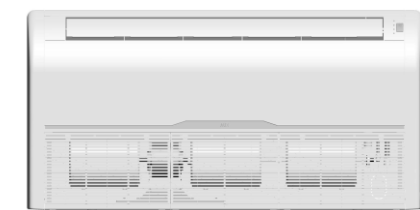
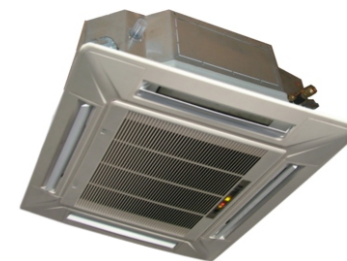


Installation Operation Instruction Manual

Air Conditioner Unit

- ◆ Installation should only be carried out by qualified technicians.
- ◆ For your convenience, please read this manual carefully and carry out all instructions in full.
- ◆ Please keep this manual in good condition for your reference.



●Components name.....	1
●Operation instructions.....	2
●Installation instructions.....	10
●Technical data.....	24

Introduction

This Manual is available for following models:

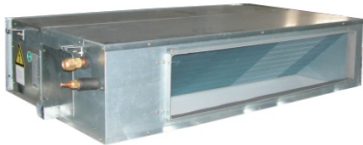
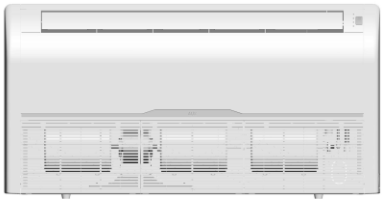
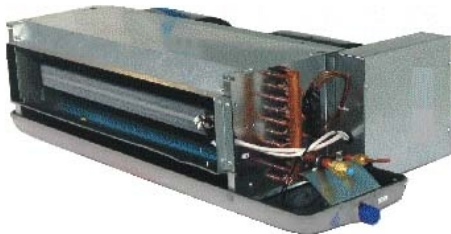
Mapping Table

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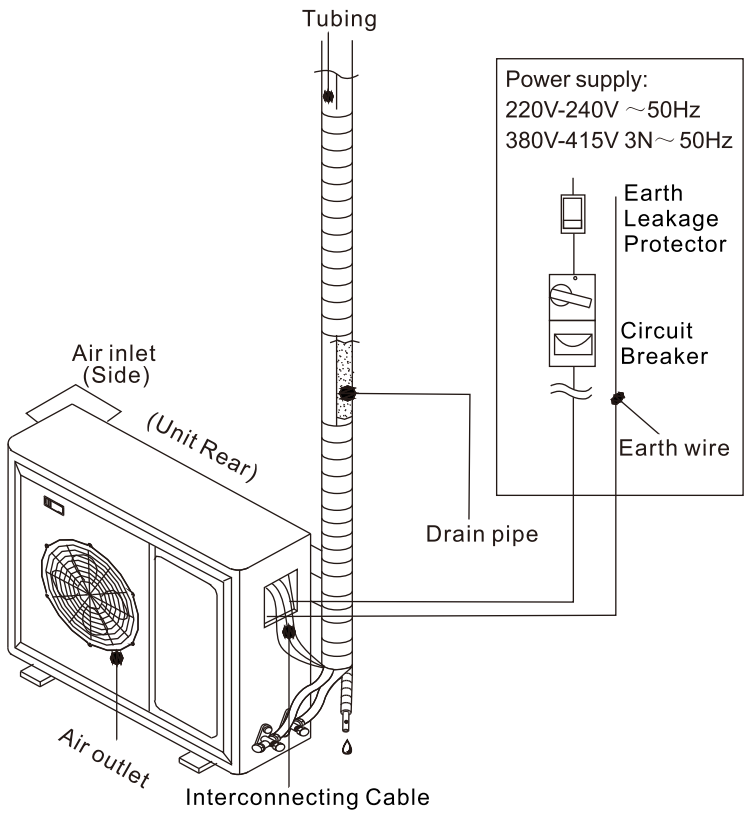
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Component name

Indoor unit

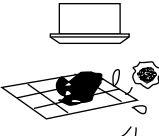


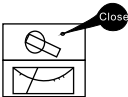
Outdoor unit



Operation instructions

Following the instructions below will allow you to get the best from your air conditioner

Proper use method	
● During cooling, avoid direct sunshine Please close the curtains 	● Do not obstruct air flow Do not place objects near the air inlet or outlet of either the indoor or outdoor unit. If the air flow is obstructed then the air conditioner will be unable to perform correctly. 
● Try not to cool excessively Suggestion of setting temperature: Cooling: 26~28℃ Heating: 18~22℃ Dehumidify: 20~24℃ 	● Do not use other heating equipment when unit run cooling function Using heating equipment will affect the cooling effect. 
● Keep the windows or doors shut Open windows or doors will increase the amount of heating or cooling required and may prevent the unit being able to perform correctly 	● Clean the air filter regularly Dirty filters will prevent the unit from being able to perform correctly and may cause expensive damage. Clean regularly by washing or with a vacuum cleaner. Replace if necessary. We recommend filter cleaning once a month or more frequently if required. 

⚠ Caution	
●Before Cleaning the air filter stop the unit on the controller and turn off at the power supply. ●Do not clean the air conditioner with water or you risk both electric shock and short circuit. ●When cleaning the air filter ensure you pay attention to health and safety.	

★Cleaning the Air Filter

In order to ensure the best performance from your air conditioner clean the air filter regularly
We recommend cleaning once a month or more frequently if required.

1. The filter can be cleaned using a vacuum cleaner or with soap and water.
2. Take off the air filter

① First, take off the bolt casing on the air inlet grille, then take off the blots using the screwdriver, and take off the filter net.

② Set the filter net back to the air inlet grille, fix its bolt and the casing.



⚠ Caution	
● When the filter is very dirty it can be washed in detergent and hot water (below 45℃). ● Ensure the filter is fully dry before reinstallation to avoid risk of electric shock or short circuiting. ● Do not dry the filter using direct sunlight.	

Ceiling & Floor Air Conditioner Unit

Type	Product		12000BTU	18000BTU	24000BTU	30000BTU	36000BTU	24000BTU	36000BTU	42000BTU	48000BTU	60000BTU		
	Indoor unit													
	Outdoor unit													
Rated cooling capacity (W)			3600	5100	7200	8500	10000	7200	10000	12000	14000	17000		
Rated heating capacity (W)			3900	5600	7900	9300	11000	7900	11000	13000	15000	17500		
Rated cooling input power (W)			1170	1690	2420	2820	3410	2750	3470	4480	4520	5690		
Rated heating input power (W)			1130	1680	2260	2700	3580	2480	3330	4650	4450	5410		
Rated cooling current (A)			5.39	7.76	11.41	13.03	15.78	5.00	6.22	8.19	8.24	10.39		
Rated heating current (A)			5.29	7.79	10.83	12.35	16.70	4.46	5.98	8.35	8.08	9.42		
Max. input power (W)			1750	2650	3650	4100	4900	3700	4570	5800	6100	7800		
Power supply			220V~240V~50Hz						380V~415V 3N~50Hz					
Air flow volume (m³/h)			620/496/434	850/680/595	1200/960/840	1500/1200/1050	1500/1200/1050	1200/960/840	1500/1200/1050	1800/1440/1260	1800/1440/1260	1800/1440/1260		
Noise dB(A)			Indoor unit	43	46	50	50	46	50	51	51	51		
			Outdoor unit	55	60	60	60	60	62	62	62	62		
Dimensions L×W×H (mm)			Indoor unit	929×660×205	1280×660×205	1280×660×205	1280×660×205	1280×660×205	1280×660×205	1631×660×205	1631×660×205	1631×660×205		
			Outdoor unit	760×260×540	800×300×590	800×300×690	903×354×857	903×354×857	800×300×690	903×354×857	903×354×857	945×340×1255	945×340×1255	
Weight (kg)			Indoor unit	24	32	33	33	33	33	44	44	44		
			Outdoor unit	38	37	56	74	86	57	86	88	97	105	
Connecting pipe specification ϕmm			Liquid pipe	ϕ6.35	ϕ9.52	ϕ9.52	ϕ9.52	ϕ9.52	ϕ9.52	ϕ9.52	ϕ9.52	ϕ9.52		
			Gas pipe	ϕ12.7	ϕ15.88	ϕ15.88	ϕ15.88	ϕ15.88	ϕ15.88	ϕ15.88	ϕ19.05	ϕ19.05	ϕ19.05	

Note:

1. No heating parameters for cooling-only Unit.
2. The cooling capacity test is based on: The indoor air dry bulb temperature is 27℃, and the wet one is 19℃; the outdoor air dry bulb temperature is 35℃, the wet one is 24℃.
The heating capacity test is based on: the indoor air dry bulb temperature is 20℃, the outdoor air dry bulb temperature is 7℃, the wet one is 6℃.
3. The above parameters are measured under the standard conditions of 5m connecting pip.
4. Product improvement may cause change of above-mentioned parameters. Our company reserves the right to change the product design for improving its performance without notice in advance. The parameters indicated on product nameplate shall prevail.

Built In Ceiling Cassette Split Air Conditioner Unit

Type	Product				12000BTU	18000BTU	24000BTU	30000BTU	36000BTU	24000BTU	36000BTU	42000BTU	48000BTU	60000BTU				
	Indoor unit																	
	Outdoor unit																	
	Panel																	
Rated cooling capacity (W)					3600	5100	7200	8500	10000	7200	10000	12000	14000	17000				
Rated heating capacity (W)					3900	5600	7900	9300	11000	7900	11000	13000	15000	17500				
Rated cooling input power (W)					1170	1690	2460	2750	3450	2750	3470	4480	4490	5780				
Rated heating input power (W)					1130	1750	2290	2800	3510	2480	3400	4700	4520	5500				
Rated cooling current (A)					5.39	7.79	11.59	12.7	15.93	5.00	6.22	8.19	8.19	10.54				
Rated heating current (A)					5.29	8.11	10.99	12.8	16.11	4.46	6.1	7.84	8.21	10				
Max. input power (W)					1750	2650	3200	4100	4900	3400	4570	5800	6100	7800				
Power supply					220V~240V~50Hz										380V~415V 3N~50Hz			
Air flow volume (m³/h)					620/496/434		850/680/595		1500/1200/1050		1100/880/770		1800/1440/1260		1800/1440/1260			
Noise dB(A)					Indoor unit		41		48		45		50		50			
					Outdoor unit		55		60		60		62		62			
Dimensions L×W×H (mm)					Indoor unit		615×615×263		835×835×240		835×835×240		835×835×280		835×835×280			
					Outdoor unit		760×260×540		800×300×590		903×354×857		800×300×690		945×340×1255		945×340×1255	
					Panel		650×650×55		650×650×55		950×950×55		950×950×55		950×950×55		950×950×55	
Weight (kg)					Indoor unit		17.5		18		24		24		26.5			
					Outdoor unit		38		45		72		57		88		105	
					Panel		3		3		5		5		5		5	
Connecting pipe specification					Liquid pipe		φ6.35		φ9.52		φ9.52		φ9.52		φ9.52			
mm					Gas pipe		φ12.7		φ15.88		φ15.88		φ19.05		φ19.05			

Note:

1. The parameter in parentheses of table is the parameter of electric heater type.
2. The parameter tested under cooling mode is based on: indoor DB 27°C, WB 19°C; Outdoor DB 35°C, WB 24°C.
The parameter tested under Heating mode based on: indoor DB 20°C, outdoor DB 7°C, and WB 6°C.
3. All the parameters in the above table are measured under 5m connecting pipe with standard working conditions.
4. Due to the products improvement, the right to change specifications and design without notice.

Please take the parameter in the nameplate as final.

Maintenance and service

★At the beginning of each Season you should check

1. There are no physical obstructions at the air inlet or outlet of either indoor or outdoor unit.
These will prevent the unit from operating correctly and may cause expensive damage to your unit
2. The electrical cables are in good condition, particularly the earth cable.
Damage must be immediately rectified by a trained person
3. Are the drains blocked? If the drain is blocked then the unit will be prevented from operating and an expensive water leak may occur.

★Check at the end of service season

Operate for 2~3 hours under the ventilation condition;
remove the moisture of the indoor unit.

Close power after the unit stops.

Note: when the unit is not in use for a long time, please cut-off power supply.

If the unit is stopped by the remote controller, it will still consume some power.

★Other check

1. After several seasons you should have the dealer or service centre clean the indoor and outdoor unit thoroughly. This will ensure the unit continues to work correctly.
2. It is possible that contaminant build up inside the unit may cause drain blockage, bad smells, water leaks and shortage of airflow, cooling or heating performance. If these occur you should have the dealer or service centre clean the system and investigate.
3. Do not attempt to clean the inside of either the indoor or outdoor unit yourself. This is a hazard to health and may cause system failure.



Fault diagnosis

⚠ Caution

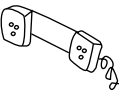
If you experience abnormal operation such as the smell of burning, water leaks, loud noises etc. turn off the power supply and contact the dealer or service centre. If you leave the unit running then major damage may occur.



Do not attempt to service or repair the unit yourself.

Errors by untrained personnel can cause short circuits, gas leakage and fire as well as being a serious danger to health and safety.

Please have all service work done by your dealer or a trained service centre,



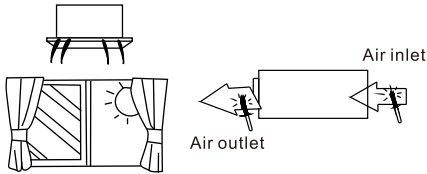
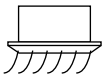
★When there is the following phenomenon, please contact the dealer or the customer service center.

- Unusual Sound During Operation
- Water Leakage at the indoor unit
- The unit won't respond to the controller
- Burning smells or smoke
- Failure of the electrical circuit or tripping the fuse
- Cables are abnormally hot



- Stop the unit and cut off power supply

In case one of the following conditions happens, please check the unit as shown below. If the problems persist, please contact the dealer or the customer service center.

Fault		Check	
The unit does not operate	➤	● Has the Earth Leakage device tripped? ● Has the circuit breaker or fuse tripped ● fuse tripped ● Is the electrical Voltage normal (between 90 & 110%)	
The cooling or heating performance is poor	➤	● Is the air filter dirty (if the filter has been installed)? ● Are the air inlet and outlet blocked? ● Are the door and window closed? When the unit has been running for 15 minutes, measure the temperature of the air inlet and outlet. If the two temperature differ 8℃ or above during cooling and differ 14℃ or above during heating, it is normal. In different environments these figures may vary. Please consult your installer for advice.	
The indoor fan does not appear to operate	➤	● During heating or under certain other circumstances the indoor fan may slow down or stop as part of the systems normal operation.	
Indoor Unit produces water vapour	➤	● This can occur when the cold air from the unit meets the warm air in the room	
The indoor unit makes strange sounds	➤	● When the air conditioner stops, or changes between cooling and heating modes a gurgling or whooshing sound is normally made ● The indoor unit will expand or contract due to the temperature change and may produce creaking or groaning sounds ● A gurgling sound is made by the flow of refrigerant through the pipes	
The air conditioner seems to produce unpleasant smells	➤	● The air conditioner cannot produce smells by itself but odours or bacteria taken in from the room may accumulate inside the unit and produce unpleasant odours. ● Try cleaning the air filter. If the problem persists the unit must be cleaned by a professional so please contact your dealer or service centre.	
During heating the indoor fan only operates after the unit starts heating and the operation light on the wired controller (optional) flashes	➤	● In order to prevent cold drafts in the room the indoor fan only runs when the air is hot during heating mode. When there is a requirement for heating and the unit starts to heat then the fan will start, after a short time. ● The unit has a memory function and, in case of a power failure, will restart after power is restored in the same mode and with the same settings as before the power failure.	

Middle Static Pressure Ducted Air Conditioner Unit

Type	Product		18000BTU	24000BTU	30000BTU	36000BTU	24000BTU	36000BTU	42000BTU	48000BTU	60000BTU
	Indoor unit										
	Outdoor unit										
Rated cooling capacity (W)			5100	7200	8500	10000	7200	10000	12000	14000	17000
Rated heating capacity (W)			5600	7900	9300	11000	7900	11000	13000	15000	17500
Rated cooling input power (W)			1700	2490	2880	3480	2750	3520	4480	4840	5670
Rated heating input power (W)			1670	2090	2730	3610	2480	3430	4650	4350	5390
Rated cooling current (A)			7.81	11.73	13.29	16.06	5.00	6.31	8.19	8.83	10.36
Rated heating current (A)			7.75	10.04	12.46	16.48	4.46	6.15	8.34	7.91	9.79
Max. input power (W)			2700	3750	4100	4900	3850	4570	5800	5950	7800
Power supply			220V-240V~50Hz			380V-415V 3N~/50Hz					
Air flow volume (m³/h)			950/760/665	1200/960/840	1500/1200/1050	1500/1200/1050	1200/960/840	1500/1200/1050	2000/1600/1400	2000/1600/1400	2000/1600/1400
External static pressure (Pa)			50/80	50/80	50/80	50/80	50/80	50/80	50/80	50/80	50/80
Noise dB(A)	Indoor unit		44/41/35	47/44/38	50/47/41	50/47/41	47	50/47/41	53/50/44	53/50/44	53/50/44
	Outdoor unit		55	60	60	60	60	60	62	62	62
Dimensions L×W×H (mm)	Indoor unit		890×785×290	890×785×290	890×785×290	890×785×290	890×785×290	890×785×290	1250×785×290	1250×785×290	1250×785×290
	Outdoor unit		800×300×590	800×300×690	903×354×857	903×354×857	800×300×690	903×354×857	903×354×857	945×340×1255	945×340×1255
Weight (kg)	Indoor unit		34	36	36	36	36	36	52	52	52
	Outdoor unit		45	55	74	86	57	84	88	97	105
Connecting pipe specification φmm	Liquid pipe		φ6.35	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52	φ9.52
	Gas pipe		φ12.7	φ15.88	φ15.88	φ15.88	φ15.88	φ15.88	φ19.05	φ19.05	φ19.05

Note:

- No heating parameters for cooling-only Unit.
- The cooling capacity test is based on: The indoor air dry bulb temperature is 27℃, and the wet one is 19℃; the outdoor air dry bulb temperature is 35℃, the wet one is 24℃.
The heating capacity test is based on: the indoor air dry bulb temperature is 20℃, the outdoor air dry bulb temperature is 7℃, the wet one is 6℃.
- The above parameters are measured under the standard conditions of 5m connecting pip.
- Product improvement may cause change of above-mentioned parameters. Our company reserves the right to change the product design for improving its performance without notice in advance.
The parameters indicated on product nameplate shall prevail.

Low Static Pressure Ducted Air Conditioner Unit

Type	Product		9000BTU	12000BTU	18000BTU	24000BTU	30000BTU	36000BTU	24000BTU	36000BTU	42000BTU	48000BTU
	Indoor unit											
	Outdoor unit											
Rated cooling capacity (W)			2600	3600	5100	7200	8500	10000	7200	10000	12000	14000
Rated heating capacity (W)			2800	3900	5600	7900	9300	11000	7900	11000	13000	15000
Rated cooling input power (W)			990	1160	1650	2530	2860	3720	2750	3520	4480	4350
Rated heating input power (W)			980	1100	1690	2160	2570	3600	2480	3620	4650	4320
Rated cooling current (A)			4.59	5.37	7.57	11.93	13.18	17.20	5.00	6.31	8.19	7.93
Rated heating current (A)			4.51	5.16	7.82	10.39	11.74	16.80	4.46	6.50	8.35	7.86
Max. input power (W)			1300	1800	2600	3750	4100	4900	3950	4570	5900	6100
Power supply			220V-240V~50Hz									
Air flow volume (m³/h)			420/340/300	630/504/441	860/688/602	1200/960/840	1500/1200/1050	1500/1200/1050	1200/960/840	1500/1200/1050	2050/1640/1435	2050/1640/1435
External static pressure (Pa)			12/30	12/30	12/30	12/30	12/30	12/30	12/30	12/30	12/30	12/30
Noise dB (A)	Indoor unit		36	38/35/29	42/39/33	45/42/36	48/45/39	48	45	48/45/39	50/47/41	50/47/41
	Outdoor unit		50	53	55	60	60	60	60	60	62	62
Dimensions L × W × H (mm)	Indoor unit		880×528×240	880 × 547 × 240	1110 × 547 × 240	1305 × 547 × 240	1305 × 547 × 240	1305 × 547 × 240	1305 × 547 × 240	1305 × 547 × 240	1705 × 547 × 240	1705 × 547 × 240
	Outdoor unit		760×260×540	760 × 260 × 540	800 × 300 × 590	800 × 300 × 690	800 × 300 × 690	800 × 300 × 690	800 × 300 × 690	800 × 300 × 690	903 × 354 × 857	945 × 340 × 1255
Weight (kg)	Indoor unit		21.5	21.5	30	34.5	34.5	34.5	34.5	34.5	44	44
	Outdoor unit		30	38	45	55	74	86	57	86	88	97
Connecting pipe specification Φmm	Liquid pipe		Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas pipe		Φ9.52	Φ12.7	Φ12.7	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ15.88	Φ19.05	Φ19.05

Note:

1. No heating parameters for cooling-only Unit.
2. The cooling capacity test is based on: The indoor air dry bulb temperature is 27℃, and the wet one is 19℃; the outdoor air dry bulb temperature is 35℃, the wet one is 24℃.
The heating capacity test is based on: the indoor air dry bulb temperature is 20℃, the outdoor air dry bulb temperature is 7℃, the wet one is 6℃.
3. The above parameters are measured under the standard conditions of 5m connecting pip.
4. Product improvement may cause change of above-mentioned parameters. Our company reserves the right to change the product design for improving its performance without notice in advance. The parameters indicated on product nameplate shall prevail.

★Fault code

When air conditioner fails, controller board will regularly lamp according to different fault indication shows corresponding fault code, Specific response is as follows :

220V-240V~/50Hz unit:

Fault	Display Type 1 (Indicator)	Display Type 2 (line controller)	Show priority level	Phenomenon
Communication failure	/	E5	1	Stop Machine
Drainage system failures	Timing lights blinking 4 in 8 seconds	E4	2	Stop Machine
Lack-phase or phase Low pressure failure	Timing lights blinking 6 in 8 seconds	E6	3	Stop Machine
Ta Abnormal	Timing lights blinking 1 in 8 seconds	E1	4	Stop Machine
Te Abnormal	Timing lights blinking 2 in 8 seconds	E3	5	Stop Machine
Tw Abnormal	Timing lights blinking 2 in 1 seconds	E2	6	No Stop Machine
Indoor thermal overload protection system		/	7	Stop Machine
Of cream (non-fault)	Running lights blinking	/	8	No Stop Machine
Lack of fluoride protection	Blinks 11 times, stops 2 seconds	E0	6	Stop Machine

380V-415V 3N~/50Hz Hz unit:

Fault	Display Type 1 (Lamp board)	Display Type 2 (trouble light)	Display Type 3 (line controller)	Show priority level	Phenomenon
Outdoor and indoor Communication failure	Blinking 5stop 2S	Blinking 5stop 2S	F1	1	Stop Machine
line controller Communication failure		-	F5	1	Stop Machine
Drainage system failures	Blinking 4 stop 2S	-	E4	3	Stop Machine
Outdoor protection (Lack-phase)	Blinking 6 stop 2S	Blinking 6 stop 2S	E6	2	Stop Machine
Outdoor protection (Exhaust temperature)	Blinking 10 stop 2S	Blinking 10 stop 2S	EA	7	Stop Machine
High voltage protection	Blinking 9 stop 2S	Blinking 1 stop 2S	E9	6	Stop Machine
Low voltage protection	Blinking 9 stop 2S	Blinking 3 stop 2S	E9	6	Stop Machine
Ta Abnormal	Blinking 1 stop 2S	-	E1	4	Stop Machine
Te Abnormal	Blinking 3 stop 2S	-	E3	5	Stop Machine
Tw Abnormal	Blinking 2 stop 2S	Blinking 2 stop 2S	E2	8	No Stop Machine
Tl Abnormal	Blinking 7 stop 2S	Blinking 7 stop 2S	E7	9	No Stop Machine
Tp Abnormal	Blinking 8 stop 2S	Blinking 8 stop 2S	E8	10	No Stop Machine

Safety precautions

In order to prevent the risk of death, serious injury or damage to property please comply with the following important safety instructions.
The extent of possible harm is described by the following symbols

 Warning
This symbol indicates danger of death or serious injury
 Caution
This symbol indicates danger of injury or damage to property

The unit must be operated in accordance with the following symbols


This symbol indicates something which is strictly forbidden

This symbol indicates something which must be adhered to

★Protective measure

 Warning	
① Your air conditioner is not designed to be installed by yourself and should only be installed by a qualified, competent and trained technician. The presence of Mains Voltage electricity and high pressure refrigerant gas make installing this system a specialist task which you should not attempt yourself. ② Any electrical work on the air conditioner should only be carried out by a qualified, competent and trained technician and not by yourself ③ Ensure the electrical power is disconnected during service and maintenance	
	
Important	
● This unit is not suitable for operation by minors or disabled users ● Children should be prevented from operating the air conditioner	
 Warning	
● The unit must be correctly earthed. Incorrect grounding will cause earth leakage and electric shock 	● Earth Leakage Protection must be installed. Failure to do so carries the risk of electric shock and fire 
 Caution	
● Do not install either the indoor or outdoor unit in a place where flammable or explosive gases are present or there is a high risk of a fire or explosion occurring 	● Ensure the unit drain pipe work is properly connected and made or water leaks will occur 

 Caution

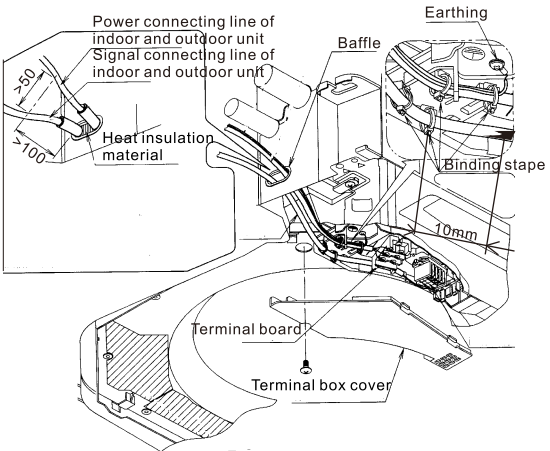
- 1.The definition of power cord is the power supply cable from the isolating switch attached to the dedicated power supply to the indoor unit or outdoor unit. Interconnecting cable for the indoor and outdoor unit is the power supply cable that connects indoor unit and outdoor unit.
2. Above-mentioned definitions are the specifications of power supply, power cord and interconnecting cable of indoor unit and outdoor unit of all different types of air-conditioners.
3. To avoid voltage drops, when the cross sectional area of a power cable core reaches the minimum size, and the power cord is lengthened, you should choose another bigger power cable size.
4. The power cord connected to the indoor unit is 227 IEC53 type cable. The power cord connected to outdoor unit and the Interconnecting cable between indoor unit and outdoor unit are both H05RN-F (neoprene) stranded wire. If you use single-strand two ply wire, please select wire with larger cross-section area by one size and a special electric jacket should be used.

★Connection method

1. To connect the indoor unit
Open the cover of terminal box cover. Connect the cables according to the electric connection diagram. And check all cables are connected safely, securely and correctly.

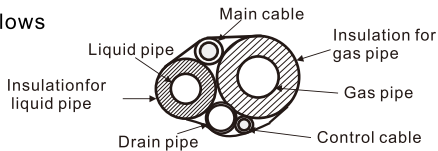
2. To connect the Outdoor unit
Open the outdoor unit electrical access panel and connect cables according to the circuit diagramon the backside of the access panel. And check all cables are connected safely, securely and correctly.
Earth wire must be connected at the right location.

Note: The PC board of outdoor unit whose power supply is 380V-415V has phase sequence protection.
Please pay attentions to it while connecting power cable.



After all connections have been made and checked, the pipe work has been leak tested and charged and the drain pipe work tested then the pipes and cables should be bound together as follows

1. Locate the drain pipe at the bottom along with the control cable
2. Place the insulated refrigerant pipes on top
3. Place the mains cable on top of these
4. Bind carefully with tape
5. Ensure the drain pipe is not damaged



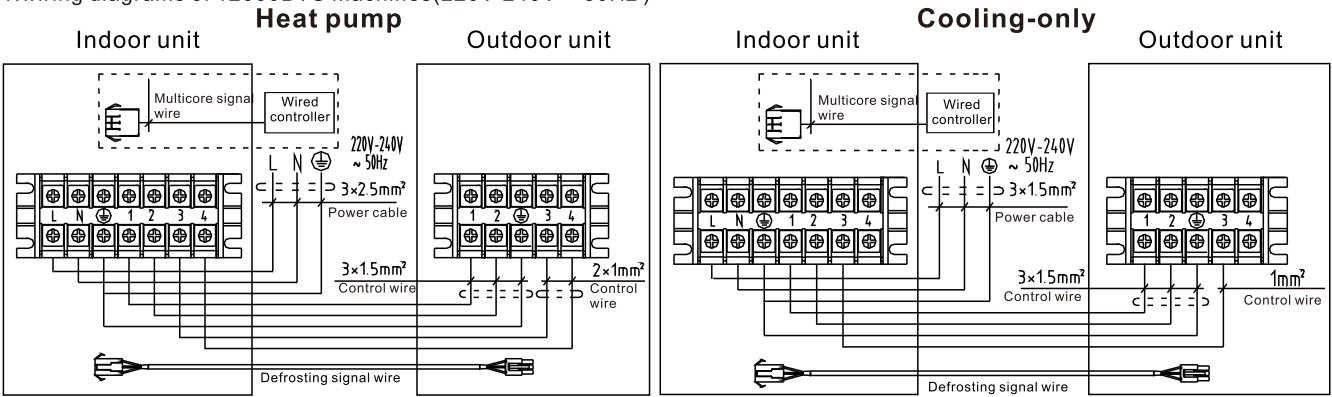
Caution: Do not squash the drain pipe during binding operation!

Commissioning

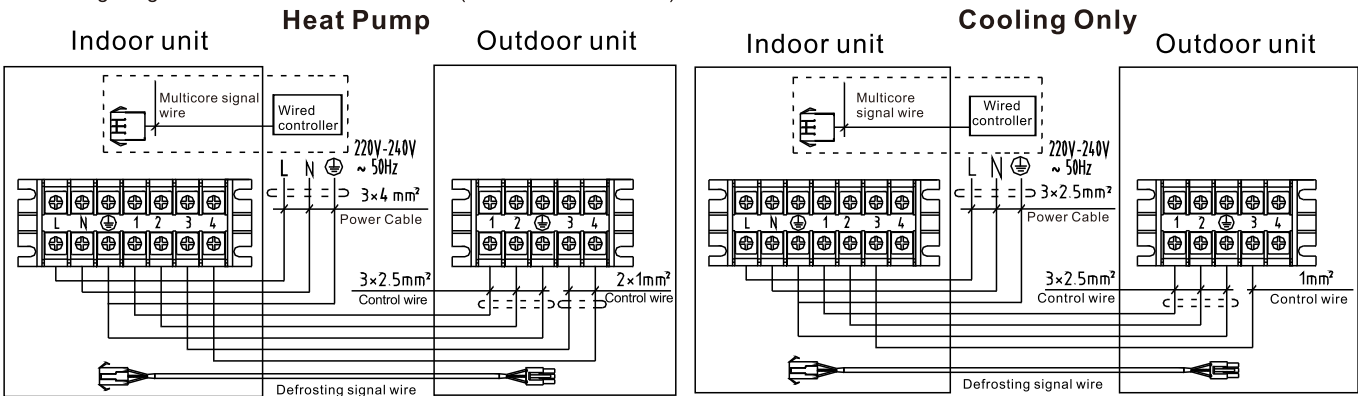
1. Turn on the Power Supply and select cooling operation as shown in the remote controller section of this manual.
2. After the 3 minute compressor protection delay, check the indoor unit louver is operating correctly and both the indoor and outdoor units are operating correctly without abnormal noise.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

-Built In Ceiling Cassette Split Air Conditioner Unit

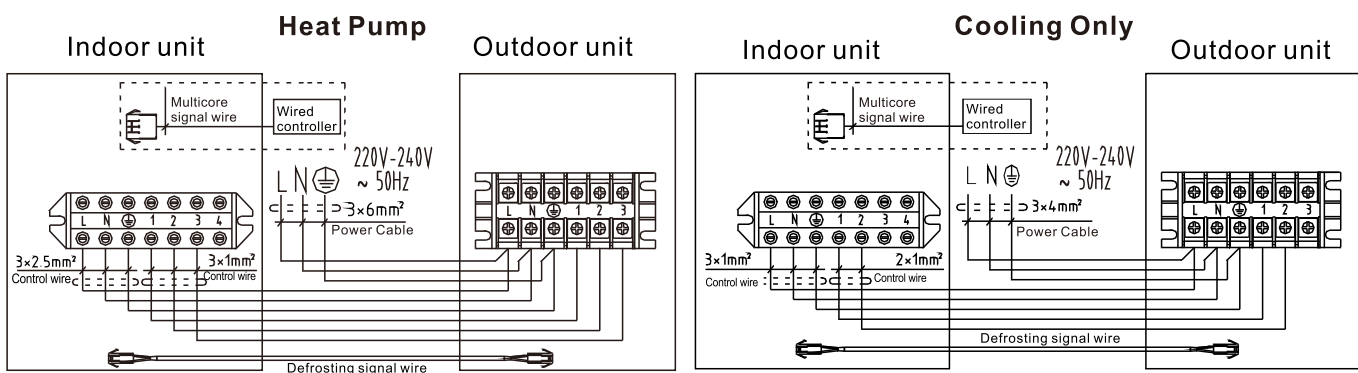
1.wiring diagrams of 12000BTU machines(220V-240V ~50Hz)



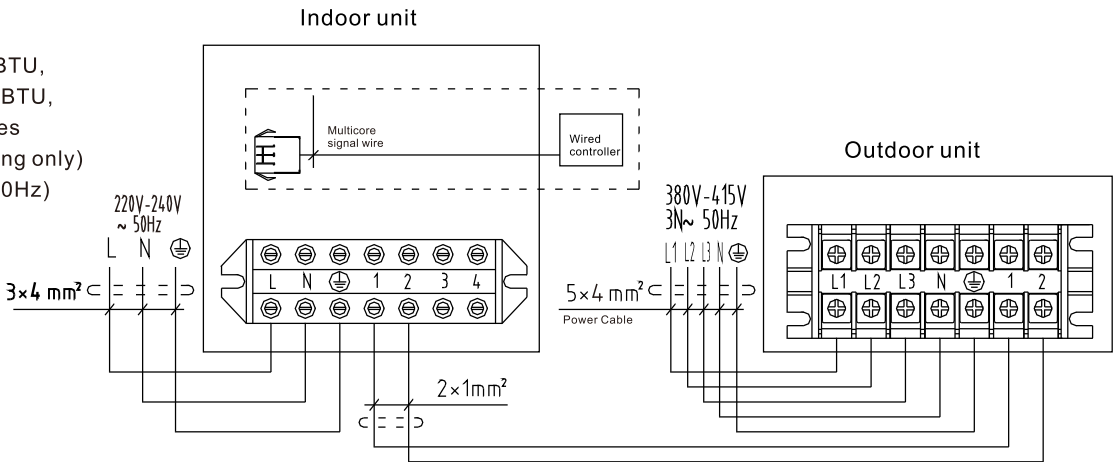
2.wiring diagrams of 18000BTU machines(220V-240V ~50Hz)



3.wiring diagrams of 24000BTU,30000BTU&36000BTU machines(220V-240V ~50Hz)



4. wiring diagrams of
24000BTU,36000BTU,
42000BTU&48000BTU,
60000BTU machines
(heat pump or cooling only)
(380V-415V 3N~ 50Hz)



★Safety precautions

Warning		
Don't use flammable sprays near the air-conditioner.		If there are some abnormalities (such as the smell of scorching), please shut down and cut off power supply.
Don't use open flame near the air-conditioner.		Do not use sub-standard or damaged wires.
Do not attempt to repair the air conditioner yourself		Do not put fingers or other objects into the air conditioner. Do not touch metal parts of the heat exchanger.
Caution		
Your air conditioner is designed for comfort cooling or heating. It is not designed for any other purpose and specifically should not be used for storing food, animals, plants, precision instruments, art or antiques, nor any other special item. It is not designed for specialist computer rooms		Do not use naked flames where the air flow from the unit can reach directly. The air from the unit will interrupt the combustion process and either extinguish the flame or misdirect it. Either is a danger of fire or explosion
Your air conditioner contains water and may also drip if the humidity is the room is too high. Do not, therefore, place any object under the unit which could be damaged in the event of water dripping on it.		Do not direct the air from the unit directly onto animals or plants as this may be harmful to them
Do not sit in the cold air stream directly for long periods		Ensure the room is properly ventilated
Check the air conditioner regularly to ensure correct operation and that nothing has become loose		Do not clean the air-conditioner with water.
		Before cleaning the air-conditioner, cut off the power.

★Installation precautions

- Before commencing with the installation please read these Installation Precautions thoroughly, making sure you understand them in full.
- These Installation Precautions are very important for the safety of you and others and should be complied with in full.
- The potential risks are described by the following symbols

 Warning	Danger of serious injury or death
 Caution	Danger of damage to property
 Forbidden	Do not do this under any circumstances

- The below symbols indicate steps which are mandatory

 	These steps are mandatory and should be carried out without fail
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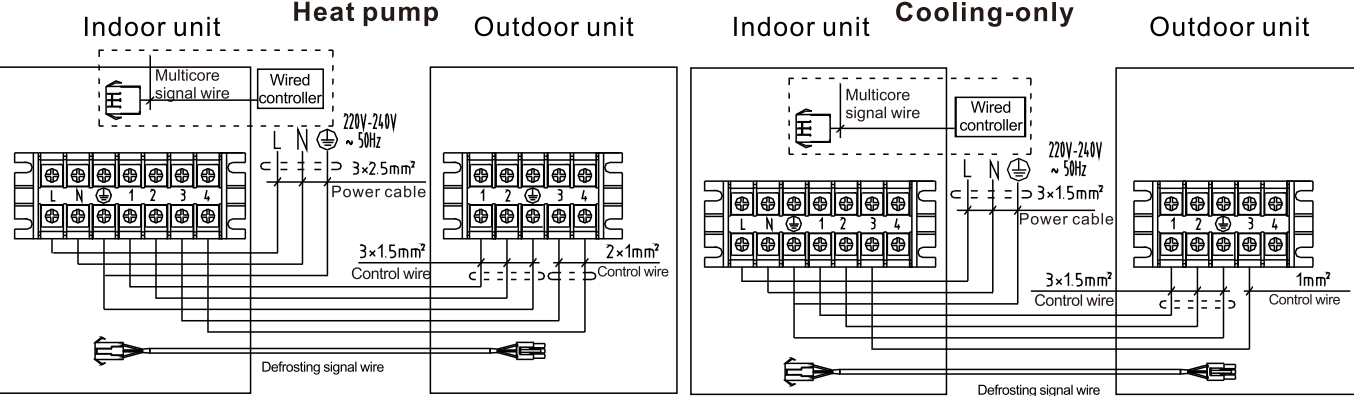
- It is important that the unit is correctly commissioned after the installation is complete to ensure it is operating correctly.
After commissioning you should use this manual to explain to the user the correct method of operating the unit and its maintenance requirements.

 Warning

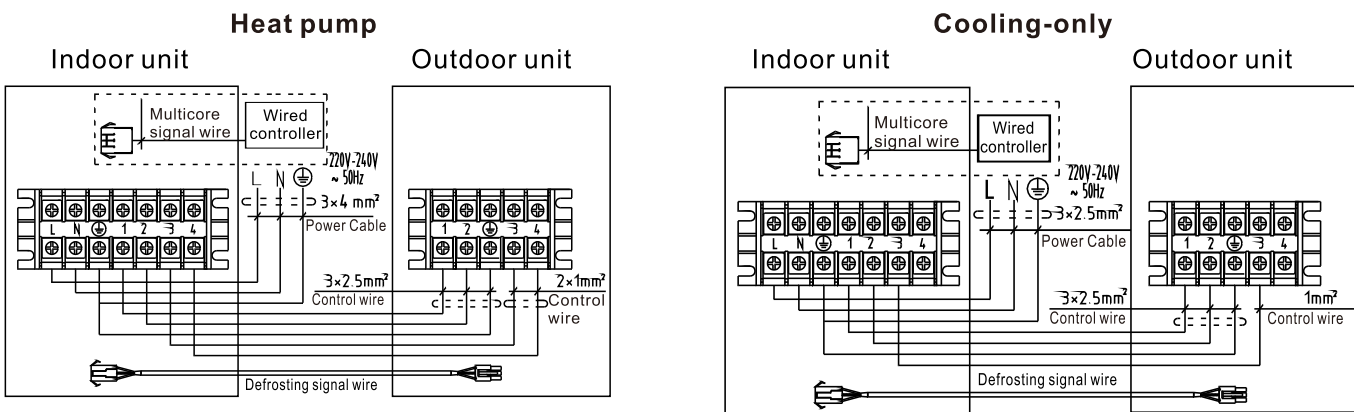
- Do not attempt to install this unit yourself. Incorrect installation can cause refrigerant or water leakage, electric shock, fire or other danger to health and safety or property.
- Where the unit is installed must be solid enough to withstand the weight of the unit. If it is not then there is the danger of the structure collapsing or the unit falling creating a danger of serious injury or death.
- The installation should be mindful of potential damage by strong winds, earthquakes or other natural phenomena. These should not be able to cause the unit to fall over and cause an accident.
- The electrical installation should be in accordance with local and national specifications and only be carried out by qualified personnel in accordance with the installation instructions. The air conditioner should have its own dedicated power supply.
- Ensure the power supply is of sufficient capacity for the unit or there is a risk of fire, electric shock or other failure.
- The wiring should be made correctly using the specified cable and properly secured to avoid the risk of external forces causing the connections to come loose. Failure to do this runs the risk of electric shock or fire.
- Ensure the refrigerant pipe work is fully evacuated and leak tested and do not over charge with refrigerant. Over charging with refrigerant can cause a leak to occur after installation. Leaks can cause a high concentration of refrigerant in an area which may result in sudden death by asphyxiation.
- Do not carry out any electrical work unless the power supply has been disconnected.
- If the unit is installed in a small room there is danger of a leak causing the refrigerant gas concentration to exceed the maximum permissible for safe breathing and this can cause sudden death by asphyxiation. Please consult your dealer about preventative measures such as audible visual leak detectors.
- When making pipe connections be sure to use a torque wrench and tighten the flare nuts to the correct torque, Over and under tightened nuts can cause refrigerant gas to leak. Do not operate the compressor unit the pipe work has been correctly made, leak tested and evacuated.
- While performing installation or maintenance ensure that no foreign objects can enter either the unit or pipe work
- Do not use any refrigerant other than the one indicated on the outdoor unit nameplate. Do not allow foreign bodies or moisture to enter the pipe work during installation and ensure the pipe work is fully leak tested and evacuated before running the unit. If the refrigerant gas becomes contaminated with moisture, air or other gases then the unit will not perform correctly and there is a risk of leakage, explosion or other damage to the unit.
- Do not extend the power cable or use multiple power cables.

★Wiring diagram of indoor and outdoor unit
-Ducted Air Conditioner Unit
-Ceiling & Floor Air Conditioner Unit

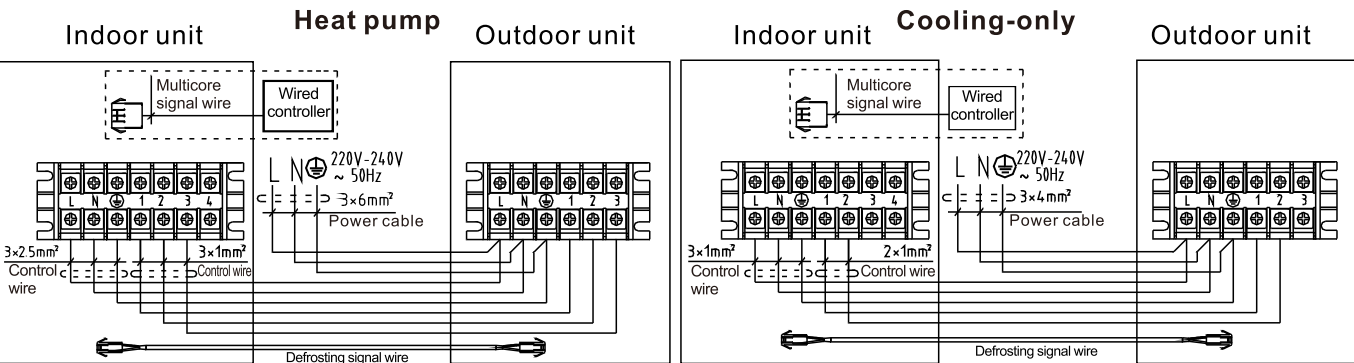
1. Wiring diagrams of 9000BTU&12000BTU machines (220V-240V ~50Hz)



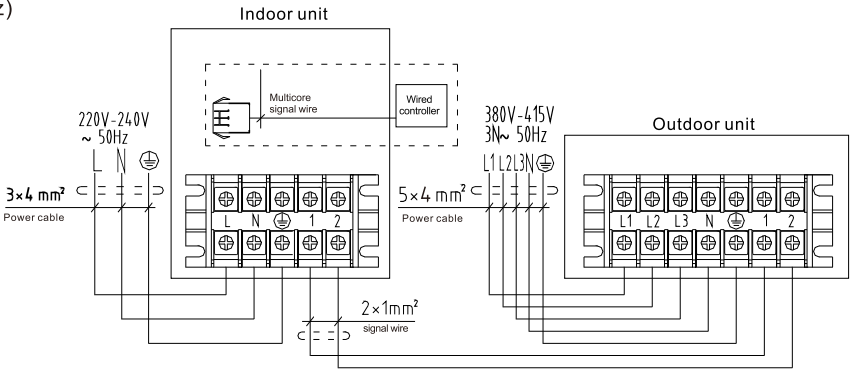
2. Wiring diagrams of 18000BTU machines (220V-240V ~50Hz)



3. Wiring diagrams of 24000BTU and 30000BTU, 36000BTU machines (220V-240V ~50Hz)



4. Wiring diagrams of 24000BTU, 36000BTU, 42000BTU, 48000BTU, 60000BTU machines (heat pump or cooling-only) (380V-415V 3N~ 50Hz)

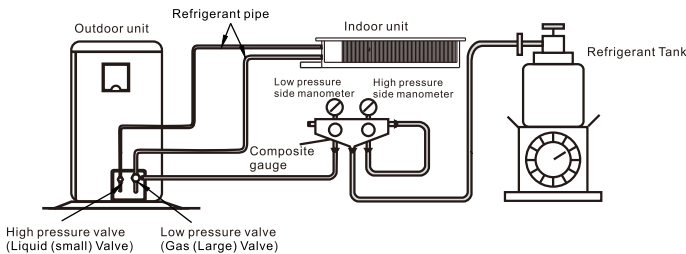


3. When you feel that refrigerant flowing out is getting cold, tighten the outdoor high pressure valve and connecting pipe of the liquid pipe and maintain the state for more than 10s.
4. Close the valve of the refrigerant tank, and by using soap and water, check for leaks at all of the connections.
5. After confirming that there is no leak, remove the service hose.
- After Evacuating or Gas Purging operation is completed, re-install the service valve nut on the low pressure valve of the outdoor unit, unscrew the spindles of high-pressure valve and low-pressure valve of the outdoor unit, and this will supply refrigerant to the pipe work and indoor unit.
- Important : Depending upon the legislation in your country Gas Purging may be illegal and therefore you should follow the Evacuation process if you are in any doubt. In particular this is the case in the European Union.

★Adjust the refrigerant quantity

When pipe length exceeds 5m, please add refrigerant according to the table below:

Refrigerant pipe	Refrigerant pipe specification		Additional fill of refrigerant
	Gas pipe	Liquid pipe	
Tubing between indoor unit and outdoor unit	φ 9.52×0.75mm	φ 6.35×0.75mm	0.02kg/m
	φ 12.7×1mm	φ 6.35×0.75mm	0.02kg/m
	φ 15.88×1mm	φ 9.52×0.75mm	0.05kg/m
	φ 19.05×1mm	φ 9.52×0.75mm	0.07kg/m



Electrical connections

Warning

All electrical works must be carried out & checked by a qualified electrician and must adhere to the IET regulations, local and national legislation and industry best practice .

The system must have its own independent power supply. An all pole isolating disconnect switch with at least 3mm contact separation must be installed. The power cord and connecting cable should be either as supplied with the unit or otherwise as specified in this manual.

Do not attempt any electrical works yourself.

An Earth Leakage Protector, Power Switch and Circuit Breaker or Fuse must be installed in the dedicated power supply or there is the risk of electric shock.

The fuse specification of single-phase control panel is F5AL 250V;
the fuse specification of three-phase control panel is F3.15AL 250V.

The grounding must be reliable. If grounding is not correct, it may lead to electric shock.

All power cables should be properly secured with cable ties so that external forces cannot disconnect the wired from the terminals. Improper connections or insecure fastening can cause electric shocks or fire.

Caution

Do NOT connect the earth cable to gas or water pipes, telephone lines, lightning rods or the earth cables of other products

Once the indoor and outdoor unit have been switched on, do not cut off power supply in 1 minute, (the system automatically set) otherwise abnormal operation will be caused.

- Please connect the power cord and interconnecting cable according to the wiring diagram.
- Connect the wire firmly to the terminal block using crimps and secure in order to prevent external forces pulling on the wire causing risk of fire or electric shock.
- After the electrical connection is completed, all wires should be prevented from touching other parts such as tubing, compressor etc.

Warning

- Do not place the outdoor unit near balconies or anywhere where children can climb onto it and potentially fall off and injure themselves
- The indoor unit should be mounted at least 2.5 metres above the ground to prevent people from interfering with it
- If there is a refrigerant leak during installation immediately ventilate the space thoroughly. Once the installation is complete carry out a thorough leak test of the system. Never allow refrigerant gas to make contact with sparks or naked flames as burning refrigerant releases poisonous gases.
- Ensure the electrical supply cable is properly protected and connections are made properly. Bad connections will cause the cable to overheat and potentially cause electric shocks or fire.
- An Earth Leakage protector must be installed. The entire electrical installation should be checked by a qualified electrician to avoid the potential for electrical shocks or fire.
- The unit must be adequately earthed
Never connect the earth wire to gas or water pipes, lightning rods or telephone cables.
Inadequate grounding of the earth cable may lead to the danger of serious injury or death by electric shock



Caution

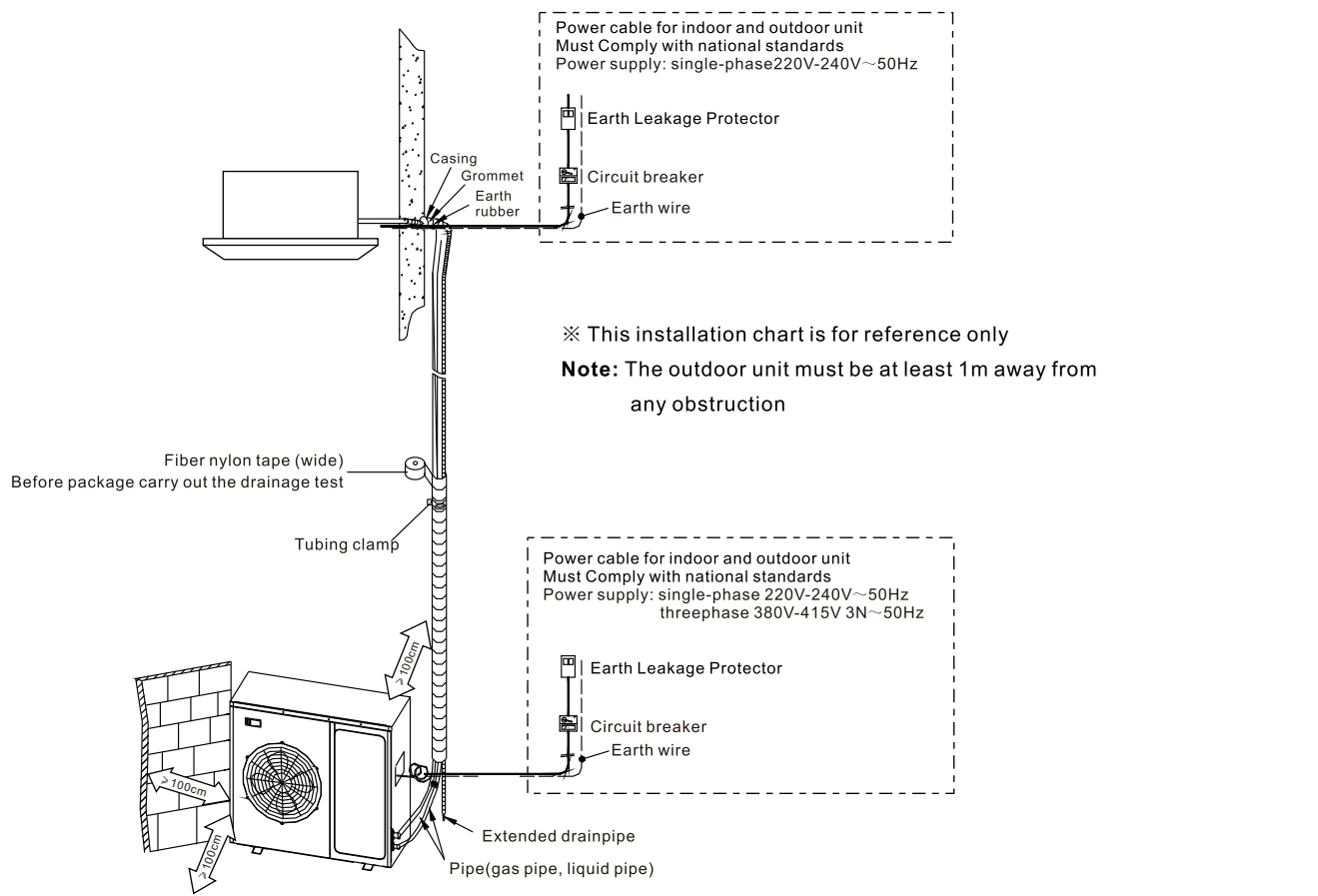
- Ensure the drain pipe is installed in accordance with the installation instructions and adequately insulated to protect against condensation forming. Badly installed drain pipe work can cause expensive damage due to water leaks.
 - Your air conditioner contains sophisticated electronic controls which may be subject to interference from radios , televisions, mobile telephones or other electronic goods. Do not operate these items near to the air conditioner or they may cause the unit to fail.
- We suggest maintaining a distance from these items to the indoor unit of at least 1 metre and to the outdoor unit of at least 2 metres.
- Depending upon the type and frequency of the electromagnetic signal you may need to leave a longer distance than this.

Forbidden

- Do not try and install, service or remove the air conditioner yourself. Contact the dealer or service centre.
- Do not mount this system in a vehicle, ship, aircraft or other place which will move while the unit is in operation.
- Do not install this unit where there will flammable or explosive gases present. If these leak and accumulate near the air conditioner then a fire or explosion may result.

Installation instructions

Installation drawing

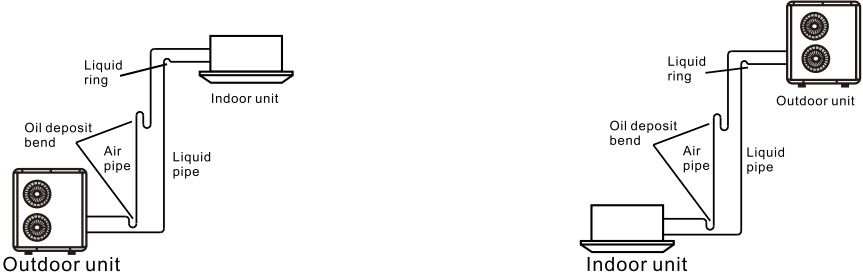


Preparation for installing accessories	Installation tools
Before installation the following items are not included with the unit but will be required for the installation and should be obtained locally 1. Four M12 suspension bolts 2. PVC drain pipe 3. Connecting pipe 4. Heat insulation materials (PE, thickness is over 8mm) used for connecting pipe 5. Five large binding tapes and five small binding tapes 6. Outdoor power cable, and indoor and outdoor power connecting cable	Besides the common tools, during connecting the pipe the following tools are required: 1. Torque spanner (42N.m, 65N.mm, 100N.mm) 2. Pipe cutter (cut copper pipe) 3. Refrigerant cylinder (when the pipe is lengthened, the refrigerant must be added) 4. Nitrogen cylinder (to prevent oxidation and to clean pipe when weld pipe) 5. Pressure gauge 6. LPG 7. Pipe clamp 8. Welding torch

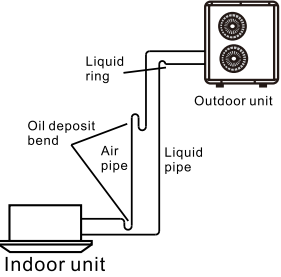
■Connection of the Connecting Pipe

Precautions to prevent compressor oil starvation

- Horizontal pipes should incline toward the outdoor unit using a 20:1 slope
- If there is a height difference between the indoor and outdoor unit, oil traps should be installed in the interconnecting gas (large) pipe:
When the vertical pipe height difference is less than 5 meters, an oil trap should be installed at the bottom of the gas (large) pipe;
When the vertical pipe height difference is more than 5 meters, then for every 5 meters an oil trap must be installed at the bottom of the gas (large) pipe, and a short loop (liquid ring) should be installed at the exit of the indoor unit liquid (small) pipe;
When the connecting gas pipe vertical height difference is less than 5 meters but the constant rise distance is too long, an oil trap should be installed in the gas (large) pipe every 10 meters.
- When the outdoor and indoor units are at the same elevation, the oil deposit bend and liquid ring do not need to be installed, if the horizontal connecting pipe length is less than 10 meters.
When the horizontal connecting pipe length is more than 10 metres, install an oil trap in the gas (large) pipe every 10 metres



When the installation position of indoor unit is higher than that of the outdoor unit.



When the installation position of indoor unit is lower than that of the outdoor unit.

Note: This chart is for explanation purposes. An actual installation will differ from this according to the site conditions.
When making an oil trap the radius of the bend should be between 1.5 and 2 times the pipe diameter.

■Connection of tubing and indoor unit

Remove the copper nut from indoor unit and insert it over the unflared tube before making the flare, align the flaring side of the connecting pipe with the connector of indoor unit, lightly coat the flare and nut with refrigerant oil, screw the copper nut onto the connector of indoor unit and tighten it (tightening torque is shown in the table above).

■Connection of tubing and outdoor unit

Follow the instructions for flaring the indoor unit on page 18

★Evacuating or Purging the pipe work

Before releasing the refrigerant in the outdoor unit into the pipe work and indoor unit it is necessary to ensure that there are no foreign objects, water or non-condensing gas in the refrigeration system. For that purpose, it is necessary to evacuate or purge the system:

■Evacuation

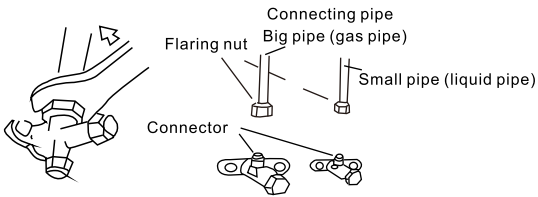
When evacuating, ensure that all the connecting pipes between indoor unit and outdoor unit have been tightened.

- Unscrew the nut of the service port from the low pressure valve of the outdoor unit, and connect a service hose connected to a composite pressure gauge to this service port.
- Connect the vacuum pump to the composite pressure gauge via another service hose, turn on the pressure gauge and vacuum pump to evacuate the indoor unit and pipes, so that after vacuuming, the absolute pressure is not greater than 50Pa.
- Switch off the valve of the composite pressure gauge, stop the vacuum pump and ensure the pressure does not increase after 20 minutes.

■Gas Purging

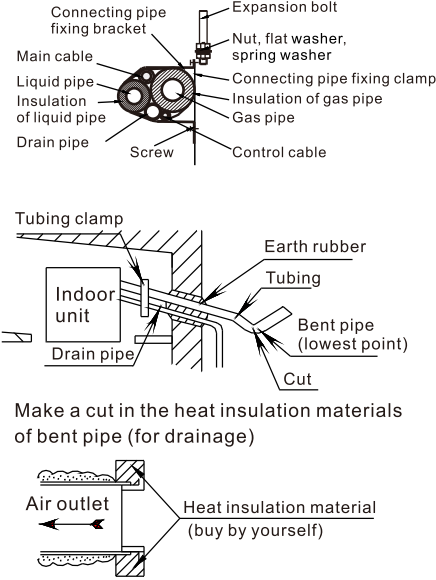
During purging, the connection between outdoor high pressure valve and liquid pipe should be loosened.

- Unscrew the nut of the service port from the low pressure valve of outdoor unit, and connect it with a service hose that has a schraeder depressor. The other end of the rubber hose is connected to the refrigerant tank.
- Open the valve of the refrigerant tank, so that the refrigerant will flush the connecting pipe of indoor unit and outdoor unit at high speed, in order to discharge the air in the pipe. You can feel that refrigerant flows out at the outlet of connecting liquid pipe.



2. Areas with very high humidity levels This air conditioner has been fully tested in various humidity conditions, however if it runs for long periods of time in a high humidity environment then the following precautions should be carried out. The indoor unit should be externally insulated using 10-20mm thickness glass fibre. The normal pipe insulation is around 8mm. This should be replaced with up to 30mm thickness insulation.

3. Sealing the Wall: To prevent rainwater or other foreign bodies from entering the room and air-conditioner after installing the tubing and drain pipe, the gap between wall hole and tubing, drain pipe and electric wire should be sealed with mastic, sealant rubber or putty, or poor performance or leakage will result. If the outdoor unit is higher than indoor unit, tubing should be bent to ensure that the lowest point of the tubing is lower than the wall hole to prevent rainwater entering the room or air-conditioner along the piping system.



★Connection of refrigerant pipe

The standard refrigerant pipe length is 5m. If the distance between the indoor and outdoor unit is longer than this then the pipe needs to be extended. Please refer to the following table for the limitations of each unit as far as maximum distance and height. Do not exceed these limits or compressor failure may result. Keep the pipe separation length and number of bends to the lowest possible and always follow the shortest path for the pipe installation. As the pipe length and number of bends increases the performance of the unit decreases and energy use increases.

Specification Model	Connecting pipe dim.(ϕ mm)		Max. Connecting pipe& length			Max. Fall (m)	Max. Bending number
	Liquid pipe	Gas pipe	Liquid pipe	Gas pipe	Max. Length (m)		
9000BTU	6.35	9.52	7.94	12.7	25	10	5
12000BTU	6.35	12.7	7.94	15.88	25	10	5
18000BTU	6.35	12.7	7.94	15.88	25	10	5
24000BTU	9.52	15.88	9.52	19.05	30	15	8
30000BTU	9.52	15.88	9.52	19.05	30	15	8
36000BTU	9.52	15.88	9.52	19.05	50	15	8
42000BTU	9.52	19.05	12.7	22.2	50	20	10
48000BTU	9.52	19.05	12.7	22.2	50	20	10
60000BTU	9.52	19.05	12.7	22.2	50	20	10

Only refrigeration quality, deoxidised, seamless, phosphor copper tube suitable for R410a should be used as a refrigerant pipe.

Requirements for connecting pipe between indoor unit and outdoor unit

1. Machining dimension of flared pipe section is as shown in following table;
2. When flaring nut is connected, some refrigerant oil should be applied on the flared pipe section (both inside wall and outside wall), and screw the nut by 3~4 thread pitches before finally tightening it;
3. Tightening torque is shown in the following table;
4. Carry out leakage test after completion of the installation.

Tubing specification	Tightening torque	Machining dimension of flared pipe section	Shape of flared mouth	Apply refrigerant oil
ϕ 6.35mm	15-19N.m	8.3-8.7mm		
ϕ 9.52mm	35-40N.m	12.0-12.4mm		
ϕ 12.7mm	50-60N.m	15.4-15.8mm		
ϕ 15.88mm	62-76N.m	18.6-19.0mm		
ϕ 19.05mm	98-120N.m	22.9-23.3mm		

Installation of indoor unit

★Select installation site

For convenience of maintenance, please reserve a service port.

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

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

Warning

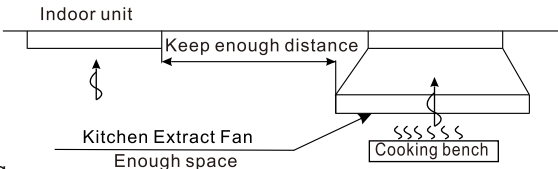
4. For ducted type indoor unit, the suspension site should be able to support the weight 4 times more than the indoor unit. There should be no increase in noise and vibration. If it needs to be reinforced, the installation should be carried on after reinforcement (if reinforcement is poor, the indoor unit will fall and cause damage).

5. The indoor unit must be away from sources of heat or steam and way from entrances.
6. The indoor unit position is near the power source (special line).
7. The indoor unit position must allow for easy connection to the outdoor unit.
8. The indoor unit position should keep away from direct sunlight and moisture.
9. The height inside the ceiling should reach the drainage requirements to ensure the installation of indoor unit.
10. The unit cannot be installed in the washhouse (it will cause electric shock).
11. In the inlet and outlet of indoor unit, protective barriers should be installed to prevent finger from inserting or contacting the fan with high speed and metal fin.

■Matters requiring attention 1

Must carry out a full inspection to the following place before installation

1. In restaurants, kitchens and other eating places, dust, flour, grease steam and other cooking by products will easily attach to the indoor fan, heat exchanger and drain pump. This will cause the performance to reduce and cause the unit to spray water, leak and may lead to the drain pump or other components to fail. Please consider adopting the following improvement measures.



The capacity of the kitchen extract fan and extract hood should be great enough to ensure that the oil, steam, flour and other cooking products will be exhausted through it and not attracted into the air conditioner. The indoor unit should be far enough away from the cooking and food preparation equipment to ensure that cooking products are not attracted into the unit.

2. When installing the unit in a factory, ensure it is situated in a place where it will not be contaminated by oil, powder, iron filings or dust.
3. Do not install near potential sources of combustible gas
4. Do not install where acidic or corrosive gases are present

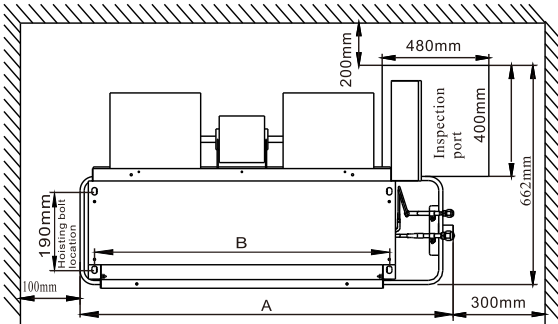
■Matters requiring attention 2

Do not drop the indoor unit or allow it to fall during transport.

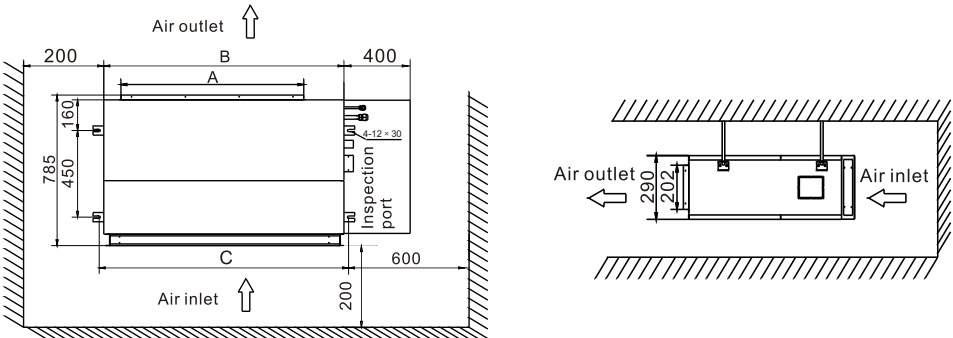
★Installation

- The location of hoisting bolt
- Low Static Pressure Ducted Air Conditioner Unit

Type	A	B
9000BTU	905	715
12000BTU		
18000BTU	1110	950
24000BTU		
30000BTU	1330	1140
36000BTU		
42000BTU	1730	1540
48000BTU		



-Middle Static Pressure Ducted Air Conditioner Unit



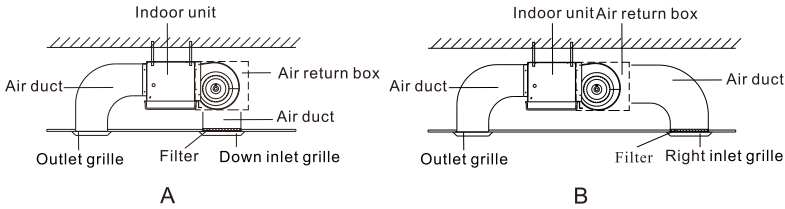
Type	A	B	C
18000BTU	590	890	940
24000BTU			
30000BTU			
36000BTU			
42000BTU	950	1250	1300
48000BTU			
60000BTU			

■The suspension drawing of indoor unit

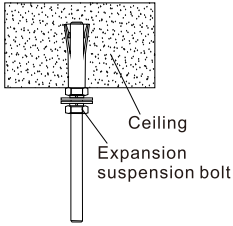
Warning
Must seriously fasten bolts and nuts. The loosening would lead to air-conditioner falling and so on.

■Duct and drain pipe installation

There are two installation methods of duct, as follows.



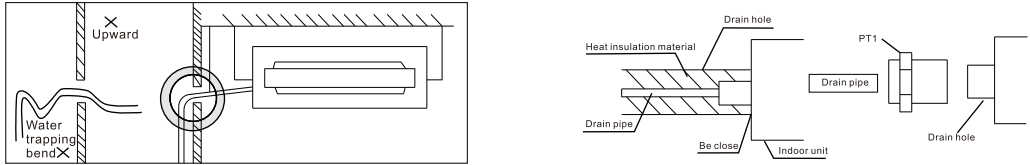
- Use canvas to connect the indoor unit and duct in order to reduce unnecessary vibration.
- As shown, the indoor unit should be leaning to the drain hole to be convenient for drainage.



★Installation of drainage pipe

1. The drain pipe must have a downward gradient (1 / 50 ~ 1 / 100).
If the drain pipe is installed ups and downs or upward, it will lead to water backflow or leakage etc.
2. During pipe connection, do not use too much force to the drain joint of indoor unit.
3. The joint is PT1.
4. There is a drain hole on each side of indoor unit; unused drain pipe must be closed.

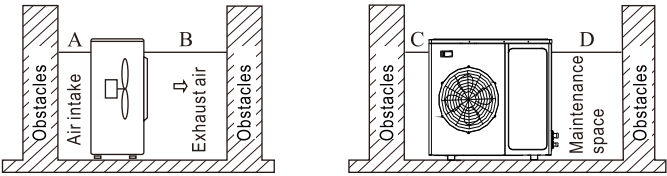
Note: The drain pipe must be wrapped heat insulation material, otherwise it will cause condensation or water drops.



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

★Installation space

After the installation site is selected the outdoor unit should be installed according to the following drawing in order to ensure adequate space for ventilation and correct maintenance of the outdoor unit.
Please reserve the space according to the following figure:

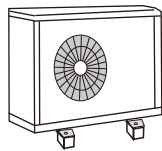
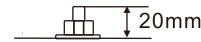


Caution
Requirement :
A>300mm; B>1500mm;
C>300mm; D>500mm;

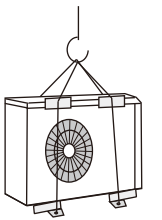
★Installation

1. Install a drainage channel to allow the condensate to flow smoothly away
2. During installation please ensure that the foundations are secure and level to avoid vibration and noise
3. Please bolt the outdoor unit down securely
4. The bolts for connecting the outdoor unit should protrude 20mm above the surface of the base
5. Do not just use the four corners as a foundation to support the unit

Caution
Please install a drainage channel around the foundations to drain away condensate. When the outdoor unit is installed on a roof please ensure that it is solid enough to bear the weight of the outdoor unit, that the installation will not affect its water tightness and condensate is able to drain away freely.



Wrong installation



Correct installation

★Transport

When the outdoor unit is to be lifted, please use two slings longer than 8m and insert cushioning material between the slings and the outdoor unit to avoid damaging the casing.

Warning
Do not touch the heat exchanger at the rear of the indoor unit with your hands or any other object!

Installation of tubing

★Installation Instructions

1. Ensure the following when long pipe work is required and this is to be brazed.
 - a) Please fully install the tubing and any brazing work before connecting the pipes to the unit.
 - b) Oxygen Free Nitrogen must be used inside the pipes to prevent oxidation.
2. If there are many joints requiring brazing during the installation of long tubing, please use an in line filter. All tubes must use refrigeration quality dehydrated copper pipe and not normal plumbing copper and should be free from moisture, dust or other contaminants.
3. Please purge the pipe with nitrogen or to eliminate any dust inside before installation.
4. Please install the pipeline according to the pipe direction, and don't repeatedly bend and then straighten a piece of pipe more than 3 times (this will damage the copper). Please use a pipe bender to bend the pipe. After preparing a length of pipe slide pipe insulation material over it.
5. After the connecting pipe work has been completed, connect to the indoor unit using the flare connector provided. Disconnect the flare nut from the indoor unit valve and place over the pipe facing the indoor unit. Flare the pipe as shown on page 24 and, after coating both the flare nut and both inside and outside of the flare with a light coat of refrigerant oil, tighten the nut using a torque wrench to tighten the nut and a spanner to hold the valve on the unit. Always use a torque wrench set to the correct torque and always hold the indoor unit valve steady with another spanner. Do not under or over tighten. This process is carried out for both the small and large pipes.
6. Connect to the outdoor unit in a similar manner.
7. After the connection of tubing is completed, please carry out a full leak test on the pipe work and ensure the pipe work and connections do not leak and everything is fully insulated.

★Heat insulation and sealing

Caution
Copper tube and drain pipe must be separately insulated to prevent condensation or water leakage .

1. The copper tube should be properly insulated using materials designed for insulating air conditioner pipe and heat resistive above 120°C

Installation of outdoor unit

★Outdoor Unit Dimensions

Mode	Outdoor unit	Type	A	B	C	D
Top view		9000BTU 12000BTU	287	539	760	540
		18000BTU	326	540	800	590
		24000BTU	326	540	800	690
Elevation view		30000BTU 36000BTU 42000BTU	354	606	903	857
		48000BTU 60000BTU	373	585	945	1255

★Select installation site

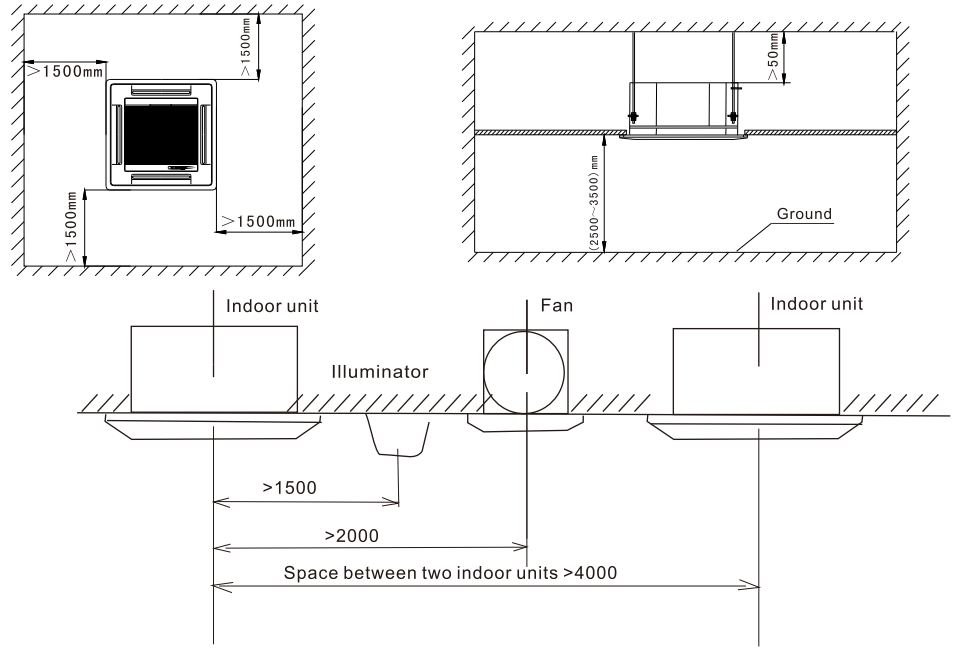
- Where you site the outdoor unit will have a direct affect upon its performance.
- In order for the outdoor unit to operate at its best you should carefully follow these instructions.
- In particular “short cycling” (allowing discharge air to return to the rear of the unit) should be avoided as this will significantly reduce the cooling and heating performance.
1. The discharge air which is expelled from the front of the unit should not be allowed to short cycle and return back to the unit.
 2. Ensure there is ample space around the unit for service and maintenance.
 3. Ensure the unit is installed on the level. Do not allow a slope of more than 5°.

■The following figures show the right installation and wrong installation:

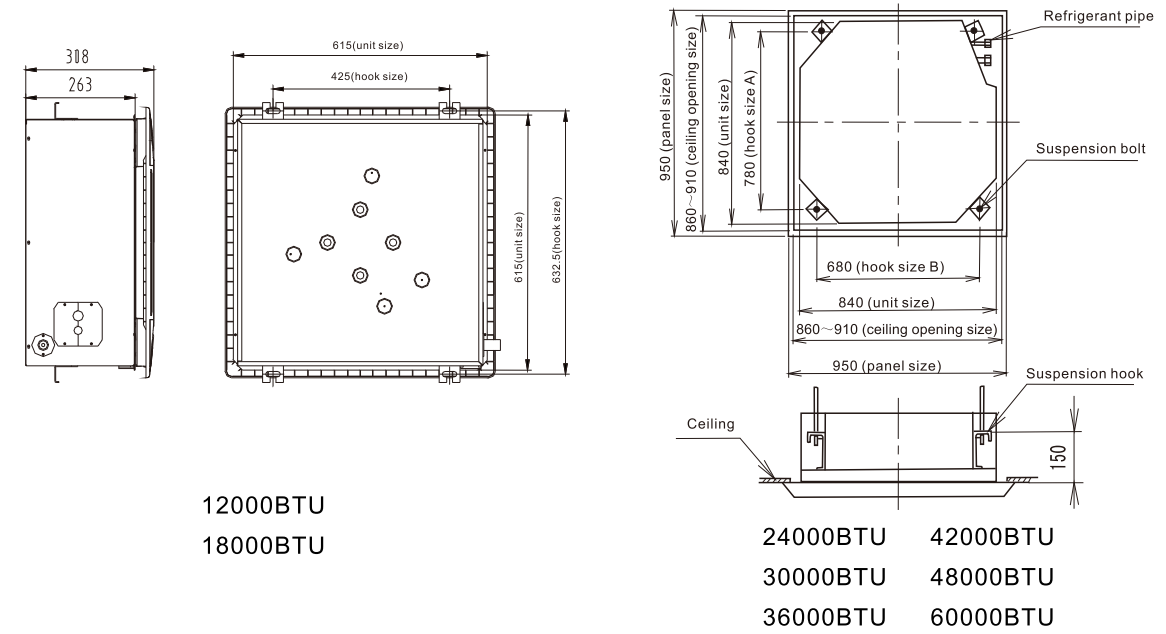
Wrong installation			
Right installation			

	Caution 1. The installation place must be well-ventilated, so that the unit can be move enough air to operate correctly 2. The installation place must be enough firm to support the weight of outdoor unit and can iso late noise and vibration; 3. Avoid direct sunlight, and if necessary a sun shelter should be mounted 4. The installation place should allow for the drainage of rainwater and water produced during defrosting 5. The installation place should prevent the unit from getting buried in a snow drift. 6. The unit should not be installed so that the fan blows into strong winds. 7. Ensure that neither the air from the outdoor unit nor noise produced by it will affect the neighbours 8. The unit must not be in a position where people will pile rubbish onto it or where it will be affected by exhaust gases
	Warning If the outdoor unit runs in a atmospheric environment where there are oil sources (including machine oil), salts (marine areas), and sulphide gas (near hot springs or oil refineries), these substances may cause unit faults.

■Select installation site
-Built In Ceiling Cassette Split Air Conditioner Unit

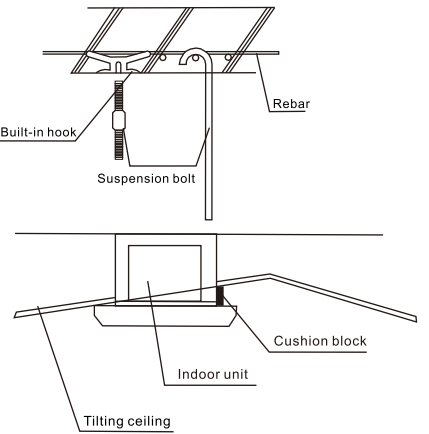


■The dimension of indoor unit



■Suspension foundation of the indoor unit

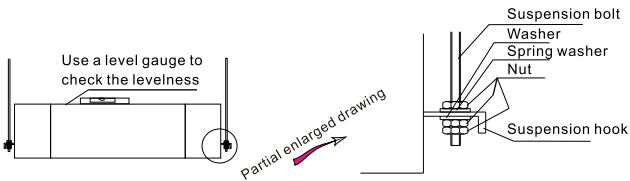
1. Select the suspension foundation
The suspension foundation is a structure of either wooden frame or reinforced concrete. It must be firm and reliable to bear the weight of more than 200kg and capable of bearing vibration for long periods.
2. Fixing of suspension foundation
Fix the suspension bolts either as shown on the right or by a steel or wooden bracket. If this unit is installed on a sloping ceiling, a cushion block should be installed between the ceiling and the air outlet panel, in order to ensure that the unit is installed on a level surface.
This is as shown in the drawing on the right



■The suspension of indoor unit

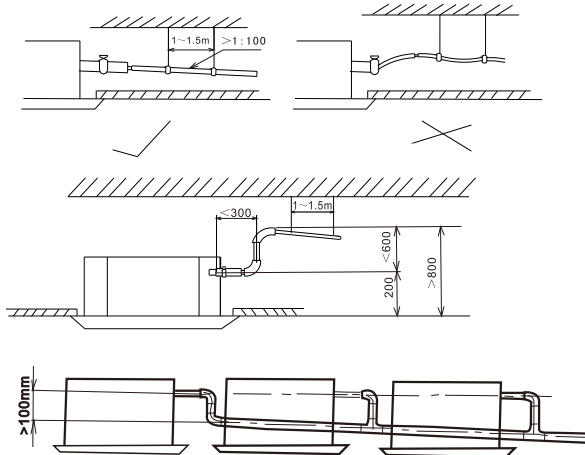
The indoor unit should be suspended as shown in the below sketch:

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



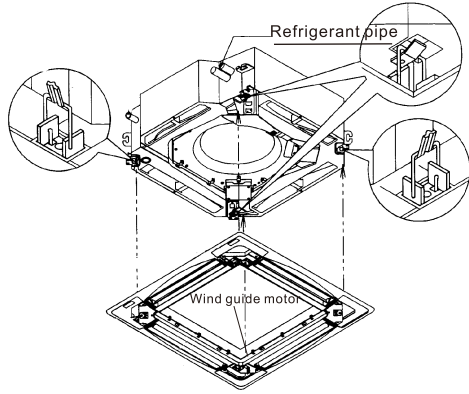
★Installation of drainage pipe

1. The drain pipe should be properly insulated to prevent the generation of condensation.
It should be installed with a downward gradient (1 / 100 ~ 150).
2. The unit has a drain pump which will lift up to 1200mm. However after the pump stops the water still in the pipe will drain back and may overflow the drain tray causing a water leak.
For this reason please install the drain pipe as shown on the right.
3. When draining multiple units into a common drain line, this common drain should be installed about 100mm below each units drain outlet, as shown in the drawing on the right.



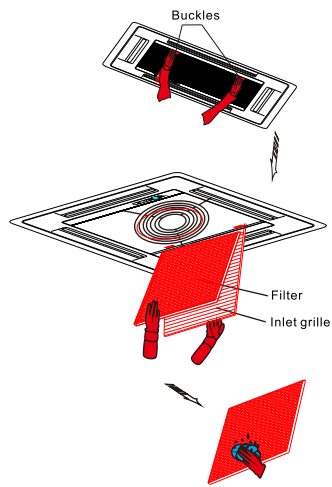
★Grille Installation

Please refer to the picture on the right.
The grille has four clips which attach to corresponding hangers on the unit and the grille should be positioned using these first.
The grille is then fixed into position by four bolts which are accessed through the four corner panels on the grille.
The four connection bolts are located inside the inlet panel of the grille.
Note: During installation please ensure that the air vane motor in the grille corresponds to the position of the refrigerant pipe entry into the indoor unit.



★Removing the Air Filter

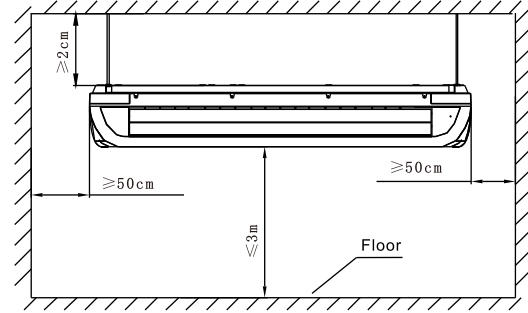
- Ensure the unit is switched off and the power is off.
- Each unit has two retention clips on the grille. These must be either depressed or pushed to the open position.
- The filter access panel may now be lowered allowing you to remove the filter from its four retaining clips.
- Ensure the filter is fully clean and dry before replacing.
- Ensure the two retention clips on the grille are in the closed position after replacing the filter.



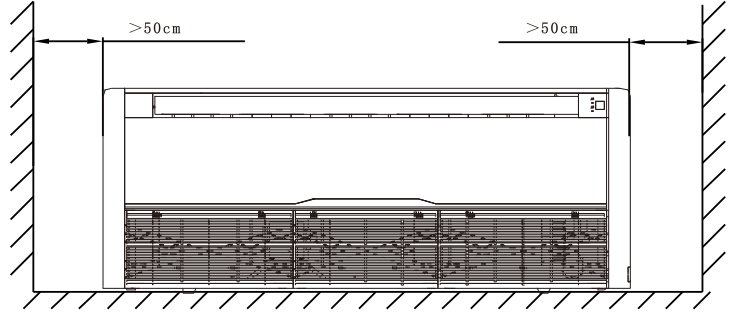
■Select installation site

-Ceiling & Floor Air Conditioner Unit

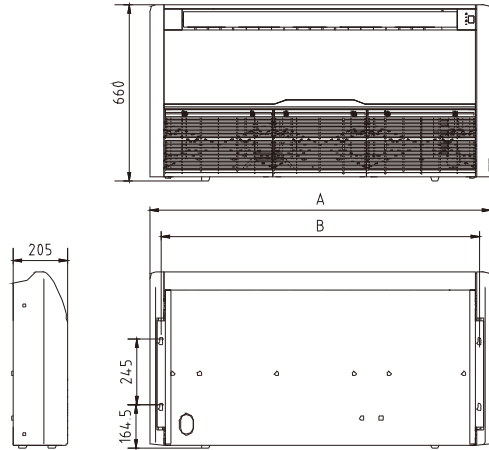
1.Floor



2.Ceiling



■The dimension of indoor unit



Unit: mm

Type	A	B
12000BTU	929	841
18000BTU		
24000BTU		
30000BTU	1280	1192
36000BTU		
42000BTU		
48000BTU	1631	1543
60000BTU		

★Installation

There are two ways of indoor unit installation: ceiling and floor.

■Ceiling installation

1. Select the suspension foundation
The suspension foundation is a structure of either wooden frame or reinforced concrete. It must be firm and reliable to bear the weight of more than 200kg and capable of bearing vibration for long periods.
2. Fixing of suspension foundation
Fix the suspension bolts either as shown on the right or by a steel or wooden bracket.
3. The suspension of indoor unit
The indoor unit should be suspended as shown below:
① Adjust the relative positions of the suspension hooks to ensure the indoor unit is level in all directions. Use a spirit level to ensure this, otherwise water leakage, air leakage etc. will be resulted.
② Tighten the nuts and ensure that the hooks are tightly connected to the nuts and shims.
③ After the unit is installed ensure it is secure and does not shake or sway
4. Installation of drainage pipe
① The drain pipe should be properly insulated to prevent the generation of condensation.
② Pipes It should be installed with a downward gradient (1 / 100 ~ 150) to allow the water to drain away.
The pipe should not rise at any point.

