

 **YORK[®]**

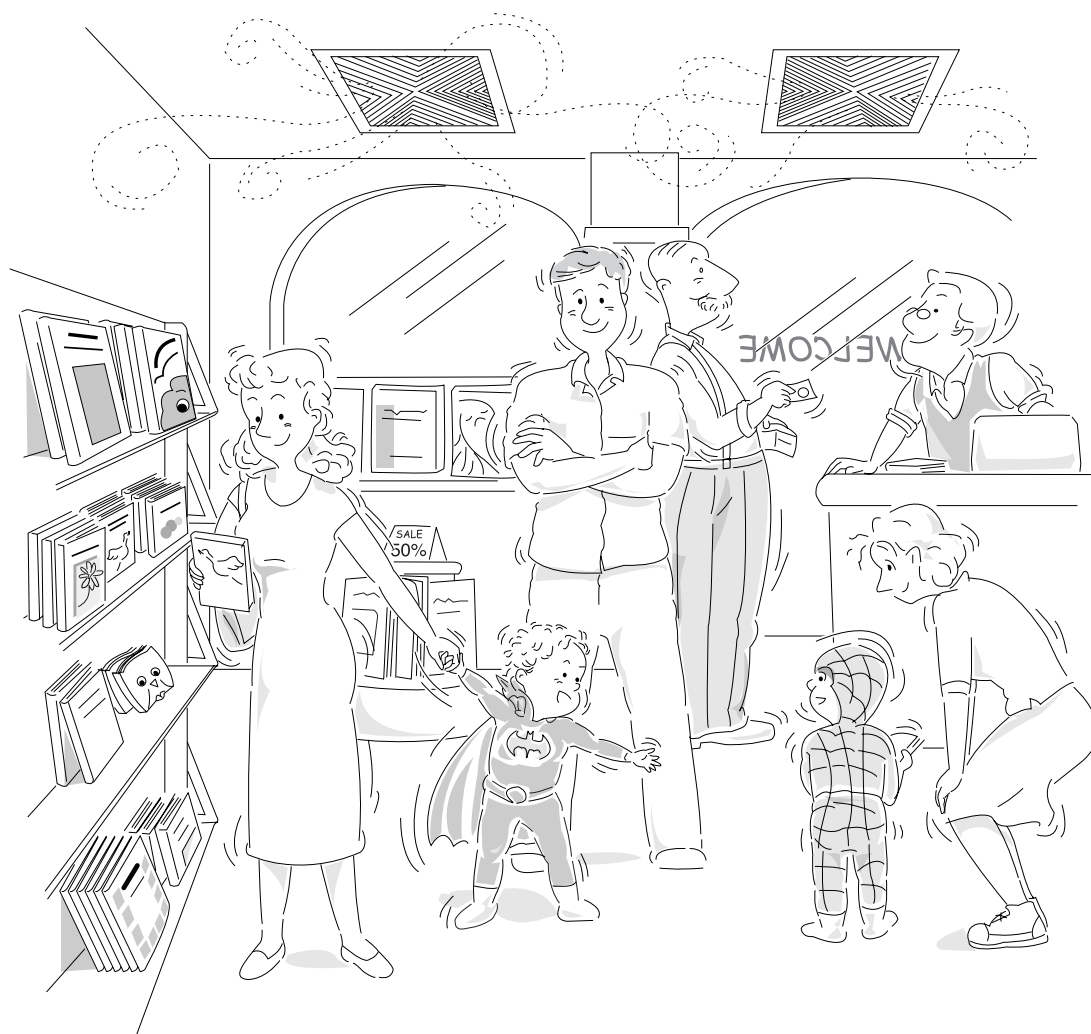
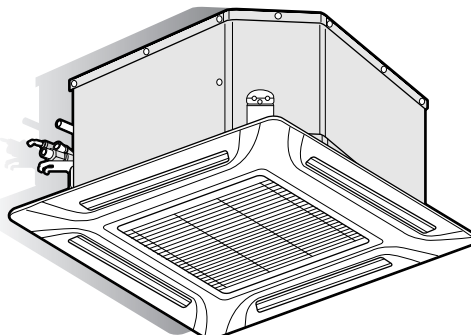
Installation & Owner's Manual

MINISPLIT CASSETTE

AIR CONDITIONER

MODELS

YKCA-YKHA 18-48



CE

R22

EN 035M80090-000



Please read this installation manual carefully before starting the installation. It will tell you necessary information.

Quality POLICY

We will continuously strive to satisfy our customers with consistent reliability in product, service and support through superior quality, service culture and distinctive technology.

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		R22		
		50Hz/1Ph	50Hz/3Ph	60Hz
Set	YKCAxxFSAAAR	YKCAxxFSAACR	YKCAxxFSAADR	
	YKHAxxFSAAAR	YKHAxxFSAACR	YKHAxxFSAADR	
Outdoor	YKDAxxFS-AAR	YKDAxxFS-ACR	YKDAxxFS-ADR	
	YKJAxxFS-AAR	YKJAxxFS-ACR	YKJAxxFS-ADR	
Indoor	YKEAxxFS-AAR	YKEAxxFS-ACR	YKEAxxFS-ADR	
	YKKAxxFS-AAR	YKKAxxFS-ACR	YKKAxxFS-ADR	





REQUIRED TOOLS

1. Screw driver
2. Hexagonal wrench
3. Torque wrench
4. Spanner
5. Reamer
6. Hole core drill
7. Tape measure
8. Thermometer
9. Manifold gauge
10. Gas leak detector
11. Vacuum pump
12. Pipe clamp
13. Pipe cutter
14. Flare tool set
15. Electrical circuit tester

EXTENDED PARTS

1. Refrigerant pipe

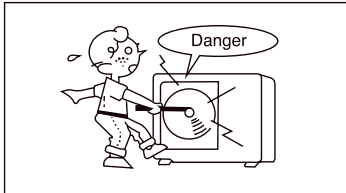
Models	18	24	30-48
Liquid	1/4 inch	3/8 inch	1/2 inch
Gas	1/2 inch	5/8 inch	3/4 inch

2. Pipe insulation material (Polyethylene foam 9 mm thick)
3. Vinyl tape
4. Putty

SAFETY PRECAUTIONS

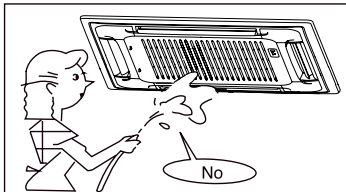
- Please read this installation manual carefully before starting installation of the unit.
- This air conditioning system contains refrigerant under pressure, rotating parts and electrical connection which may be dangerous and can cause injury. Installation and maintenance of this air conditioning system should only be carried out by trained and qualified personnel.
- After unpacking, please check the unit carefully for possible damage.
- Before undertaking any work on the unit, make sure that the power supply has been disconnected.

WARNING & CAUTIONS



CAUTION

Do not attempt to install this unit by yourself. This unit requires installation by qualified persons.

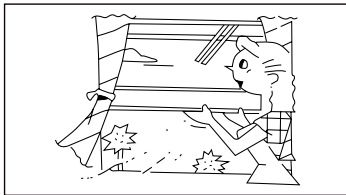


DANGER

Do not attempt to service the unit yourself. This unit has no user serviceable components. Opening or removing the cover will expose you to dangerous voltage. Turning off the power supply will not prevent potential electric shock.

DANGER

Never put hands or objects into the Air Outlet of indoor or outdoor units. These units are installed with a fan running at high speed. To touch the moving fan will cause serious injury.



DANGER

To avoid the risk of serious electrical shock, never sprinkle or spill water or liquid on unit.

WARNING

Ventilate the room regularly while the air conditioner is in use, especially if there is also a gas appliance in use in this room. Failure to follow these directions may result in a loss of oxygen in the room.

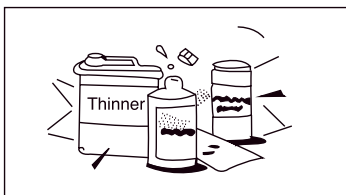


WARNING

To prevent electric shock, turn off the power or disconnect the power supply plug before beginning any cleaning or other routine maintenance. Follow the directions for cleaning in this manual.

WARNING

Do not use liquid cleaners or aerosol cleaners, use a soft and dry cloth for cleaning the unit. To avoid electric shock, never attempt to clean the unit by sprinkling water.



WARNING

Do not use caustic household drain cleaners in the unit. Drain cleaners can quickly destroy the unit components (drain pan and heat exchanger coil, etc.)

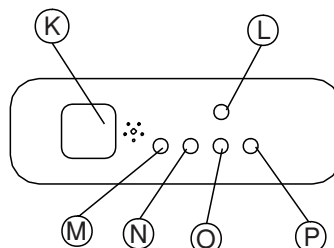
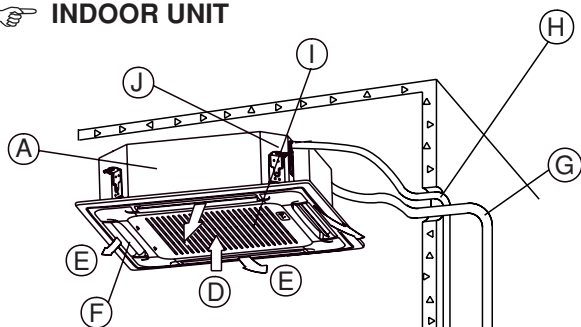
WARNING

For proper performance, operate the unit in temperature and humidity ranges indicated in this manual. If the unit is operated beyond these conditions, it may cause abnormal functions of the unit or dew dripping from the unit.



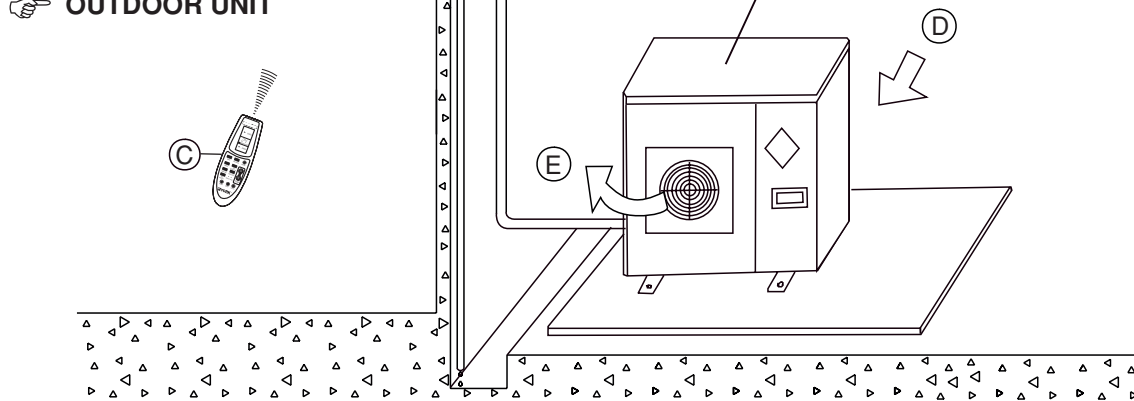
PART NAMES

INDOOR UNIT



Display Panel

OUTDOOR UNIT



INDOOR & OUTDOOR UNIT

- A. Indoor unit
- B. Outdoor unit
- C. Remote controller
- D. Air-in
- E. Air-out
- F. Air flow louver (at air outlet)
- G. Connecting pipe
- H. Drain hose
- I. Return Grill (with air filter)
- J. Drain pump (drain water from indoor unit)

DISPLAY PANEL

- K. Infrared signal receiver
- L. Emergency button
- M. Running indicator
- N. Timer indicator
- O. Frost indicator (cooling and heating type) or fan indicator (cooling only type)
- P. Pump indicator

NOTE

All the pictures in this manual are for explanation purpose only. They may be slightly different from the air conditioner you purchased. The actual shape shall prevail.

OPERATING TEMPERATURE

Mode	Cooling operation	Heating operation	Drying operation
Room temperature	17°C-32°C	0°C-30°C	17°C-30°C
Outdoor temperature	21°C-43°C	-7°C-24°C	11°C-43°C

CAUTIONS

1. If air conditioner is used outside of the above conditions, certain safety protection features may come into operation which cause the unit to function abnormally.
2. Room relative humidity is less than 80%. If the air conditioner operates in excess of this figure, the surface of the air conditioner may attract condensation. Please set the vertical air flow louver to its maximum angle (Vertically to the floor), and set HIGH fan mode.
3. Optimum performance will be achieved within these operating temperature.



TECHNICAL SPECIFICATION

Technical Specifications: Ceiling Cassette YKCA-YKHA "R22" - 50Hz

Models		Indoor Unit	YKEA-YKKA								
			YKEA18	YKKA18	YKEA24	YKKA24	YKEA48	YKKA48			
		Outdoor Unit	YKDA-YKJA								
			YKDA18	YKJA18	YKDA24	YKJA24	YKDA48	YKJA48			
Power Supply		V/Ph/Hz	220-240/1/50				380-415/3/50				
Power Consumption		W	2000	2000/1960	3040	3040/2950	5400	5400/5500			
Running Current		A	9.1	9.1/9	8.7	13.8/13.4	9.5	9.2/9.4			
Refrigerant Type			R22								
Refrigerant Charge		gr	1150	1850	1350	2500	2200	4400			
Noise Level		Indoor Outdoor	dB(A)		dB(A)		dB(A)				
			43	43	43	43	47	47			
			48	48	52	52	57	57			
Indoor Unit		Power Supply		220-240/1/50							
				Ph		Ph		Ph			
				1	1	1	1	1	1		
		Fan		Air Flow	m³/h	1000	1000	1050	1050	1750	1750
				Input Power	W	98	98	120	120	137	137
				Running Current	A	0.45	0.45	0.58	0.58	0.61	0.61
		Dimension		Height	mm	240	240	240	240	310	310
				Width	mm	840	840	840	840	840	840
				Depth	mm	840	840	840	840	840	840
		Weight		kg	36	36	36	36	40	40	
System Operation Control			Wireless Control with LCD Display								
Outdoor Unit		Power Supply		220-240/1/50				380-415/3/50			
				Ph		Ph		Ph			
				1	1	1	1	3	3		
		Compressor		Qty	1	1	1	1	1	1	
				Compressor Type	Rotary			Scroll			
		Dimension		Height	mm	695	695	860	860	1245	1245
				Width	mm	845	845	895	895	940	940
				Depth	mm	335	335	330	330	360	360
		Weight		kg	52	57	73	79	110	112	
		Piping		Type		Flare+Nuts					
Pipe Size				Gas		Gas		Gas			
				1/2	1/2	5/8	5/8	3/4	3/4		
		Liquid		Liquid		Liquid					
				1/4	1/4	3/8	3/8	1/2	1/2		

Technical Specifications: Ceiling Cassette YKCA-YKHA "R22" - 60Hz

Models		Indoor Unit	YKEA-YKKA								
			YKEA18	YKKA18	YKEA24	YKKA24	YKEA48	YKKA48			
		Outdoor Unit	YKDA-YKJA								
			YKDA18	YKJA18	YKDA24	YKJA24	YKDA48	YKJA48			
Power Supply		V/Ph/Hz	208-230/1/60				460/3/60				
Power Consumption		W	2150	2150/2160	3050	3050/2950	5300	5300/5350			
Running Current		A	10	10/906	15	14.5/14	8.3	8.3/8.4			
Refrigerant Type			R22								
Refrigerant Charge		gr	1150	1800	1400	2500	2200	4300			
Noise Level		Indoor Outdoor	dB(A)		dB(A)		dB(A)				
			44	44	44	44	48	48			
			48	48	52	52	60	60			
Indoor Unit		Power Supply		208-230/1/60							
				Ph		Ph		Ph			
				1	1	1	1	3	3		
		Fan		Air Flow	m³/h	1000	1000	1050	1050	1750	1750
				Input Power	W	101	101	136	136	152	152
				Running Current	A	0.46	0.46	0.64	0.64	0.7	0.7
		Dimension		Height	mm	240	240	240	240	310	310
				Width	mm	840	840	840	840	840	840
				Depth	mm	840	840	840	840	840	840
		Weight		kg	36	36	36	36	40	40	
System Operation Control			Wireless Control with LCD Display								
Outdoor Unit		Power Supply		208-230/1/60				460/3/60			
				Ph		Ph		Ph			
				1	1	1	1	3	3		
		Compressor		Qty	1	1	1	1	1	1	
				Compressor Type	Rotary			Scroll			
		Dimension		Height	mm	695	695	860	860	1245	1245
				Width	mm	845	845	895	895	940	940
				Depth	mm	335	335	330	330	360	360
		Weight		kg	52	55	68	74	110	112	
		Piping		Type		Flare+Nuts					
Pipe Size				Gas		Gas		Gas			
				1/2	1/2	5/8	5/8	3/4	3/4		
		Liquid		Liquid		Liquid					
				1/4	1/4	3/8	3/8	1/2	1/2		

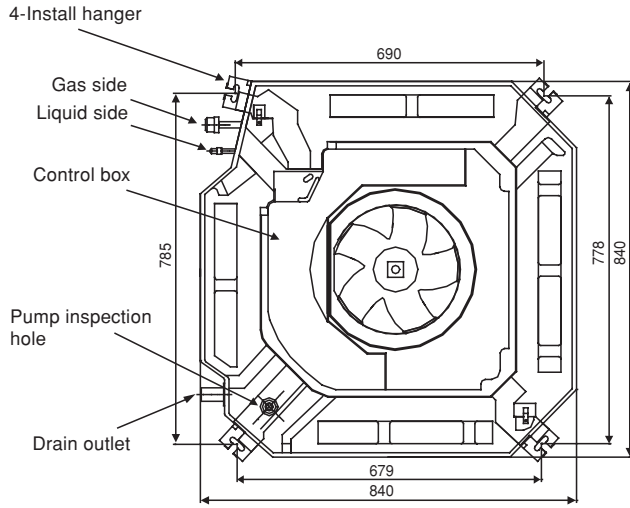
Remark: The above design and specifications are subject to change without prior notice for product improvement.



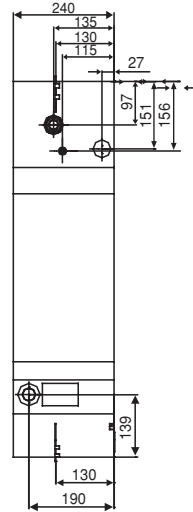
DIMENSIONS

INDOOR UNIT

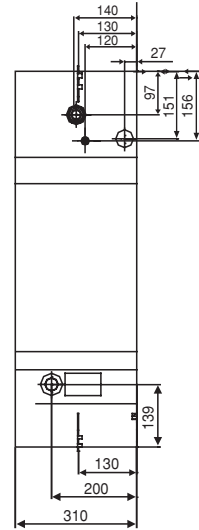
■ YKEA-YKKA 18-48



YKKA 18-48



YKKA 18-24



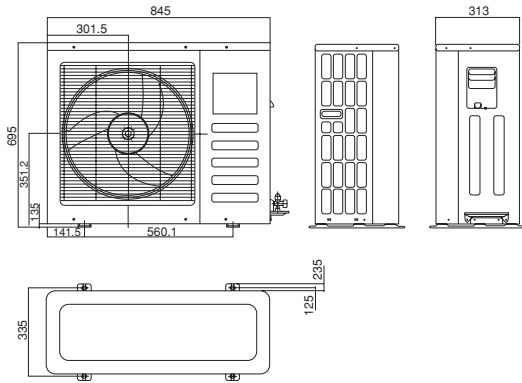
YKKA 48



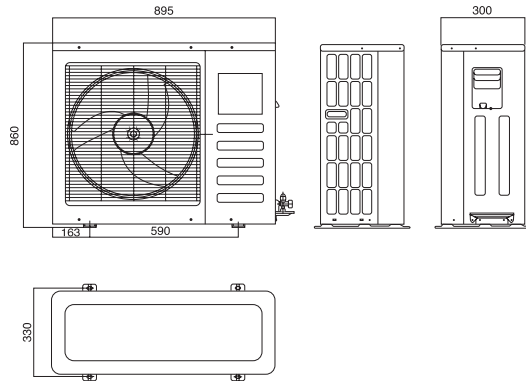


OUTDOOR UNIT

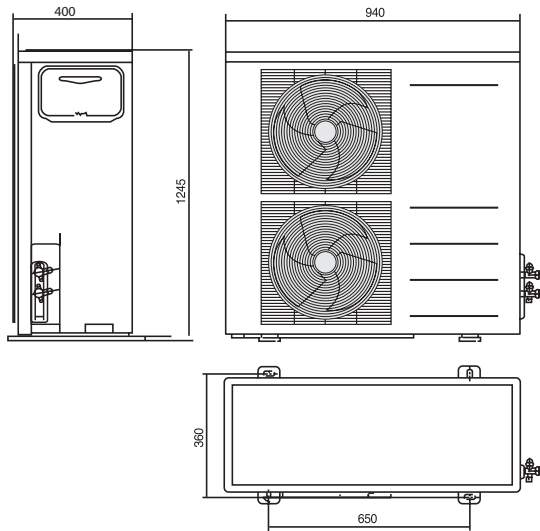
■ YKDA-YKJA 18



■ YKDA-YKJA 24



■ YKDA-YKJA 48





INSTALLATIONS

CAUTIONS

Location in the following places may cause malfunction of the machine. (If unavoidable, please consult your local dealer)

- a. There is petrolatum existing.
- b. There is salty air surrounding (near the coast).
- c. There is caustic gas (the sulfide, for example) existing in the air (near a hot spring).
- d. The Volt varies violently (in the factories).
- e. In buses or cabinets.
- f. In kitchen where oil or gas are present.
- g. There is strong electromagnetic wave existing.
- h. There are inflammable materials or gas.
- i. There is acid or alkaline liquid evaporating.
- j. Other special conditions.

NOTICES BEFORE INSTALLATION

1. Select the correct carry-in path.
2. Move this unit as originally packaged as possible.
3. The air conditioner must be electrically insulated according to the relevant standards to electrical appliances.

1. The indoor unit

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

2. The outdoor unit

- There is enough room for installation and maintenance.
- The air outlet and the air inlet are not impeded, and cannot be reached by strong wind.
- It must be a dry and well ventilating place.
- The base is flat, level and can support the weight of the outdoor unit without vibration.
- Your neighborhood will not feel uncomfortable with the noise or expelled air.
- There is no leakage of combustible air.
- It is easy to install the connecting pipe or cables.
- Determine the air outlet direction where the discharged air is not blocked.
- A place is free from a leakage of combustible gases.
In the case that the installation place is exposed to a strong wind such as a seaside or high position, secure the normal fan operation by putting the unit lengthwise along the wall or using a duct or shield plates.
- If possible, do not install the unit which is exposed to direct sunlight.
- If necessary, install a blind that does not interfere with the air flow.
- During the heating mode, the water drained off the outdoor unit. The condensate should be well drained away by the drain hole to an appropriate place so as not to interfere other people or public.
- Select the position that will not be subject to snow drifts, accumulation of leaves or other seasonal debris. It is important that the air flow for the outdoor unit is not impeded as this will result in reduction in heating or cooling performance.

INDOOR UNIT INSTALLATION

1. INSTALL THE MAIN BODY

A. The existing ceiling (to be horizontal)

- a. Cut a square hole of 880 x 880 mm. in the ceiling according to the shape of the installation paper board. (Refer to chart 3, 4)
 - The center of the hole should be at the same position of that of the air conditioner body.
 - Determine the lengths and outlets of the connecting pipe, drainpipe, and cables.
 - Strengthen the ceiling as necessary to avoid vibration.





- b. Select the position of installation hooks according to the hook holes on the installation board.
- Drill four holes of 12 mm., 45 ~ 50 mm. deep at the selected positions on the ceiling. Then embed the expandable hooks (fittings).
 - Face the concave side of the installation hooks toward the expandable hooks. Determine the length of the installation hooks from the height of ceiling, then cut off the unnecessary part.
 - If the ceiling is extremely high, determine the length of the installation hook according to facts.

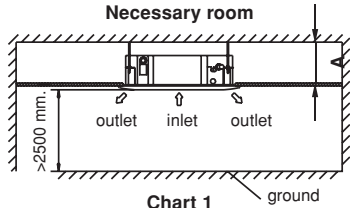


Chart 1

Note: 18000-24000 Btu/h Series, A = 260 mm.
48000 Btu/h Series, A = 330 mm.

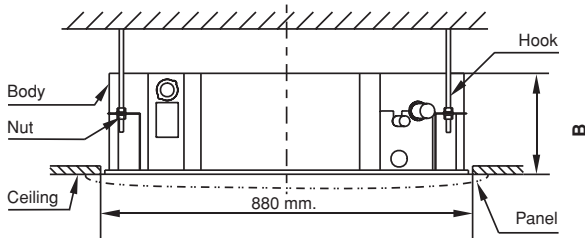


Chart 2

Note: 18000-24000 Btu/h Series, B = 240 mm.
48000 Btu/h Series, B = 310 mm.

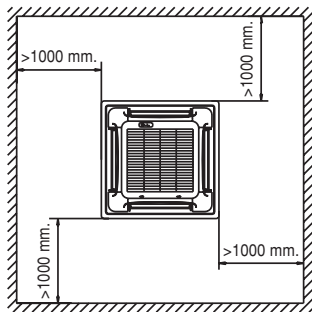


Chart 3

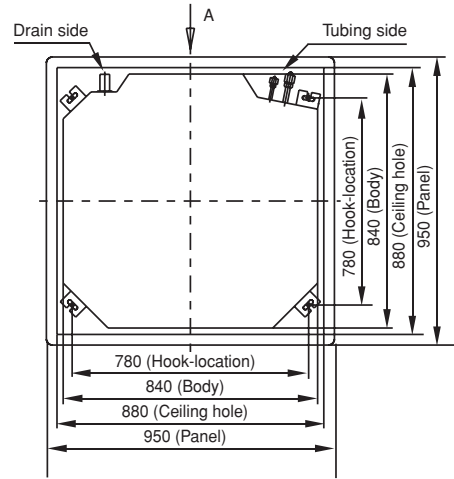


Chart 4

(Unit : mm.)

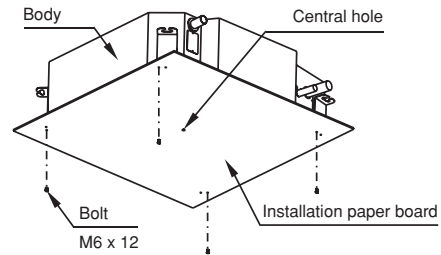


Chart 5

The length could be calculated from Chart 5
Length=H-181+L (in general, L=100 mm. and is half of the whole length of the installation hook)

- c. Adjust the nuts on the four installation hooks evenly to ensure the balance of the body.
- If the drainpipe is awry, leakage will be caused by the malfunction of the water-level switch.
 - Adjust the position to ensure the gaps between the body and the four sides of ceiling are even. The body's lower part should sink into the ceiling for 10 ~ 12 mm. (Refer to chart 5).
 - Locate the air conditioner firmly by adjusting the nuts.

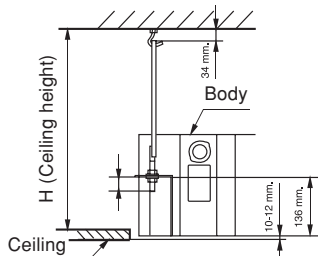


Chart 6

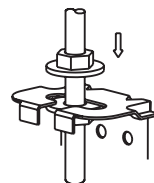


Chart 7





B. New built houses and ceilings

- a. In the case of new built house, the hook can be embedded in advance (refer to the A.b mentioned above). But it should be strong enough to bear the indoor unit and will not become loose because of concrete shrinking.
- b. After installing the body, fasten the installation paper board onto the air conditioner with bolts (M6 x 12) to determine in advance the sizes and positions of the hole opening on ceiling.
 - Refer to the A.a mentioned above for others.
- c. Refer to the A.c mentioned above for installation.
- d. Remove the installation paper board.

CAUTION

After installing the body, the four bolts (M6 x 12) must be fastened to the air conditioner to ensure the body is grounded well.

2. INSTALL THE PANEL

CAUTIONS

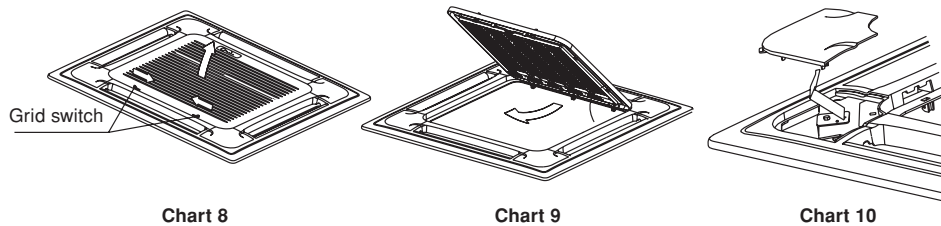
- Never put the panel face down on floor or against the wall.
- Never crash or strike it.

(1) Remove the inlet grid.

- a. Slide two grid switches toward the middle at the same time, and then pull them up. (Refer to chart 8)
- b. Draw the grid up to an angle of about 45° and remove it. (Refer to chart 9)

(2) Remove the installation covers at the four corners.

Undo the bolts, loose the rope of the installation covers, and remove them. (Refer to chart 10)



(3) Install the panel

- a. Align the swing motor on the panel to the tubing joints of the body properly. (Refer to chart 11)
- b. Fix hooks of the panel at swing motor and its opposite sides to the hooks of corresponding water receiver. (Refer to chart 11①) Then hang the other two panel hooks onto corresponding hangers of the body. (Refer to chart 11②)

CAUTIONS

Do not coil the wiring of the swing motor into the seal sponge.

- c. Adjust the four panel hook screws to keep the panel horizontal, and screw them up to the ceiling evenly. (Refer to chart 11③)
- d. Regulate the panel in the direction of the arrow in chart 11④ slightly to fit the panel's center to the center of the ceiling's opening. Guarantee that hooks of four corners are fixed well.
- e. Keep fastening the screws under the panel hooks, until the thickness of the sponge between the body and the panel's outlet has been reduced to about 4 ~ 6 mm. The edge of the panel should contact with the ceiling well. (Refer to chart 12)
 - Malfunction described in chart 13 can be caused by inappropriate tightness the screw.
 - If the gap between the panel and ceiling still exists after fastening the screws, the height of the indoor unit should be modified again. (Refer to chart 14-left)
 - You can modify the height of the indoor unit through the openings on the panel's four corners, if the lift of the indoor unit and the drainpipe is not influenced (refer to chart 14-right).

(4) Hang the air-in grid to the panel, then connect the lead terminator of the swing motor and that of the control box with corresponding terminators on the body respectively.

(5) Relocate the air-in grid in the procedure of reversed order.

(6) Relocate the installation cover.

- a. Fasten the rope of installation cover on the bolt of the installation cover. (Refer to chart 15-left)
- b. Press the installation cover into the panel slightly. (Refer to chart 15-right)



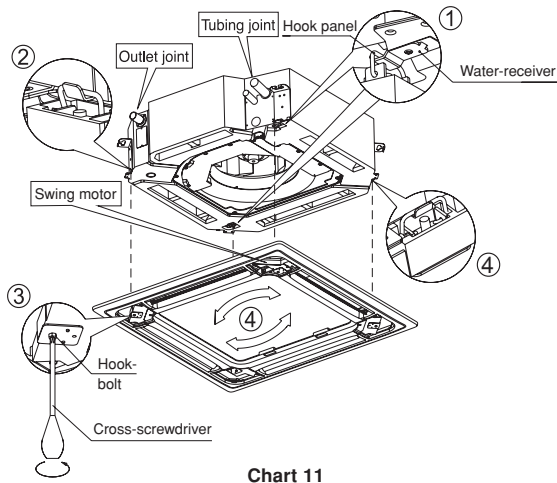


Chart 11

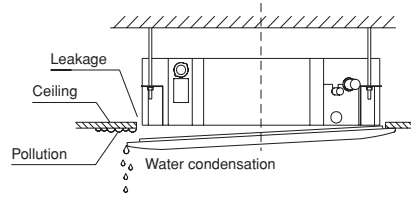


Chart 13

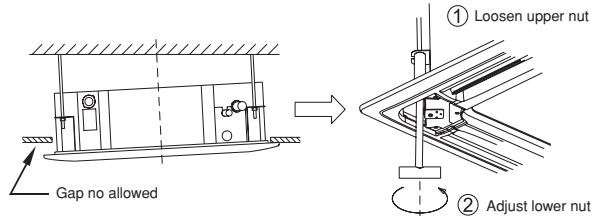


Chart 14

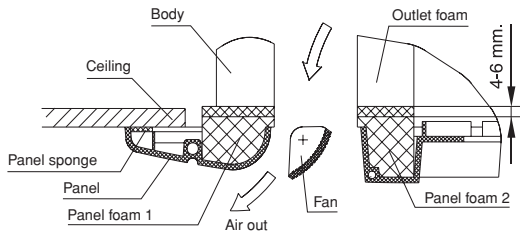


Chart 12

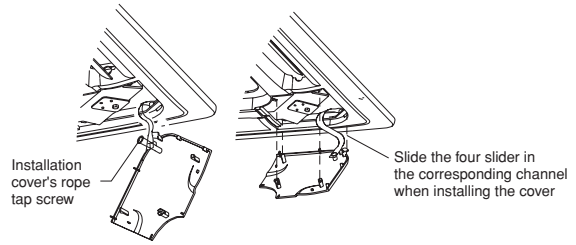


Chart 15

OUTDOOR UNIT INSTALLATION

CAUTIONS

- Keep this unit away from direct radiation of the sun or other heaters.
- If unavoidable, please cover it with a shelter.
- In places near coast or with a high attitude where the wind is violent, please install the outdoor unit against the wall to ensure normal performance.
Use a baffle when necessary.
- In the case of extremely strong wind, please prevent the air from flowing backwards into the outdoor unit. (Refer to chart 16)
- Locate the outdoor unit as close to the indoor unit as possible.
- The minimum distance between the outdoor unit and obstacles described in the installation chart does not mean that the same is applicable to the situation of an airtight. Leave open two of three directions A, B, C.

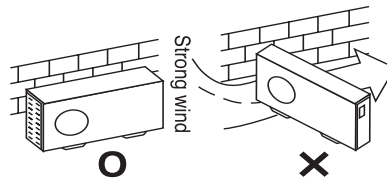


Chart 16





NECESSARY ROOM FOR INSTALLATION AND MAINTENANCE

(Refer to chart 17, chart 18)

Remove the obstacles nearby to prevent the performance from being impeded by too little of air circulation. The minimum distance between the outdoor unit and obstacles described in the installation chart does not mean that the same is applicable to the situation of an airtight room. Leave open two of the three directions (A, B, C).

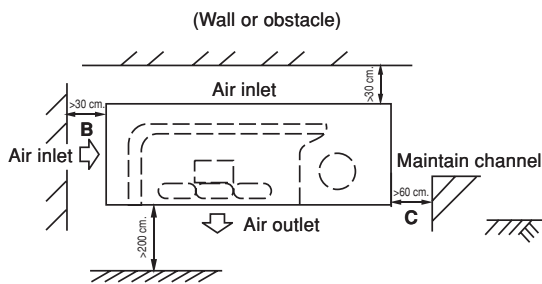


Chart 17

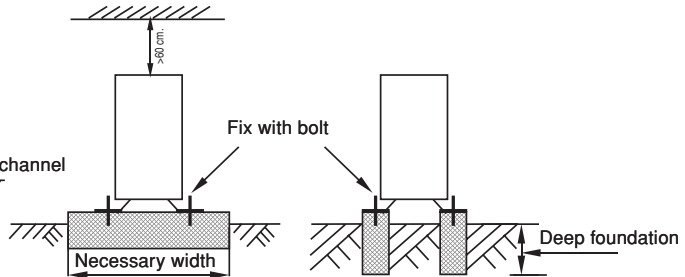


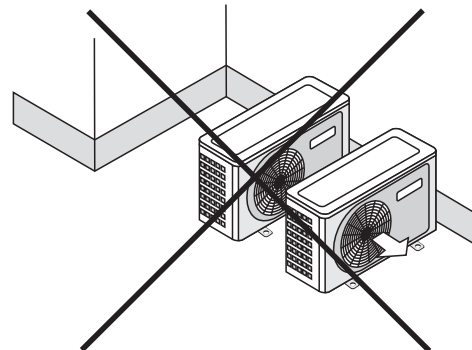
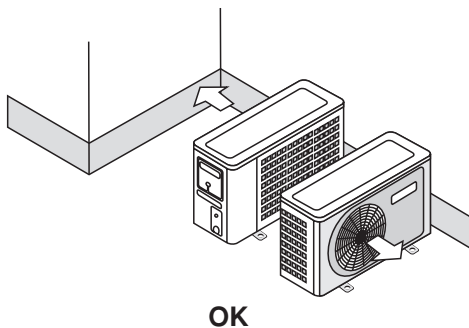
Chart 18

MOVING AND INSTALLING

- Since the gravity center of this unit is not at its physical center, so please be careful when lifting it with a sling.
- Never hold the air-in of the outdoor unit to prevent it from deforming.
Do not touch the fan with hands or other objects.
- Do not lean it more than 45°, and do not lay it sidelong.
- Please fasten the feet of this unit with bolts firmly to prevent it from collapsing in case of earthquake or strong wind.
- Make concrete foundation of the size of 590 x 328. (Refer to chart 18)

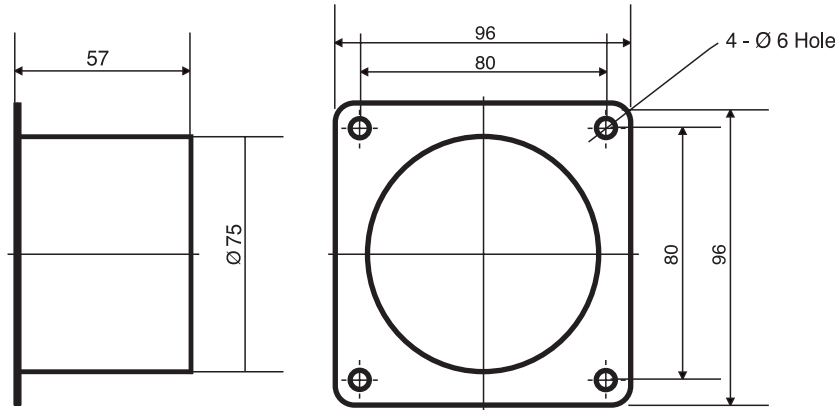
COLD AREA RECOMMENDATION

- Outdoor heat pump unit: install the unit at least 10 cm. above ground level to facilitate drainage of defrost water and prevent accumulation of ice. In effect, defrost water can cause accumulation of ice under the unit during subfreezing outdoor temperatures.
- In areas with heavy snowfall, it is best to install the unit on wall supports.
- In some regions, it is necessary to heat the bottom of the condensate drainage pan and the condensate drainage piping to avoid ice formation, and resulting ice build-up in the fan compartment (heater strip must be at least 25 W/m).



INSTALLATION OF FLANGE AND DUCT

Fresh air can be introduced into the unit either by installing a duct directly to the unit or adding an external fan.



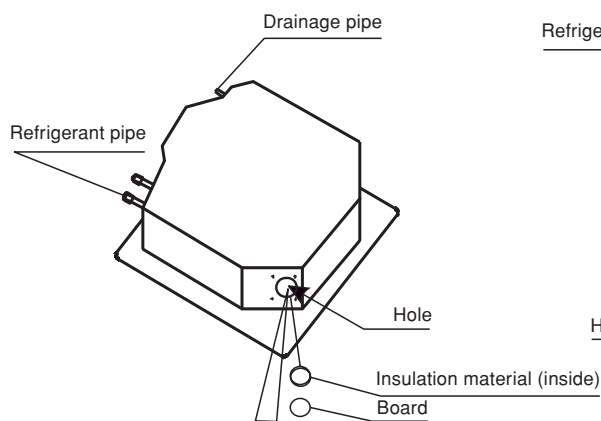
NOTE

1. The device can be installed in ceiling cassette type indoor units.
2. The duct diameter is 75 mm.

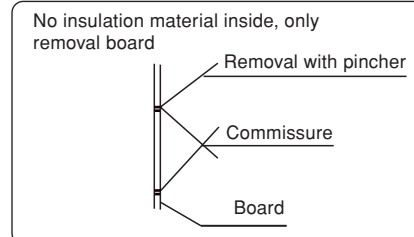
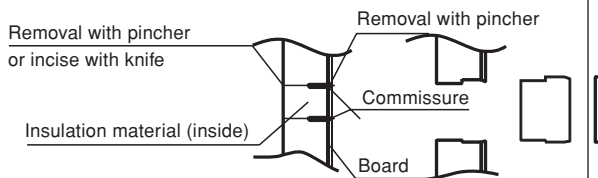
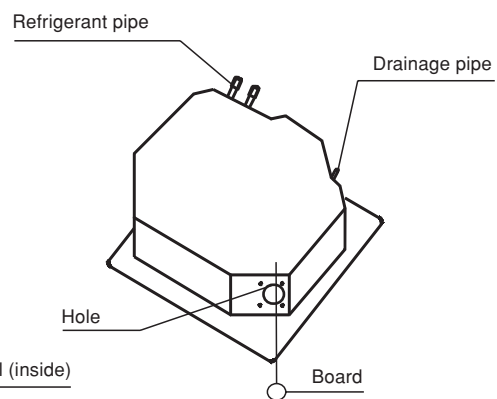
For different type of indoor unit, the installation methods are different and the position of holes are differed.

1. Removal the hole on the board.

Installation Type 1
The hole is opposite to drainage pipe



Installation Type 2
The hole is opposite to refrigerant pipe





Stick insulation material 4 at indoor hole

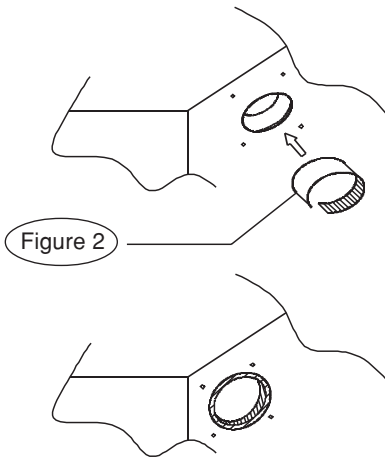
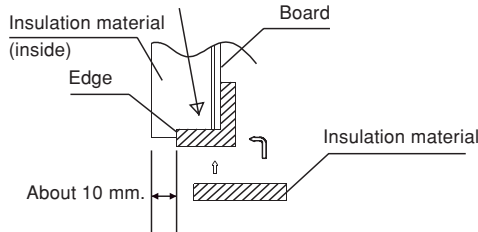


Figure 2

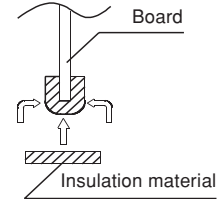
Installation Type 1

Put the insulation material 4 on the interface of the hole as shown in Figure 2, then stick on the inside and surface of the board. The interface of the hole cannot have gap.



Installation Type 2

Stick insulation material at the opening part of the board.



Ensure the interface of insulation material 4 closely contacts with the inside insulation material and the board.

Use screw 2 (M4 x 12, 4 Pieces) to install flange at the hole, and then stick insulation material 3.

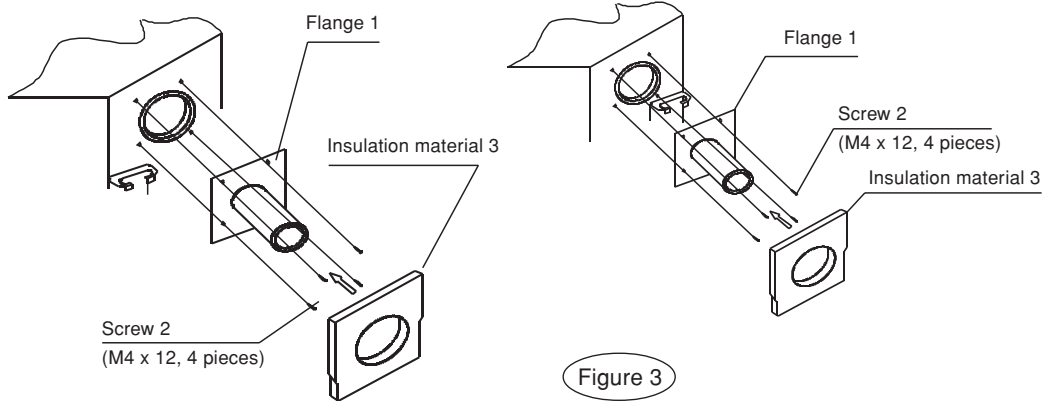
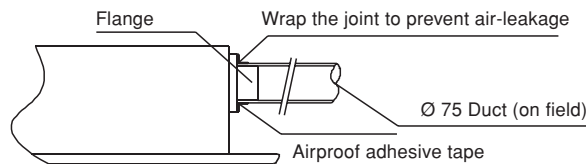


Figure 3

Install duct (the rated diameter: $\varnothing 75$)

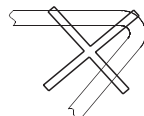
1. Connect the duct to the flange. (The flange is assembled with the interface of duct.)
2. After connection, use the ethylene tape (provided on field) to wrap the joint to prevent air-leakage.



Note:

1. All ducts must be completely heat-insulated.
2. The following phenomena are not allowed when installing duct:

A) Bend too much



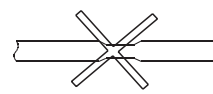
Wrong

B) Too many bender



Wrong

C) Diameter reduce



Wrong



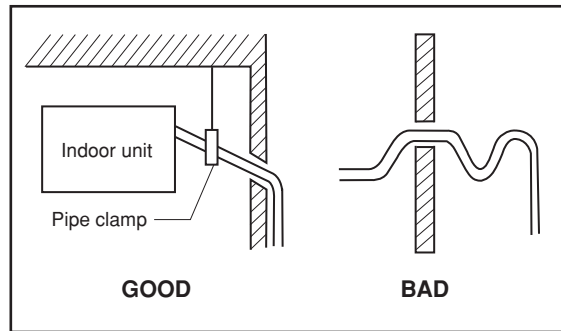
CONDENSATE DRAINAGE

INSTALLATION

The units are fitted with an internal condensate drainage pump the unit. Drainage piping connected to the unit must be installed with a downwards slope without any rises.

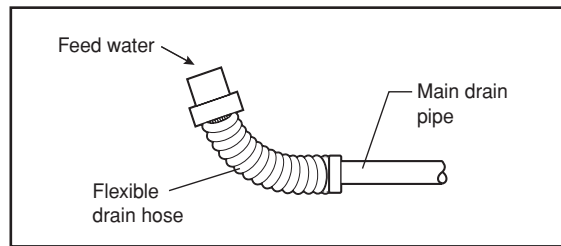
Drain piping work

- Drain pipe must be in downward gradient for smooth drainage.
- Avoid installing the drain pipe in up and down slope to prevent reversed water flow.
- During the drain pipe connection, be careful not to exert extra force on the drain connector at indoor unit.
- Be sure to execute heat insulation (polyethylene foam with thickness more than 8.0 mm.) on the drain piping to avoid the condensed water dripping inside the room.



Drain test

- Connect the main drain pipe to the flexible drain hose.
- Feed water from flexible drain hose to check the piping for leakage.
- When the test is completed, connect the flexible drain hose to the drain connector on the indoor unit.

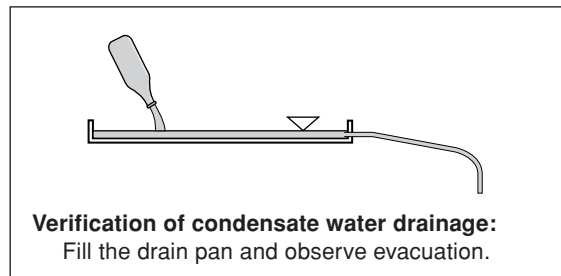
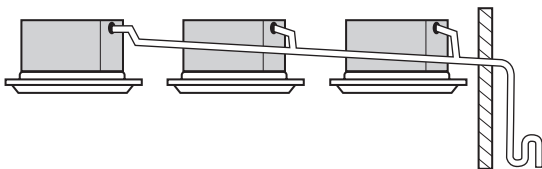


NOTE

THIS INDOOR UNIT USES A DRAIN PUMP FOR CONDENSED WATER DRAINAGE. INSTALL THE UNIT HORIZONTALLY TO PREVENT WATER LEAKAGE OR CONDENSATION AROUND THE AIR OUTLET

CAUTION (MULTIPLE CASSETTE UNIT INSTALLATIONS)

When a common drainage line is required, the connection point of each unit to the line must be higher than the line itself. The diameter of a common drainage line must be sufficient to accommodate the condensate flow from the units connected to it.



REFRIGERANT PIPING CONNECTIONS

■ Fixing and piping

- Piping must be performed by qualified personnel according to good refrigeration system practices.
- Piping materials and insulation materials must be of refrigerant quality.
- Select the pipe diameters according to the size of unit and cut the pipe to design length by using pipe cutter.
- Install the flare nuts and flare the end of the pipes.
- Check that no foreign bodies are inside the piping.
- Align the center of the connection pipes and tighten the flare nut.
- Fix piping with pipe clamps and check that any pipe vibrations cannot be transmitted to the building structure.

NOTE

- Connect the pipe correctly.
- Do not apply the excessive torque.
- Use an appropriate bending tool to form curves and avoid over-tightening the refrigerant tubes.
- To prevent heat loss, the two lines must be insulated separately.

■ Maximum piping length

Unit size	18	24	48
(m)	20	20	25

The suction line must have a 2% gradient up to the compressor on horizontal sections.

Where piping lengths are unusually long and include a large number of oil traps, it may be necessary to adjust to compressor charge.

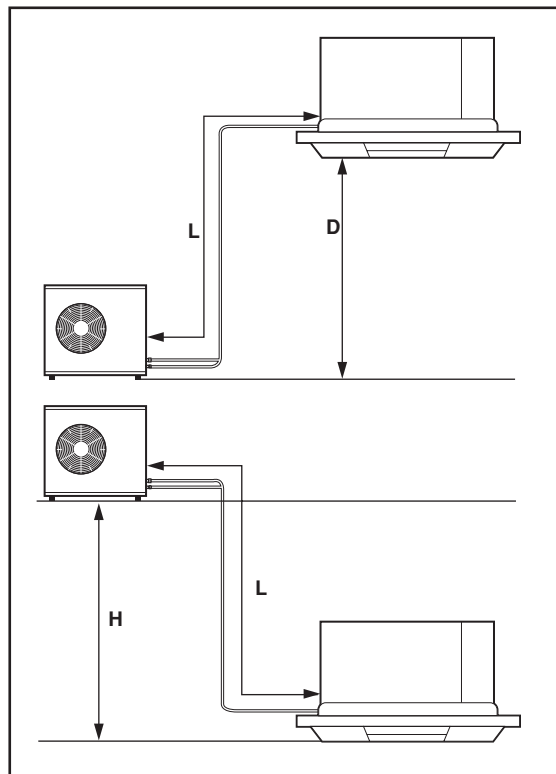
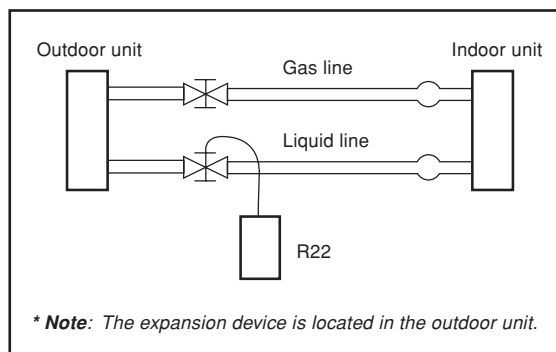
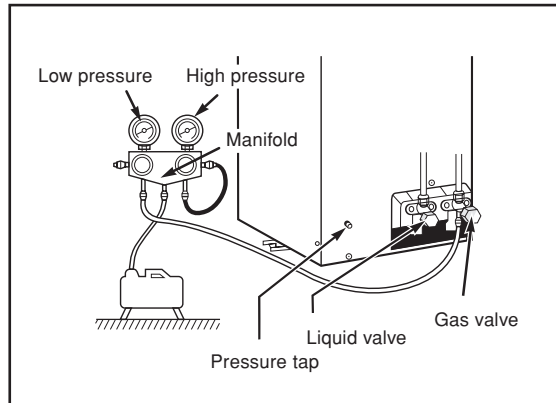
Refrigerant charge to be added per extra meter of piping length when more than 5 meters.

Unit size	Models		
	18	24	48
g/m	30	65	90

Prefabricated refrigerant piping is available as an accessory. If this is not used, piping and insulating materials employed must be compatible with this type of installation.

The pre-charged outdoor unit does not require charging if piping length is 5 m or less. However, the inter-connecting piping and the indoor unit must be pumped down before releasing R22 refrigerant into them from the outdoor unit.

1. Remove the cap from the service valve.
2. Connect the line to a vacuum pump and pump down to 5 Pa.
3. When pump down is finished, wait 15 minutes to detect potential circuit leakage. Open service valves on the outdoor unit.



WIRING DIAGRAM

■ Wiring

Prepare the power source for exclusive with the air conditioner.

The supply voltage must comply with the rated voltage of the air conditioner. The plug socket shall be accessible after installation.

Remark: All the wiring must be based on the wiring nameplate which is shown on the model.

CAUTIONS

- Perform the wiring with sufficient capacity. Installation places legally require a short circuit isolator to be attached to prevent electrical shock.
- Do not extend the power cable code by cutting.
- Power voltage should be in the range of 90%-110% of rated voltage.
- The plug of the air conditioner takes a grounding leg, and clients should use a grounding socket so that the air conditioner can be grounded efficiently.
- If the power cord is damaged, replacement should be conducted by qualified technician or a serviceman.

NOTE Remark per EMC Directive 89/336/EEC

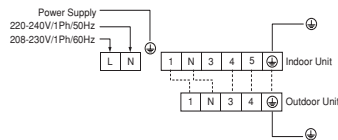
To prevent flicker impressions during the start of the compressor (technical process), the following installation conditions do apply.

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 32A fusing point.
2. No other equipment has to be connected with this power line.
3. For detailed installation acceptance, please refer to your contract with the 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.

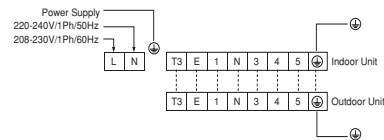
CAUTIONS

- Never modify the unit by removing any of the safety guards or by bypassing any of the safety interlock switches.
- Connect the connecting cable correctly and connect the connecting cable to terminal as identified with their respective marks.
- Do not scratch the conductive core & inner insulator of power supply cables and do not deform or smash on the surface of cables.

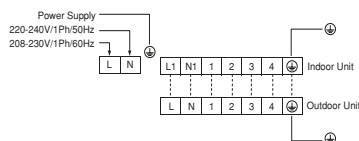
Model 18 Cooling only



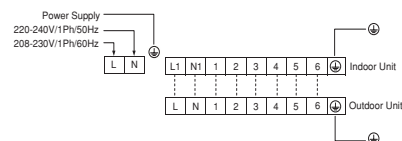
Model 18 Cooling and Heating



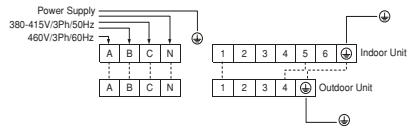
Model 24 Cooling only



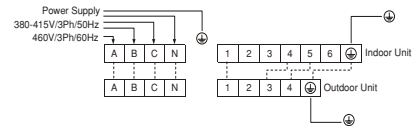
Model 24 Cooling and Heating



Model 48 Cooling only



Model 48 Cooling and Heating



Electrical work

Model	Power source	Circuit breaker/fuse	Wiring size
18000 Btu/h	220-240V - 50Hz	30/25A	3 x 2.5 mm ²
	208-230V - 60Hz		
24000 Btu/h	220-240V - 50Hz	40/25A	3 x 2.5 mm ²
	208-230V - 60Hz		
48000 Btu/h	380V 3N - 50Hz	42/27A	5 x 2.5 mm ²
	460V 3N - 60Hz		

NOTE

The supply voltage must be consistent with the rate voltage of the air conditioner.

OPTIMAL OPERATION

To achieve optimal performance, please note the following:

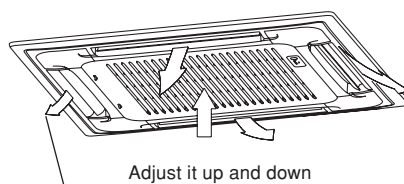
- Adjust the air flow direction correctly so that it is not directed on people.
- Adjust the temperature to achieve the highest comfort level. Do not adjust the unit to excessive temperature level.
- Close doors and windows on COOL or HEAT modes, or performance may be reduced.
- Do not put any object near air inlet or air outlet, as the efficiency of the air conditioner may be reduced and the air conditioner may stop running.
- Clean the air filter periodically, otherwise cooling or heating performance may be reduced.
- Do not operate unit with horizontal louver in closed position.

ADJUSTING AIR FLOW DIRECTION

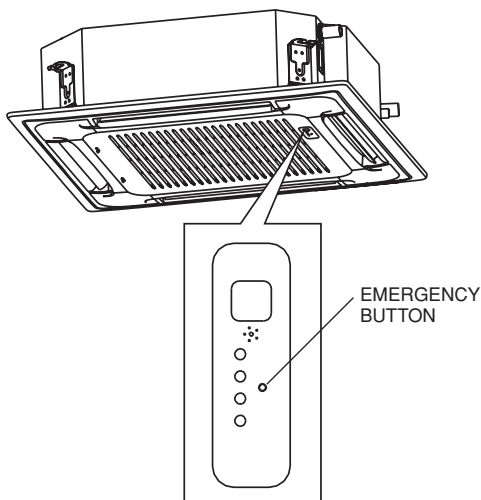
While the unit is in operation, you can adjust the air flow louver to change the flow direction and naturalize the room temperature evenly. Thus you can enjoy it more comfortably.

1. Set the desired air flow direction.
Push the **SWING** button to adjust the louver to the desired position and push this button again to maintain the louver at this position.
2. Adjust the air flow direction automatically.
Push the **SWING** button, the louver will swing automatically.

While this function is set, the swing fan of indoor unit runs; otherwise, the swing fan doesn't run. The swing scale of every side is 30°. When the air conditioner is not in operation (including when "TIMER ON" is set), The **SWING** button will be disabled.



EMERGENCY OPERATIONS



This function is used to operate the unit temporarily in case you misplace the remote controller or its batteries are exhausted. Two modes including AUTO and mandatory COOL can be selected through the EMERGENCY BUTTON on the air inlet grill control box of the indoor unit. Once you push this button, the air conditioner will run in such order: AUTO, mandatory COOL, OFF, and back to AUTO.

1. AUTO

The RUN lamp is lit, and the air conditioner will run under AUTO mode. The remote controller operation is enabled to operate according to the received signal.

2. Mandatory COOL

The RUN lamp flashes, the air conditioner will turn to AUTO after it is enforced to cool with a wind speed of HIGH for 30 minutes. The remote controller operation is disabled.

3. OFF

The RUN lamp goes off. The air conditioner is OFF while the remote controller operation is enabled.

MAINTENANCE

WARNING

Before you clean the air conditioner, be sure to disconnect the power supply plug.

Cleaning the indoor unit and remote controller

- Use a dry cloth to wipe the indoor unit and remote controller.
- A cloth dampened with cold water may be used on the indoor unit if it is very dirty.
- Never use a damp cloth on the remote controller.
- Do not use a chemically-treated duster for wiping or leave such material on the unit for long, because it may damage or fade the surface of the unit.
- Do not use benzene, thinner, polishing powder, or similar solvents for cleaning. These may cause the plastic surface to crack or deform.

If you do not plan to use the unit for at least 1 month.

- (1) Operate the fan for about half a day to dry the inside of the unit.
- (2) Stop the air conditioner and disconnect power.
- (3) Remove the batteries from the remote controller.

Checks before operation

- Check that the wiring is not broken off or disconnected.
- Check that the air filter is installed. (Some air-conditioners haven't air filters.)
- Check that the outdoor unit air outlet or inlet is not blocked.

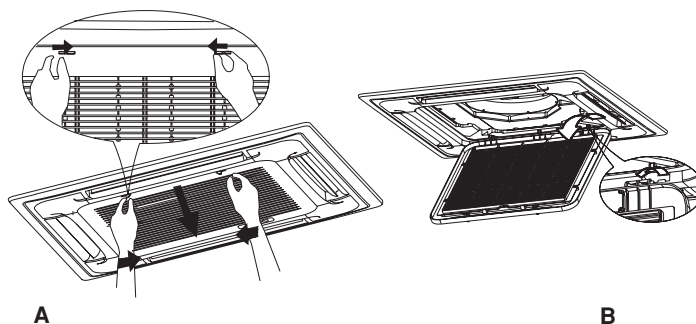
Cleaning the air filter

- The air filter can prevent the dust or other particulate from going inside. In case of blockage of the filter, the working efficiency of the air conditioner may greatly decrease. Therefore, the filter must be cleaned once two weeks during long time usage.
- If the air conditioner is positioned in a dust place, the cleaning frequency of the air filter must be increased.
- If the accumulated dust is too heavy to be cleaned, please replace the filter with a new one (replaceable air filter is an optional fitting).

1. Open the air-in grill.

Push the grill switches toward the middle simultaneously as indicated in sketch A. Then pull down the air-in grill.

Caution: The control box cables, which are originally connected with the main body electrical terminators must be pulled off before doing as indicated above.



2. Take out the air-in grill (together with the air filter shown in sketch B). Pull the air-in grill down at 45° and lift it up to take out the grill.
3. Dismantle the air filter.
4. Clean the air filter (Vacuum cleaner or pure water may be used to clean the air filter. If the dust accumulation is too heavy, please use soft brush and mild detergent to clean it and dry out in cool place).



OPERATION TIPS

The following events may occur during normal operation.

1. Protection of the air conditioner.

Compressor protection

- The compressor cannot restart for 3 minutes after it stops.
Anti-cold air (Cooling and heating models only)
- The unit is designed not to blow cold air on HEAT mode, when the indoor heat exchanger is in one of the following three situations and the set temperature has not been reached.
 - A) When heating has just started.
 - B) Defrosting.
 - C) Low temperature heating.
- The indoor or outdoor fan stop running when defrosting (Cooling and heating models only).
Defrosting (Cooling and heating models only)
- Frost may be generated on the outdoor unit during heat cycle when outdoor temperature is low and humidity is high resulting in lower heating efficiency of the air conditioner.
- During this condition air conditioner will stop heating operation and start defrosting automatically.
- The time to defrost may vary from 4 to 10 minutes according to the outdoor temperature and the amount of frost buildup on the outdoor unit.

2. A white mist coming out from the indoor unit.

- A white mist may generate due to a large temperature difference between air inlet and air outlet on COOL mode in an indoor environment that has a high relative humidity.
- A white mist may generate due to moisture generated from defrosting process when the air conditioner restarts in HEAT mode operation after defrosting.

3. Low noise of the air conditioner.

- You may hear a low hissing sound when the compressor is running or has just stopped running.
This sound is the sound of the refrigerant flowing or coming to a stop.
- You can also hear a low "squeak" sound when the compressor is running or has just stopped running.
This is caused by heat expansion and cold contraction of the plastic parts in the unit when the temperature is changing.
- A noise may be heard due to louver restoring to its original position when power is first turned on.

4. Dust is blown out from the indoor unit.

This is a normal condition when the air conditioner has not been used for a long time or during first use of the unit.

5. A peculiar smell comes out from the indoor unit.

This is caused by the indoor unit giving off smells permeated from building material, from furniture, or smoke.

6. The air conditioner turns to FAN only mode from COOL or HEAT (for cooling and heating models only) mode.

When indoor temperature reaches the temperature setting on air conditioner, the compressor will stop automatically, and the air conditioner turns to FAN only mode. The compressor will start again when the indoor temperature rises on COOL mode or falls on HEAT mode (for cooling and heating models only) to the set point.

7. Dripping water may generate on the surface of the indoor unit when cooling in a high relative humidity (relative humidity higher than 80%). Adjust the horizontal louver to the maximum air outlet position and select HIGH fan speed.

8. Heating mode (For cooling and heating models only)

The air conditioner draws in heat from the outdoor unit and releases it via the indoor unit during heating operation. When the outdoor temperature falls, heat drawn in by the air conditioner decreases accordingly. At the same time, heat loading of the air conditioner increases due to larger difference between indoor and outdoor temperature. If a comfortable temperature cannot be achieved by the air conditioner, we suggest you use a supplementary heating device.

9. Auto-restart function

Power failure during operation will stop the unit completely. For the unit without Auto-restart feature, when the power restores, the RUN indicator on the indoor unit starts flashing. To restart the operation, push the ON/OFF button on the remote controller. For the unit with Auto-restart feature, when the power restores, the unit restarts automatically with all the previous settings preserved by the memory function.

10. Lightning or a car wireless telephone operating nearby may cause the unit to malfunction.

Disconnect the unit with power and then re-connect the unit with power again. Push the ON/OFF button on the remote controller to restart operation.



TROUBLESHOOTING GUIDE

Problem	Probable cause	Remedy
A. The air conditioner does not run.	<ol style="list-style-type: none"> 1. Power failure. 2. Fuse blown or circuit breaker open. 3. Voltage is too low. 4. Faulty contactor or relay. 5. Electrical connections loose. 6. Thermostat adjustment too low (in heating mode) or too high (in cooling mode). 7. Faulty capacitor. 8. Incorrect wiring, terminal loose. 9. Pressure switch tripped. 	<ol style="list-style-type: none"> 1. Wait for power resume. 2. Replace the fuse or reset the breaker. 3. Find the cause and fix it. 4. Replace the faulty component. 5. Retighten the connection. 6. Check thermostat setting. 7. Find the cause then replace capacitor. 8. Check and retighten. 9. Find the cause before reset.
B. The outdoor fan runs but the compressor will not start.	<ol style="list-style-type: none"> 1. Motor winding cut or grounded. 2. Faulty capacitor. 	<ol style="list-style-type: none"> 1. Check the wiring and the compressor winding resistance. 2. Find the cause then replace capacitor.
C. There is insufficient heating or cooling.	<ol style="list-style-type: none"> 1. There is a gas leak. 2. Liquid and gas line insulated together. 3. The room was probably very hot (cool) when you started the system. 	<ol style="list-style-type: none"> 1. Remove charge, repair, evacuate and recharge. 2. Insulate them separately. 3. Wait while unit has enough time to cool the room.
D. The compressor runs continuously.	<ol style="list-style-type: none"> 1. Thermostat adjustment too low (in heating mode) or too high (in cooling mode). 2. Faulty fan. 3. Refrigerant charge too low, leak. 4. Air or incondensables in refrigerant circuit. 	<ol style="list-style-type: none"> 1. Check thermostat setting. 2. Check condenser air circulation. 3. Find leak, repair and recharge. 4. Remove charge, evacuate and recharge.
E. The compressor starts but shuts down quickly.	<ol style="list-style-type: none"> 1. Too much or too little refrigerant. 2. Faulty compressor. 3. Air or incondensables in refrigerant circuit. 4. Changeover valve damaged or blocked open (heat pump unit). 	<ol style="list-style-type: none"> 1. Remove charge, evacuate and recharge. 2. Determine the cause and replace compressor. 3. Remove charge, evacuate and recharge. 4. Replace it.
F. Clicking sound is heard from the air conditioner.	In heating or cooling operation any plastic parts may expand or shrink due to a sudden temperature change in this event, a clicking sound may occur.	In heating or cooling operation any plastic parts may expand or shrink due to a sudden temperature change in this event, a clicking sound may occur.

DECLARATION OF CONFORMITY



DECLARATION OF CONFORMITY

Type of Equipment
Brand Name
Type Designation

Air Conditioners
YORK
YKEA-YKDA 18/24/36/48FS, YKKA-YKJA 18/24/36/48FS, YKEB-YKDB 12/18/24/30/36/48FS,
YKKB-YKJB 12/18/24/30/36/48FS, YKKC-YKJC 12/18/24/30/36/48FS
EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC and Machine Safety Directive: MSD

Application of Council
Directive (s)

The following harmonized standards have been applied:

Standard (s)
EN 60335-1:2002+A11
EN 60335-2-40:2003
EN 50366:2003
EN 55014-1/A2:2002
EN 55104-2/A1:2001
EN 61000-3-2:2000
EN 61000-3-3:1995+A1

The product complies with the harmonized European safety standards and harmonized EMC standards listed above.

We have internal production control system that ensures compliance between the manufacturer products and the technical documentation.

The product is CE mark.

We declare under our sold responsibility that the equipment follows the provisions of the Directives stated above.

Authorized Representative:

CM Choi
Shipping Manager

YORK International (Northern Asia) Ltd.

15/F., Tower II, World Trade Square, 123 Hoi Bun Road, Kwun Tong, Kowloon, Hong Kong

Telephone: (852) 2331 9286 Fax: (852) 2331 9840

Technical Service Division: Telephone: (852) 2331 9286 Fax: (852) 2304 0068

INSTALLATION, REMOVAL AND DISPOSAL

**This product contains refrigerant under pressure, rotating parts, and electrical connections which may be a danger and cause injury!
All work must only be carried out by competent persons using suitable protective clothing and safety precautions.**



Read the Manual



Risk of electric shock



**Unit is remotely controlled
and may start without warning**



1. Isolate all sources of electrical supply to the unit including any control system supplies switched by the unit. Ensure that all points of electrical and gas isolation are secured in the OFF position. The supply cables and gas pipework may then be disconnected and removed. For points of connection refer to unit installation instructions.
2. Remove all refrigerant from each system of the unit into a suitable container using a refrigerant reclaim or recovery unit. This refrigerant may then be re-used, if appropriate, or returned to the manufacturer for disposal. **Under No circumstances should refrigerant be vented to atmosphere.** Where appropriate, drain the refrigerant oil from each system into a suitable container and dispose of according to local laws and regulations governing disposal of oily wastes.
3. Packaged unit can generally be removed in one piece after disconnection as above. Any fixing down bolts should be removed and then unit lifted from position using the points provided and equipment of adequate lifting capacity. Reference MUST be made to the unit installation instructions for unit weight and correct methods of lifting. Note that any residual or spilt refrigerant oil should be mopped up and disposed of as described above.
4. After removal from position the unit parts may be disposed of according to local laws and regulations.

