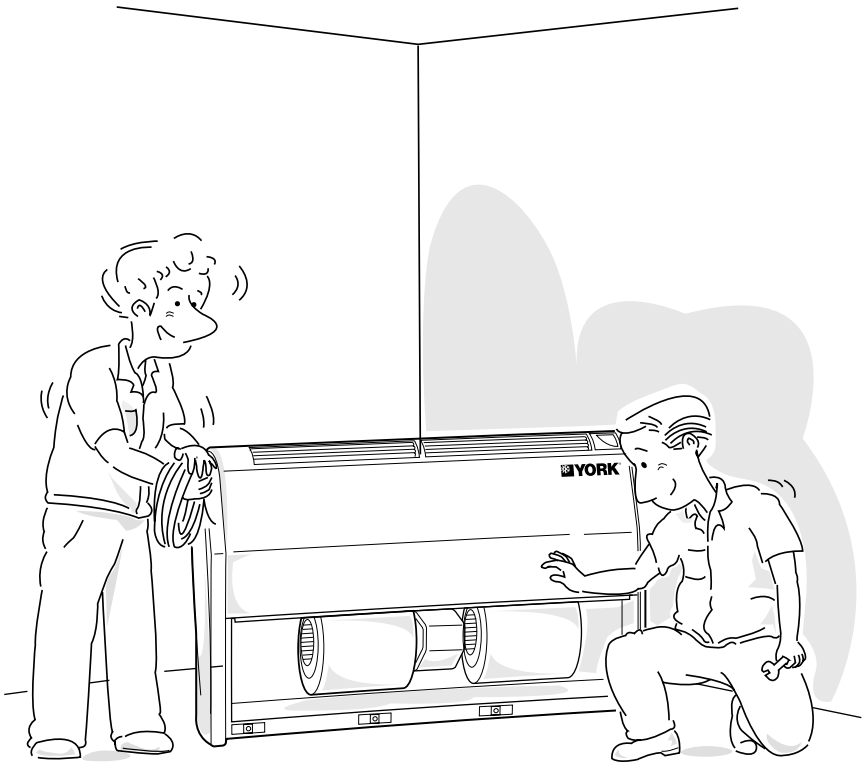
YORK®

Installation Manual

MINISPLIT
FLOOR/CEILING
AIR CONDITIONER

MODELS

PCC/POC 12
PCC/POC 18
PCC/POC 24
PCC/POC 36
PCC/POC 48
PCC/POC 60



035T80002-000

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.

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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 Guage
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	PCC/POC					
	12	18	24	36	48	60
Liquid size	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"
Gas size	1/2"	5/8"	5/8"	5/8"	3/4"	3/4"

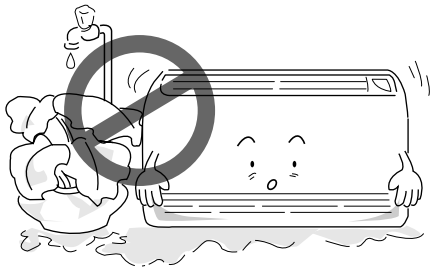
2. Pipe Insulation Material (Polyethylene foam 9 mm thick)
3. Vinyl Tape
4. Putty

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.

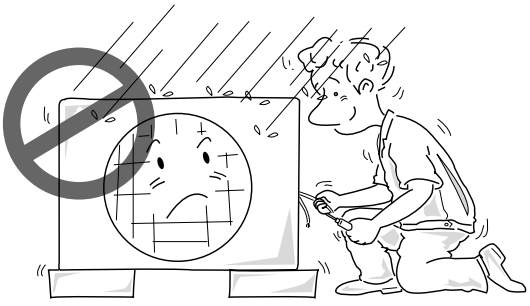
CAUTIONS FOR INSTALLATION

Do not store or unpack the unit in a wet area or expose to rain or water.



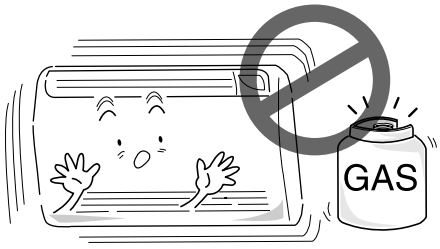
It may cause the unit to short circuit and may result electric shocks or fire.

Do not conduct installation in wet area or in the rain.



It is a high risk to cause the electrical shocks.

Do not install in a place where flammable gas may leak.



It may cause fire.

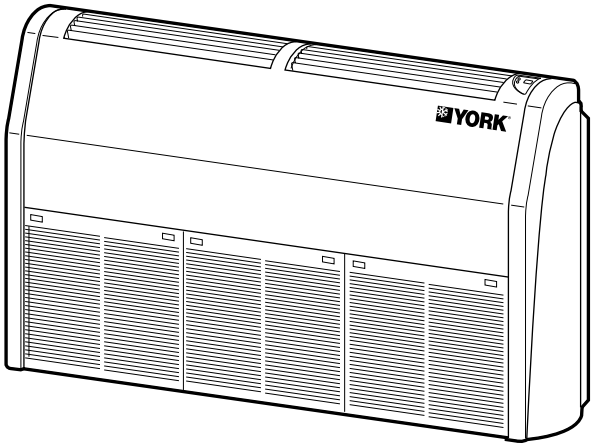
This system is designed for domestic or residential use only.

If used in certain envionments, such as a manufacturing workplace, the equipment may not function efficiently.

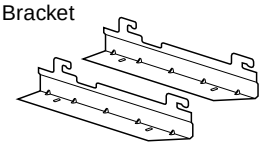
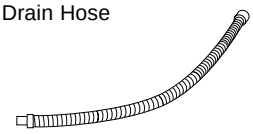
PART LIST

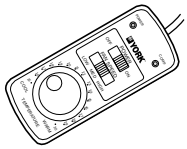
INDOOR UNIT

■ PCC12-60



INSTALLATION ACCESSORIES

Description	Q'ty	USE
Bracket 	2	–
Tapping Screw (∅4x20) 	6	For install the case of Remote Control
Nylon Fastener 	1	For drain hose
Drain Hose 	1	–
Insulation (Drain hose) 	1	Adhesive type
VT Wire (280 mm) 	1	For drain hose

Description	Q'ty	USE
Remote Control 	1	–
Installation and Owner's manual 	2	–

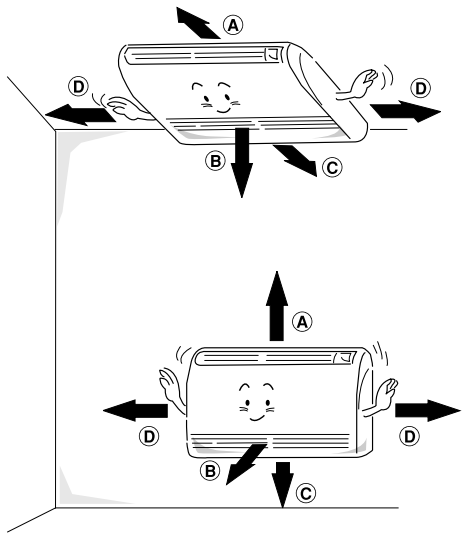
PREPARATION BEFORE INSTALLATION

- Before doing any work, check the interior power supply cord and the main breaker capacity are sufficient and the installation area is sufficient and complies with the requirements.
- Check that the power supply available agrees with nameplate voltage.
- Electrical work, wiring and cables must be performed in compliance with national and local wiring codes and standard.
- Do not use the extension cables. In the case extended cables are needed, use the terminal block.

SELECTION OF THE LOCATION

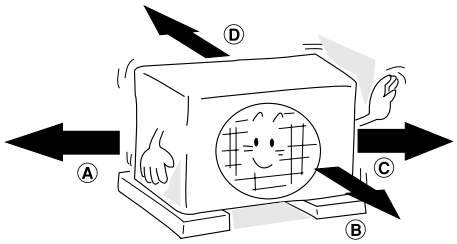
■ Select a place which provides the space around the units as shown in the diagram below.

Indoor Unit



Dimension (cm)	PCC					
	12	18	24	36	48	60
A	50	50	50	50	50	50
B	80	80	80	80	80	80
C	5	5	5	5	5	5
D	20	20	20	20	20	20

Outdoor Unit

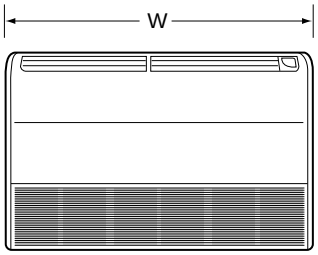


Dimension (cm)	POC					
	12	18	24	36	48	60
A	40	40	40	40	40	40
B	20	20	20	20	20	20
C	20	20	20	20	20	20
D	60	60	60	60	60	60

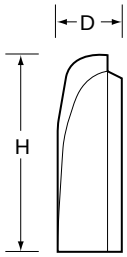
DIMENSION

■ Indoor Dimension

Dimension (mm)	PCC					
	12	18	24	36	48	60
W	980	980	1,280	1,780	1,780	1,780
H	630	630	630	630	630	630
D	240	240	240	240	240	240

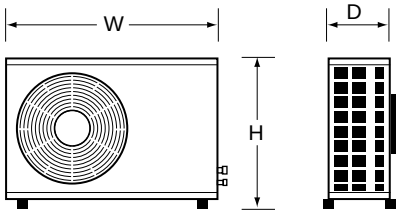


FRONT VIEW



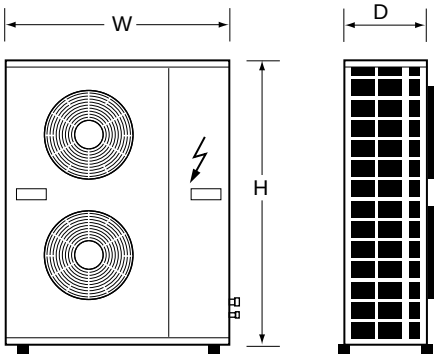
SIDE VIEW

■ Outdoor Dimension



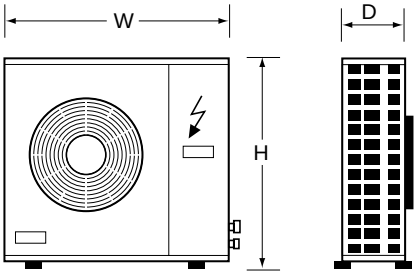
FRONT VIEW SIDE VIEW

POC 12-24



FRONT VIEW SIDE VIEW

POC 48-60



FRONT VIEW SIDE VIEW

POC 36

Dimension (mm)	POC					
	12	18	24	36	48	60
W	840	840	890	900	870	870
H	590	590	590	700	1,155	1,155
D	300	300	300	325	375	375

(continued)

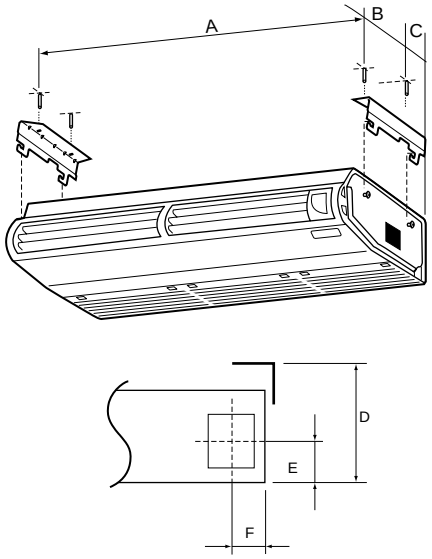
DRILLING MEASUREMENT

■ Indoor Unit

Drill the hole to fixing unit follow the diagram below

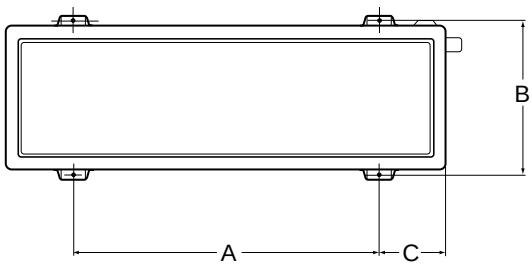
Ceiling Installation Drilling

Dimension (mm)	PCC					
	12	**18**	**24**	**36**	**48**	**60**
A	85	85	1,105	1,605	1,605	1,605
B	365	365	365	365	365	365
C	50	50	50	50	50	50
D	235	235	235	235	235	235
E	165	165	165	165	165	165
F	115	115	115	115	115	115

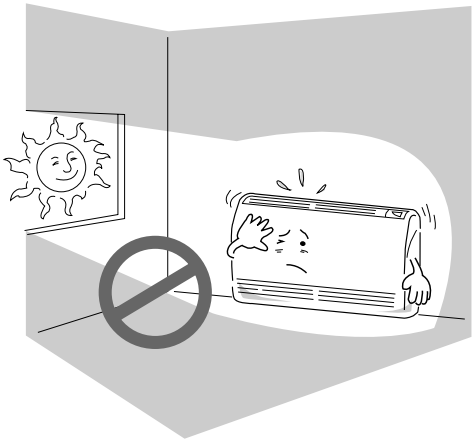


■ Outdoor Unit

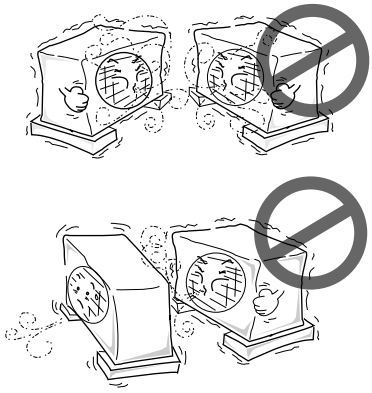
Dimension (mm)	POC					
	12	**18**	**24**	**36**	**48**	**60**
A	570	570	570	610	600	600
B	315	315	315	350	350	350
C	145	145	145	140	150	150



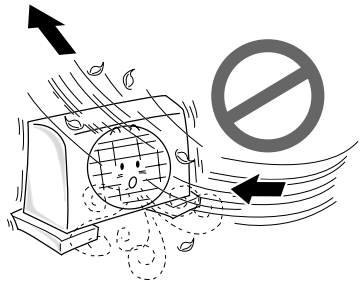
INSTALLATION IN THE FOLLOWING PLACES MAY RESULT IN TROUBLE



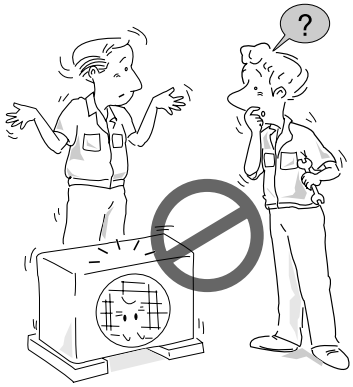
Installation of the indoor unit in direct sun light.



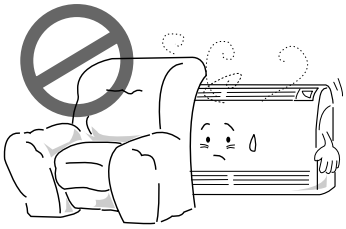
Installation of outdoor units too close or, blowing discharged air into each other.



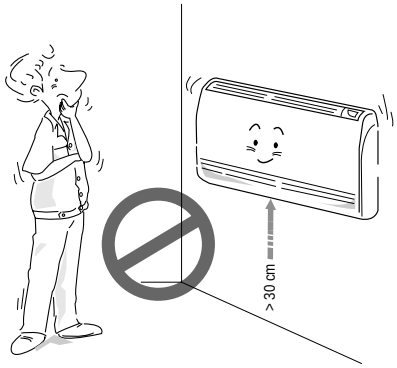
Installation of the outdoor unit in a place exposed regularly to a strong wind.



Installation in the unit in wrong direction.

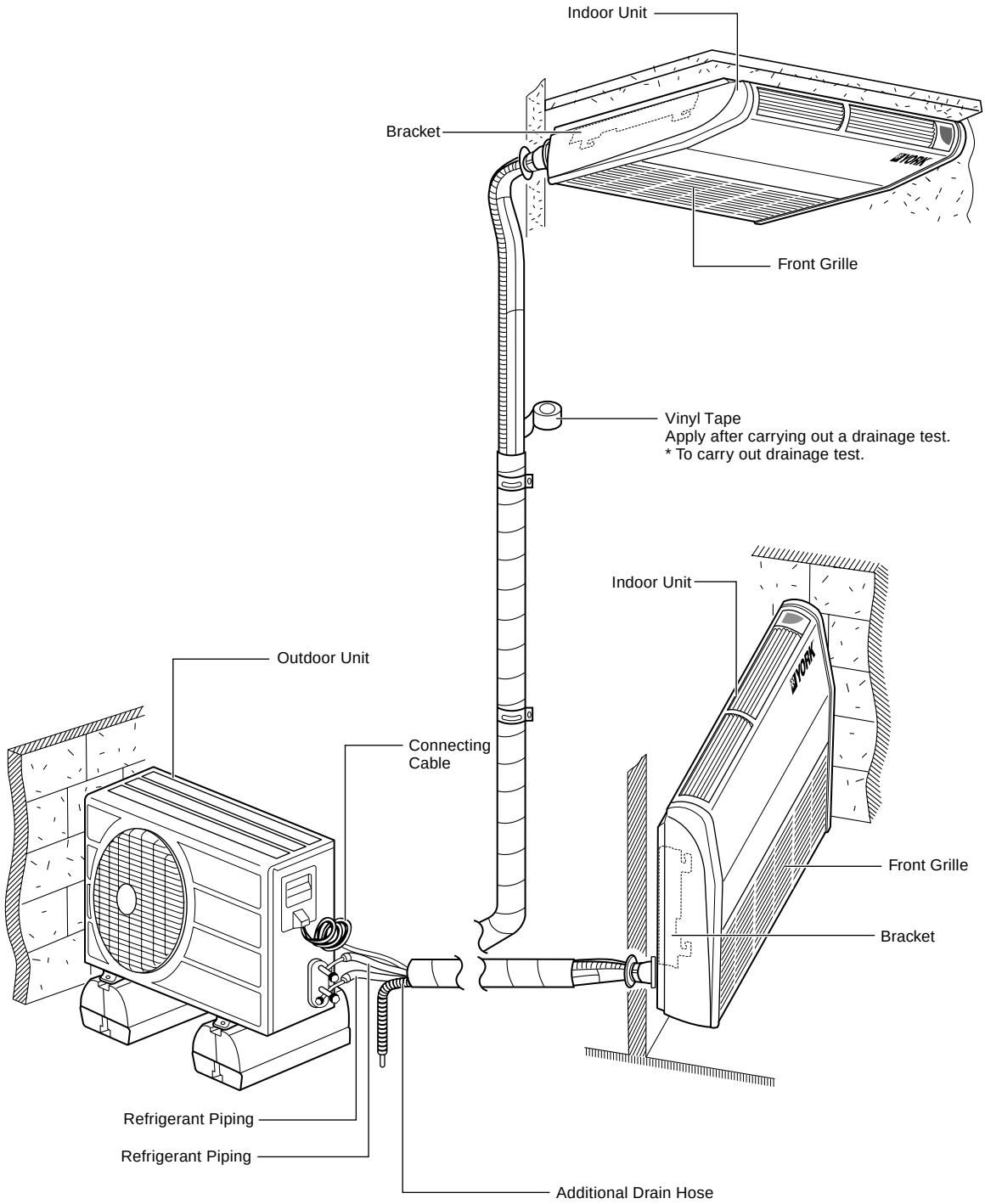


Installation of the indoor unit in a place where there is an obstacle near the air inlet or outlet.



Installation of the indoor unit at too high > 30 cm a position.

INSTALLATION DIAGRAM



INSTALLATION PROCEDURE

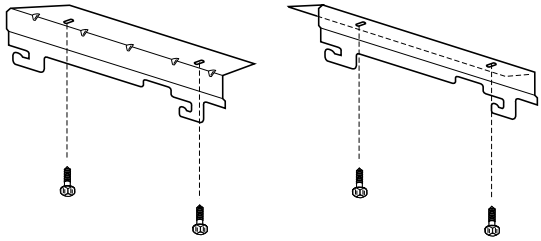
Cautions

- Piping must be performed by qualified personnel according to good refrigeration system practices
- Piping materials and insulation materials must be refrigerant quality
- Select the pipe diamerters according to the size of unit and cut the pipe to design length by pipe cutter
- Check that no foreign bodies are inside the pipe
- Connect the pipe correctly
- Do not apply the excessive torque
- Connect the electric cable correctly
- Use an appropriate bending tool to form curves and avoid over-tightening the refrigerant tubes

INDOOR UNIT

Bracket Fixing

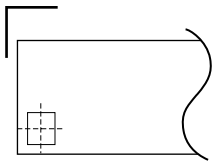
1. **Measure and mark the hole position.**
2. **Drill a hole and mount bracket.**



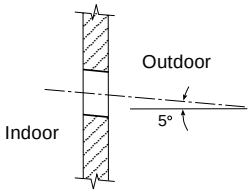
Drain Hose Drilling

1. **Measure and mark the hole position.**
2. **Drill a hole at a slight downward slant toward the outdoor side.**

Ceiling drain hose hole



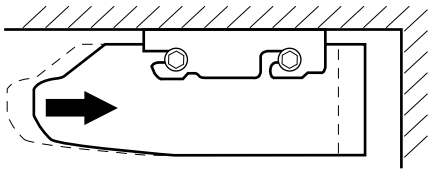
Note : When installing the refrigerant pipes from others side. A hole must be place to allow fall towards the outdoor unit.



■ Indoor Unit Fixing

Ceiling Case

1. **Lift the indoor unit to the bracket.**
2. **Push the indoor unit to lock at the bracket.**



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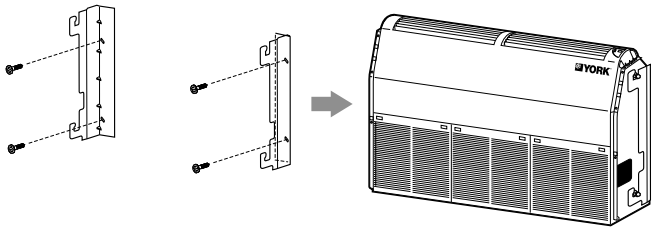
Floor Case

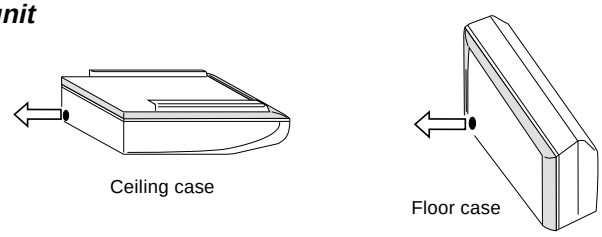
1 **Measure and mark the hole position.**

2 **Drill a hole and mount bracket.**

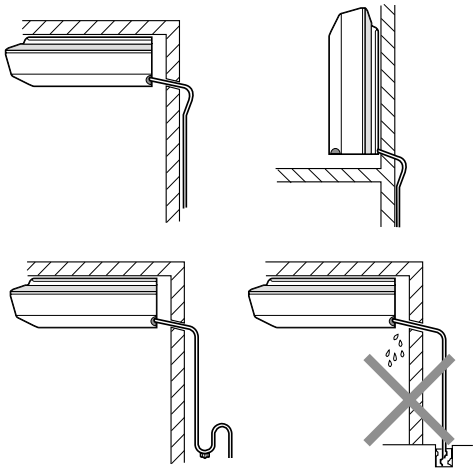


■ Drain Hose

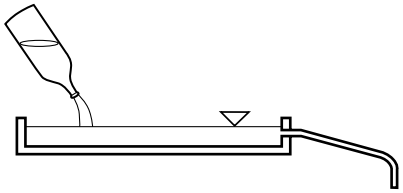
Drain hose can pass through the indoor unit follow figure below.



After fixing the indoor unit, open front grille and then insert refrigerant pipe, drain hose and electric cable from outdoor through the wall into the unit case, then connect drain hose together and arrange it.



Verification of condensate water drainage:
Fill the drain pan with water and observe evacuation.

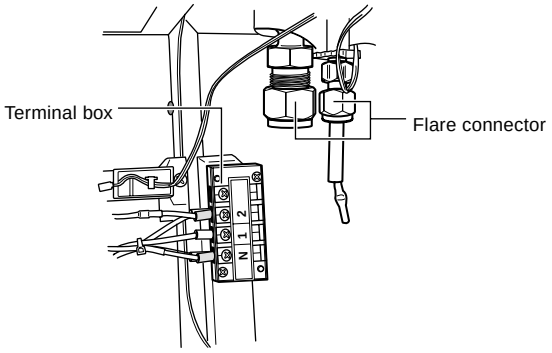


Note : Do not put the drain hose end into water.

■ Unit Coupling

1 **Connect electric cable to terminal box.**

2 **Connect refrigerant pipe to flare connector.**

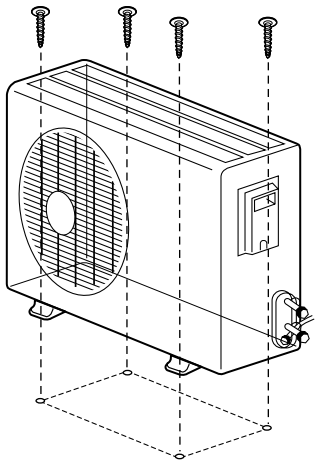


OUTDOOR UNIT

■ Unit Fixing

1 **Measure and mark the hole position.**

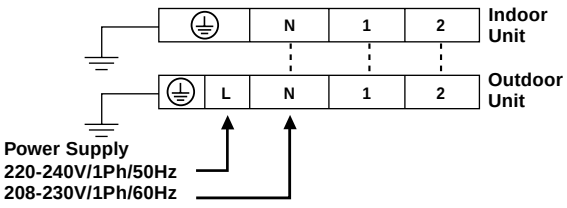
2 **Drill the hole and fix the outdoor unit.**



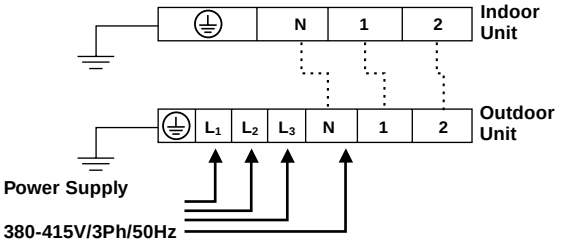
■ Unit Coupling

Connect electric cable to terminal box follow electric diagrame below.

PCC/POC 12-60 Cooling Only Units



PCC/POC 12-60 Cooling Units



Cautions

- Never modify the unit by removing any of the safety guards or by bypassing any of the safety interlock swithces.
- 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.

■ Maximum Piping Lengths

Note : Where the difference in elevation between the indoor unit and the outdoor unit is greater than 5 meters, install an oil trap every 5 meters.

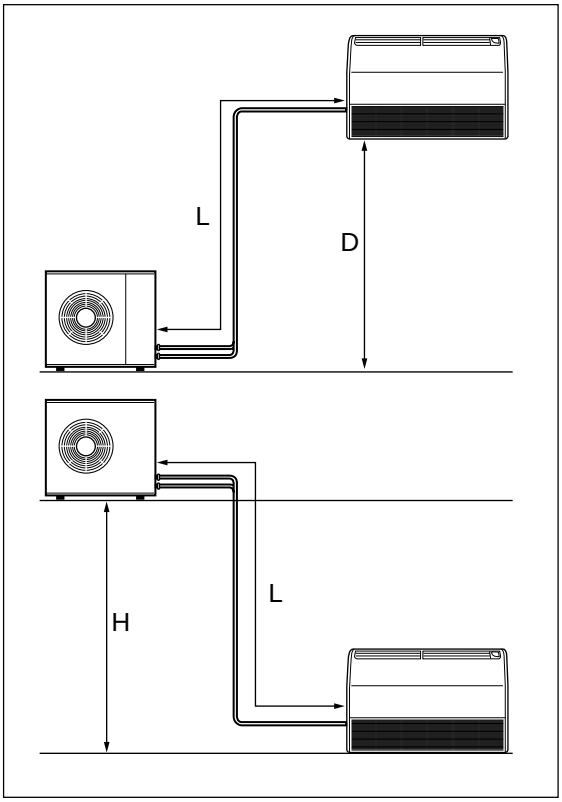
Unit size	12	18	24	36	48	60
D (m)	15	15	22	20	24	20
L (m)	18	18	25	25	30	30
H (m)	12	12	20	22	26	26

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.

(continued)

Refrigerant charge to be added per extra metre of piping length when more than 7.5 meters.

Unit size	PCC/POC					
	12	**18**	**24**	**36**	**48**	**60**
g/m	15	40	40	40	40	40

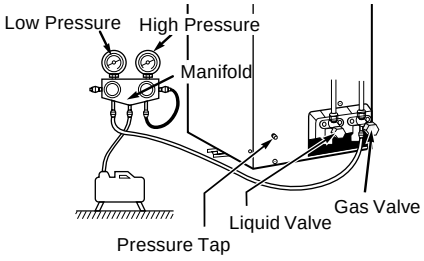


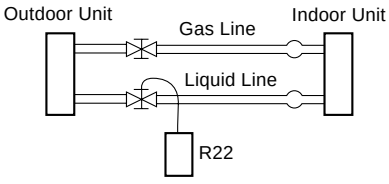
■ Refrigerant Piping Connections (FLARE Connections)

To avoid alteration of unit capacities, check that piping lengths and changes in elevation are kept to a strict minimum.

Before connectiong the refrigerant lines, follow the procedures below (if pre-charged connection lines are not supplied):

- Select copper pipe diameters according to the size of unit to be installed.
- Install the refrigeration lines, checking that no foreign bodies get inside the piping.
- Install the flare connectors and flare the ends of the pipes.





This unit is shipped complete with a charge of R22 refrigerant that will be sufficient for an interconnecting piping length of 5 meters.

TEST OPERATION

CHECK THIS ITEM BEFORE START OPERATION

Outdoor

- Check the flare nut connections, valve stem cap connections and service cap connections for gas leak with a leak detector or soap water.

Indoor

- Check the unit is firmly fixed.
- Check the connecting pipes are tighten securely.
- Check the pipe insulation.
- Check the drainage.
- Check the connection of the grounding wire.

TROUBLE SHOOTING GUIDE

Problem	Probable cause	Remedy
A. The air conditioner does not run.	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.	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.	1. Motor winding cut or grounded. 2. Faulty Capacitor.	1. Check the wiring and the compressor winding resistance. 2. Find the cause then replace Capacitor.
C. There is insufficient heating or cooling.	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.	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 run continuously.	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.	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.	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)	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 temperatue 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 temperatue change in this event, a clicking sound may occur.

TECHNICAL SPECIFICATION

Models				Indoor Unit	PCC					
					12	18	24	36	48	60
				Outdoor Unit	POC					
					12	18	24	36	48	60
Nominal Capacities		Cooling		Btu/h	13,000	18,000	24,000	36,000	48,000	60,000
				kW	3.8	5.3	7.0	10.5	14.1	17.6
				kcal/h	3,276	4,536	6,048	9,072	12,096	15,120
		Heating		Btu/h	-	-	-	-	-	-
				kW	-	-	-	-	-	-
				kcal/h	-	-	-	-	-	-
Indoor Unit	Power Supply			V/Ph/Hz	220-240/1/50			220-240/1/50 380-415/3/50	380-415/3/50	
	Fan	Air Flow		CEM	600	600	600	1,200	1,600	1,800
		Input Power		kW	1.4	1.98	2.66	378/3.78	4.93	5.47
		Running Current		A	6.3	9.0	11.9	17.95/7.65	11.5	10.6
	Dimension		Height	mm	630			630		
			Width	mm	980			1,780		
			Depth	mm	240			240		
	Weight			kg	32	35	38	46	46	46
	System Operation Control				Wired Remote Control					
	Expansion device				Capillary Tube					
Outdoor Unit	Compressor		Qty		1	1	1	1	1	1
			Compressor type		Rotary				Recipocating	
			Refrigerant		R-22					
	Dimension		Height	(mm)	550			710	1,155	
			Width	(mm)	820			845	870	
			Depth	(mm)	375			375	375	
	Weight			kg	80	80	80	90	109	109
	Piping	Type			Flare and Nuts					
		Pipe Size	Discharge	inch	1/4"	3/8"	3/8"	3/8"	3/8"	3/8"
			Suction	inch	1/2"	5/8"	5/8"	5/8"	3/4"	3/4"

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DE - COMMISSIONING DISMANTLING & 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.

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