

Introduction

Part 1 : General Information

Part 2: Indoor Units

Part 3: Installation

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Introduction

Fan coil unit is a kind of compound device which assemble fan and surface-type coil heating-exchanger together. Fan coil with fresh air supply system is a main type of center air-conditioner system, so it is an important component of AC devices. Fan coil has horizontal type, vertical type, etc. A cooling (heating) supply system usually consists of fan coil terminals and chilled water system (heated water system).

Chigo[®] commercial AC fan coil is designed and manufactured on the base of advanced technology, and utilize qualified galvanized iron as material. Due to its supper-thin design, it has such advantages: beautiful outlook, space saving, easy installation, etc. And the most obvious advantage is that it can decrease the outlet air Temp-difference as low as possible to make room more comfortable, as well as don't decrease cooling capacity output. For the large air flow volume design, it can increase room ventilation frequency, supply more flesh air, and balance room temperature distribution. Benefiting from adoption of advanced material and technology, it can effectively decrease the running noise and keep running smoothly. With the advantages above, it can be widely applied in market, hospital, office building, hotel airport, etc.



Part 1: General Information

- 1. Model Names of Coil**
- 2. External Appearance**
- 3. Nomenclature**
- 4. Features**

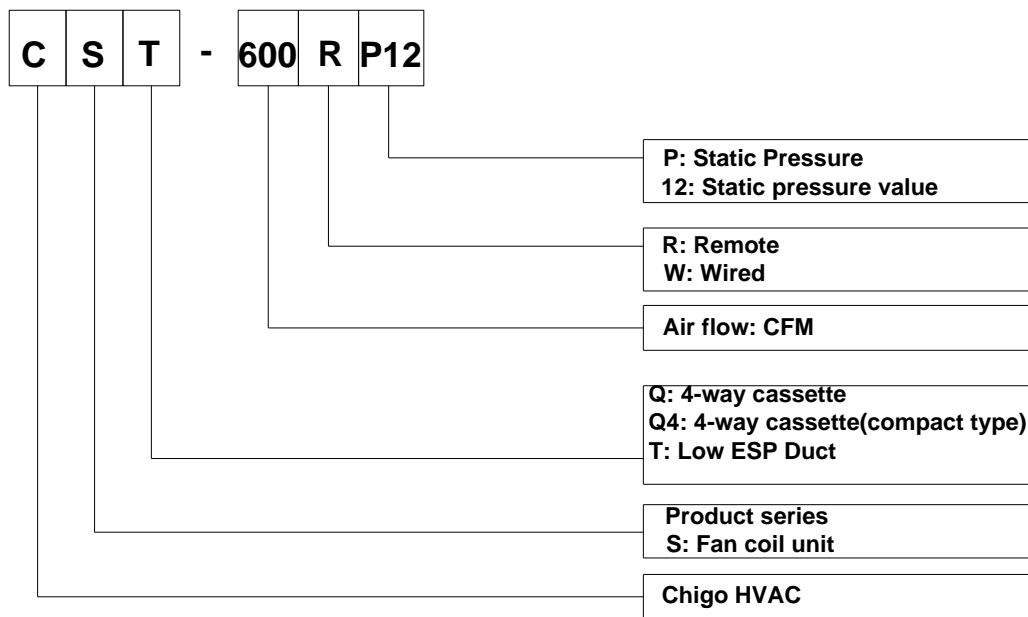
1. Model Names of Fan Coil

No	Type	Model	Power source
1	Compact Ceiling Cassette Type	CSQ4-300R	220-240V~,1Ph, 50Hz
2		CSQ4-350R	
3		CSQ4-470R	
4	Ceiling Cassette Type	CSQ-600R	
5		CSQ-760R	
6		CSQ-880R	
7		CSQ-1000R	

2. External Appearance

Ceiling Cassette Type	Compact Ceiling Cassette Type
	

3. Nomenclature



4. Features

- ✧ Chilled water/Hot water (2 pipes)
- ✧ Low height for easy installation
- ✧ Low noise fan direct driven by single phase, 3 speed permanent split capacitor motor.
- ✧ Copper tube/aluminum fin coils
- ✧ Unit constructed by electrostatic galvanized sheet, providing maximum protection against corrosion

Part 2 Indoor Units

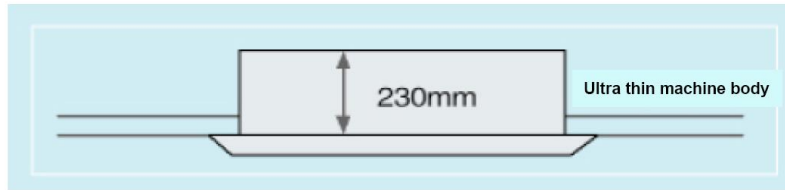
- 1. Ceiling Cassette Type**
- 2. Compact Ceiling Cassette Type**

Ceiling Cassette Type

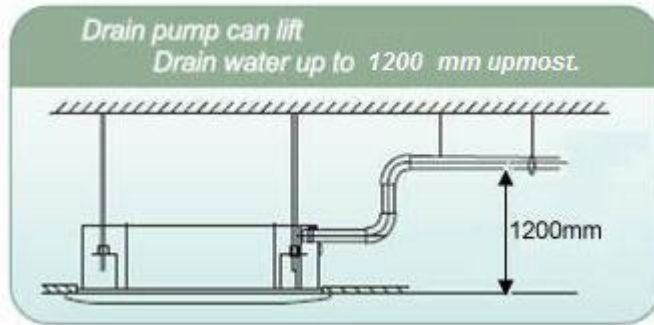
- 1. Features**
 - 2. Specification**
 - 3. Dimensions**
 - 4. Service Spaces**
 - 5. Wiring Diagram**
 - 6. Sound Levels**
 - 7. Exploded View**
 - 8. Troubleshooting**
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1. Features

- 1) Ultra thin machine body to easy installation and maintenance. 1000~1300m³/h: 230mm; 1500~1700m³/h: 285mm.



- 2) Drainage pump can take up the condenser water to 1200mm.



- 3) Stylish design is harmonious with any interior decoration and creates an elegant environment.



- 3) A full series of controller give you the most suitable solution according to the different requirements from different customers.



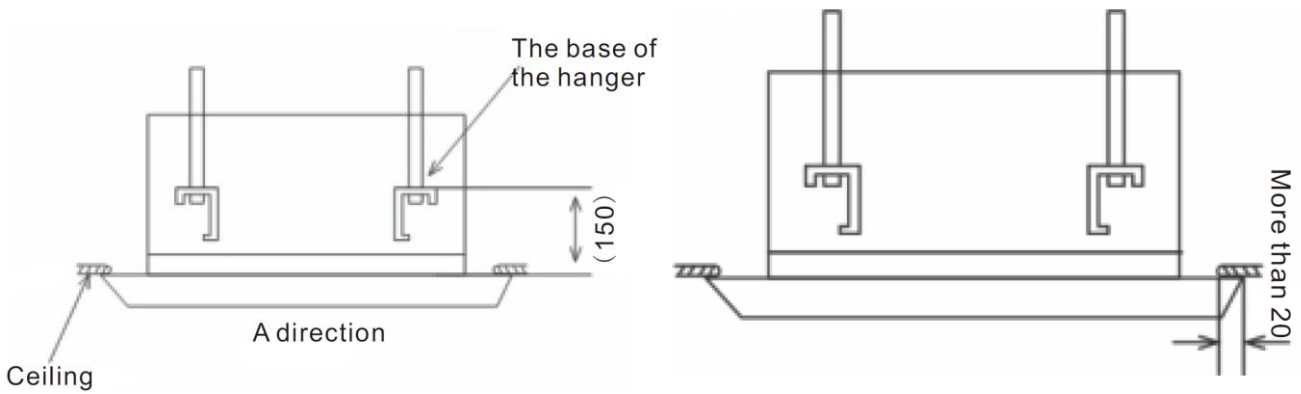
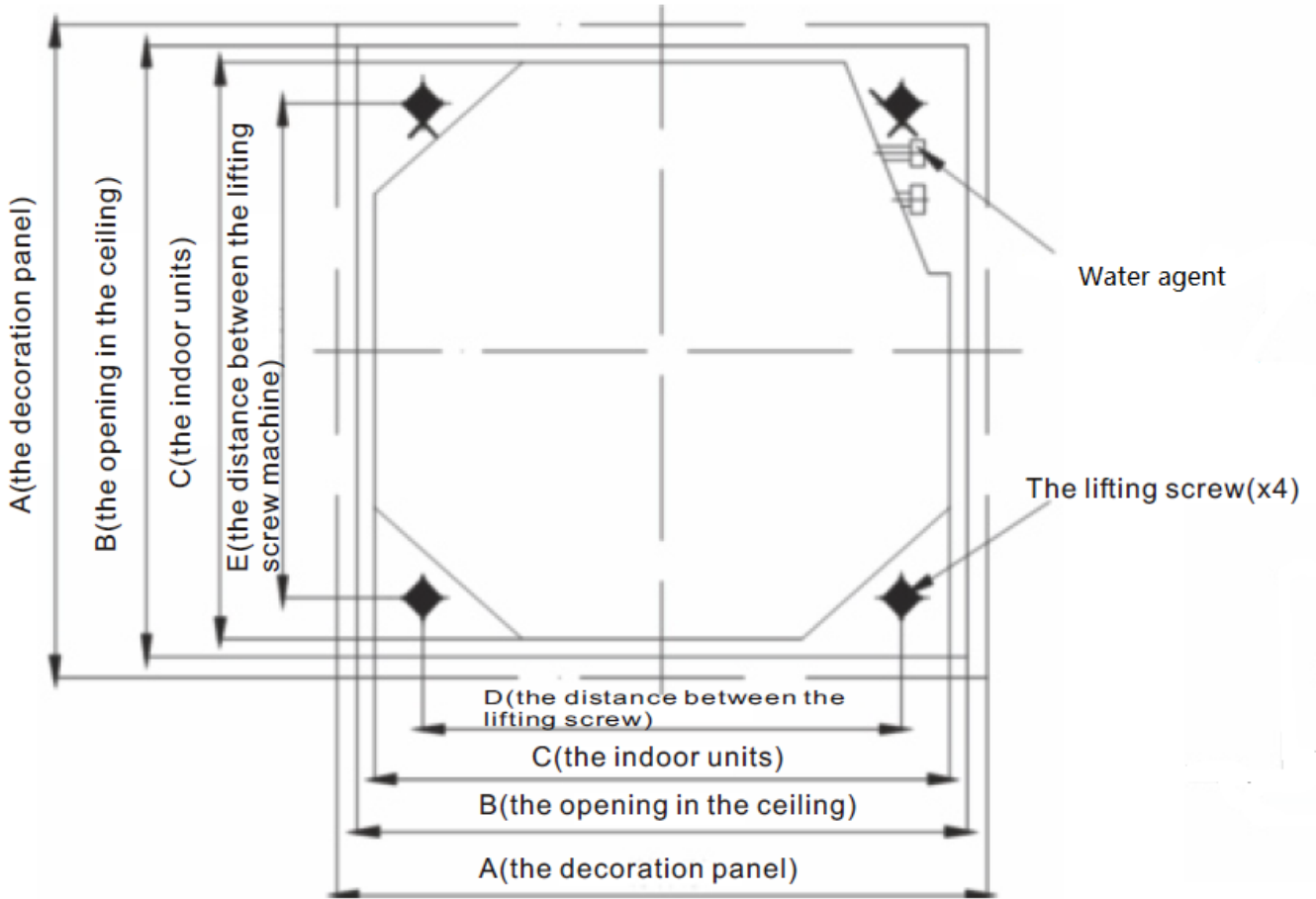
- 5) 3-speed motor provides more choices
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2. Specification

Model NO.		CSQ-600R	CSQ-760R	CSQ-880R	CSQ-1000R	
air flow (Hi-speed)	CFM	600	760	880	1000	
	m3/h	1000	1300	1500	1700	
Cooling Capacity (Hi-speed)	W	5300	7200	8500	10000	
	Btu	18080	24560	29000	34120	
Heating Capacity (Hi-speed)	W	8000	10800	12800	15000	
	Btu	27290	36850	43670	51180	
Noise	dB(A)	43-48	44-48	45-52	45-53	
Water flow	m3/h	1.1	1.24	1.46	1.55	
Water pressure drop	kPa	36	36	38	40	
Indoor coil	Number Of Rows	2	2	2	2	
	Tube Pitch(A)x Row Pitch	mm	21×13.37	21×12.7	21×12.7	
	Fin spacing	mm	1.45			
	Fin type		Hydrophilic aluminum			
	Tube Outside Dia.And type	mm	φ7,Inner grooved tube			
	Coil Dimension (L×H×W)	mm	2000×168×32	2000×168×32	2000×252×32	2000×252×32
Fan motor	type		Low noise 3-speed fan motor			
	Number		1	1	1	1
	Input	W	140	150	160	180
	Capacitor	μF	3	3	4	4
Indoor unit	Dimension (W×H×D)	mm	840×230×840	840×230×840	840×285×840	840×285×840
	Packing (W×H×D)	mm	920×265×920	920×265×920	920×310×920	920×310×920
	Net/Gross weight	kg	23/28	23/28	26/31.5	28/33.5
plane	Dimension (W×H×D)	mm	950×50×950	950×50×950	950×50×950	950×50×950
	Packing (W×H×D)	mm	1030×105×1030	1030×105×1030	1030×105×1030	1030×105×1030
	Net/Gross weight	kg	5.4/8	5.4/8	5.4/8	5.4/8
Control Mode		wired controller(optional),remote controller(standard)				
Pipe	water-inlet pipe	mm	DN20	DN20	DN20	DN20
	water-return pipe	mm	DN20	DN20	DN20	DN20
	Condensation water-outlet pipe	mm	DN25	DN25	DN25	DN25

- Remark:**
1. All performance data above is based upon 0Pa ambient static pressure.
 2. Cooling capacity test condition: air inlet Temp. : 27DB°C/19WB°C, water inlet Temp. 7°C, water Temp. difference 5°C
 3. Heating capacity test condition: Air inlet Temp. 21DB°C, water inlet Temp. 60 DB°C, water Temp. difference 5°C

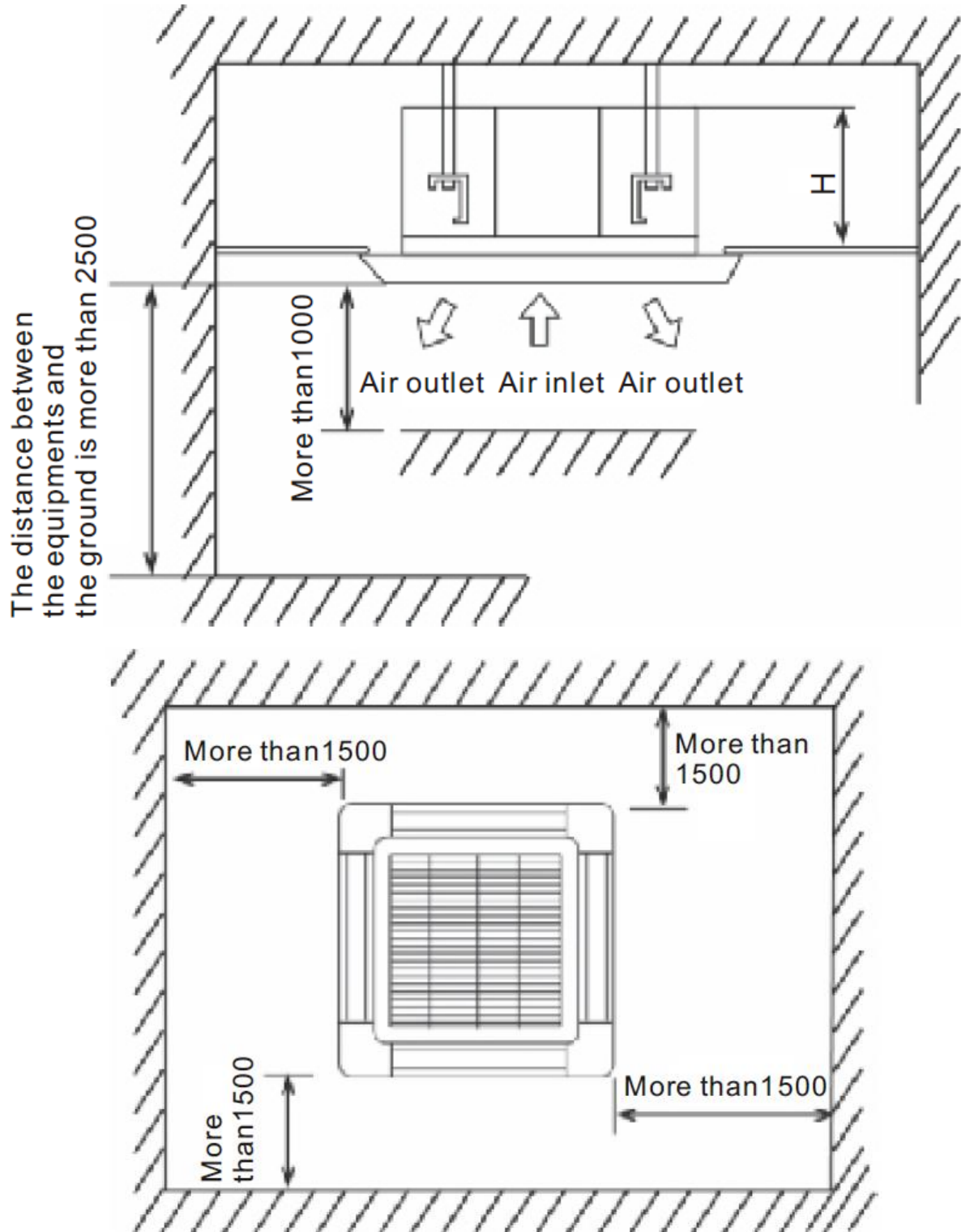
3. Dimensions



Unit: mm

Model		Dimensions(H)				
		A	B	C	D	E
CSQ-600R	CSQ760R	950	890	840	680	780
CSQ-880R	CSQ-1000R					

4. Service Spaces



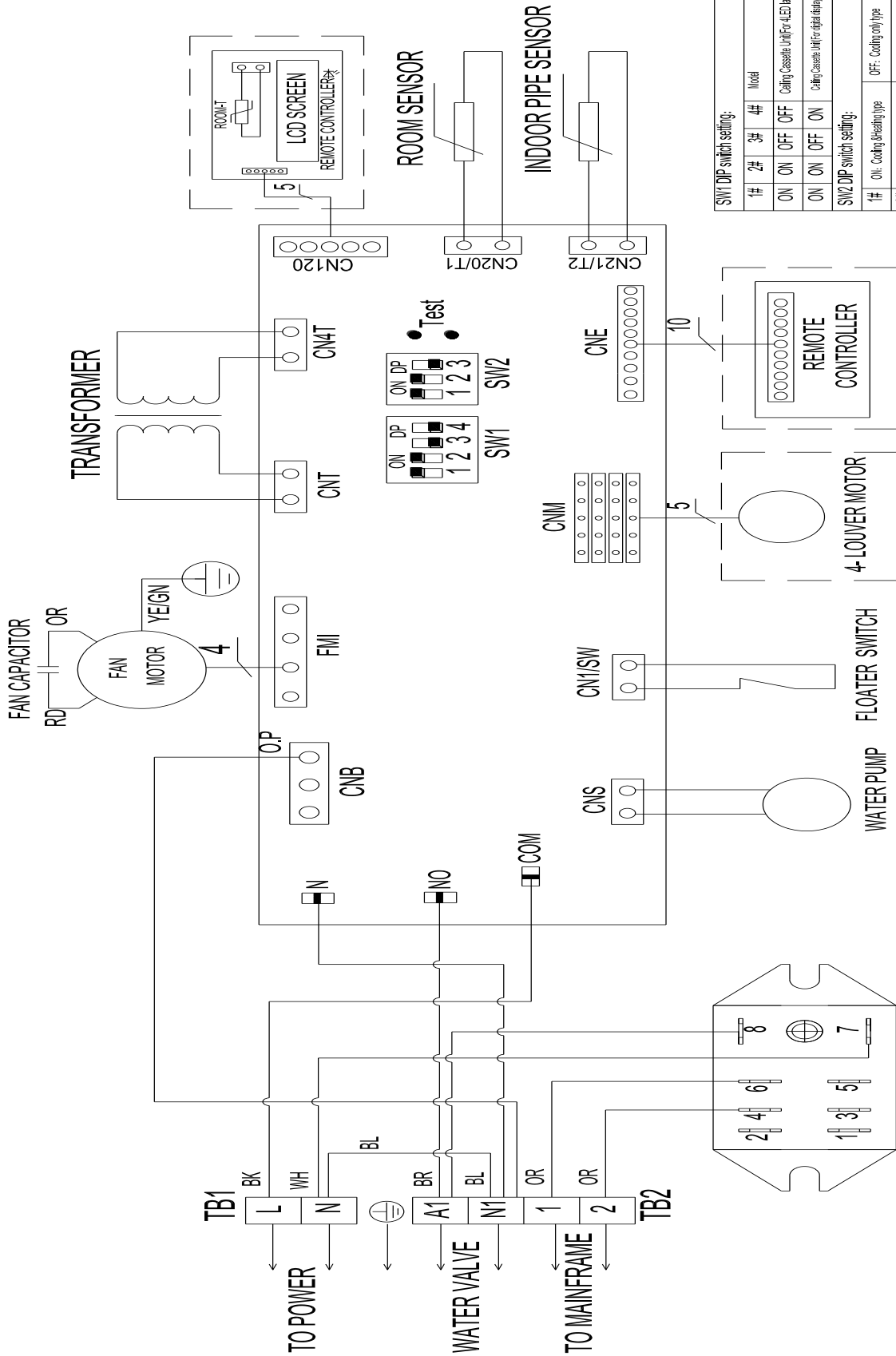
Installation dimension

Model	Dimensions(H) (mm)
CSQ-600R CSQ-760R	230
CSQ-880R CSQ-1000R	285

5. Wiring Diagram

CSQ-600R, CSQ-760R , CSQ-880R, CSQ-1000R

CIRCUIT DIAGRAM



SW1 DIP switch setting:

1#	2#	3#	4#	Model
ON	ON	OFF	OFF	Catig. Cassette Unit For 4-LED lamp panel
ON	ON	OFF	ON	Catig. Cassette Unit For digital display lamp panel

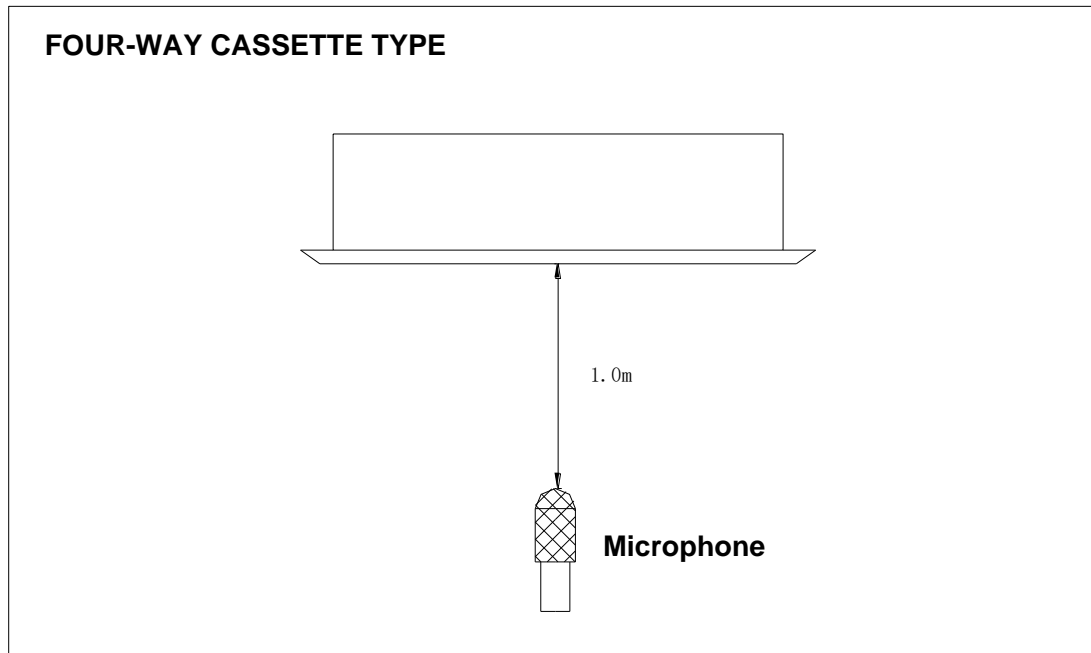
SW2 DIP switch setting:

1#	ON: Cooling & heating type	OFF: Cooling only type
2#	ON: With Non-volatile Memory	OFF: Without Non-volatile Memory
3#	ON: Room temp. sensor T1 for the controller	OFF: Room temp. sensor T1 for Electric control panel

NOTE: Keep the red pin in a short circuit to enter rapid response mode. Normal mode is a short circuit.

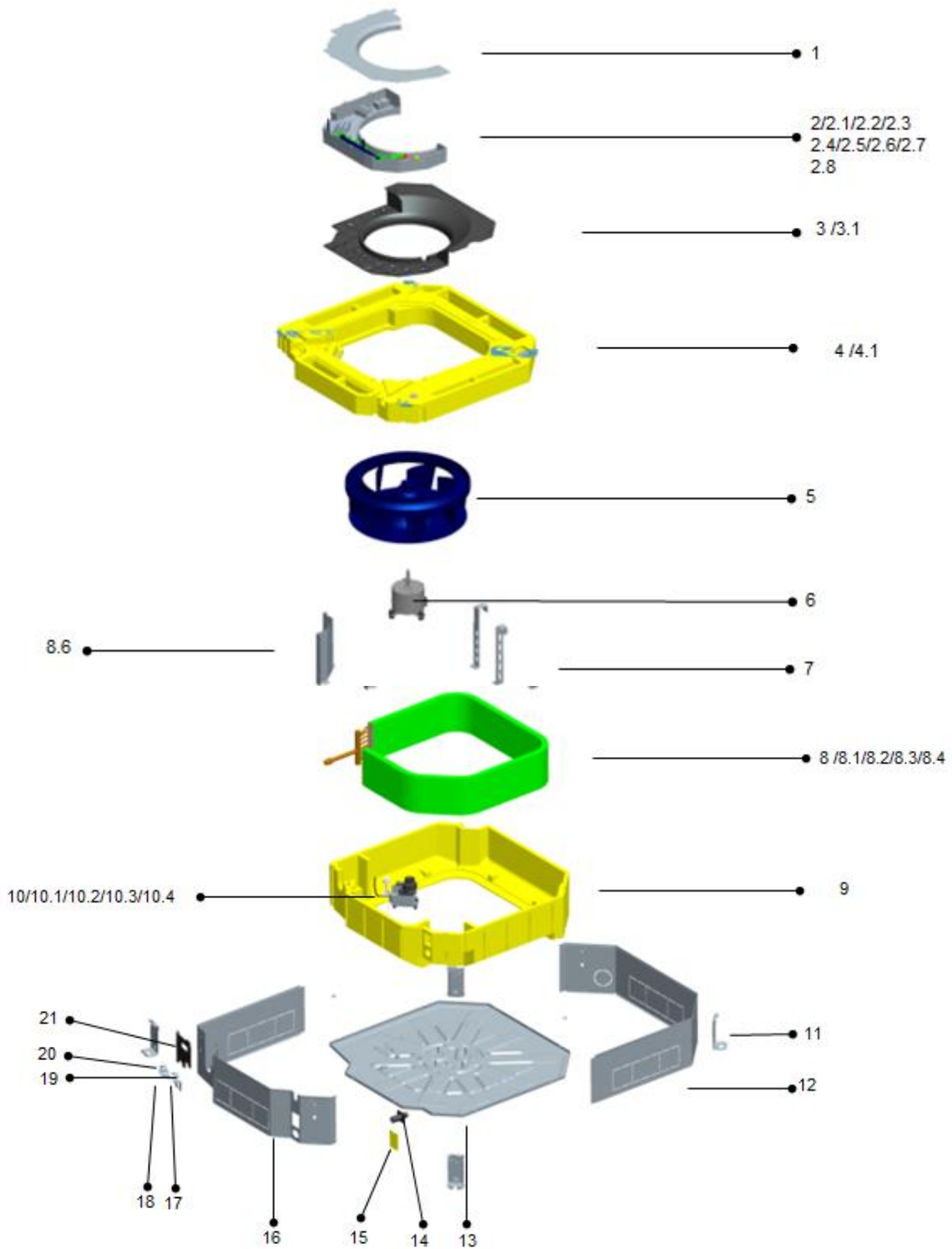
6. Sound Levels

Model		CSQ-600R	CSQ-760R	CSQ-880R	CSQ-1000R
Noise	dB(A)	43-48	44-48	45-52	45-53



7. Exploded View

CSQ-600R, CSQ-760R , CSQ-880R, CSQ-1000R



No.	Part Name	Quantity	No.	Part Name	Quantity
1	E-parts box cover	1	8.3.2	Evaporator	1
2	Electrical control components for indoor unit	1	8.3.3	Water inlet pipe welding assy	1
2.1	transformer	1	8.3.4	Drain pipe welding assy	1
2.2	Fan motor capacitor	1	8.4	Main fixing board	1
2.3	Terminal	1	9	Upper foam components	1
2.4	Terminal	1	10	Pre-assembling assy for water pump	1
2.5	E-parts board for indoor unit	1	10.1	water pump support	1
2.6	Temperature sensor	1	10.2	Water pump	1
2.7	Temperature sensor	1	10.3	Liquid-level sensor	1
2.8	Welded chasis for E-parts box	1	10.4	Underlay for water pump support	3
3	Wind inlet guide assy	1	11	Hanger	4
3.1	Wind inlet guide	1	12	Rear brattice	1
4	Water pan components	1	13	Chassis assy	1
4.1	Foam pendant	2	14	Discharge pipe joint	1
5	Centrifugal fan	1	15	Side maintenance board for water pump	1
6	Fan motor for indoor unit(YDK-55T-6-1)	1	16	Front brattice	1
7	Auxiliary fixing board for evaporator	2	17	Lower pipe clamp	1
8	Evaporator components	1	18	Lower pipe clamp(φ35)	1
8.1	Insulating pipe	2	19	Upper pipe clamp	1
8.2	Evaporator attached cotton	1	20	Upper pipe clamp(φ35)	1
8.3	Evaporator welding assy	1	21	Valve panel	1
8.3.1	Instalation tube for probe	1			

8. Troubleshooting

Problem Analysis

If the air conditioner is out of work, read the following before contacting the maintenance department and it will save you time and efforts.

Problems	Phenomenna	Causes	Solution
Air conditioner fails to run	Press "ON/OFF"key on the remote controller, no "beep "sound comes from the indoor unit and the RUN light is off	Power failure	Press"ON/OFF"key after comeback of power
		Power switch is off	Turn on power supply
		Fuse of power switch may have burned.	Replace the fuse
		The creepage switch is off	Turn on the creepage switch
		The remote controller is working out of the function range	Operate the remote controller in the function range of the remote controller
		Batteries of remote controller exhausted(Information on the screen darken)	Replace them with new batteries
After starting up, the air conditioner will stop working in a short time	Remote controller indicates that the air conditioner is working	Air inlet or outlet of the indoor or outdoor unit are blocked	Eliminate all dirties and make air smooth.
		The air filter is dirt	Clean the filter
Air flow is normal but the air blew out is not cool or warm	Remote controller indicates that the air conditioner is working	Temperature is not set correctly, too high in COOL mode or too low in HEAT mode	Set the temperature properly.
		The air filter net has been blocked with dust or dirt	Clean the ail filter net
		Air inlet or outlet of the indoor or outdoor unit are blocked	Eliminate all dirties and make air smooth.
		Doors and windows are open	Close doors and windows

NOTE: If the unit stops running due to power failure, it will not restart when the power is resumed. To restart again, press ON/OFF switch of the remote controller.

Fault codes table(1)

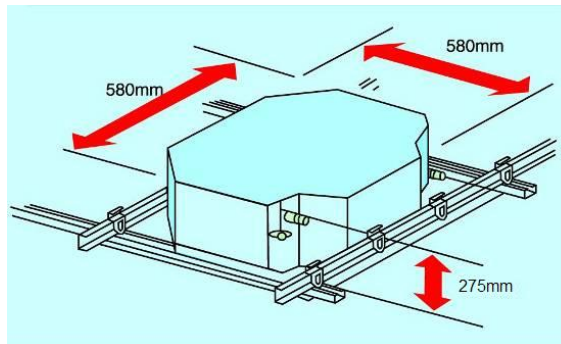
Faults	LED flashing conditions	Digital display	Instruction
Probe of Room temp.sensor goes wrong	TIMER lamp flashes at the speed of 5 Hz	E2	The system will recover normal operation once faults are eliminated
Probe of Evaporator sensor goes wrong	RUN lamp flashes at the speed of 5 Hz	E3	
Probe of Condenser sensor goes wrong	Defrost lamp flashes at the speed of 5 Hz	E5	
Water fulfilled protection	Warning light flashes at the speed of 5 Hz	F5	
Outdoor unit protection	Both defrost lamp and warning light flash at the speed of 5 Hz	F2	
Communication fault	Both RUN lamp and defrost lamp flash at the speed of 5 Hz	E1	The display should be cleared up by manual
EEPROM Communication fault	Both RUN lamp and TIMER lamp flash at the speed of 5 Hz	P6	Recovered after blackout
Forced cooling indication	Both RUN lamp and warning light flash at the speed of 5 Hz	No	The display will be cleared up after exiting the operating mode.
Anti-cold wind indication in heating mode	Defrosting preheating is ON	P1	The display will be cleared up after exiting the operating mode.

Compact Ceiling Cassette Type

- 1. Features**
- 2. Specification**
- 3. Dimensions**
- 4. Services Space**
- 5. Wiring Diagram**
- 6. Sound Levels**
- 7. Exploded view**
- 8. Troubleshooting**

1. Features

- 1) Low operation noise
 - Streamline plate ensures quietness
 - Creates natural and comfortable environment
- 2) 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
- 3) Improvement for easy installation and maintenance
 - Little space is required for installation into a shallow ceiling
 - Because of the compactness and weight reduction of the main unit and panel, all models can be installed without a hoist



The sketch of installation (compact type)

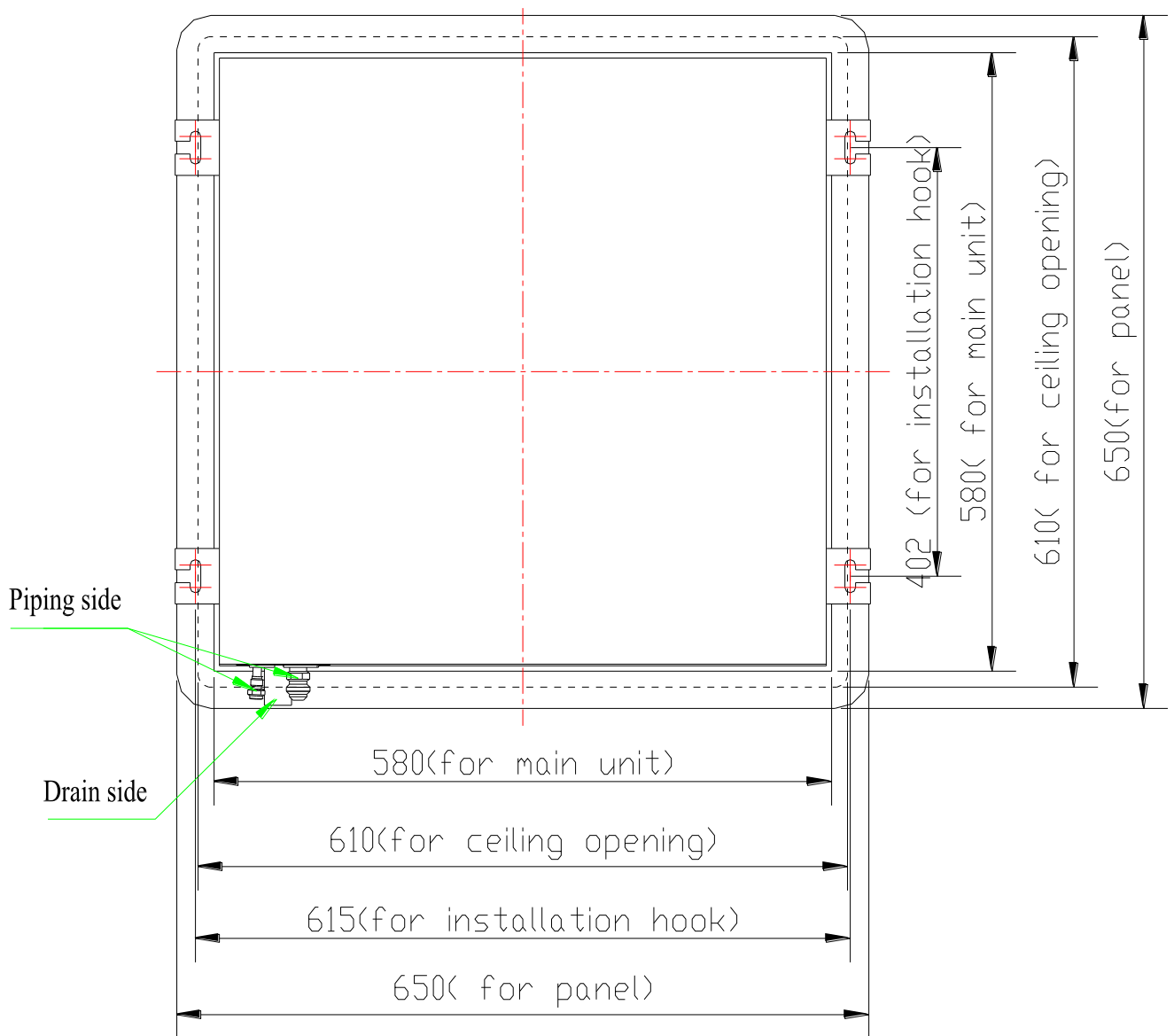
- 4) A full series of controller give you the most suitable solution according to the different requirement from different customers.
 - 5) Optimized structure makes the air volume and capacity improved rapidly.
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2. Specification

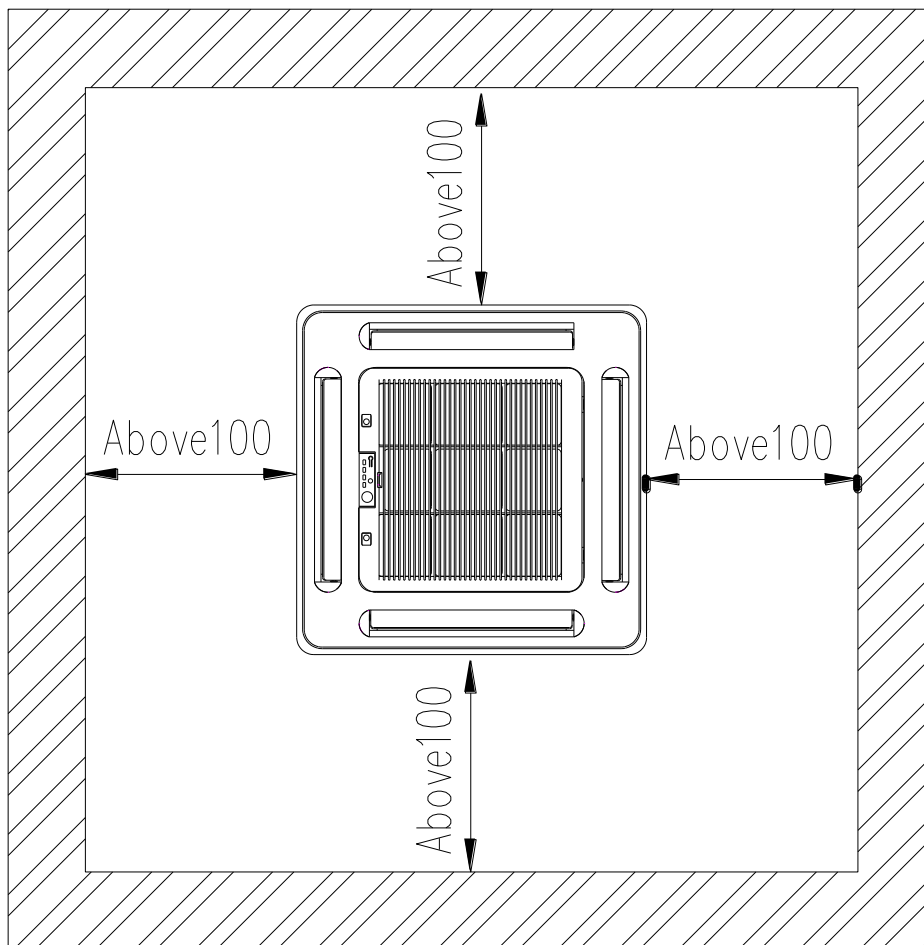
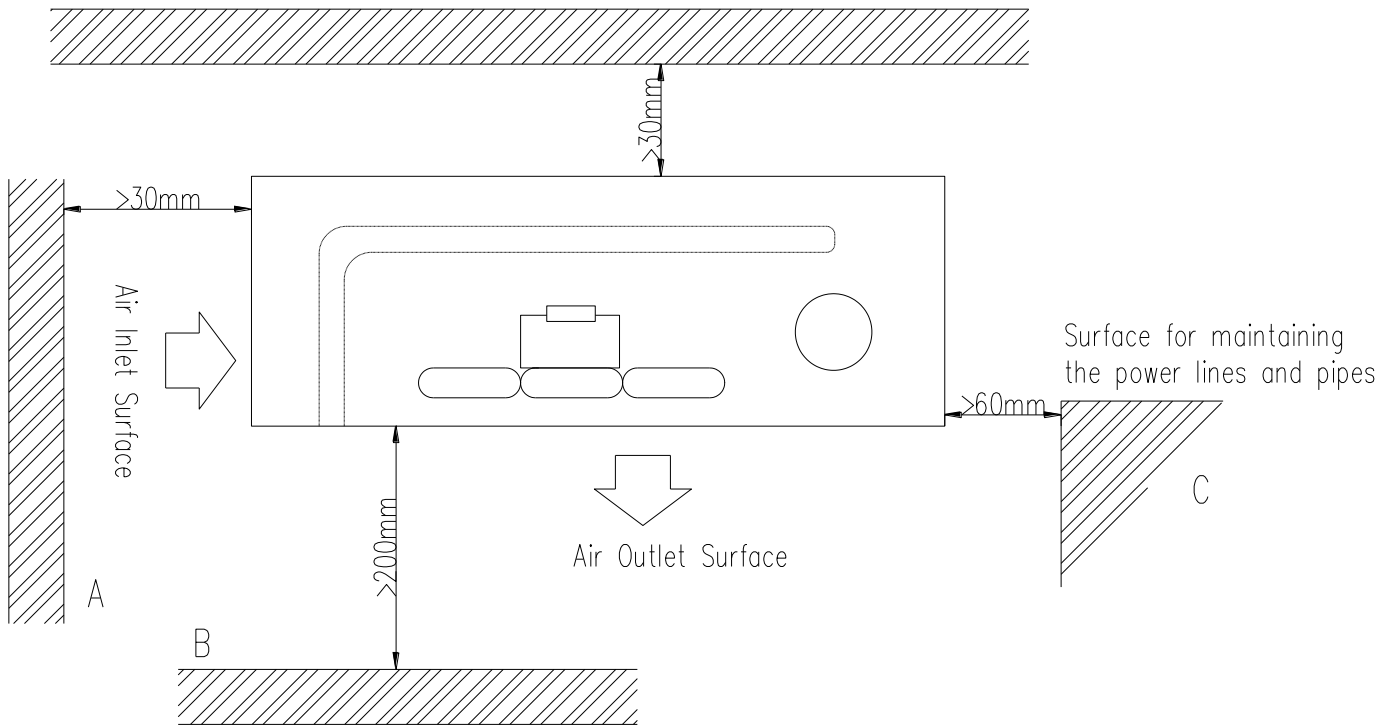
Model NO.			CSQ4-300R	CSQ4-350R	CSQ4-470R
Air flow (Hi-speed)	CFM		300	350	470
	m3/h		500	600	800
Cooling Capacity (Hi-speed)	W		2800	3500	4500
	Btu		9550	11940	15350
Heating Capacity (Hi-speed)	W		4200	5300	6800
	Btu		14330	18080	23200
Noise (Hi-speed)	dB(A)		40	44	44
Water flow	m3/h		0.48	0.60	0.78
Water pressure drop	kPa		25	28	30
Indoor coil	Number Of Rows		2	2	2
	Tube Pitch(A)x Row Pitch(B)	mm	25.4×22	21×12.7	21×12.7
	Fin spacing	mm	1.55		
	Fin type		Hydrophilic aluminum		
	Tube Outside Dia.And type	mm	φ9.52, inner grooved tube	φ7, inner grooved tube	φ7, inner grooved tube
	Coil Dimension (L×H×W)	mm	425×203.2×22	435×210×25.4	435×210×25.4
Fan motor	type		Low noise 3-speed fan motor		
	Number		1	1	1
	Input	W	43	64	65
	Capacitor	μF	2	2	2.5
Indoor unit	Dimension (W×H×D)	mm	580×275×580	580×275×580	580×275×580
	Packing (W×H×D)	mm	745×350×675	745×350×675	745×350×675
	Net/Gross weight	Kg	22/24	22/24	22/24
plane	Dimension (W×H×D)	mm	650×30×650	650×30×650	650×30×650
	Packing (W×H×D)	mm	710×120×710	710×120×710	710×120×710
	Net/Gross weight	Kg	2.7/4	2.7/4	2.7/4
Control Mode			wired controller(optional),remote controller(standard)		
Pipe	water-inlet pipe	mm	DN20	DN20	DN20
	water-return pipe	mm	DN20	DN20	DN20
	Condensation water-out let pipe	mm	DN25	DN25	DN25

- Remark:**
1. All performance data above is based upon 0Pa ambient static pressure.
 2. Cooling capacity test condition: air inlet Temp. : 27DB°C/19WB°C, water inlet Temp. 7°C, water Temp. difference 5°C
 3. Heating capacity test condition: Air inlet Temp. 21DB°C, water inlet Temp. 60 DB°C, water Temp. difference 5°C

3. Dimensions

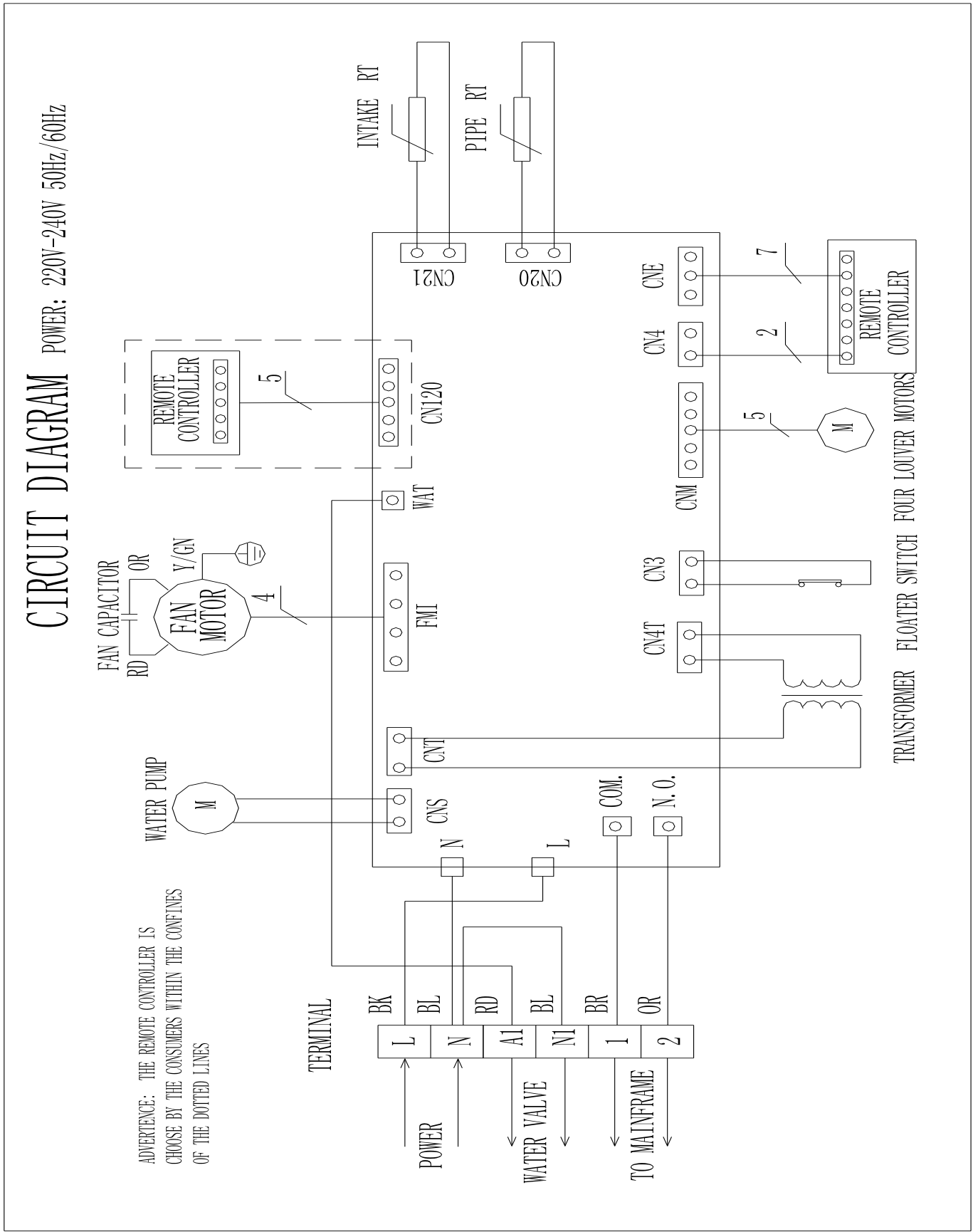


4. Service Space



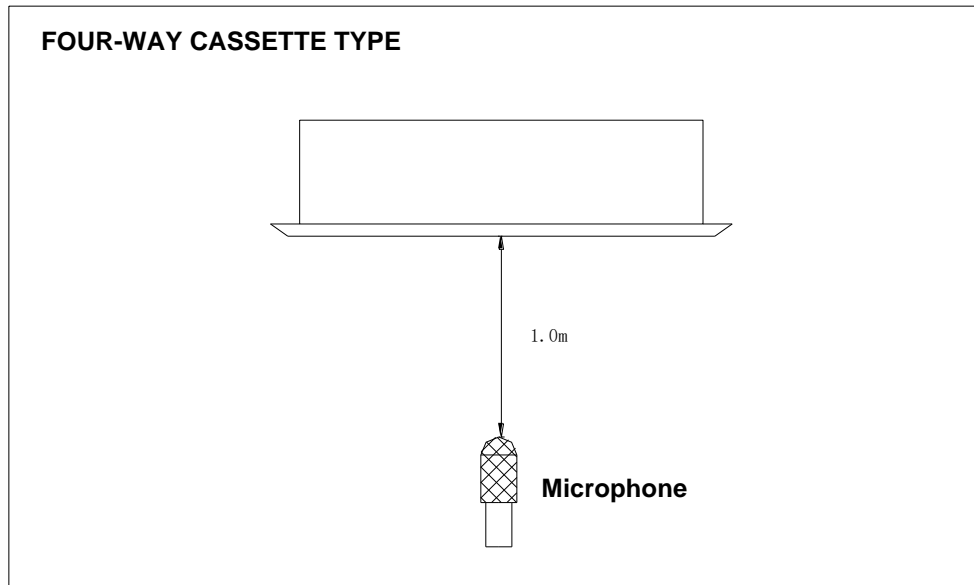
5. Wiring Diagram

CSQ4-300R, CSQ4-350 , CSQ4-470R



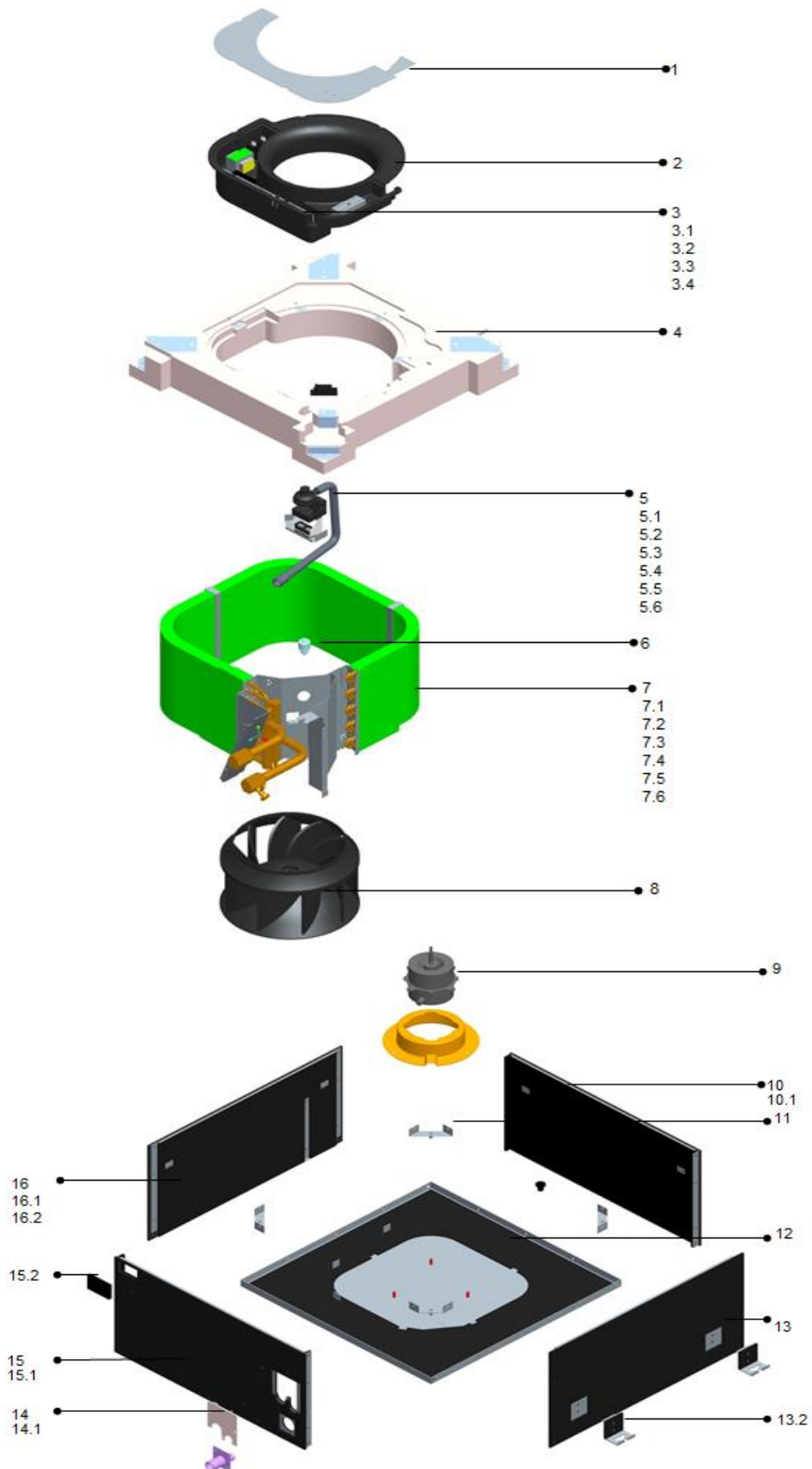
6. Sound Levels

Model		CSQ4-300R	CSQ4-350R	CSQ4-470R
Noise	dB(A)	40	44	44



7. Explored View

CSQ4-300R, CSQ4-350 , CSQ4-470R



No.	Part Name	Quantity	No.	Part Name	Quantity
1	E-parts box cover assy	1	7.4	Evaperator compacting bar assy	2
2	E-parts box	1	7.5	Evaporator subassembly	1
3	E-parts subassembly	1	8	Centrifugal fan	1
3.1	Fan capacitor	1	9	Indoor fan motor(YDK-35T-4)	1
3.2	Transformer	1	10	Brattice IV components	1
3.3	Terminal	1	10.1	Brattice IV	1
3.4	Indoor PCB	1	11	Brattice fixing bar components	4
4	Foam water pan assy(ROHS)	1	12	Chassis components	1
5	Water pump components	1	12.1	Chassis welding components	1
5.1	Water pump fixing plate assy	1	13	Brattice I components	1
5.2	Discharge pipe	1	13.1	Brattice I	1
5.3	Water pump	1	13.2	Shackle	2
5.4	Water pump gasket 2	1	14	Copper tube support panel components	1
5.5	Water pump gasket 1 components(ROHS)	1	14.1	Copper tube support panel	1
5.6	Discharge joint pipe assy(ROHS)	1	15	Brattice II components	1
6	Water level switch	1	15.1	Brattice II	1
7	Evaporator components	1	15.2	Protection rubber	1
7.1	End-plate II fixing plate assy	1	16	BratticeIII components	1
7.2	End-plate I fixing plate assy	1	16.1	Brattice I	1
7.3	Inclined end-plate assy	1	16.2	Shackle	2

8. Troubleshooting

Problem Analysis

If the air conditioner is out of work, read the following before contacting the maintenance department and it will save you time and efforts.

Problems	Phenomenon	Causes	Treatment
Failure to run	Press "ON/OFF" switch on the remote controller, no "Hua-" sound is heard, and the RUN indicator is not on.	Power failure	After resumption of power, press "ON/OFF" switch
		Now connection of power	Connect power
		Broken fuse	Replace fuse
		Electric leakage is OFF	Connect electric leakage switch
		Remote controller is out of the operation range	Operate the remote controller within the operation range
		Cells of remote controller are out(LCD is dim)	Replace cells
Stops soon after startup	Remote controller indicates that the unit is running	The air inlet or outlet of the indoor or outdoor unit is clogged	Clear away clogging
		The air filter is clogged with dust or soil	Clean filter
The air conditioner is fanning, but not sufficiently cool or warm	Remote controller indicates that the unit is running	Temperature is set too high in cooling Temperature is set too low in heating	Check the temperature set on the remote controller. Re-set the appropriate temperature
		Filter is clogged with dust	Clean filter
		The air inlet or outlet of the indoor or outdoor unit is clogged	Clear away clogging
		Windows and doors are open	Close windows and doors

NOTE: If the unit stops running due to power failure, it will not restart when the power is resumed. To restart again, press ON/OFF switch of the remote controller.

Failure Testing and Indication

In case of failure, the indicating light will indicate the failure state.

Self-examination information	Codes of self-examination of luminescent tube	Remarks
Preheating indication	1 flashes/3s	Display up starting (RUN lamp)
Failure of indoor temperature sensor	2 flashes/4s	Display in stop, protective lamp ON, RUN lamp OFF.
Failure of pipe temperature sensor	3 flashes/5s	Display in stop, protective lamp ON, RUN lamp OFF.
Water pump failure	4 flashes /6s	Display in stop, protective lamp ON, RUN lamp OFF.

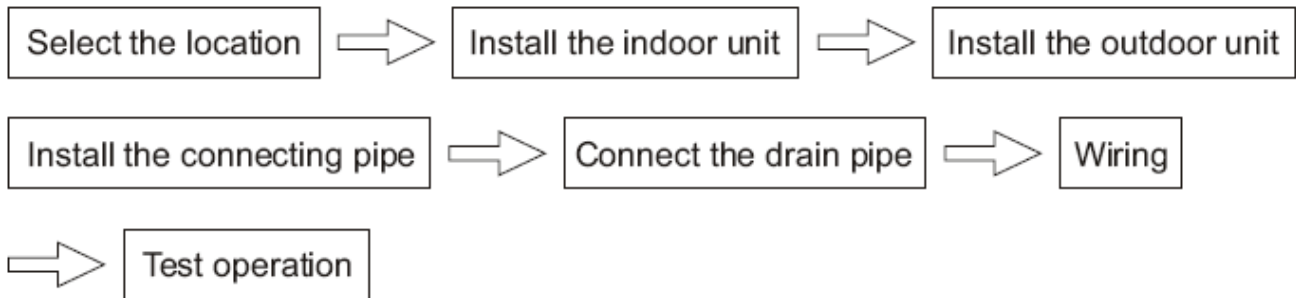
Part 3: Installation

The Installation

- 1. Before Installation**
- 2. Install the Main Body**
- 3. Installation space**
- 4. Install the Panel**
- 5. Connect the Drain Pipe**
- 6. Wiring**

1. Before Installation

Please check whether the accessories are of full scope. If there are some fittings free from use, please restore them carefully.



2. Installation space

(refer to the unit dimension .)

The indoor unit should be installed in a location that meets the following requirements:

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

Caution:

Keep indoor unit, outdoor unit, power supply wiring and transmission wiring at least 1 meter away from televisions and radios. This is to prevent image interference and noise in those electrical appliances. (Noise may be generated depending on the conditions under which the electric wave is generated, even if 1 meter is kept.)

3. Install the Main Body

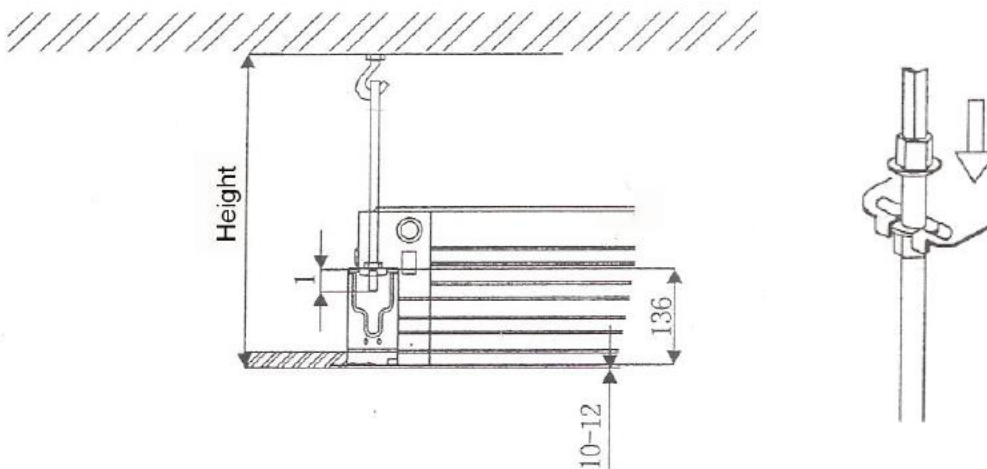
A. Existing ceiling (Keep the ceiling level)

(1) Drill some holes on the ceiling according to the installation paper card

- Keep the center of the ceiling opening in line with that of the main unit;
- Ensure the length and outward holes of the connecting pipes, drain pipes and electrical connection;
- Please reinforce the strength of the ceiling to keep the ceiling level and without vibration

(2) Determine the location of installation hook according to holes of the installation hook on four corners of the installation paper card.

- Drill four holes with $\phi 12\text{mm}$ and height of 50~55mm at the position as determined on the roof, and then lay expansion hooks;
- Aim the concave of the installation hook at the expansion hook when installing. Determine the length of the hook based on the height of ceiling and then cut away the excessive part;
- If the ceiling is rather high, cut the installation hook at the middle. Use $\phi 12$ round steel bar for welding and the length of the steel bar is based on the height of ceiling
Please adjust the four hexagon nuts on the installation hook and keep the main unit level
- If the drain pipe is slanted, it may cause error action of the water level switch and then water leakage;
- Adjust the location of the main unit to ensure even distance to the four sides of the ceiling and the bottom of the main unit into the bottom of the ceiling for 10~12mm (See Bottom left figure)
- After adjusting the location and levelness of the main unit, fasten the nuts on the installation hooks to fix the unit (see bottom right figure)

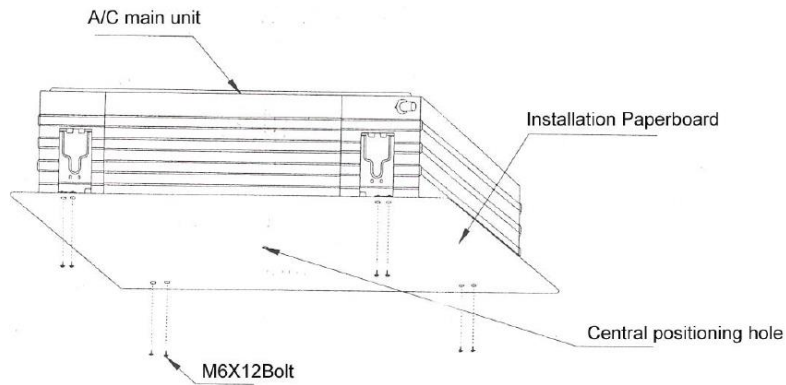


B. For new room and new ceiling

(1) Carry out installation following the step of A (2) aforesaid. You can buried some hooks in new room, which can bear the weight of the unit and not loose for concrete shrinking;

(2) After hoisting the main unit, fix the installation paperboard onto the main unit with M6 \times 12 bolts (accessories), which will determine the size and position of the ceiling opening (See Fig 7)

- Keep the ceiling level when installing;
 - The rest procedure is as the steps of A(1) aforesaid;
- (3) Install as the steps of A(3) aforesaid
 (4) Remove the installation paperboard



Note: After installing the main unit, fix the four bolts M6 ×12 onto the main unit to fasten the unit.

4. Install the Panel

Caution:

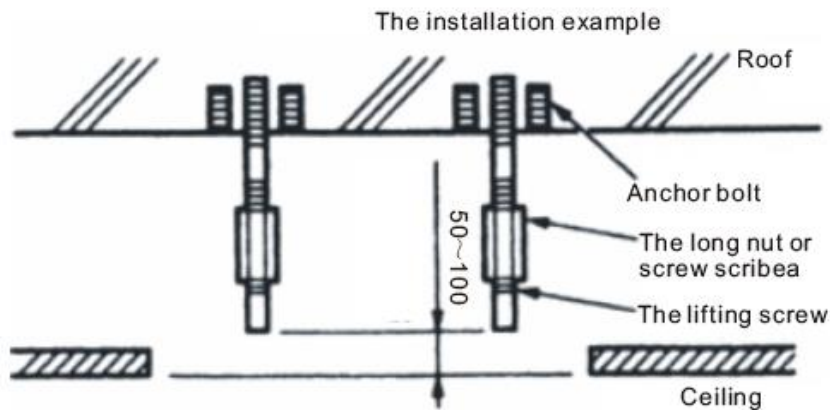
Never put the panel face down on floor or against the wall, or on bulgy objects.

Never crash or strike it.

A. Remove air inlet grille

(1) Slide or press down the two grille switches together, and then lift them up (See Fig 8);

(2) Lift the air inlet grille to about 45° and then take it down (See Fig 9);



NOTE: all the parts above mentioned will be supplied at the installation site

B. Remove installation lid from four corners

Unscrew the bolts and loosen the rope of installation lid and then draw out the lid (See Fig 10)

C. Install the panel

(1) Point the swing motor on the panel straight to the tubing side of the main unit (See Fig 11);

(2) In installation, put the hooks of swing motor and the panel onto the hook of water pan on the main unit (as shown in Fig 12①), and then put the rest two hooks of the panel onto the suspending support of the main unit (as shown in Fig 12②);

NOTE: The summit of the plastic lid of the swing motor should be inserted into the recess of the sealing panel of the outlet pipe;

(3) Insert the lead of the swing motor into the clip position on the panel;

NOTE: Not entangle the lead into the sealed sponge

(4) Adjust the four hook bolts to keep the panel level and evenly lift it to the position close to the ceiling (as shown in Fig 11③)

(5) Slightly adjust the panel following the arrow direction (Fig 11④) to keep the center of the panel in line with that of the ceiling opening. Check whether the hooks on four corners are put up.

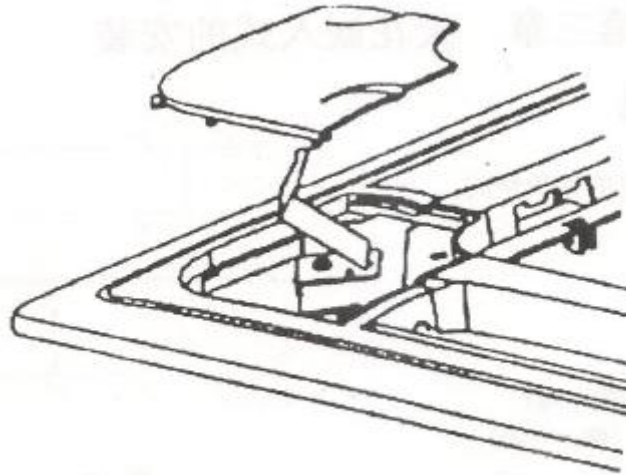


Fig 10

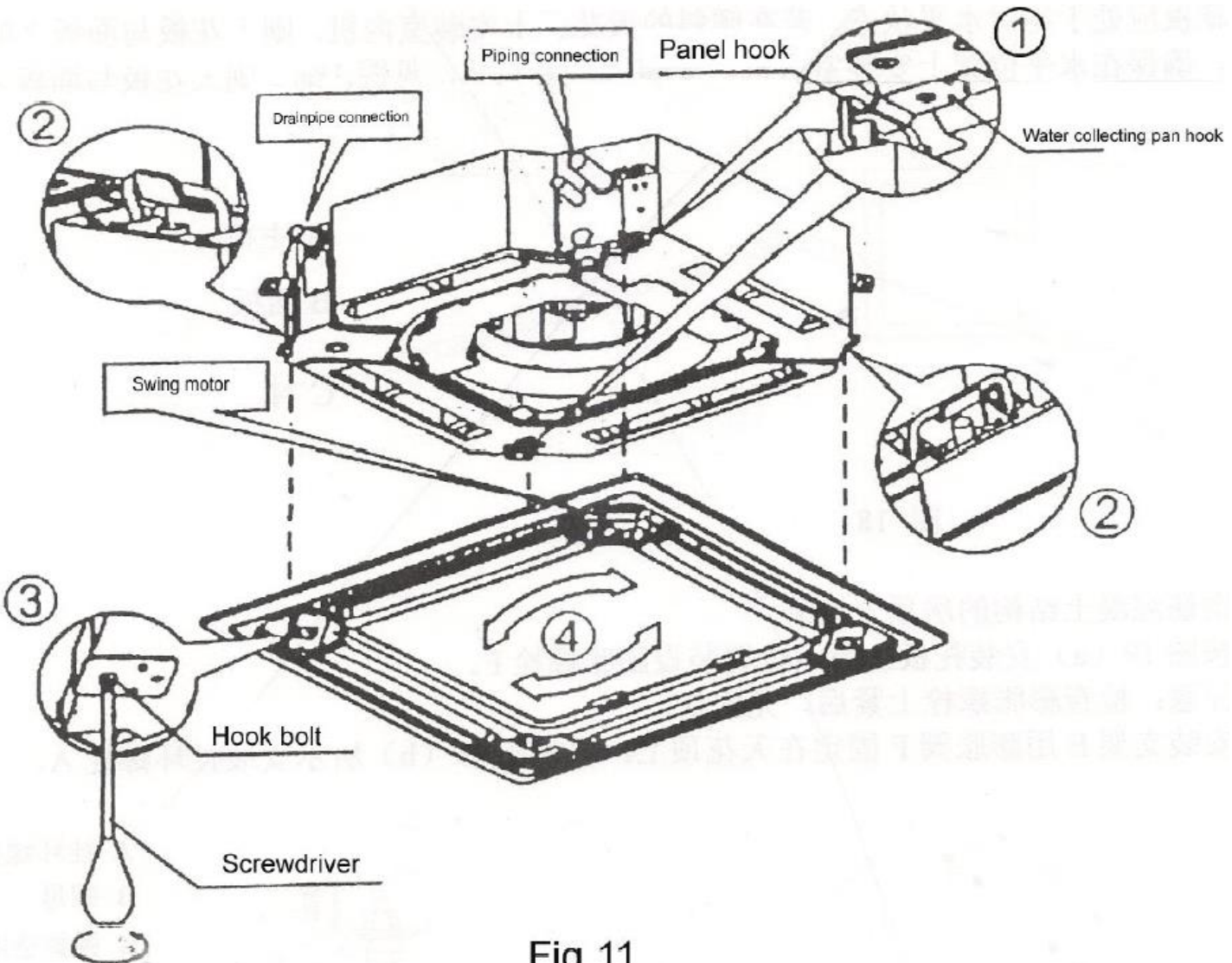


Fig 11

(6) Continue to tighten evenly the bolts under the hooks till the thickness of the sponge between the main unit and the panel is reduced to 4~6mm, and the edges of the panel are all contact well with the ceiling (See Fig12)

- Improper tightness of bolts will cause failure shown in Fig 13;

- After tightening bolts, if there is still a slit between the ceiling and the panel, adjust the height of the unit again (See the left one of Fig 14);
 - If lifting and declining the unit and the length of drain pipe is not limited, you can adjust the height of indoor unit through the opening at the four corners (See the right one of Fig 14)
- D. First put the air grille onto the panel and then connect the leads of the swing motor and the control box with the corresponding connectors on the main unit;
- E. Install the air inlet grille contrary to the steps of removing it;

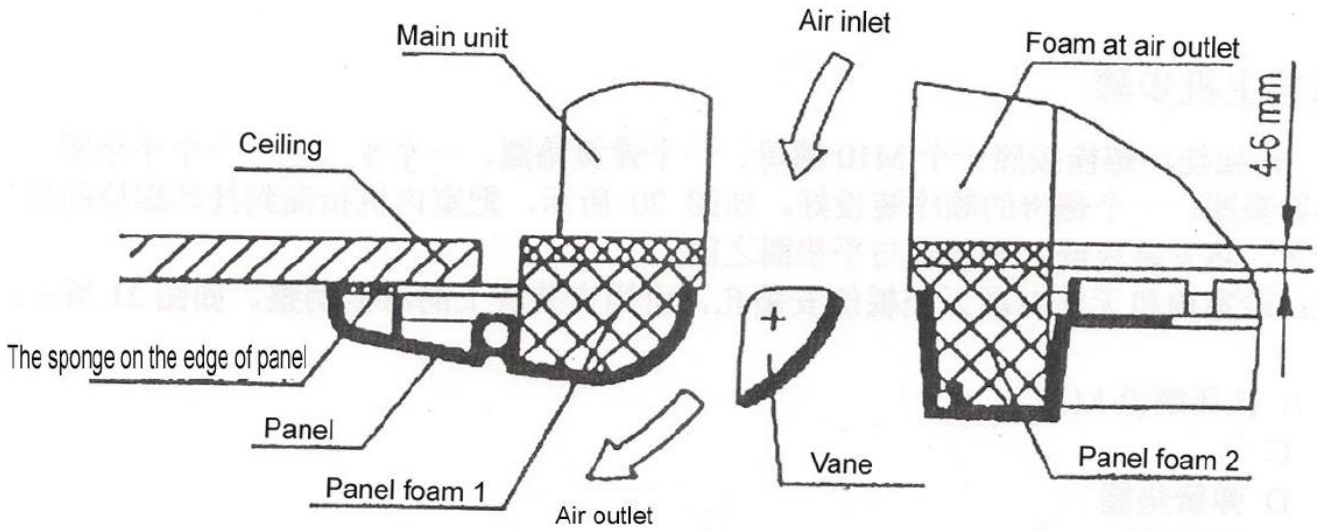


Fig12

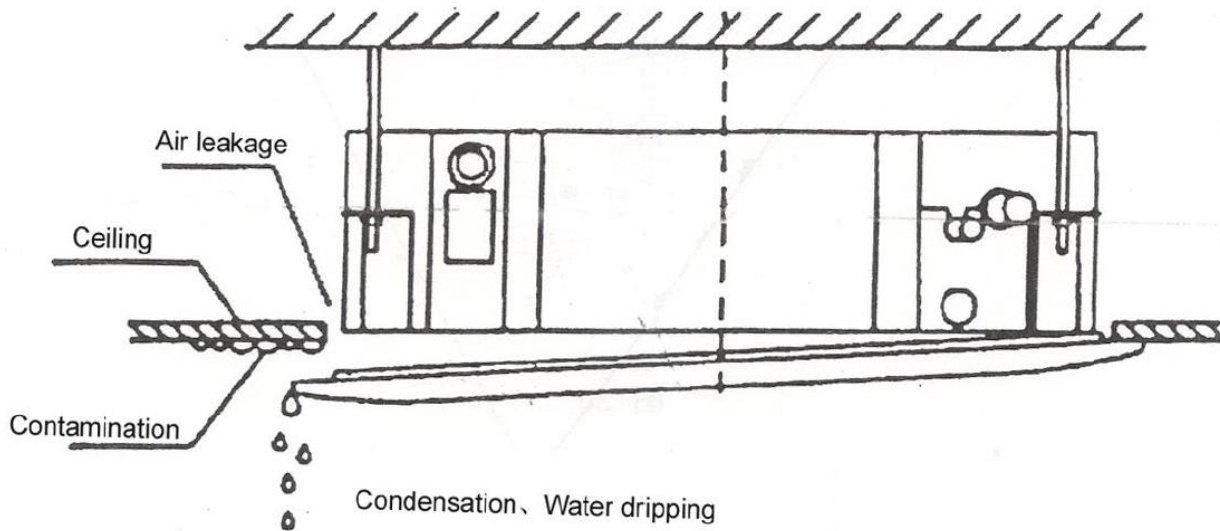


Fig 13

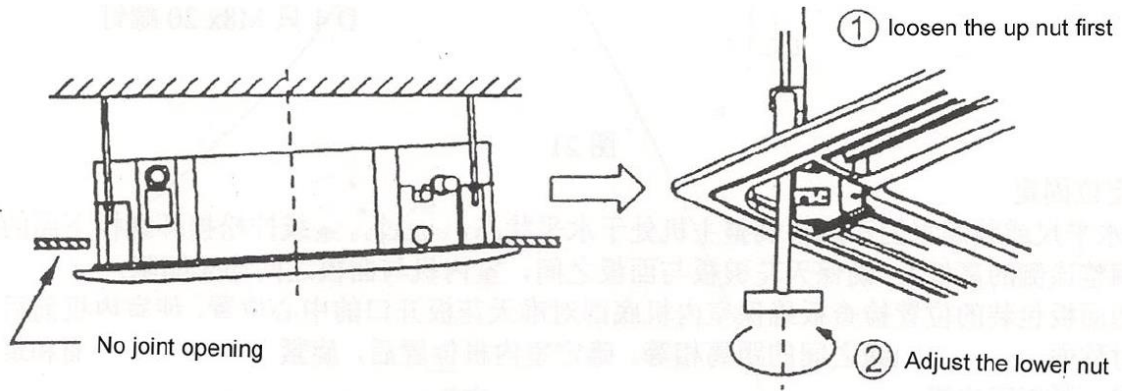


Fig 14

F. Insert the installation cover board again

- (1) Fix the rope of the installation cover board at the bolt of the cover board(See the left one of Fig 15);
- (2) Slightly push the cover into the panel (see the right one of Fig 15)

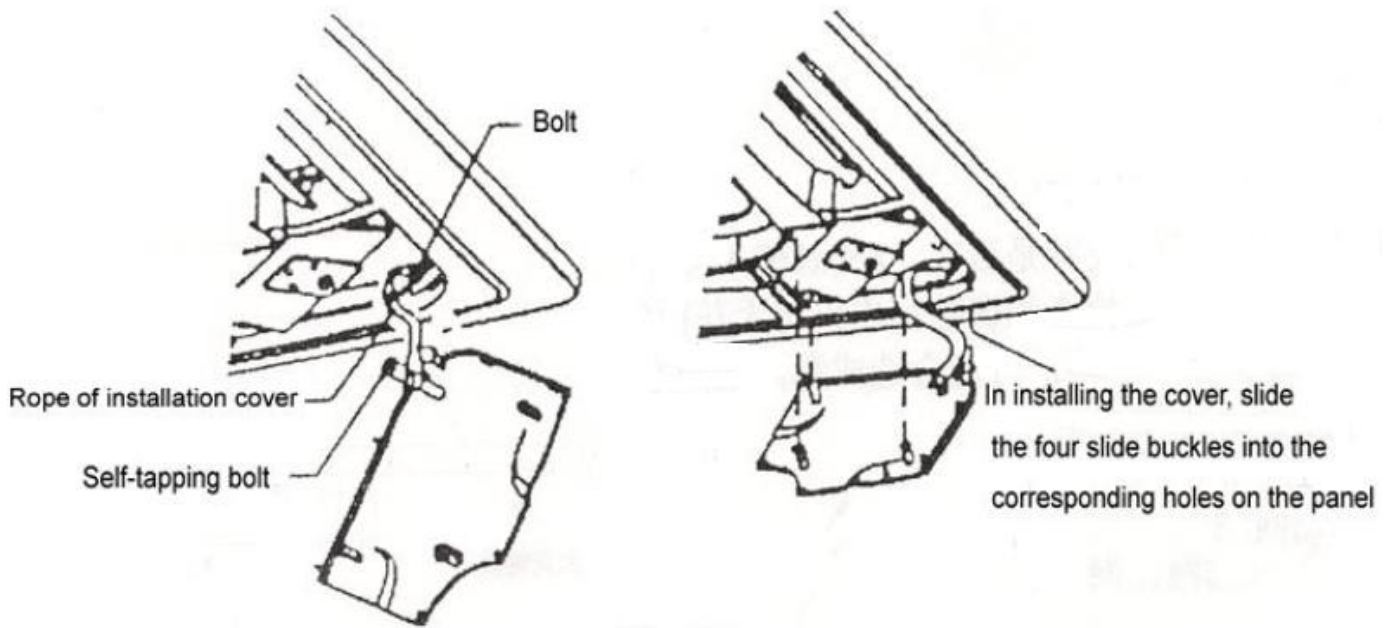


Fig. 15

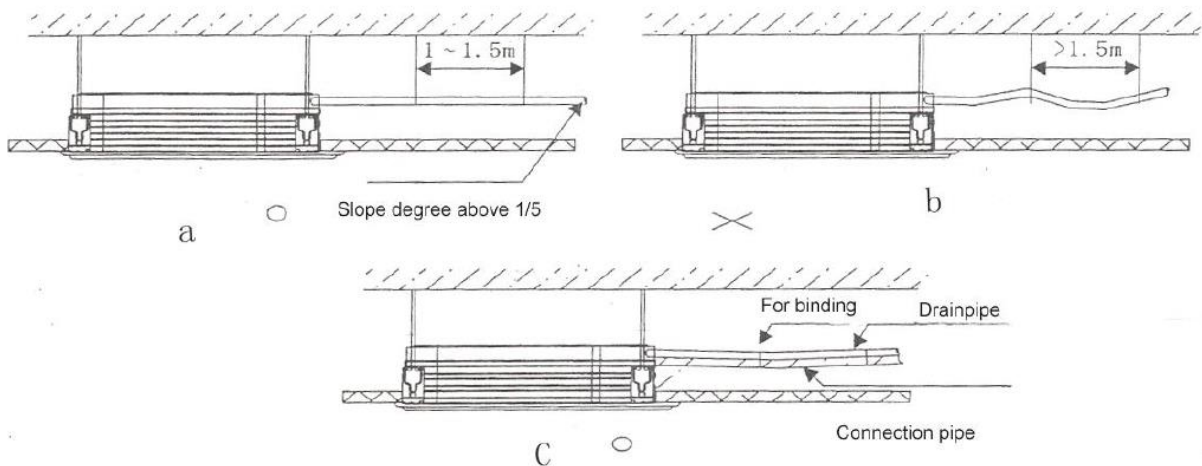
5. Connect the Drain Pipe

A. Install the drainpipe

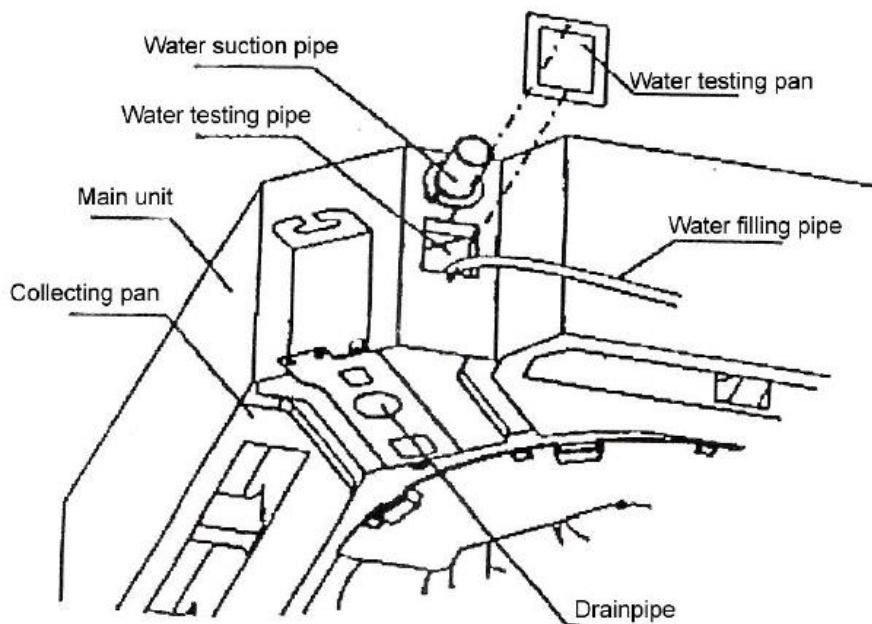
- (1) Adopting the hard PVC pipe(Outer diameter 37-39mm, Inner diameter 32mm),the proper drainpipe can be purchased from the distributor or market;
- (2) Connect the drainpipe to the bottom of the water suction pipe of the main unit and fasten it together with the water outlet insulating pipe with the clip of the water outlet pipe.

Note: Be gentle to prevent the water suction pipe from cracking.

- (3) The water suction pipe and drainpipe (especially the indoor section) should be bound with the water outlet insulation sleeve and then fasten it with the band to avoid the entrance of air that will cause condensation.
- (4) In order to avoid of the backward flow into the air condition when stopping running, incline the drain pipe toward the outdoor side (drain side) with the gradient of more than 1/50. Avoid of any protrusion or water trap (Refer to Fig a)
- (5) Not pull the drainpipe when connecting and set a supporting point every 1-1.5m to avoid of bending of the drainpipe(Refer Fig b);Besides, you can wrap the drainpipe and connection pipe together first and then fix the fronter with the later (Refer Fig C)



- (6) To connect the drainpipe lengthened, wrap the indoor part with protective pipe to keep it from loosening;
- (7) If the outlet of the drainpipe is above the water suction pipe of the main unit, keep the drainpipe vertically upward as much as possible. The bending part of the pipe adopts the rigid pipe with reliable support and the rise height of the pipe is less than 20mm to avoid of overflowing for the flow back when stopping.
- (8) Keep distance of the end of drainpipe and the ground or the bottom of the waterspout more than 50mm and not extend into water. When draining directly the condense water to waterspout, bend the drainpipe upward into the "U" shape to prevent bad smell from entering room.



B. Drain test

(1) Check whether the drainpipe is smooth and joints are all sealed well before test;

(2) As for the new room, please do the drain test first, and then lay the ceiling

- Fill 2000 ml water into the water pan with filling pipe at the water testing port (Refer to Fig 17);
- Power on the unit and start the cooling operation to check whether the noise of drain pump and the drain is normal (Basing on the length of drainpipe, it will delay about 1 minute before draining) and whether there is water leakage at joints. Remove problems immediately, if any;
- Stop the unit and check if there is any abnormal situation 3 minutes later. In case of irrational layout of drainpipe, the alarm lamp of the control will flash for the much flow back or the water will flow out from water pan;
- Cut off the power and empty the seeper, then install back the cover;

(3) The drain plug at the bottom of the main body is used for emptying the water of the water pan in repairing of problems. When the unit is running , put the plug in position to avoid of water leakage.

6. Wiring

Caution:

1. The air conditioner should use separate power supply with rated voltage.
2. The external power supply to the air conditioner should have ground wiring, which is linked to the ground wiring of the indoor and outdoor unit.
3. The wiring work should be done by qualified persons according to circuit drawing.
4. An all-pole disconnection switch having a contact separation of at least 3mm in a pole should be connected in fixed wiring.
5. Be sure to locate the power wiring and the signal wiring well to avoid cross-disturbance.
6. Do not turn on the power until you have checked carefully after wiring.

Note:

Remark per EMC Directive 89/336/EEC to prevent flicker impressions during the start of the compressor (technical process), following installation conditions do apply.

1. The power connection for the air conditioner has to be done at the main power distribution. The distribution has to be of a low impedance, normally the required impedance reaches at a 32 A fusing point.
 2. No other equipment has to be connected with this power line.
 3. For detailed installation acceptance please refer to your power supplier, if restrictions do apply for products like washing machines, air conditioners or electrical ovens.
 4. For power details of the air conditioner refer to the rating plate of the product.
 5. For any question contact your local dealer.
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Part 4: Controller

Wireless remote controller

1.Type 1

The operation of the remote controller

- ON/OFF button

For ON/OFF operation of air conditioner. In ON mode, LCD displays time, operating mode, temperature set, fan speed set and setting of air vane; In OFF mode, LCD just displays the time.

- TEMP - button

Press this button once to reduce 1°C. In cooling, heating, dehumidifying and ventilating mode, the lowest temperature is 18°C.

- TEMP + button

Press this button once to increase 1°C. In cooling, heating, dehumidifying and ventilating mode, the highest temperature is 29°C.

- FAN SPEED button

For setting fan speed. Press the button, the speed will be switched among HIGH, MID, LOW and AUTO. Press it once to switch once;

- VANE SWING button

For changing the vane swinging mode. Press the button, the vane will swing or stop. Press this button once to switch the vane once.

- MODE button

For setting operating mode. Press this key, the mode will be changed and the order is as follow:



- SLEEP button

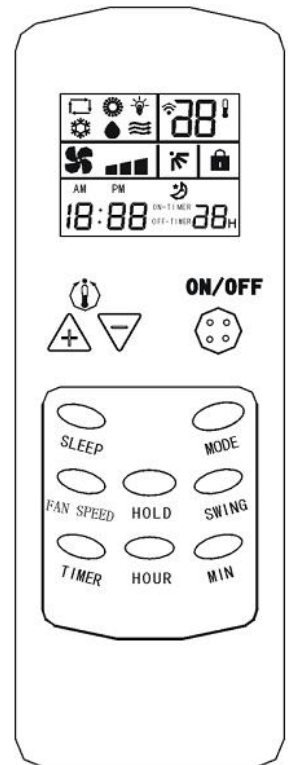
For setting SLEEP state or exiting the SLEEP state.

- LOCK/UNLOCK button

For setting locking function. Press this button to lock or unlock the controller.

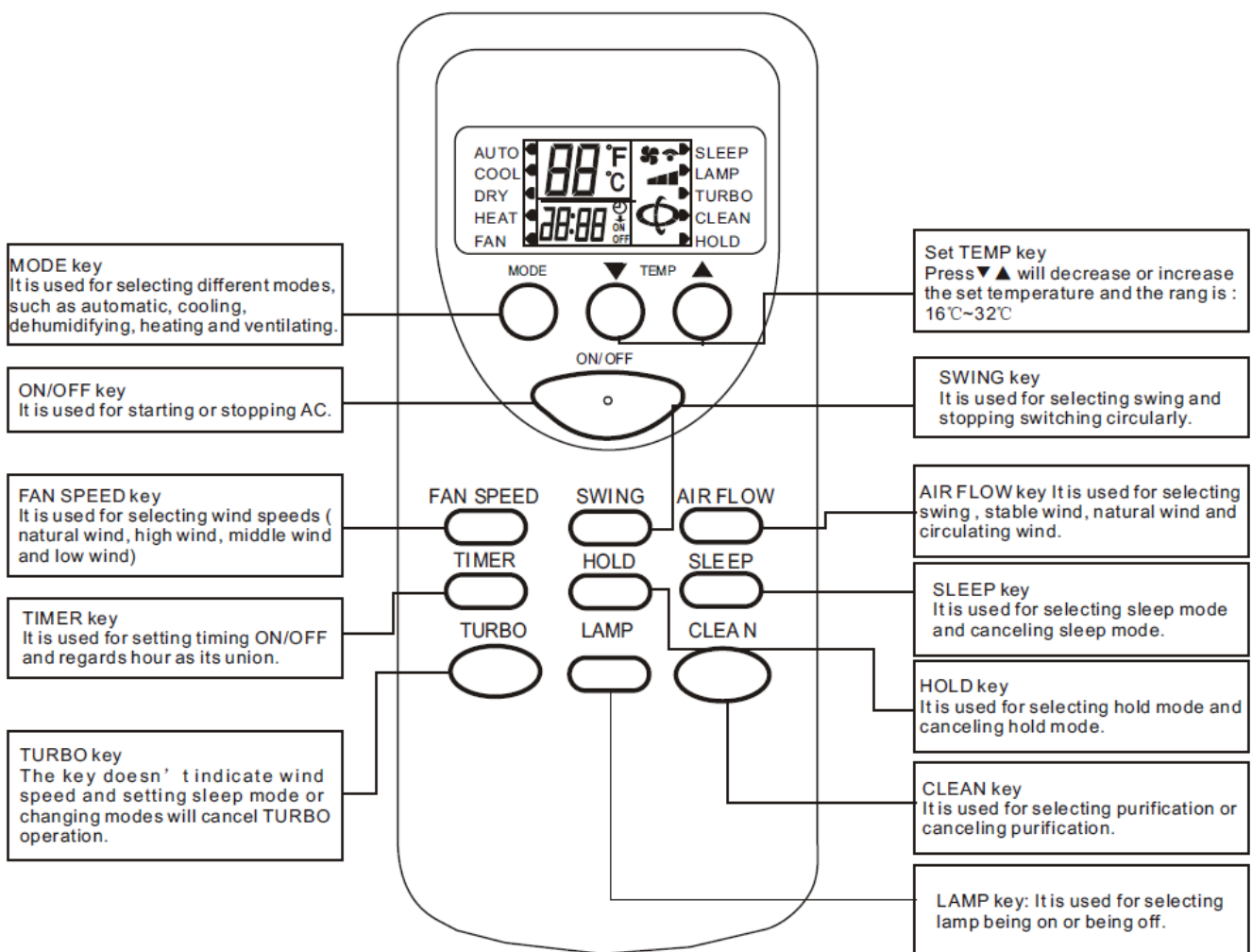
- TIMING button

For setting timing mode. Press this key to select timing ON or timing OFF.



2. Type 2

- The model of the following remote controller is Lingtong common remote controller. TURBO key, LAMP key, AIR FLOW key and CLEAN key is applicable for special latest developed new models instead of normal ones.



2.1 Introduction of Functional Key

- **ON/OFF key:** Press the key and the remote control will switch circularly in the order : ON→OFF→ON.

When it is powered on at first from off state to on state, the default setting of work condition is (The set temperature is 25°C and the mode , wind speed, swing and air door are all automatic and there is no LAMP, no TURBO, no CLEAN, no SLEEP, no TIMER and no HOLD function). When it is not powered on firstly from OFF state, the work condition is as the same as the state before stopping. It will cancel LAMP, CLEAN, SLEEP, TURBO and TIME mode.

- **MODE key:** Press the key to switch modes in the order :AUTO→COOL→DRY→HEAT→FAN→AUTO
- **▼ key:** In DRY mode or AUTO mode, pressing▼key cannot change the temperature. In other mode, press the key once and the temperature will decrease 1°C in the order : 32°C→31°C→...→17°C→16°C .

- **▼key**: In DRY mode and AUTO mode, pressing ▼ key cannot change the temperature. In other mode, press the key once and the temperature will increase 1°C in the order: 16°C→17°C →...→31°C→32°C .
 - **FAN SPEED key**: The default wind speed is in the automatic wind mode when starting firstly. The remote control won't react by pressing the key because the wind speed can't be adjusted and in low speed in dehumidifying mode. In other mode, press the key to switch modes in the order : automatic wind→ high speed →middle speed→ low speed →automatic wind.
 - **SWING key** : In dehumidifying mode, the swing mode is in the stable wind mode without change. In other mode, press the key to switch modes in the order: swing →stable wind→natural wind →swing.
 - **AIR FLOW key** : The default air flow is in the swing mode when starting firstly and press the key to switch modes in the order: SWING →STOP →SWING.
 - **TIMER key** : The default mode is in no timing state, press the key to set timing time . The switch order is: 1H→2H→...→24H→cancel→1H.... Press the key to set timing starting in the OFF state and set timing stopping in the ON state. After setting timing function, the time keeps decreasing per hour until the time decreasing to the timing on or timing off and the timing display will be cancelled at the same time . Pressing MODE key can't cancel timing in timing mode which will set out timing time by pressing other key.
 - **HOLD key**: The default state is in no HOLD key state, press the key to select modes in order: HOLD key →cancel HOLD key→ HOLD key ; In HOLD key mode, all keys except HOLD key of the remote control can't work .
(NOTE: In HOLD key mode, the remote and operation panel of the unit both will be locked automatically by pressing the key and press the key again , they will be unlocked. As for the split unit , it only hold the control other than EMERGENCY key and the panel will make a reaction.)
 - **SLEEP key** : Press the key to switch modes in the order: SLEEP→ cancel SLEEP→ SLEEP. The sleeping function won't be cancelled for changing modes. Press the key to set sleep mode and the wind speed will automatically be switched to low speed and it can adjust the wind speed by pressing the FAN SPEED key (except dehumidifying mode).
 - **TURBO key**: The default state for the control is no turbo and the key don't work in the AUTOMATIC mode, DRY mode and FAN mode (It will not display any contents and not send out any codes). The control, however, will switch between on and off by pressing the key in other mode. The wind speed isn't indicated in turbo mode and it will be cancelled for changing modes and setting sleep mode.
 - **LAMP key** : The default state is in no LAMP key state, press the key to select modes in order : LAMP key →cancel LAMP key→ LAMP key; In LAMP key mode, pressing MODE key can't cancel the show of LAMP key.
 - **CLEAN key** : The default state is in no purification state, press the key to select modes in order : CLEAN →cancel CLEAN→ CLEAN; In CLEAN mode,
-

pressing CLEAN key can't cancel CLEAN function. Press the key when the remote control is closed, the control will switch modes in the order : CLEAN →cancel CLEAN→ CLEAN; When you stop the unit and turn on the purification switch, except the wind, the stable swing and air door swing speed aren't adjusted.
