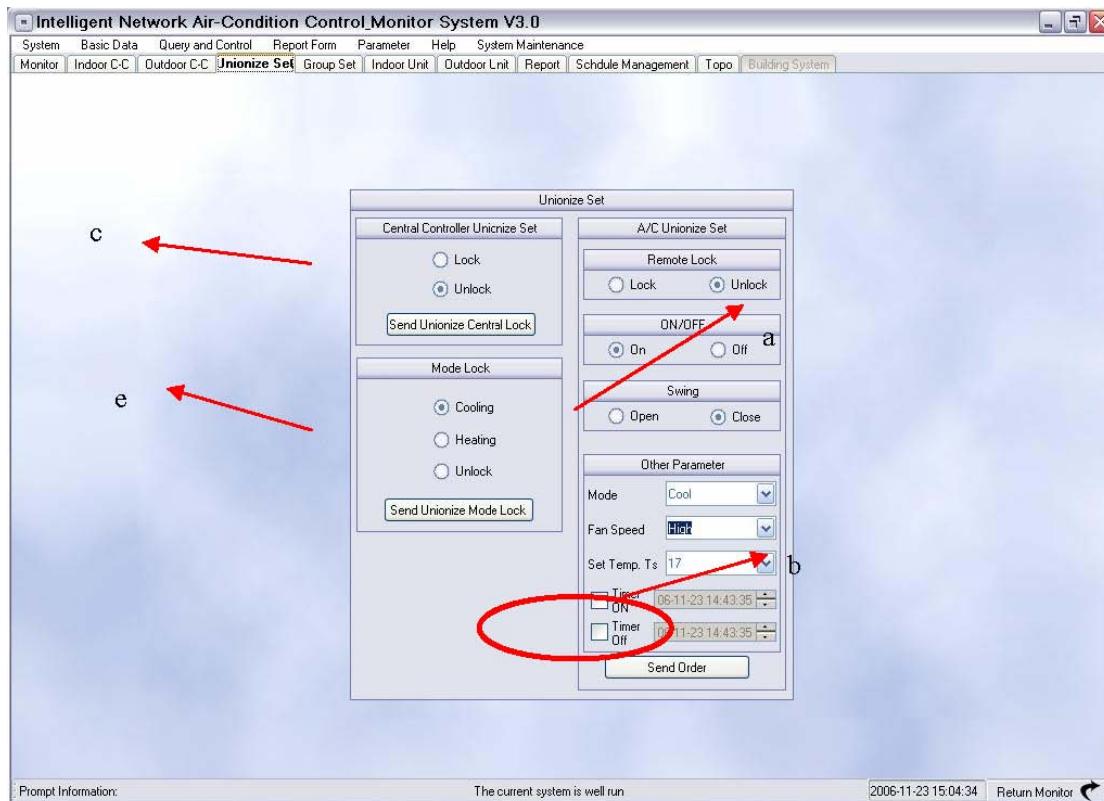
- If "All air conditioners" under f is not ticked, the air conditioner setting box is to set up the air conditioner selected from the air conditioner selection box d.
- If "All air conditioners" under f is ticked, the settings are valid for all the air conditioners under the centralized controller selected in c.
- The centralized controller settings include two options: remote controller locking and unlocking. The default is unlocking. When locking is selected, the selected air conditioner will not receive remote controller setting signals after successful locking, but the upper level settings are still valid. When the remote controller of air conditioner is locked, the remote controller can be unlocked and then the indoor unit can receive remote controller signals.
- On/Off setting is used to set up the air conditioner switching On/Off. When timing on or off is selected, On/Off setting is shielded and cannot be operated.
- Mode setting is used to set up the operation mode of air conditioner, including Cooling, Heating, Auto, Dehumidifying and Fan. The fan speed options include high, low and auto. The temperature setting can vary between 17 ~ 30°C.
- Timing On/Off option, if not ticked and selected, the timing on/off time is not available. When either option is selected, all the setting information cannot be sent to the indoor unit immediately through "Send". Instead, such information will be saved in the database as per the selected timing on /off status. If timing on is selected only, all the setting information except air conditioner On/Off will be saved, including set timing on time. When the set timing on time is up, the setting information, including switching on will be sent to the indoor unit. If timing off is selected, only the timing off is saved and switching off command will be sent upon the timing off time.

3.5.3 Outdoor centralized controller query window



- ◆ a is made of the tree consisting of outdoor centralized controllers, sets and outdoor units. The set refers to the outdoor units under the same refrigeration system.
- ◆ b is the centralized controller selection box. After the centralized controller is selected, the outdoor units in c will change with the centralized controller. Press "Query" to display the information of centralized controller. Press "Previous" to query for the information of the previous outdoor centralized controller and "Next" for the information of the next outdoor centralized controller.
- ◆ c refers to the outdoor unit selection box and selection of an outdoor unit under the selected outdoor centralized controller.
- ◆ d refers to the type of outdoor units. f displays the specific information about a specific model, including digital, frequency variable and water type outdoor units. If no specific information about the outdoor unit is available, the default is frequency variable.
- ◆ e displays the common information of all the outdoor units.
- ◆ The outdoor centralized controller and outdoor units can only be queried and cannot be controlled.

3.5.4 Uniform setting page

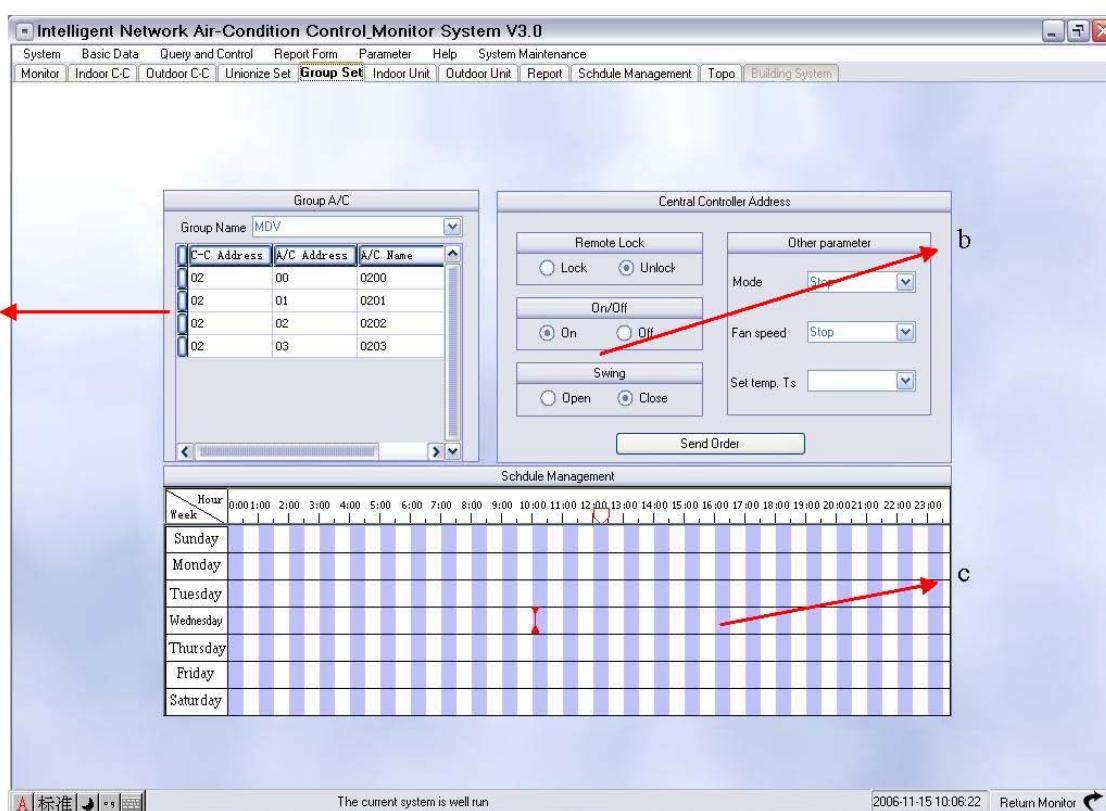


- ◆ Uniform setting is specific to all the indoor units within the system and includes mode setting, locking, unlocking and mode locking and unlocking for indoor units.
- ◆ a is the air conditioner setting column, where the remote controller locking setting is to send the locking commands to all the indoor units so that they cannot receive remote controller signals. The default is unlocking. On/Off option refers to sending commands to switch on or off the air conditioner. In case of Off, the swing, mode, fan speed or temperature setting is disabled. Such settings are enabled if On is selected. Swing function includes swing On /Off with Off as the default. Mode option includes cooling, heating, fan, dehumidifying and auto. The fan speed of indoor unit fan may be high, medium, low and auto. The temperature can be set within 17 ~ 30°C. After "Send Command" is pressed, the system sends commands to each indoor unit for setting.
- ◆ b is the timing On/Off setting option. When either option is selected, On/Off option will be shielded. If timing On is selected, press "Send Command" to save all the settings and switching on information into the database. If timing Off is selected, press "Send Command" to save the switching off information into the database. All the timing information of each indoor unit can be displayed at the query system when the timing time is not up. When timing time is up, all the setting information will be sent to the indoor units and the timing information will then be

removed if you query any air conditioner in the system.

- ◆ c is the locking option of centralized controller, including locking and unlocking. In case of locking, all the controller key operations will be disabled after all the indoor centralized controllers receive a locking command. Select centralized controller unlocking, and then press "Send uniform centralized controller locking command" to unlock all the indoor centralized controllers after successfully sending the commands.
- ◆ e is the mode locking selection box. When only one mode is allowed for the whole system, select cooling or heating from the option, and then press "Uniform mode locking command". After it is successfully sent, the operation mode of indoor unit cannot be changed through a remote controller or centralized controller. But the indoor unit can be unlocked or other operation mode may be used from the upper level. When the mode locking is applied to all the indoor units, select unlocking and press "Uniform mode locking command" to unlock the indoor units and the mode of all the indoor units can be changed after the command is successfully sent.

3.5.5 Group settings

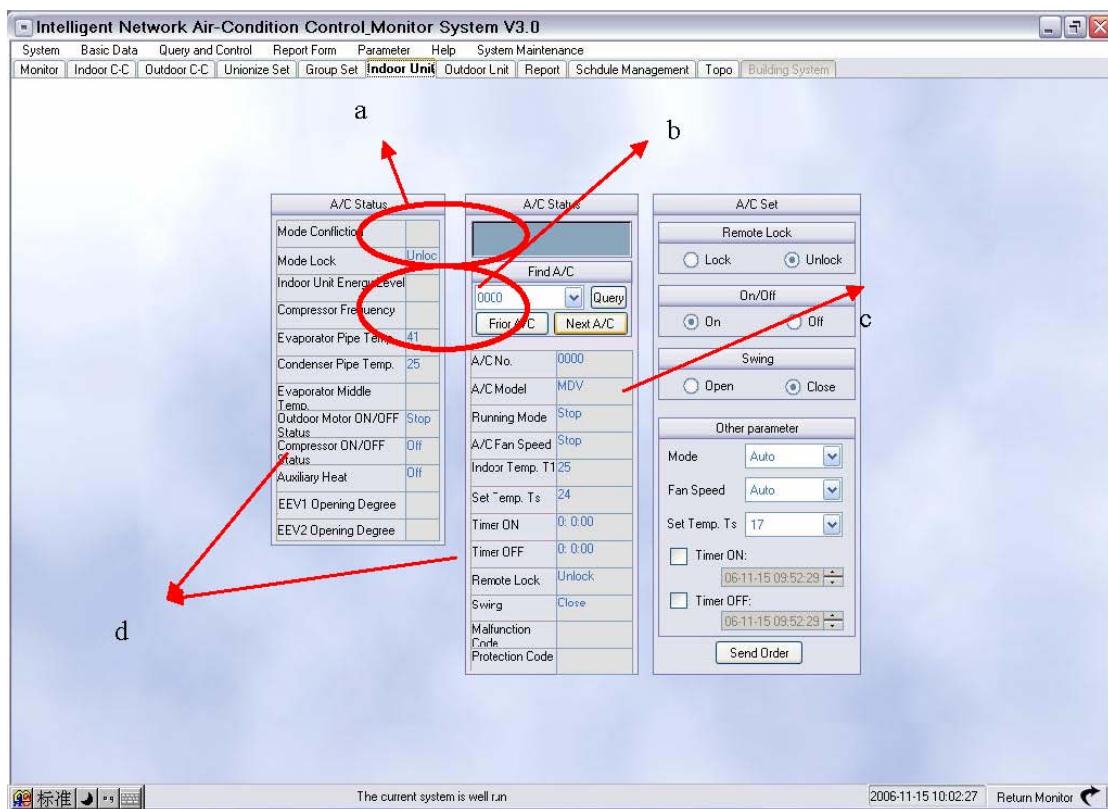


- ◆ a consists of the group name drop down box and selected indoor unit of group. After a group is selected, all the indoor units under the group will be in the list.
- ◆ b is the group setting box and includes remote controller setting, On/Off setting and operation

mode setting, fan speed of indoor unit and temperature setting. As for the previous indoor unit settings, direct press "Send Command" after proper settings to send such settings to all the indoor units of the group.

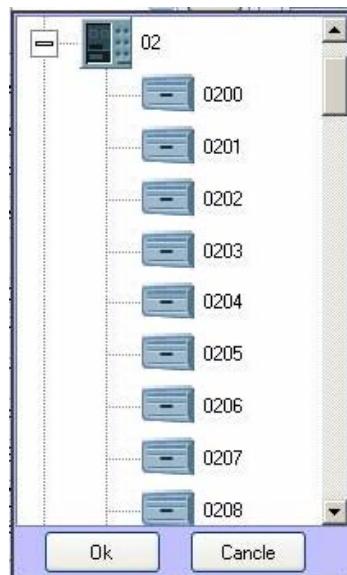
◆ After a group is selected in a, the schedule management information related to the group will be displayed in the schedule management box c. The schedule management information consists of a number of tasks, which are all switching on tasks - starting from switching on and ending at switching off. The schedule management box consists of many arrow lines. When we need to know the setting of a specific task, select the arrow line of the task (it will turn red after selection). Double click to enter the schedule management page. So we can view the specific setting of the task.

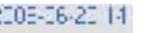
3.5.6 Indoor unit window



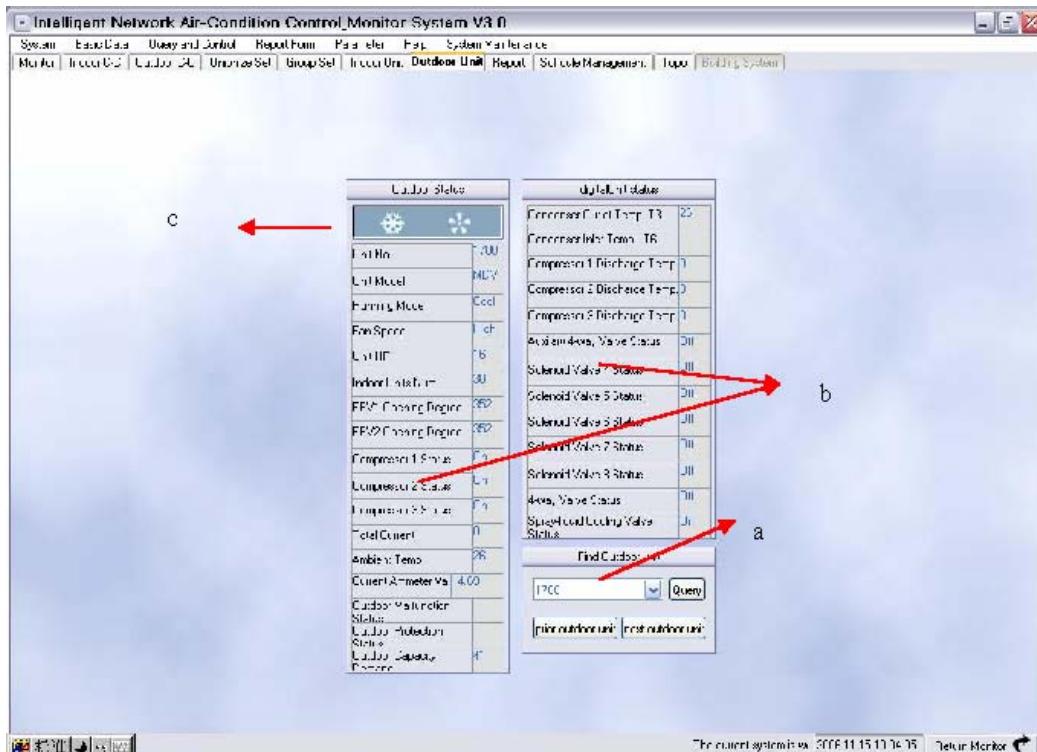
◆ a is used to display the status of selected indoor unit. After Query is pressed, the icons in box a display the status of the current indoor unit. In the display box, there is icon of indoor unit operation mode, icon of timing setting, icon of indoor fan speed and locking icon. For the mode icons, " " indicates Cooling, " " indicates heating , " " indicates timing setting, " " indicates high speed of indoor fan , " " indicates low speed of indoor fan , " " indicates remote controller locking or mode locking setting.

- ◆ b is the indoor unit selection box. Click the dropdown box “”, and the tree consisting of indoor units and centralized controllers will be prompted, as shown in Fig. below Fig. After the indoor unit is selected from the tree, press “OK” and then the name of indoor unit will be prompted in the dropdown box. Then press Query and the relevant information of the indoor unit will be in the display box in d.

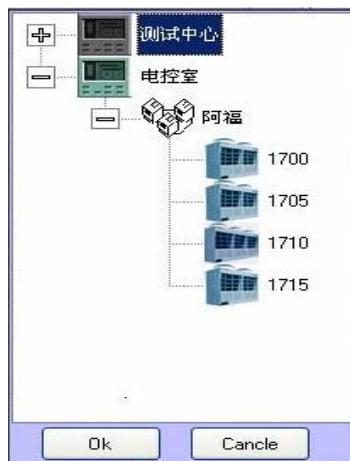


- ◆ c is used to set indoor units. It is almost the same as the indoor unit setting in indoor centralized controller window. But there is no air conditioner selection box here. So it can only set up the air conditioner selected in b.
- ◆ d is used to display the indoor unit operation status. If no operation information is available for an indoor unit, a blank is used. Timing information may be expressed as “”, or “0 : 0 : 00” in case of none. After a timing task is fulfilled, the air conditioner returns to non-timing status. In case of mode conflict, the word “conflict” will be displayed behind the mode and at the mode conflict column. The information displayed at the status information display column and the information of database is simultaneously updated.

3.5.7 Outdoor unit window

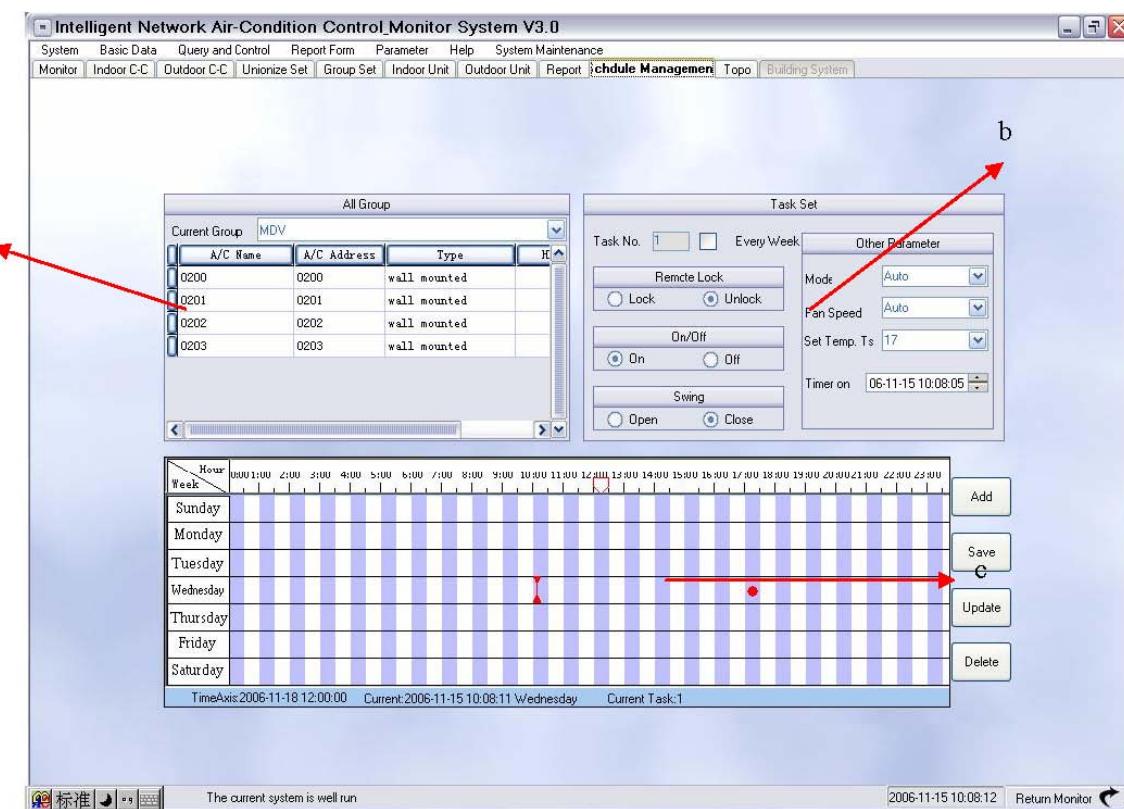


- ◆ Only query function is available for outdoor units and so it has only one outdoor unit selection column, outdoor unit status display column and outdoor unit status marking. The displays at outdoor unit status display column are updated simultaneously with database updating. The latest current status will be reflected only if Query button is used.
- ◆ a is the selection column of outdoor unit. Press outdoor unit drop down box " ", and the tree consisting of outdoor centralized controllers, sets and outdoor units will be prompted, as shown in below figure. After an outdoor unit is selected, press "OK" and the name of selected outdoor unit will be displayed in the most front.



- ◆ b is the outdoor unit status display column to display the latest status of selected outdoor unit in the specific items in the column. A blank is used if no status information is available for an outdoor unit. It is updated simultaneously with the database updating.
- ◆ c is the status marking column of outdoor unit to mark the operation mode of outdoor unit and outdoor fan status. In the operation mode, "  " indicates Cooling mode, and "  " indicates Heating mode. For the outdoor fan, "  " indicates High and "  " indicates Low.

3.5.8 Schedule management page

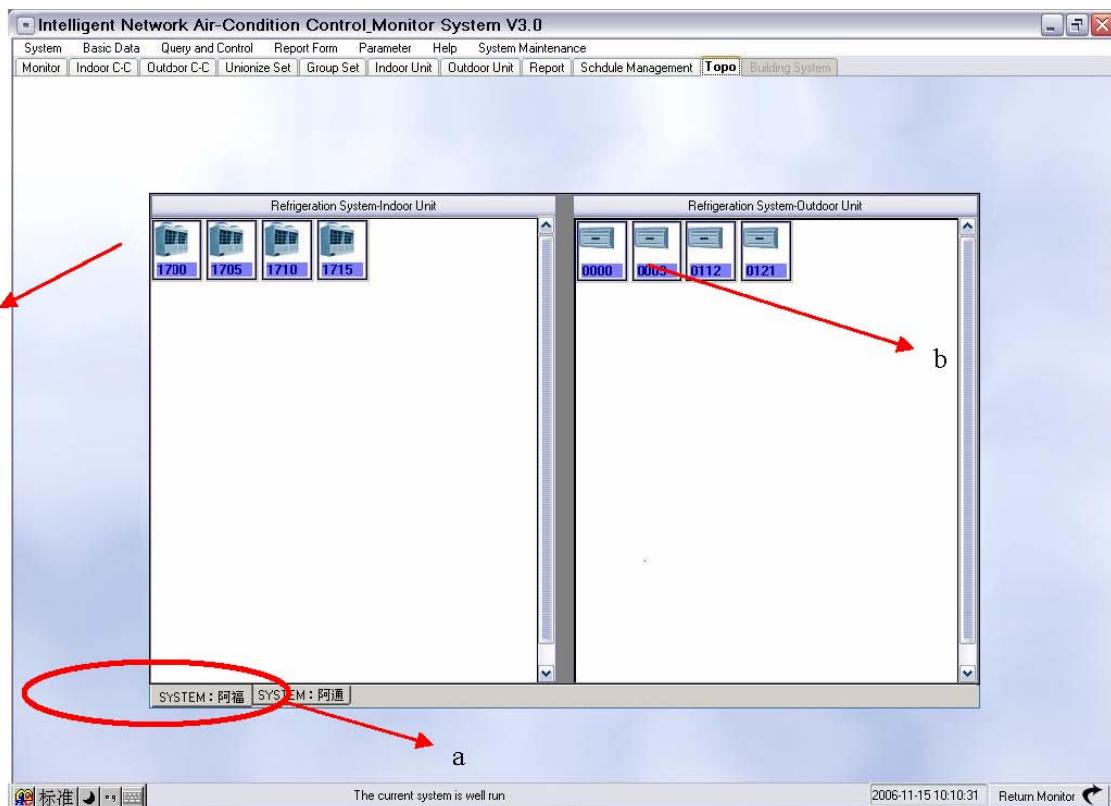


- ◆ The group selection column a, can select a specific group and display the information related to the group. When a group is selected from the group selection box a, c will display all the set tasks for the group. b is the task setting column.
- ◆ All the tasks of the group are switching on tasks, namely starting from switching on and ending at switching off.
- ◆ After a group is selected, you may delete, modify and create tasks.
- ◆ To add a new command, firstly press "New" and then select the items in setting column b one by one. The task setting is basically the same as the setting of indoor unit, but On/Off option cannot be operated. The system default is that all the tasks are switching on tasks. After all the settings are selected, the task can be set as a weekly task. If it is set as a weekly task on every

Tuesday, task will be executed every Tuesday. If it is not set as a weekly task, the task will be executed when it is time and will be deleted after execution. After the above operations, press "Save" and a new task is created. You can view the task from c.

- ◆ To modify a task, you may select the task from c and then the setting of the task is displayed in b. Then the setting can be modified in b and after that press "Save" and the task modification is OK.
- ◆ To delete a task, you only need to select the task in c and then press "Delete" to delete the task.

3.5.9 Refrigeration system topology

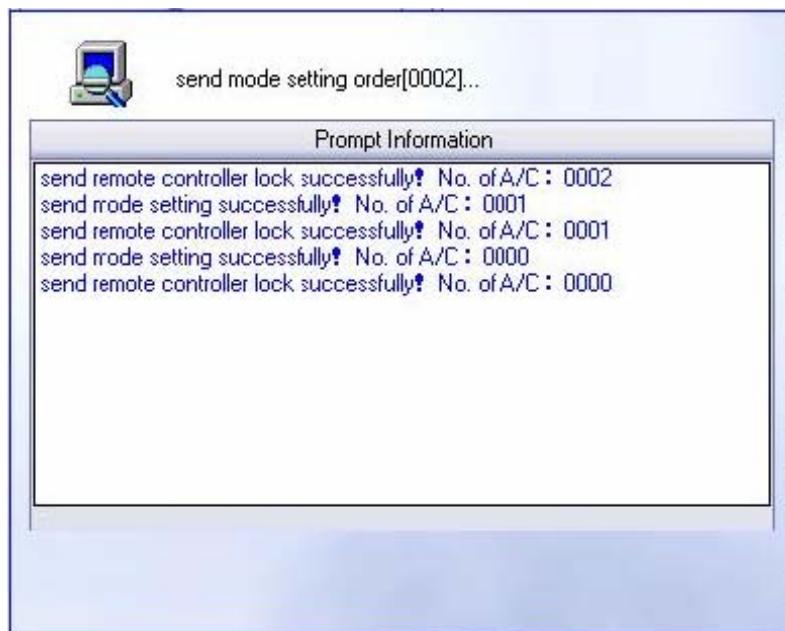


- ◆ Refrigeration system TOP diagram is used to connect the outdoor units with indoor units within the same refrigeration system. So you can view the distribution status of system visually.
- ◆ a lists all the refrigeration systems within the system and the refrigeration systems has the name of outdoor sets.
- ◆ Click any refrigeration system in a and b and c will display all the indoor units and outdoor units of the refrigeration system. The indoor unit is represented with the icon of indoor unit in the system. Likewise, the outdoor units are represented with their icons in the system.
- ◆ In b, when we move the cursor to any icon, the complete name of the indoor unit will be displayed through a small mark. When we press any icon, we will enter the indoor unit page and

meanwhile the latest status of the indoor unit will be displayed.

- ◆ The outdoor unit operations in c are the same as the indoor unit operations in b. The difference is that to press outdoor unit icon will skip to the outdoor unit window and the latest information of outdoor unit will be displayed.

3.5.10 System command sending prompt box



- ◆ The system sends commands in two forms – to send commands manually, and the system sets timing and group task commands. If the commands are manually sent successfully, the sending box will be automatically closed after sending. Unsuccessfully sending commands shall be manually closed. The auto commands triggered by the system will be closed automatically upon completion of sending.
- ◆ The type of command sent and successful or unsuccessful sending will be listed in the sending box.

3.6 Electricity allotment and report

3.6.1 Electricity allotment principle

- ◆ The system allotment adopts peroration and the electricity for peroration is mainly the electricity consumption of outdoor units and of indoor unit fan and Slave electric heater.
- ◆ The indoor units of the same refrigeration system share the electricity consumption of the outdoor sets of the refrigeration system. The indoor units outside the system do not share the electricity of the outdoor sets of the refrigeration system.
- ◆ The electric bill of an indoor unit in certain time period can be divided into two parts: basic electricity and shared electricity.
- ◆ The basic electricity includes the electricity consumption of the indoor unit due to operations in Cooling, heating or fan mode. 4-7-1-3-2The shared electricity includes electricity consumed by outdoor units when all the indoor units are in standby status, as well as the electricity consumed by outdoor set (an administrator may log onto the system to select to incorporate this portion of electricity or not) when the whole refrigeration system runs normally but the billing system has some faults.

- Calculation of basic electricity : $F_a = FA \cdot e$ Where FA is the total shared electricity consumed by the refrigeration system during a certain time period, and e is the ratio based on the capacities of indoor units.

- Calculation of shared electricity $F_a = FA \cdot e$ Where FA is the total shared electricity consumed by the electricity consumers of a system during a certain time period, and e is the ratio based on the capacities of indoor units.

- ◆ Electricity fee allotment of a refrigeration system under different circumstances

- When all the indoor units of system are in standby status (not in cooling, heating or fan mode), each indoor unit shall be allotted with the electricity consumed by the outdoor set during the time period (shared electricity) in proportion to their capacities.

- Cooling mode (basic electricity)

Indoor unit in Cooling mode : Shared electricity consumed by outdoor set plus electricity consumed by indoor unit's own fan and Slave electric heater.

Indoor unit in Fan mode : Only the electricity consumed by indoor unit's own fan

Indoor unit in Stand-by : No electricity is incorporated.

- When the system runs in heating mode and there is no indoor unit in conflict status (basic electricity)

Indoor unit in Heating mode : Shared electricity consumed by outdoor set plus the electricity consumed by indoor unit's own fan and Slave electric heater.

Indoor unit in Stand-by : No electricity is incorporated.

- When the system runs in heating mode and there is indoor unit in conflict status (basic electricity)

Indoor unit in Heating mode : Shared electricity consumed by outdoor set plus the electricity consumed by indoor unit's own fan and Slave electric heater.

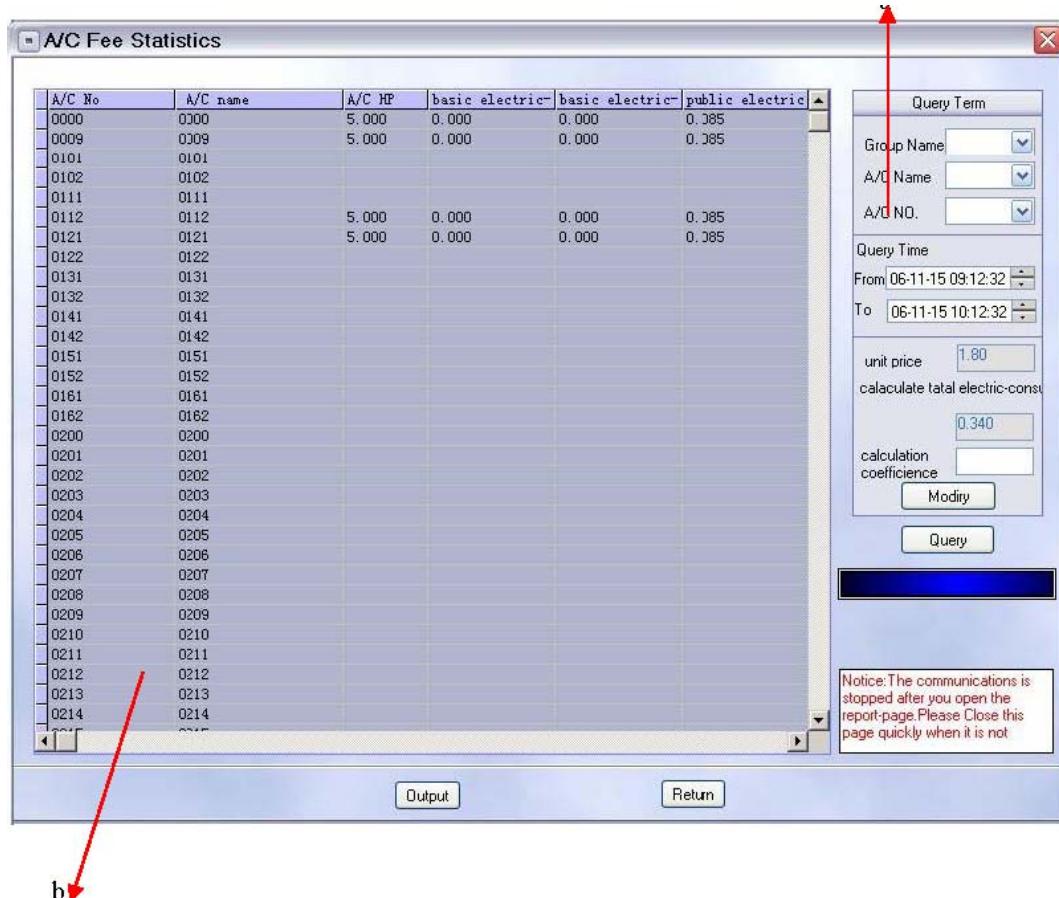
Indoor unit in Cooling mode (conflict) : Only the electricity consumed by indoor unit's own fan

Indoor unit in Fan mode (conflict) : Only the electricity consumed by indoor unit's own fan

Indoor unit in Stand-by : No electricity is incorporated

3.6.2 Report

◆ Air conditioner billing statistics sheet



A/C No	A/C name	A/C HP	basic electric	shared electric	public electric
0000	0000	5.000	0.000	0.000	0.385
0009	0009	5.000	0.000	0.000	0.385
0101	0101				
0102	0102				
0111	0111				
0112	0112	5.000	0.000	0.000	0.385
0121	0121	5.000	0.000	0.000	0.385
0122	0122				
0131	0131				
0132	0132				
0141	0141				
0142	0142				
0151	0151				
0152	0152				
0161	0161				
0162	0162				
0200	0200				
0201	0201				
0202	0202				
0203	0203				
0204	0204				
0205	0205				
0206	0206				
0207	0207				
0208	0208				
0209	0209				
0210	0210				
0211	0211				
0212	0212				
0213	0213				
0214	0214				
0215	0215				

Output **Return**

Notice: The communications is stopped after you open the report-page. Please Close this page quickly when it is not

- The billing statistics is based on groups and the billing data of all or individual air conditioners of the group can be printed out.
- The electricity fees for any time period can be queried for and printed.
- The electricity bill consists of two parts: basic electricity fee and shared electricity fee. The fee of each indoor unit for the time period is displayed in the total electricity fee item in the report.

◆ Detailed electricity bill

A/C electric-charge List

A/C No	A/C Name	ON/OFF	Running mode	Fan speed	Auxiliary	Electric	Electric-	Start time
1401	1401	On	Cool Middle	Off	2.5873	4.621		2006-11-20
1401	1401	On	Cool Middle	Off	0.1153	0.208		2006-11-20
1401	1401	On	Heat Middle	Off	0.0639	0.115		2006-11-20
1401	1401	On	Heat Middle	Off	0.2900	0.522		2006-11-20
1401	1401	On	Cool Middle	Off	0.6057	1.090		2006-11-20
1401	1401	On	Cool High	Off	0.2316	0.417		2006-11-21
Total					3.943	7.097		

Query Term
 Group Name: 变频组
 A/C Name: 1401
 A/C NO.: 1401
 Query Time
 From: 06-11-20 10:42:05
 To: 06-11-21 10:42:05
 unit price: 1.80
 calculate total electric-consumption: 3.943
 calculation coefficient:
 Modify
 Query

 Notice: The communications is stopped after you open the report-page. Please Close this page quickly when it is not

Output Return

◆ The detailed bill is the list for a certain time period as per the On/Off information of indoor units. It is similar to a telephone bill. The detailed bill of the group of air conditioners or an individual air conditioner can be output.

- The bill for any time period can be output.
- All the output bills only include basic electricity fees without shared electricity fees.

◆ Operation data of indoor units



- The indoor unit operation data report is the list of operation data of indoor units under query for a certain time period.
- Only the data of one indoor unit can be outputted and the maximum time period is 7 days.
- The report is used to analyze data during maintenance and it can facilitate identification of causes for faults.

◆ Operation data of outdoor units

Outdoor Units Running Data

running mode	capacity of outdoor	running state of ou	number of connected	current	P
Cool 23	Low	0	1	44	
Cool 23	Low	0	1	44	
Cool 23	Low	0	1	44	
Cool 23	Low	0	1	40	
Cool 23	Low	0	1	40	
Cool 23	Low	0	1	40	
Cool 23	Low	0	1	40	

Query Term

 C-C Name: 测试中

 C-C NO.: 20

 Outdoor Unit Name: 2003

 Outdoor Unit NO.: 2003

Query Time

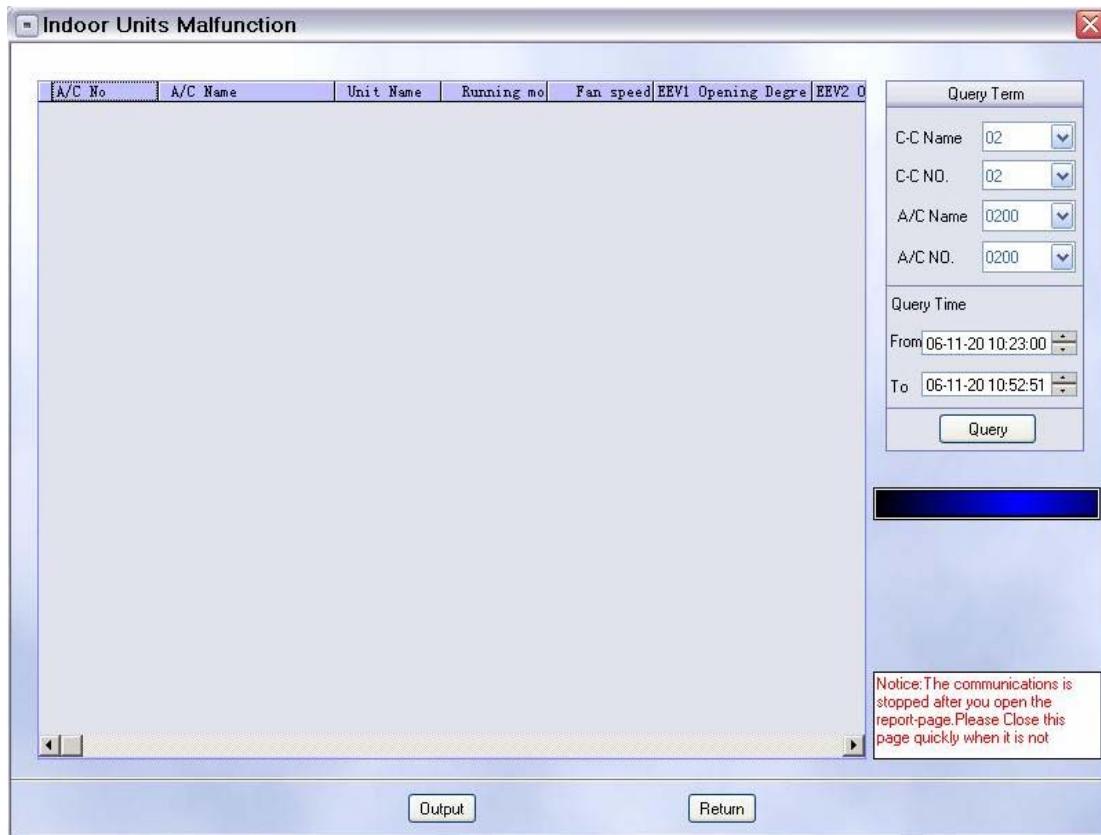
 From: 06-11-20 10:23:00

 To: 06-11-20 10:49:41

Notice: The communications is stopped after you open the report-page. Please Close this page quickly when it is not

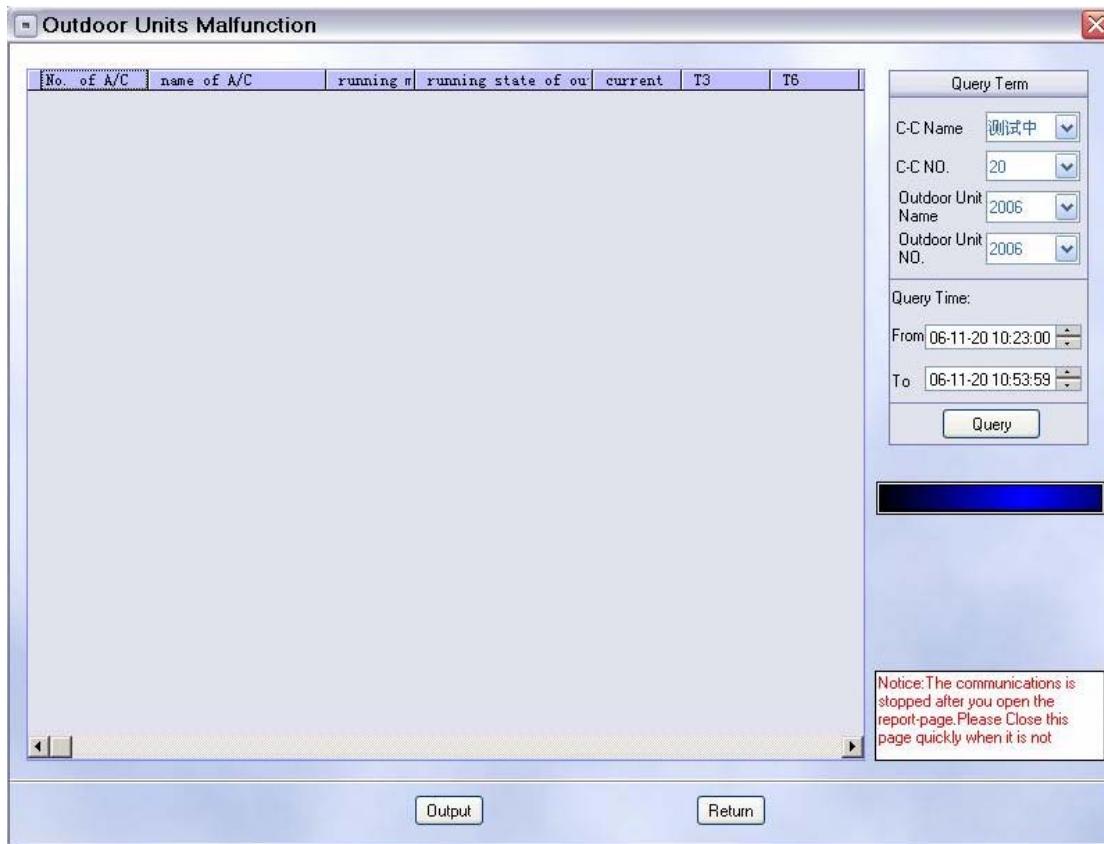
- As the operation data of indoor units, the outdoor unit operation data report is the list of operation data of outdoor units under query for a certain time period.
- Only the data of one outdoor unit can be outputted and the time period is 7 days.
- The report is used to analyze data during maintenance and it can facilitate identification of causes for faults.

◆ Querying indoor unit faults and protection



- As the indoor unit operation data report, it is used to query for the report of all indoor unit faults and protection information for a certain time period.
- The maximum query time period of report is 7 days.
- It is mainly used to query for the faults and protection of indoor units of system during a time period.

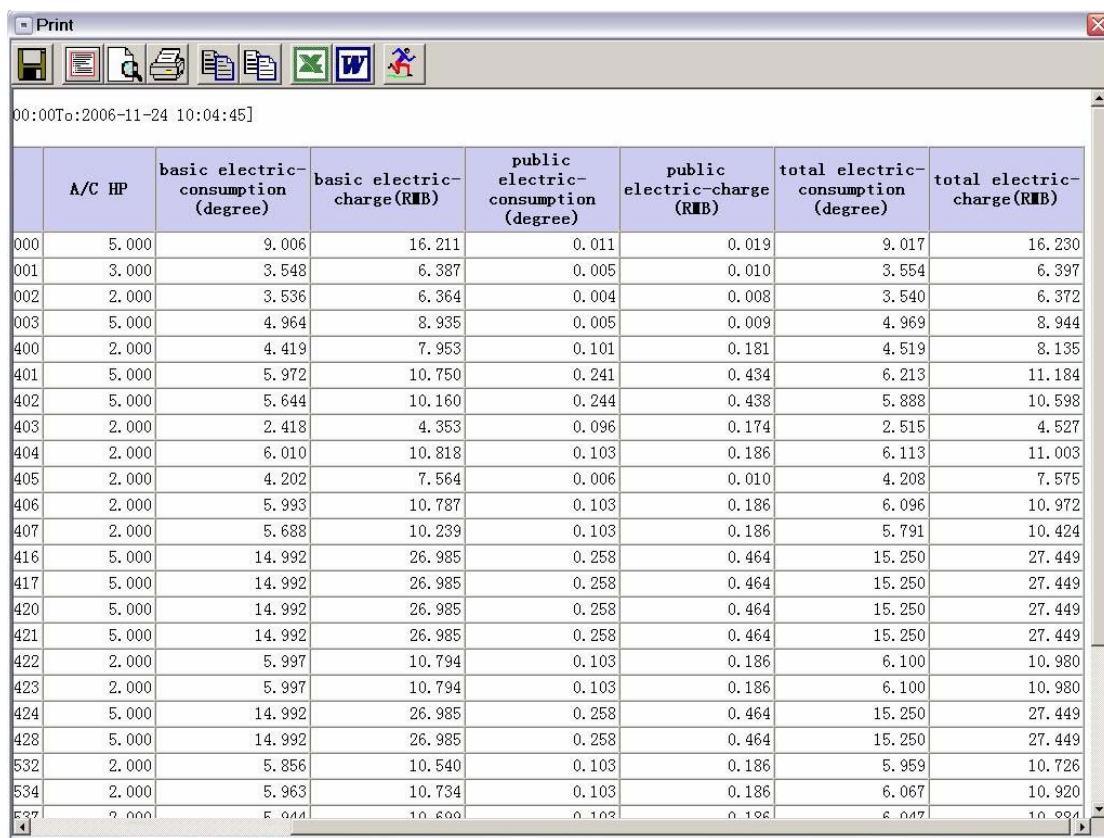
◆ Querying outdoor unit faults and protection



- As the outdoor unit operation data report, it is used to query for the report of all outdoor unit faults and protection information for a certain time period.
- The maximum query time period of report is 7 days.
- It is mainly used to query for the faults and protection of outdoor units of system during a time period.

◆ Report printing and output in EXCEL worksheets and WORD tables

Print



	A/C HP	basic electric consumption (degree)	basic electric charge(RMB)	public electric-consumption (degree)	public electric-charge (RMB)	total electric-consumption (degree)	total electric-charge(RMB)
000	5.000	9.006	16.211	0.011	0.019	9.017	16.230
001	3.000	3.548	6.387	0.005	0.010	3.554	6.397
002	2.000	3.536	6.364	0.004	0.008	3.540	6.372
003	5.000	4.964	8.935	0.005	0.009	4.969	8.944
400	2.000	4.419	7.953	0.101	0.181	4.519	8.135
401	5.000	5.972	10.750	0.241	0.434	6.213	11.184
402	5.000	5.644	10.160	0.244	0.438	5.888	10.598
403	2.000	2.418	4.353	0.096	0.174	2.515	4.527
404	2.000	6.010	10.818	0.103	0.186	6.113	11.003
405	2.000	4.202	7.564	0.006	0.010	4.208	7.575
406	2.000	5.993	10.787	0.103	0.186	6.096	10.972
407	2.000	5.688	10.239	0.103	0.186	5.791	10.424
416	5.000	14.992	26.985	0.258	0.464	15.250	27.449
417	5.000	14.992	26.985	0.258	0.464	15.250	27.449
420	5.000	14.992	26.985	0.258	0.464	15.250	27.449
421	5.000	14.992	26.985	0.258	0.464	15.250	27.449
422	2.000	5.997	10.794	0.103	0.186	6.100	10.980
423	2.000	5.997	10.794	0.103	0.186	6.100	10.980
424	5.000	14.992	26.985	0.258	0.464	15.250	27.449
428	5.000	14.992	26.985	0.258	0.464	15.250	27.449
532	2.000	5.856	10.540	0.103	0.186	5.959	10.726
534	2.000	5.963	10.734	0.103	0.186	6.067	10.920
537	2.000	5.044	10.600	0.103	0.186	6.017	10.99



- If the report needs to be printed, direct press " " button to output the report to the default printer.
- If the report shall be saved as an EXCEL worksheet, you need to operate as follows: click select all button" ", press copy button " ", and then click EXCEL output button to output the report to an EXCEL worksheet. Finally you only need to save it.
- If the report shall be saved as a WORD table, repeat the process for EXCEL worksheet but press WORD output button " " at the final step.

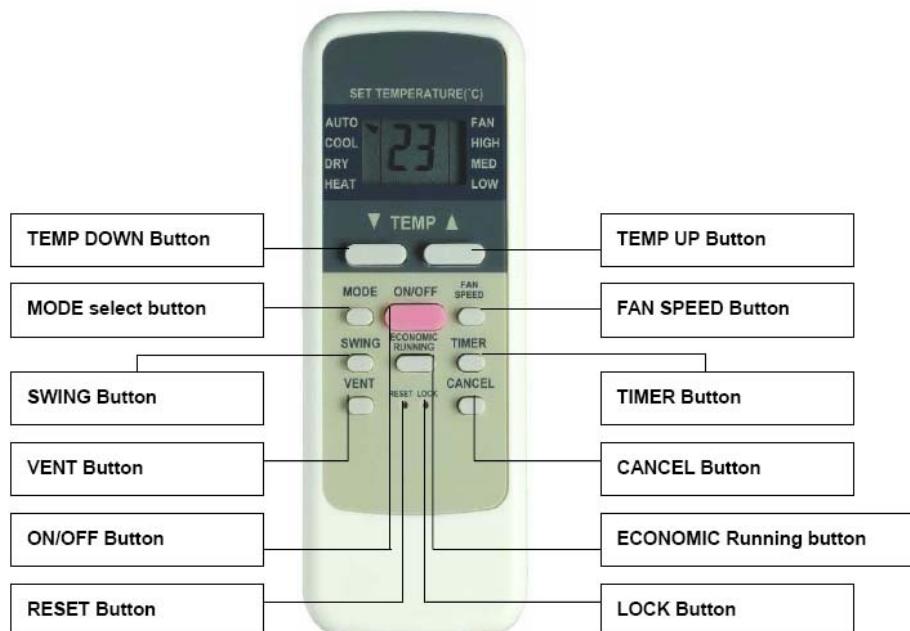
5. Remote controller

5.1 Wireless remote R-51/E

Remote Controller Specifications

Model	R51/E
Rated Voltage	3.0V
Lowest Voltage of CPU Emitting Signal	2.0V
Reaching Distance	8m (when using 3.0 voltage, it can get 11m)
Environment Temperature Range	-5 °C ~ 60 °C

Introduction of Function Buttons on the Remote Controller



TEMP DOWN Button: Push the TEMP DOWN button to decrease the indoor temperature setting or to adjust the timer in a counter-clockwise direction.

MODE SELECT Button: Each time you push the button, a mode is selected in a sequence that goes from AUTO, COOL, DRY, HEAT and FAN as the following figure indicates:



▲ NOTE: HEAT only for Heat Pump

SWING Button: Push this switch button to change the louver angle.

RESET Button: When the RESET button is pushed, all of the current settings are cancelled and the control will return to the initial settings.

ECONOMIC RUNNING Button: Push this button to go into the Energy-Saving operation mode.

LOCK Button: Push this button to lock in all the current settings. To release settings, push again.

CANCEL Button: Push this button to cancel the TIMER settings.

TIMER Button: This button is used to preset the time ON (start to operate) and the time OFF (turn off the operation)

ON/OFF Button: Push this button to start the unit operation. Push the button again to stop the unit operation.

FAN SPEED Button: This button is used for setting fan speed in the sequence that goes from AUTO, LOW, MED to HIGH, and then back to Auto.

TEMP UP Button: Push this button to increase the indoor temperature setting or to adjust the timer in a counter-clockwise direction.

VENT Button: Push this button to set the ventilating mode. The ventilating mode will operate in the following sequence:



Ventilation Function is available for the Fresh Star Series.

5.2 Wireless remote controller R91/R92

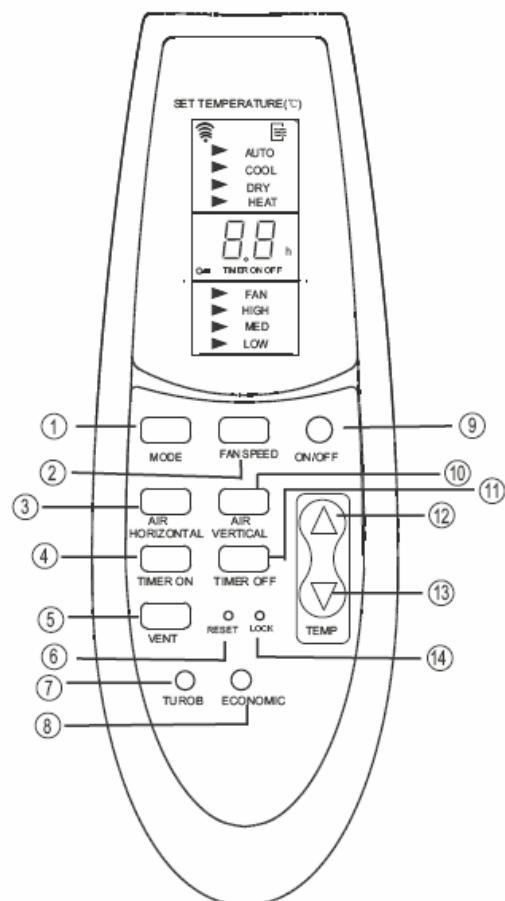
Remote Controller Specifications

Model	R91/BGE, R92/BGE
Rated Voltage	3.0V
Lowest Voltage of CPU for Emitting Signal	2.0V
Transmitting Distance	8m (with 3.0 volts, up to 11m)
Environment Temperature Range	-5°C ~ 60°C

R-91



R-92



MODE Select Button: Each time you push the button, a mode is selected in a sequence that goes from AUTO, COOL, DRY, HEAT, and FAN, as the following figure indicates:



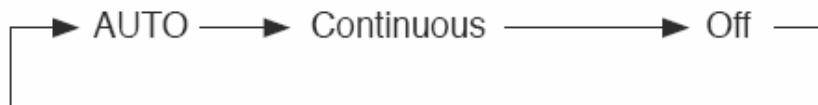
NOTE: A COOL only model has no HEAT feature.

FAN SPEED Button: This button is used for setting Fan Speed in the sequence that goes from AUTO, LOW, MED to HIGH, then back to AUTO.

AIR HORIZONTAL Button: When press the button once and quickly, the air flow direction setting feature of the louver is activated. The moving angle of the louver is 6° for each press. Keep pressing the button to move the louver to the desired position. If keep pressing the button without releasing for 2 more seconds, the auto swing feature of the louver is activated. The horizontal louver would swing up/down automatically. Press it again to stop.

TIMER ON Button: Press this button to preset the time ON (start to operate). Each press will increase the TIMER ON setting in 30 minutes increments. When the setting time displays 10:00, each press will increase the TIMER ON setting in 60 minutes increments. To cancel the time ON program, simply adjust the TIMER ON to 0:00.

VENT Button: Push this button to set the ventilating mode. The ventilating mode will operate in the following sequence: AUTO Continuous Off



RESET Button: When the RESET button is pushed, all of the current settings are cancelled and the control will return to the initial settings. (Use a 1mm little round stick to push the button)

TURBO Button: Push this button on COOL/HEAT mode and the air conditioner will go into powerful cooling or heating operation. Push again to cancel the TURBO function. (Available for Master Gold and Everest only)

ECONOMIC Button: Press this button to activate the Energy-Saving mode. Press again to stop the function. This function is available on COOL, HEAT or AUTO mode only and maintains the most comfortable temperature for you.

ON/OFF Button: Push this button to start the unit operation. Push the button again to stop the unit operation.

AIR VERTICAL Button: When press the button once and quickly, the air flow direction setting feature of the louver is activated. The moving angle of the louver is 6° for each press. Keep pressing the button to move the louver to the desired position. If keep pressing the button without releasing for 2 more seconds, the auto swing feature of the louver is activated. The vertical louver would swing up/down automatically. Press it again to stop.

NOTE: If the auto swing up/down feature has been set by unit control panel, press the AIR VERTICAL button on remote controller will cancel the feature.

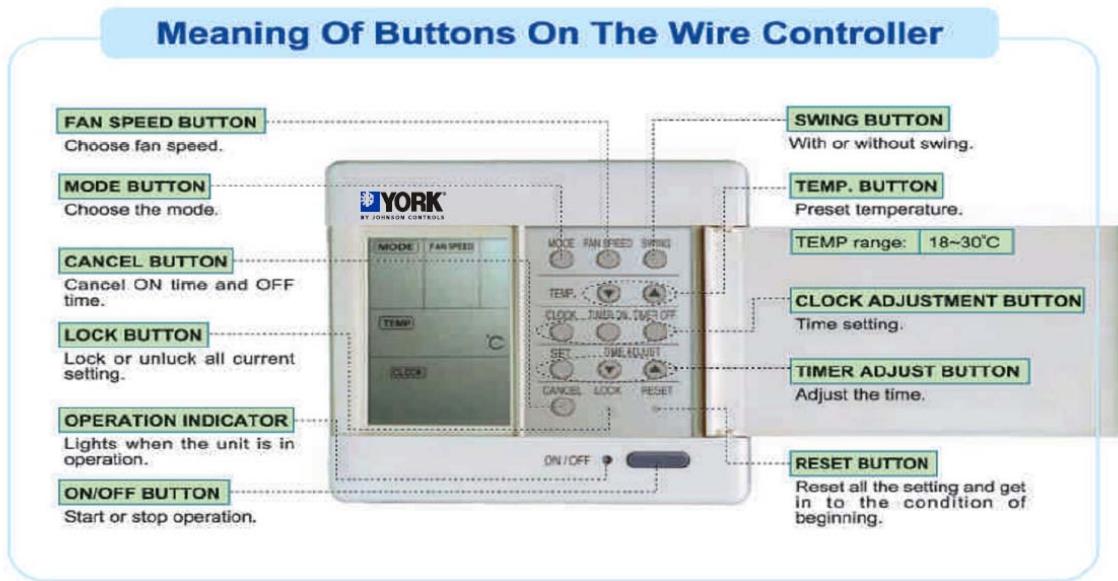
TIMER OFF Button: Press this button to preset the time OFF (turn off the operation). Each press will increase the TIMER OFF setting in 30 minutes increments. When the setting time displays 10:00, each press will increase the time OFF setting in 60 minutes increments. To cancel the TIMER OFF program, simply adjust the TIMER OFF to 0:00

TEMP Button: Press the button to increase the indoor temperature setting.

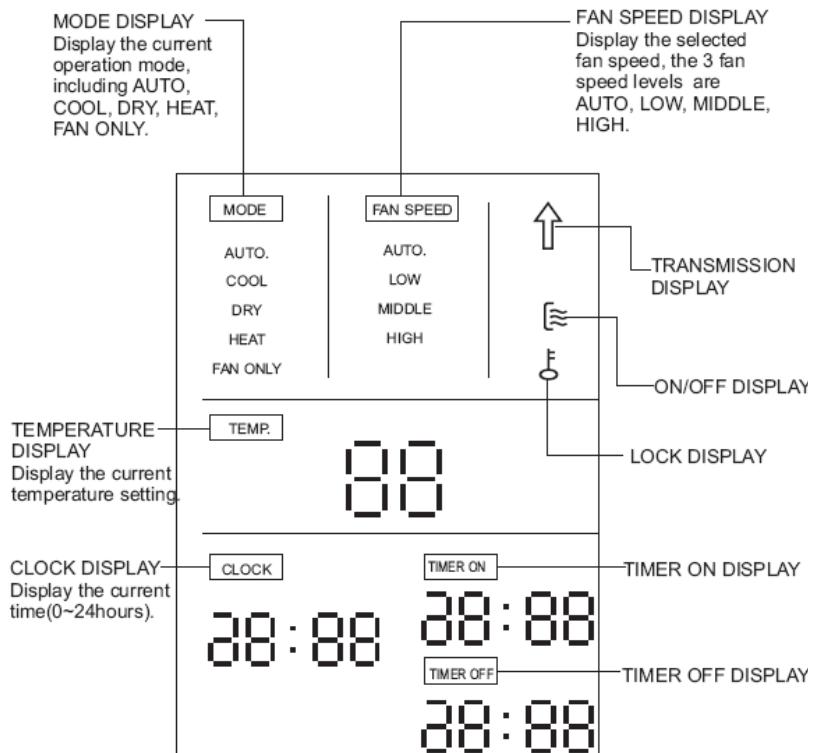
TEMP Button: Press the button to decrease the indoor temperature setting.

LOCK Button: Push this button to lock all the current settings, push again to cancel the LOCK function.

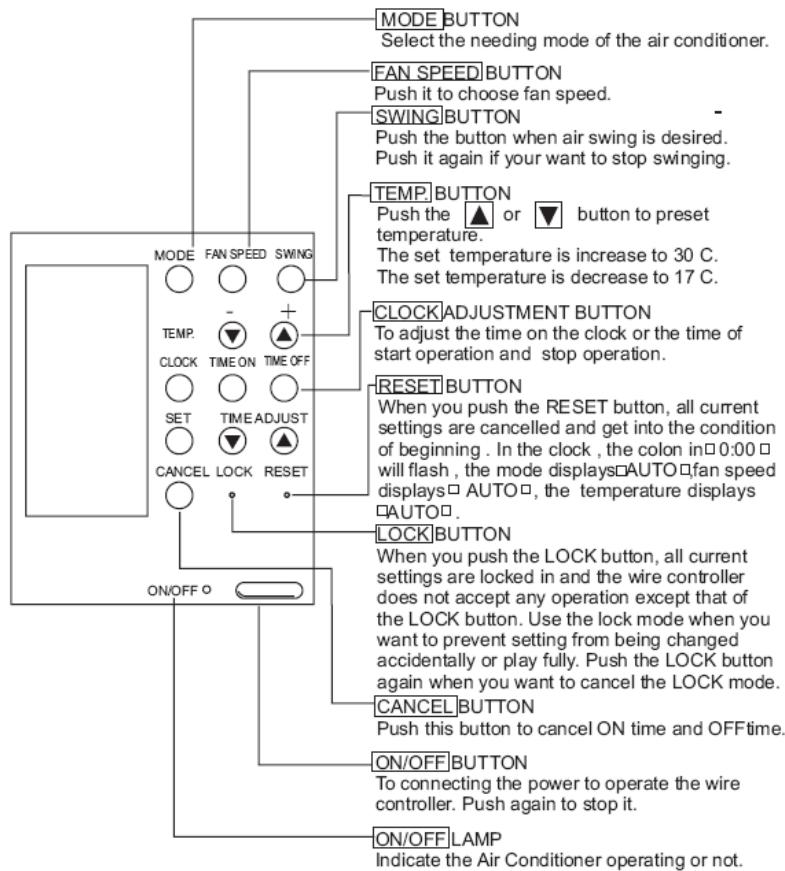
5.3 Wired remote controller AMR01M



Name and function of indicators on the wire controller



Wire controller and their functions



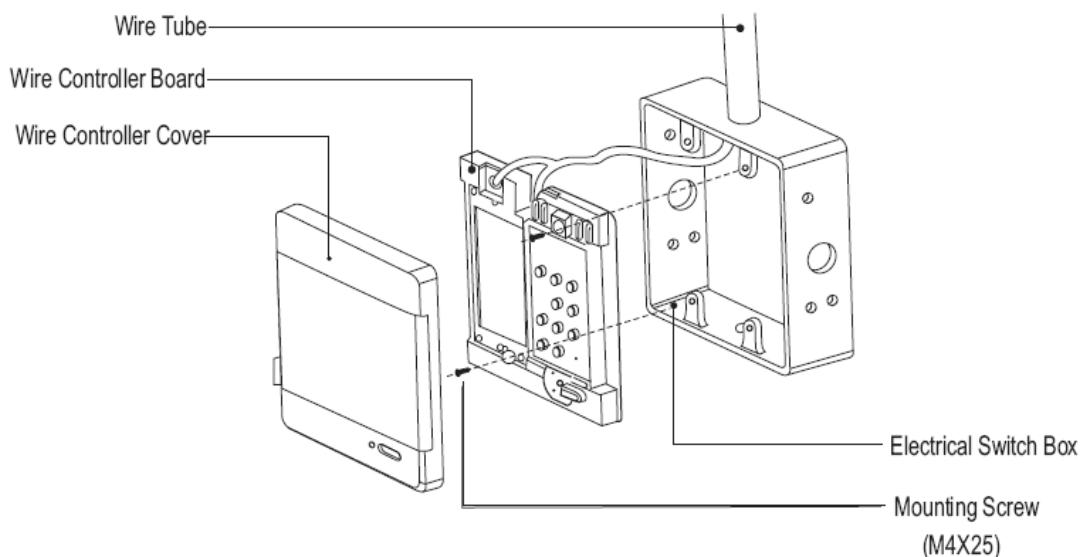
Installation

Installation into the wall

The diameter of Wire Controller wire must be suitable for its length.

Wiring Tube must be suitable for the wires.

Turn a screwdriver at the concave on bottom panel of the Wire Controller to remove the Cover.

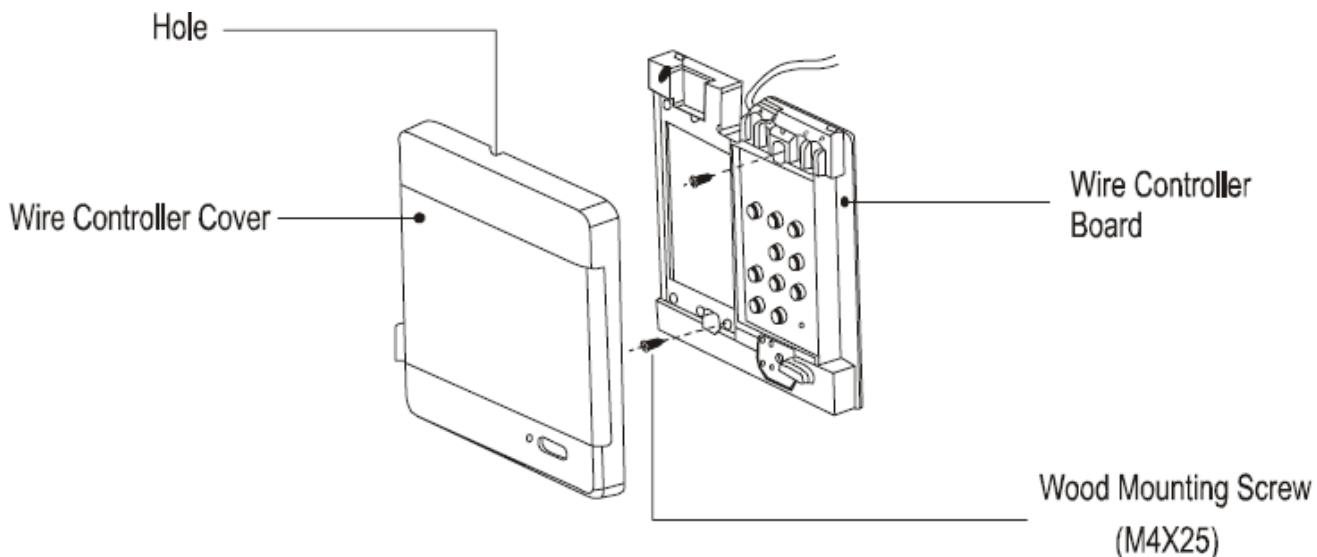


NOTE

- Never turn screws too tightly, or else the cover would be dented, or the Liquid Crystal breaks.
- Do not cut wires when installing Wire Controller cover.

Installation on the wall

Cut a hole that can let a Three-core Rubber Insulating Screen Cable pass by from the middle of Wire Controller Top Cover before installation.



Refer to Electrical Switch Box Installation above for other installation information you need.
Use Clue around the Screen Cables and the Hole for sealing after installation completed.

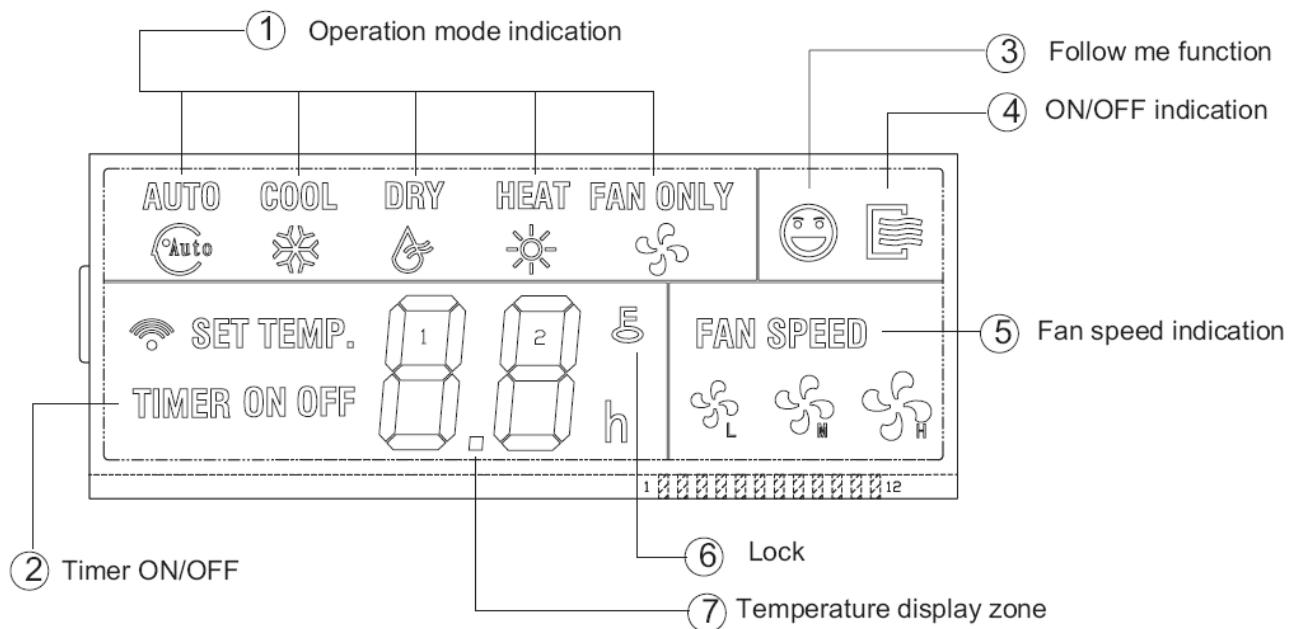
NOTE

- Never turn screws too tightly, or else the cover would be dented or the Liquid Crystal breaks.
- Do not cut wires when installing Wire Controller Cover.
- Please leave enough long cable for maintenance of the Wire Controller Board.

5.4 Wired remote controller AMR01Y



Name and function of indicators on the wire controller



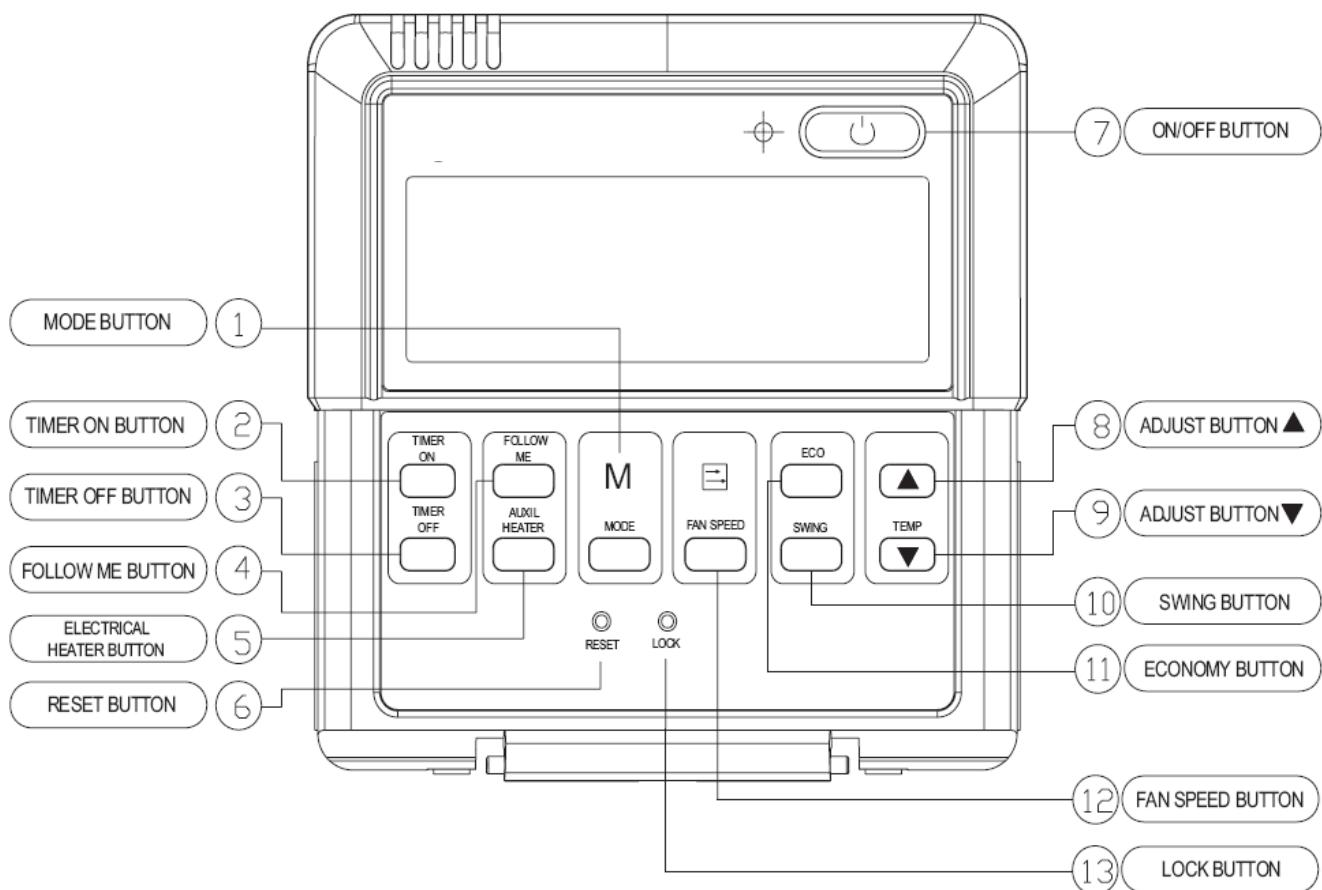
1. Operation mode indication: When press "MODE" button, the following mode can be selected in circle. Auto Cool Dry Heat Fan only Auto.

Auto→ Cool→ Dry →Heat→ Fan only →Auto

For cooling only model, heat mode is skipped.

2. Timer: When adjust setting on time or only on time is set, the "ON" is lighted. When adjust setting off time or only off time is set, the" OFF" is lighted. If on and off timer are both set, the "ON" and "OFF" are both lighted.
3. Follow me function: There is a temperature sensor inside the wire controller, after setting temperature, it will compare the two temperatures, and the space of wire controller will be the same as setting temperature. It is available under cooling, heating, auto mode.
4. ON/OFF indication: When it is on, the icon display, otherwise it is extinguished.
5. Fan speed indication: There are four fan modes: low, middle, high, and auto. For some models, no middle fan then the middle fan is seen as high speed.
6. Lock: When the"LOCK"button is pressed, the icon appears and other buttons is unable, press again, the icon disappears.
7. Temperature display zone: Generally it displays setting temperature; it can be adjusted by press temperature button▲and▼ .But in fan mode, no display here.

Name and functions of buttons on wire controller



Mode button: When press this button, the operation mode change as the following sequence:



Remark: For the cooling only model, the heating mode is skipped.

Timer on button: Press this button, timer on function is active. Then every press, the time increase 0.5h, after 10h, 1h incensement after each press. If cancel this Function, just set it to "0.0"

Timer off button: Press this button, timer off function is active. Then every press, the time increase 0.5h, after 10h, 1h increase after each press. If cancel this function, just set it to "0.0".

Follow me button: When under cool, heat and auto mode, press this button, follow me function is active. Press again, this function is ineffective.

Electrical heater button: If press this button in heat mode, electrical heater function become ineffective.

Reset button (hidden): Use a 1mm stick to press in the little hole, then the current setting is canceled. The wire controllers enter into original state.

ON/OFF button: When in off state, press this button, the indicator is on, the wire controller enter into on state, and send setting information to in door Pcb . When in on state, press this button, the indicator is off, and send instruction. If timer on or timer off has been set, it cancel this setting then send instruction to stop the machine.

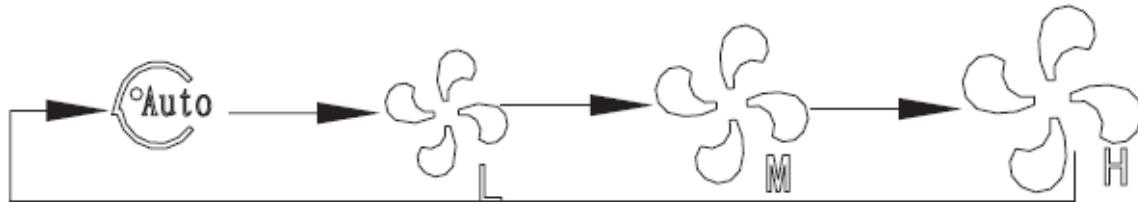
Adjust button: Set indoor temperature up. If press and hold on, it will increase at 1degree per 0.5 second.

Adjust button: Set indoor temperature down. If press and hold on, it will decrease at 1degree per 0.5 second.

Swing button: First press, start swing function; second press, stop swing. (Match to some model with swing function).

Economy operation button: press this button, the indoor unit operates in economy mode, press again, exit this mode (it may be ineffective for some models)

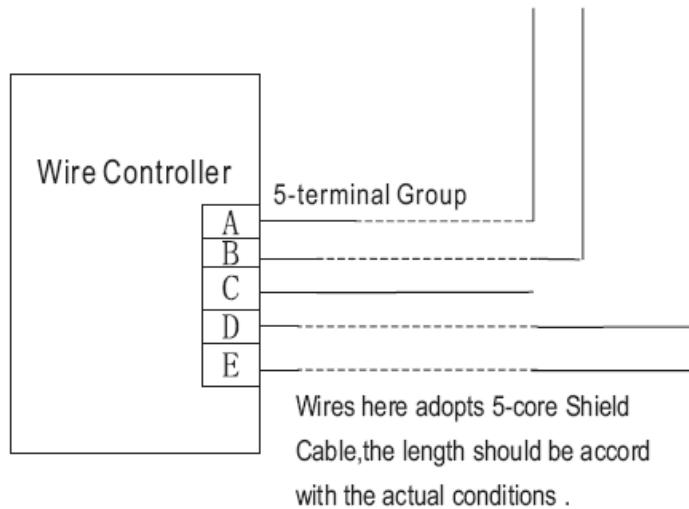
Fan speed button: press this button consecutively; the fan speed will circle as follow:



Lock button (hidden): When you push the LOCK button, all current settings are locked in and the wire controller does not accept any operation except that of the LOCK button. Use the lock mode when you want to prevent setting from being changed accidentally or play fully. Push the LOCK button again when you want to cancel the LOCK mode.

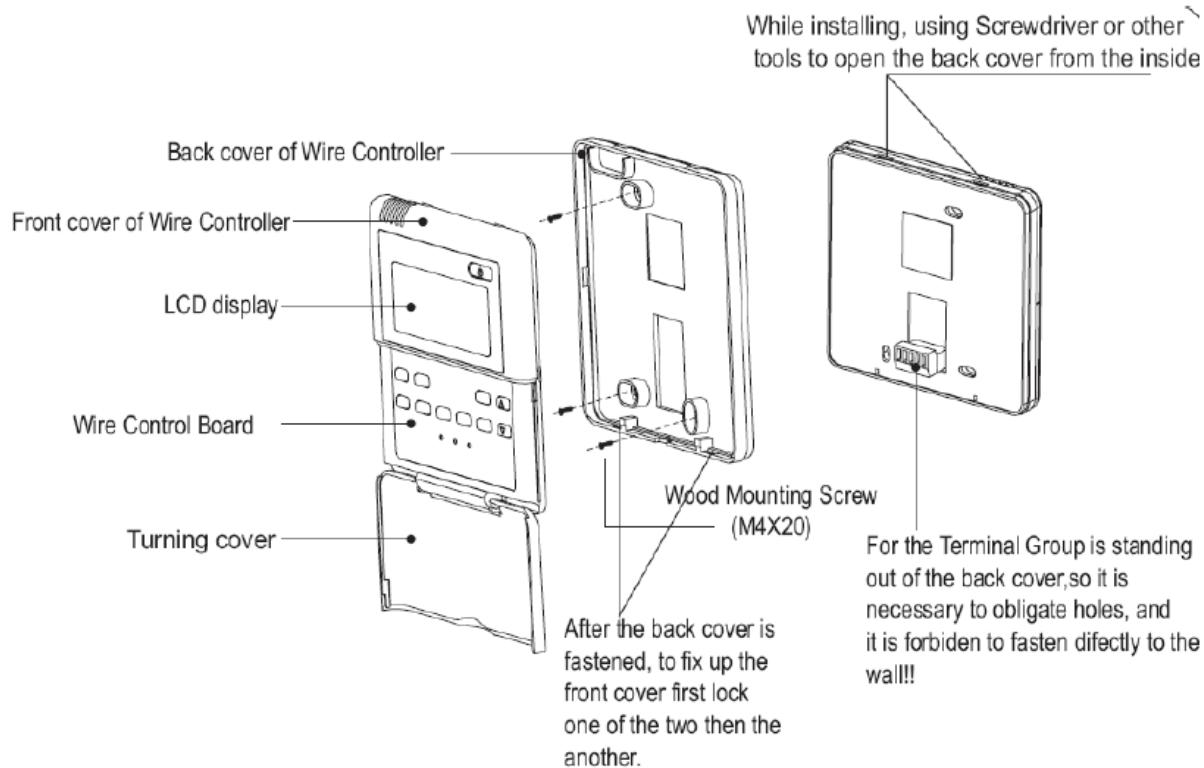
Installation

Wiring technique and principle:



Instruction for installing

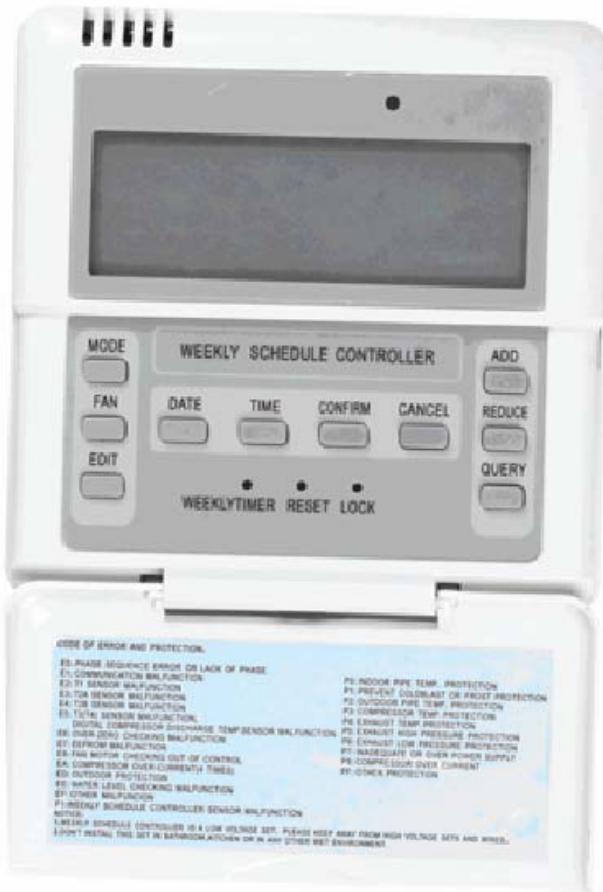
When it is necessary to use this controller, it needs to add a small 5-terminal Group and fasten a infrared emitter near to the receiver in the switch board. Connecting the anode and cathode to A、B of the Terminal Group, also connect +5V、GND、RUN、 of the switch board separately to the C、D、E of the 5-terminal Group.



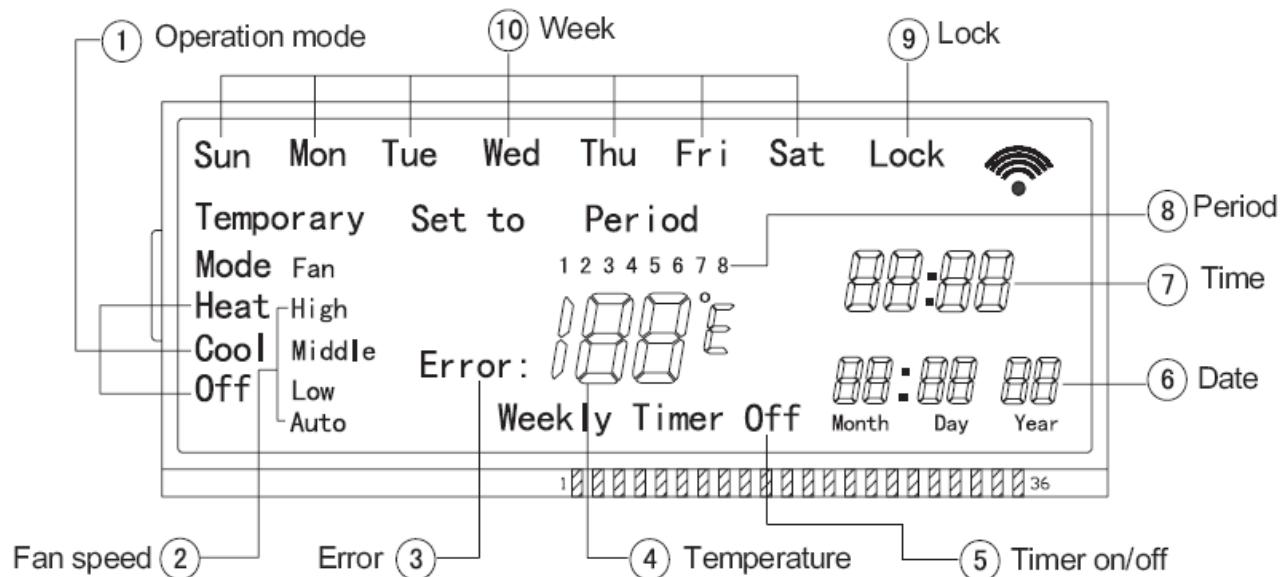
NOTE

- The connecting wire should be a little longer as to take away the switch board easily for maintenance.
- The connecting wire should be a little longer as to take away the controller easily for maintenance.

5.5 Weekly schedule timer AMR02M

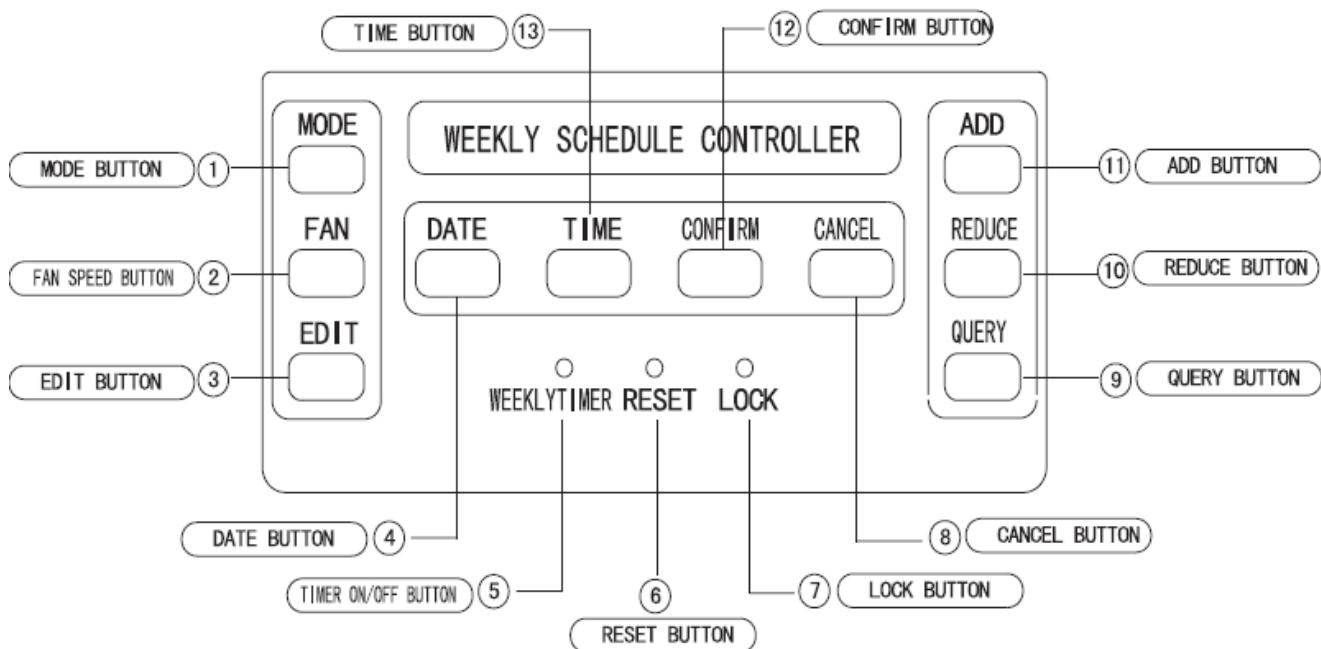


Name and Function of Indicators on the controller



1. Operation mode indication: When press "MODE" and "ADD" or "REDUCE" button, the following mode can be selected
In circle: Cool→ Heat→ Off.
For cooling only model, heat mode should be skipped.
2. Fan speed indication: There are four fan modes: low, middle, high, and auto. For some models, no middle fan then the middle fan is seen as high speed.
3. Fault indication.
4. Temperature indication.
5. Weekly Schedule Controller switch indication.
6. Date indication.
7. Time indication.
8. Period indication.
9. Lock indication.
10. Week indication.

Name and operation of the button of the wire controller



Mode button: When press this button and ADD or REDUCE button to select Heat or Cool or off, press Confirm to save and back.
Remark: For the cooling only model, the heating mode should be skipped.

Fan speed button: press this button and ADD or REDUCE Button to select of High or Middle or Low or Auto, press Confirm to save and back.

Edit button: When press this button, can setup Week and Date and Period.

Day button: press this button and ADD or REDUCE button to select of High or Middle or Low or Auto, press Confirm to save and back.

Timer on/off button: Press this button, can turn off the weekly timer function.

Reset button: When press this button, all of the display part of LCD will be light last 2 second when weekly timer has been electrified or reset. Following the lamp will be closed and last 1 second. So the system will come into normal display state and need to carry out initial setting.

Lock button: press this button, weekly timer come into lock mode, Press LOCK again, lock mode is unchained at once. Weekly timer lock mode state can not be canceled when weekly timer has come back to supply power after interruption of power supply.

Cancel button: It is for not saving and retreating, or to cancel the lock.

Query button: Press "Query" "Select" "query ""present" temperature value press "Cancel "to back, press "Confirm" time section parameters' setting :press "Add" or "reduce" to select several days from "Sun" to "Sat" 7 days, press" Confirm ""1 "~"8 "time section selection beginning from No.1 time section , setting mode, fan's velocity, starting time and end time, till 8 time sections are finished press "Confirm" to save press "Cancel" to retreat.

Reduce button: It is for reducing to numbers and moving left or up to the other.

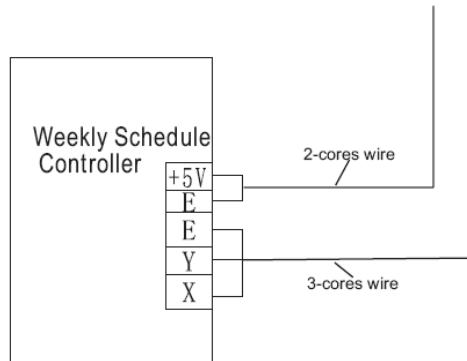
Add button: It is for adding to numbers, and moving right or down to the other.

Confirm button: It is for confirm selection.

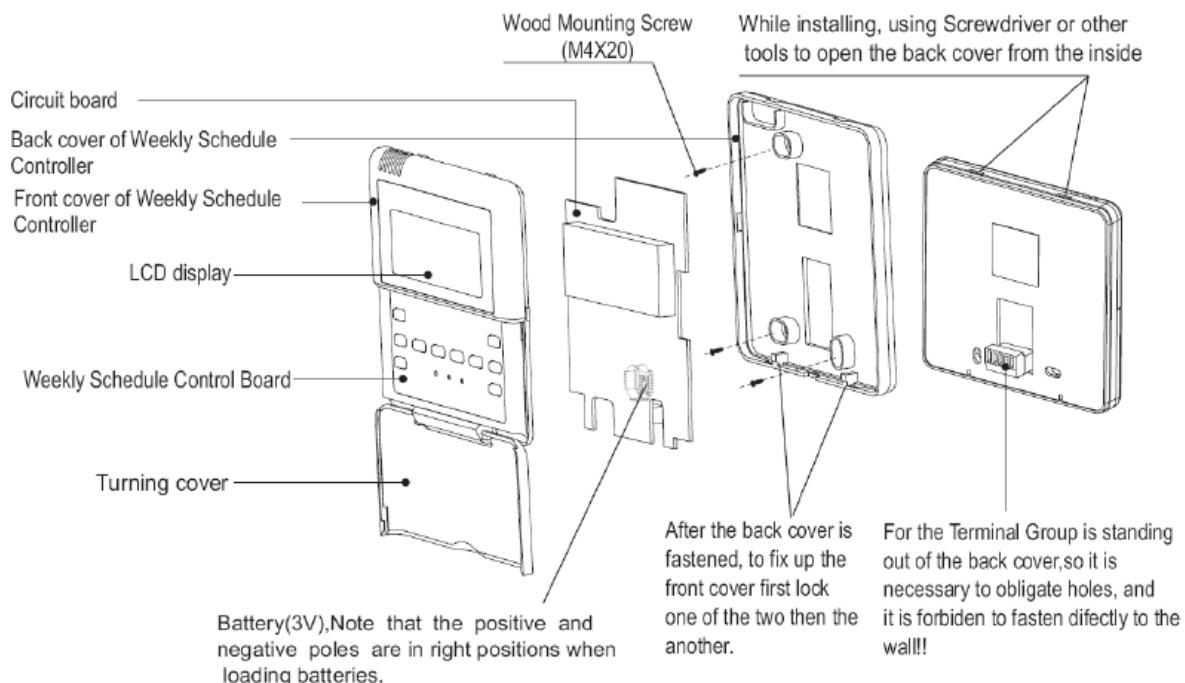
Time button: When press button, and press "Add" or "Reduce" to adjust the hours value , press "Confirm" adjust minutes: press "Add "or "Reduce" to adjust the minutes value, press "Confirm" to save and back.

Installation

Wiring technique and principle:



Instruction for installing: When a weekly schedule controller is needed, a small 2-cores wire and 3-cores wire should be added. Connect with the same color.

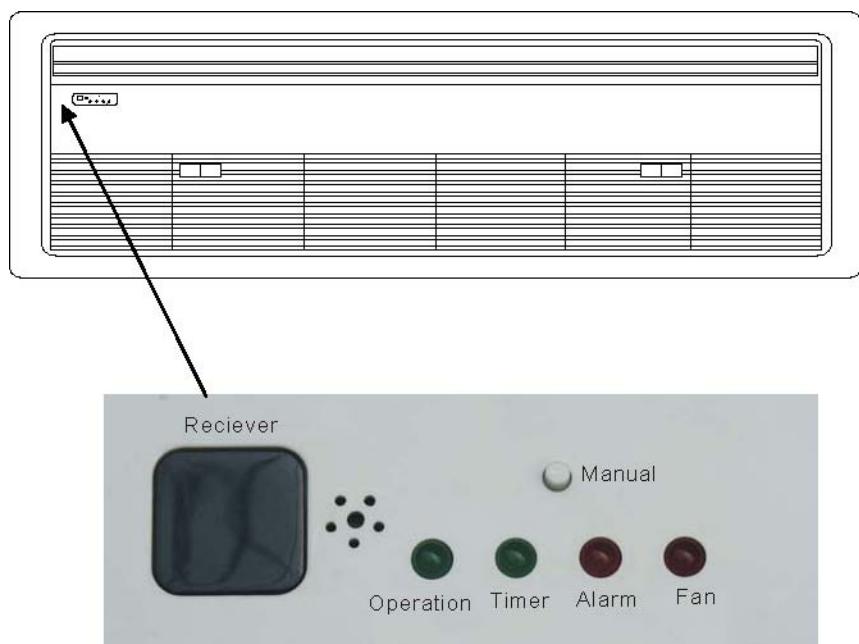
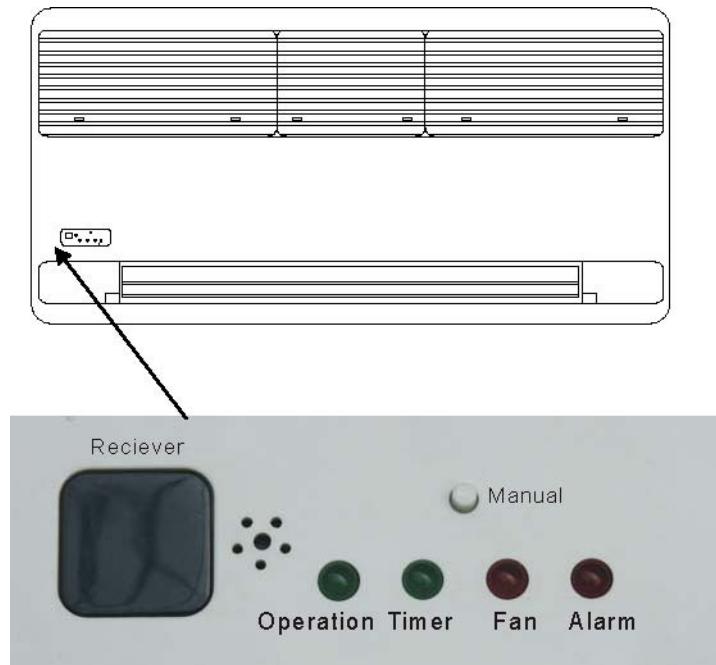


Note:

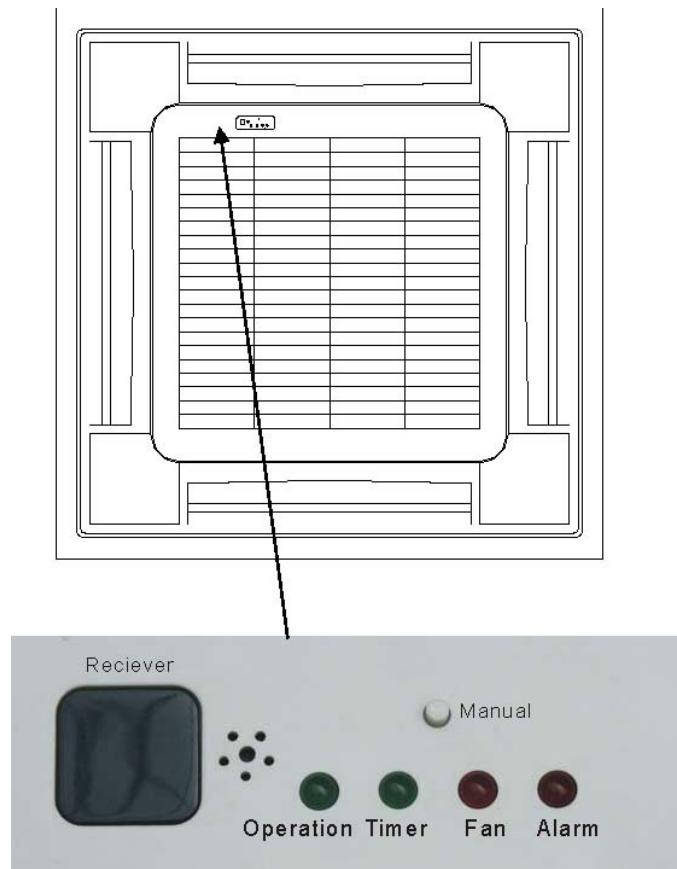
- The connecting wire should be a little longer as to take away the switch board easily for maintenance.
- The connecting wire should be a little longer as to take away the controller easily for maintenance.

6. Receiver & Display unit

6.1) One-way cassette type



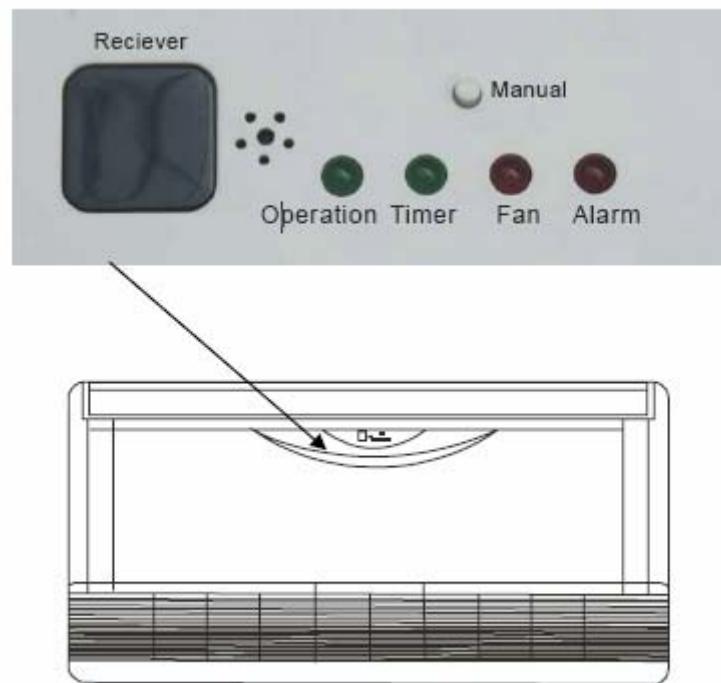
6.2) Four-way cassette type



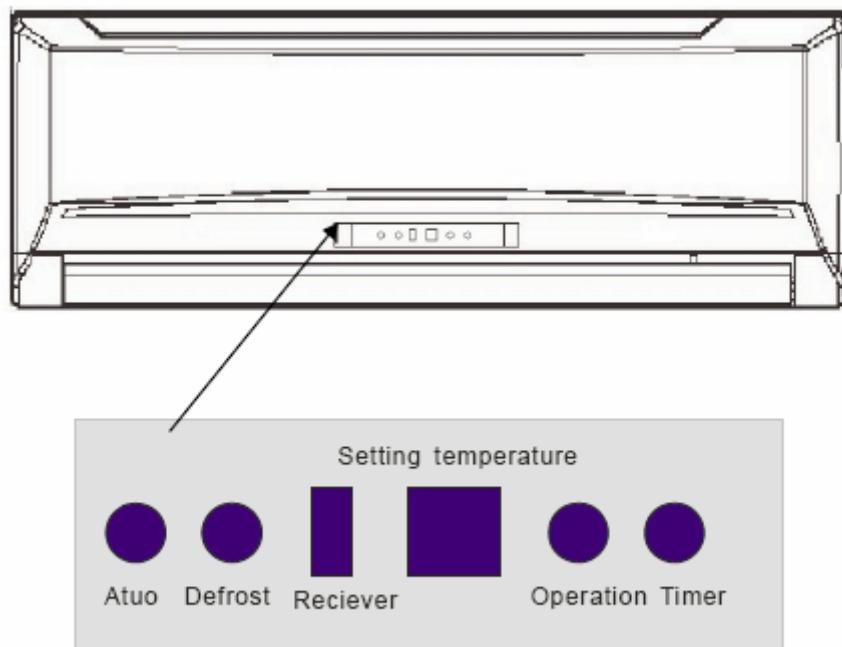
6.3) Concealed duct type



6.4) Floor & Ceiling type



6.5) Hi wall





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