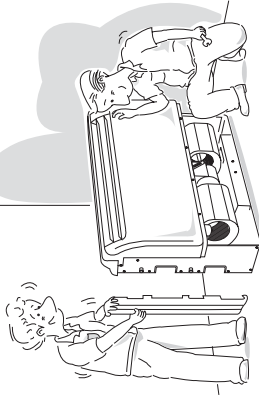


# INSTALLATION & OWNER'S MANUAL

MINISPLIT FLOOR/CEILING AIR CONDITIONER  
 MODELS: YOCA-YOHA 12-60



## PART LIST

### INDOOR UNIT

YOCA-YOHA

### REQUIRED TOOLS

- Screw Driver
- Hexagonal Wrench
- Torque Wrench
- Spanner
- Reamer
- Hole Core Drill
- Tape Measure
- Thermometer
- Mainfold Gauge
- Gas Leak Detector
- Vacuum Pump
- Pipe Clamp
- Pipe Cutter
- Hole Core Set
- Electrical Circuit Tester

### EXTENDED PARTS

- Refrigerant Pipes: See Technical Specification
- Pipe Insulation Material (Polyethylene foam 9 mm thick)
- Vibril Tape
- 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.
- Do not conduct installation in wet area or in the rain.



It may cause fire due to short circuit and may result in electric shocks or fire.

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



It may cause fire.

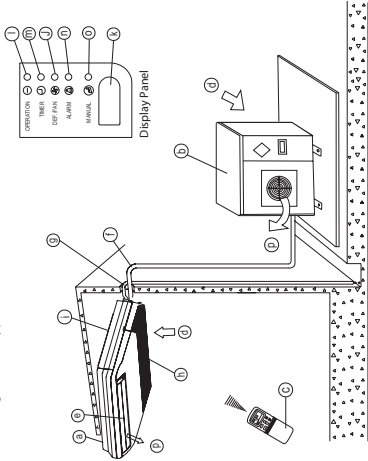
It is a high risk to cause the electrical shocks.

- This system is designed for domestic or residential use only.



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

### Ceiling & Floor Type



### NOTICE!

The chart based on one model of our product is for reference only, which may be different from the unit you purchased.

### NAMES AND FUNCTIONS

a	indoor unit	b	outdoor unit
c	remote controller	d	air-in
e	air flow louver (at air outlet)	f	connecting pipe
g	drain hose	h	air inlet (with air filter in it)
i	installation part	j	DEF/ FAN indicator (For cooling and heating type, it's DEF; for cooling only type, it's FAN)
k	infrared signal receiver	l	operation lamp
m	timer indicator	n	alarm indicator
o	temporary button	p	air-out

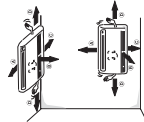
### PREPARATION BEFORE INSTALLATION

- Before doing any work, check the interior power supply cord and the main breaker capacity are sufficient and the installation area is sufficient and suitable for the unit.
- 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 (mm)	YOCA-YOHA					
	12	18	24	36	48	60
A	2300	2300	2300	2300	2300	2300
B	2300	2300	2300	2300	2300	2300
C	5	5	5	5	5	5
D	120	120	120	120	120	120

### OUTDOOR UNIT



Dimension (mm)	YOCA-YOHA					
	12	18	24	36	48	60
A	300	300	300	300	300	300
B	2000	2000	2000	2000	2000	2000
C	600	600	600	600	600	600
D	300	300	300	300	300	300

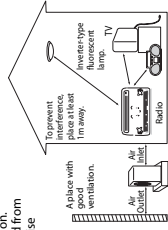
### INSTALLATION

#### INSTALLATION SITE

- To install the air conditioner in the following types of environments, consult the shop.
  - Places with an oily ambient or where steam or soot occurs.
  - Salty or corrosive environments such as coastal areas.
  - Places where the outdoor air is polluted by dust or soot.
  - Places where the outdoor air is polluted by soot or tapping.
- The drain from the outdoor unit must be directed to a place of good drainage.

#### CONSIDER NUISANCE TO YOUR NEIGHBOURS FROM NOISES

- For installation choose a place as described below.
  - A place solid enough to bear the weight of the unit and which does not amplify the operation noise or vibration.
  - A place where the operation noise or vibration is not directed from the floor into the adjacent room.
  - A place where the operation noise will not annoy your neighbours.



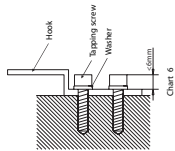
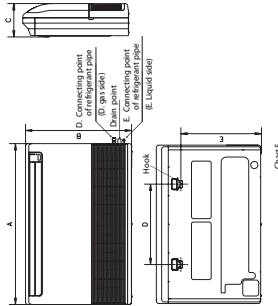
#### ELECTRICAL WORK

- For power supply, be sure to use a separate power circuit dedicated to the air conditioner.

#### SYSTEM RELOCATION

- Relocating the air conditioner requires specialized knowledge and skills. Please consult the shop where you bought the air conditioner if relocation is necessary for moving or remodelling.

#### WALL MOUNTING INSTALLATION

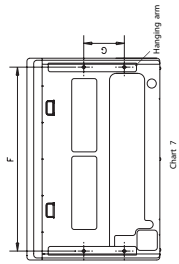


1. Fix the hook with tapping screw onto the wall. (Refer to Chart 6)

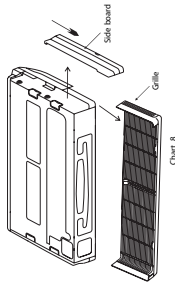
2. Hang the indoor unit on the hook.



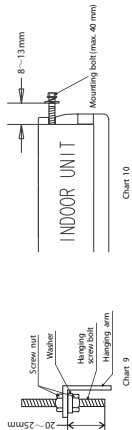
## CEILING INSTALLATION



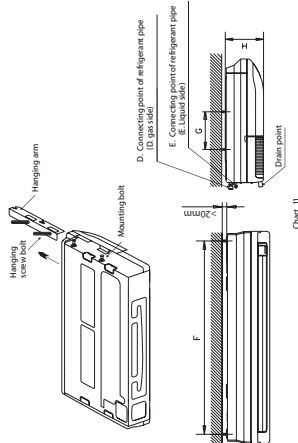
- Remove the side board and the grille. (Refer to Chart 8)  
(For models 48000 and 60000 Btu/h, do not remove the grille.)



- Locate the hanging arm on the hanging screw bolt. (Refer to Chart 9)  
Prepare the mounting bolts on the unit. (Refer to Chart 10)



- Hang the unit on the hanging arm by sliding backward. Securely tighten the mounting bolts on both sides. (Refer to Chart 9)



- Connect the point of refrigerant pipe (D, gas side)  
E. Connecting point of refrigerant pipe (F, liquid side)  
G. Connecting point of all-pipe  
H. Drain point

## ATTENTION

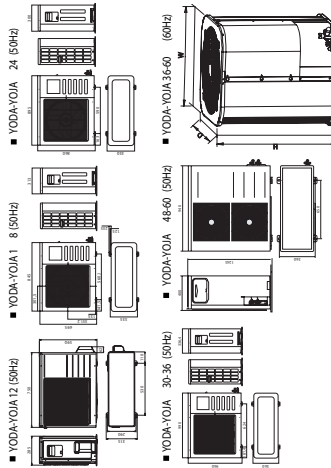
The figures above are based on model with 18000Btu/h as rated capacity, which may differ from the unit you purchased.

## The dimension of the unit

Capacity (Btu/h)	A	B	C	D	E	F	G	H
12000-24000 Btu/h	990	660	206	505	506	907	200	203
36000 Btu/h	1280	660	206	795	506	1195	200	203
48000-60000 Btu/h	1670	680	244	1070	450	1542	200	240

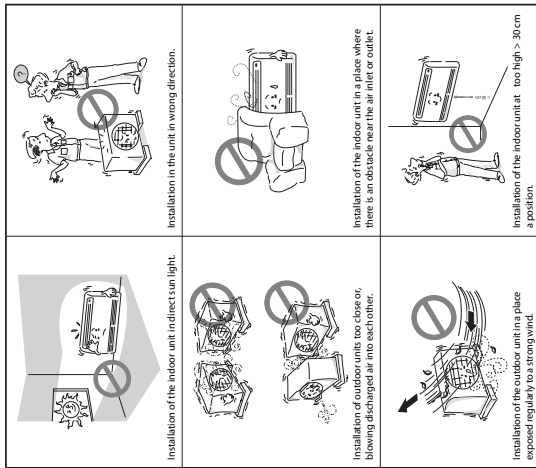
- Note: The dimension of 12000 Btu/h and 24000 Btu/h are the same  
The dimension of 48000 Btu/h and 60000 Btu/h are the same

## Outdoor unit



Model	W	D	H
YODA-YOJA 12	554	554	636
YODA-YOJA 11	554	554	636
YODA-YOJA 30-36	554	554	840
YODA-YOJA 48-60	740	740	852
YODA-YOJA 36-60	740	740	852

## INSTALLATION IN THE FOLLOWING PLACES MAY RESULT IN TROUBLE

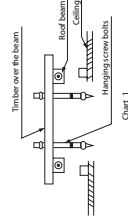


## INDOOR UNIT INSTALLATION

- Installing  $\varnothing 10$  hanging screw bolts. (4 bolts)  
Please refer to the following figure for the distance measurement between the screw bolts.
- Please install with  $\varnothing 10$  hanging screw bolts.
- The banding to the ceiling varies from the constructions, consult the construction personnel for the specific procedures.
- The size of the ceiling to be handled ..... do keep the ceiling flat. Consolidate the roof beam for possible vibration.
- Cut off the roof beam.
- Strengthen the place cut off and consolidate the roof beam.
- Carry out the pipe and line operation in the ceiling after finishing the installation of the main body. While choosing where to start the operation, determine the direction of the pipes to be drawn out. Especially in case there is a ceiling, position the refrigerant pipes, drain pipes, indoor & outdoor lines to the connection places before hanging up the machine.
- The installation of hanging screw bolts.

## Wooden construction

Put the square timber transversely over the roof beam, then install the hanging screw bolts. (Refer to Chart 1)



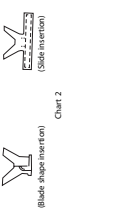
## For Original concrete bricks

Use embedding screw bolt. (Refer to Chart 3)



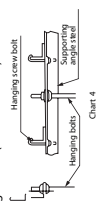
## New concrete bricks

Inlaying or embedding the screw bolts. (Refer to Chart 2)



## Steel roof beam structure

Install and use directly the supporting angle steel. (Refer to chart 4)



## WIRING

- Attaching wiring  
1. The air conditioner should use separate power supply with rated voltage  
2. The external power supply to the air conditioner should have ground wiring, which is linked to the ground wiring of the indoor and outdoor unit.  
3. The wiring work should be done by qualified persons according to circuit drawing.  
4. A leakage protector should be installed according to the National Standard concerning electrical appliance.  
5. Be sure to locate the power wiring and the signal wiring well to avoid cross-disturbance and their contact with connecting pipe or stop valve body.  
6. The wiring attached to this air conditioner is 10m long. Be sure to prolong it with wiring of the same type and proper length if necessary. Generally, do not twist two wiring together unless the joint is soldered well and covered with insulator tape.  
7. Do not turn on the power until you have checked carefully after wiring.

## The Specification of Power

POWER	12000~18000 Btu/h (Cooling/Heating)		24000~36000 Btu/h (Cooling/Heating)		36000~60000 Btu/h (Cooling/Heating)	
	1-PHASE	3-PHASE	1-PHASE	3-PHASE	1-PHASE	3-PHASE
FREQUENCY AND VOLT	200-240V~50Hz		200-240V~50Hz		380V 3N~50Hz	
CIRCUIT BREAKER/FUSE (A)	20/16		40/25		40/20	
INDOOR UNIT POWER WIRING (mm <sup>2</sup> )	2.0		3x2.5		3x2.5	
INDOOR/OUTDOOR POWER WIRING (mm <sup>2</sup> )	3x2.5		3x2.5		3x2.5	
STRONG ELECTRIC SIGNAL	5x2.0 (3x2.0)		5x2.0 (3x2.0)		3x2.0 (3x2.0)	
WEAK ELECTRIC SIGNAL	1-core shield wire 1x0.3mm <sup>2</sup>		1-core shield wire 1x0.3mm <sup>2</sup>		2-core shield wire 2x0.5mm <sup>2</sup>	

POWER	12000~18000 Btu/h (Cooling Only)		24000~36000 Btu/h (Cooling Only)		36000~60000 Btu/h (Cooling Only)	
	1-PHASE	3-PHASE	1-PHASE	3-PHASE	1-PHASE	3-PHASE
FREQUENCY AND VOLT	200-240V~50Hz		200-240V~50Hz		380V 3N~50Hz	
CIRCUIT BREAKER/FUSE (A)	40/25		3x2.5		40/20	
INDOOR UNIT POWER WIRING (mm <sup>2</sup> )	2.0		3x2.5		2.0	
INDOOR/OUTDOOR POWER WIRING (mm <sup>2</sup> )	3x2.0		3x2.0		3x2.0	
STRONG ELECTRIC SIGNAL	3x2.0		3x2.0		1x2.0	
WEAK ELECTRIC SIGNAL	---		---		---	

Chart 1 B

## CONNECT THE DRAIN PIPE

- Install indoor unit drain pipe (fitting) when connecting PVC pipes.

## Cautions

- The drain pipe of indoor unit must be heat insulated, or it will condense dew, as is the connections of the indoor unit.
- Do not use PVC binder must be used for pipe connection, and make sure there is no leakage.
- With the connection part to the indoor unit, please be noted not to impose pressure on the side of indoor unit pipes.
- When the declivity of the drain pipe downwards is over 1/100, there should not be any winding.
- The total length of the drain pipe when pulled out transversely shall not exceed 20m, when the pipe is over long, a prop stand must be installed to prevent winding.
- Refer to the figures on the right for the installation of the pipes.

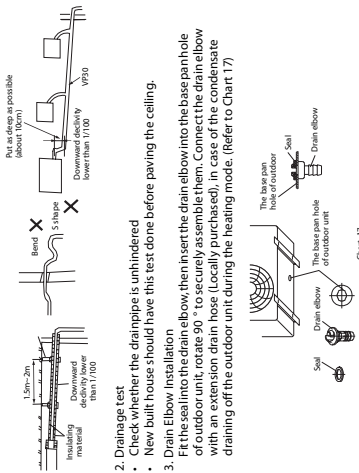
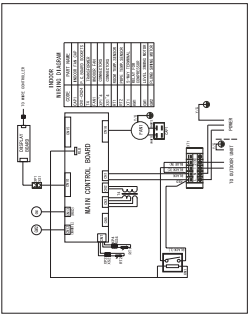


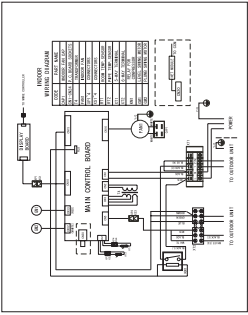
Chart 17



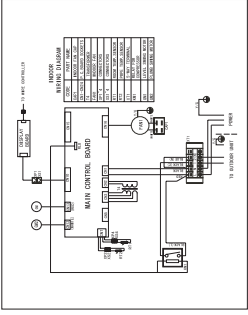
12,000 50Hz Cooling (Indoor)



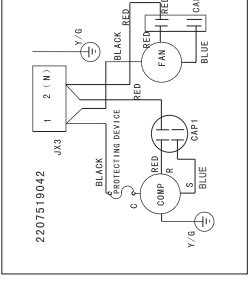
12,000 50Hz Heating (Indoor)



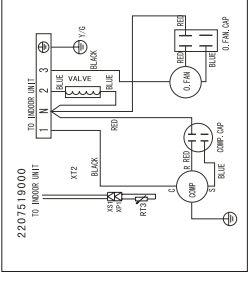
18,000 50Hz Cooling (Indoor)



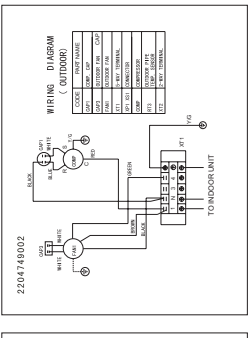
12,000 50Hz Heating (Outdoor)



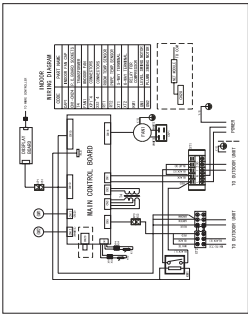
12,000 50Hz Cooling (Outdoor)



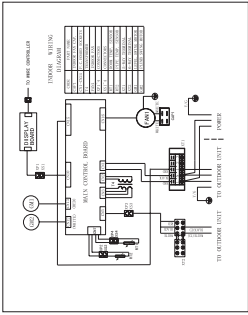
18,000 50Hz Heating (Outdoor)



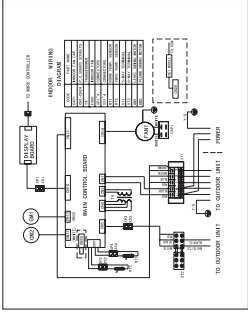
18,000 50Hz Heating (Indoor)



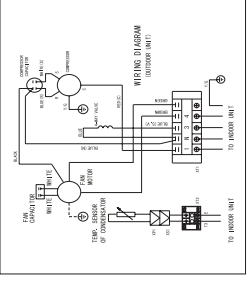
24,000 50Hz Cooling (Indoor)



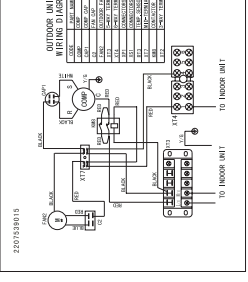
24,000 50Hz Heating (Indoor)



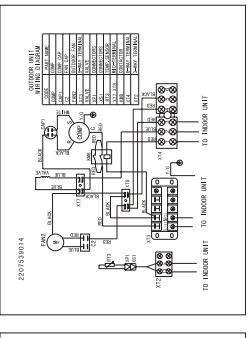
18,000 50Hz Heating (Outdoor)



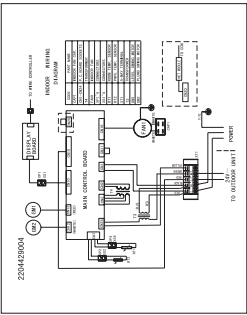
24,000 50Hz Cooling (Outdoor)



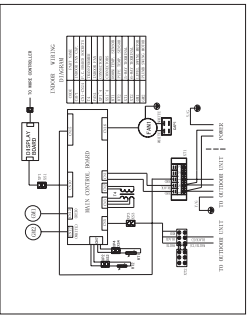
24,000 50Hz Heating (Outdoor)



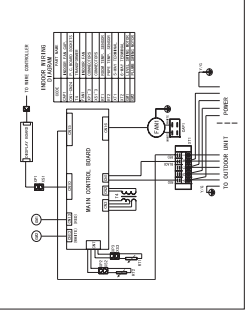
24,000 60 Hz Cooling (Indoor)



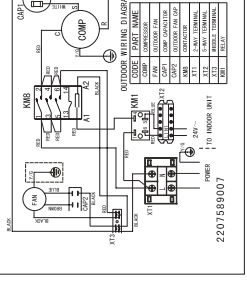
36,000-1Ph 50/60Hz Cooling (Indoor)



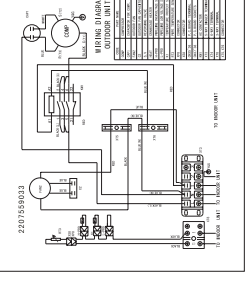
36,000-3Ph 50/60Hz Cooling (Indoor)



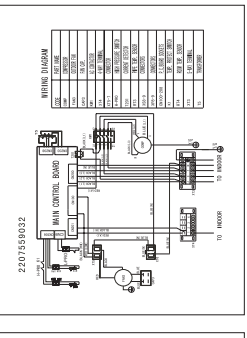
24,000 60 Hz Cooling (Outdoor)



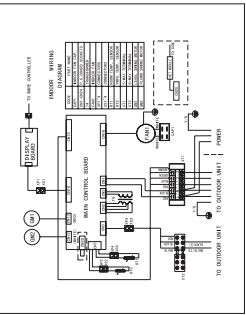
36,000-1Ph 50/60Hz Cooling (Outdoor)



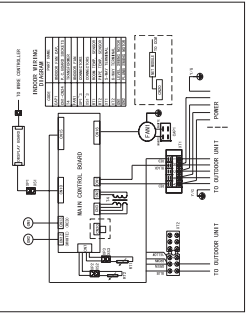
36,000-3Ph 50/60Hz Cooling (Outdoor)



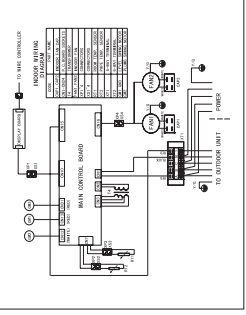
36,000-1Ph 50Hz Heating (Indoor)



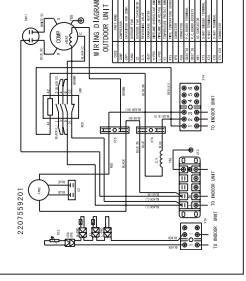
36,000-3Ph 50Hz Heating (Indoor)



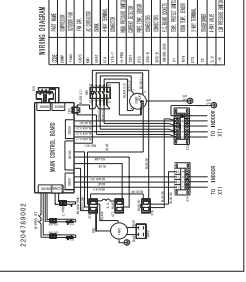
48,000 50/60Hz Cooling (Indoor)



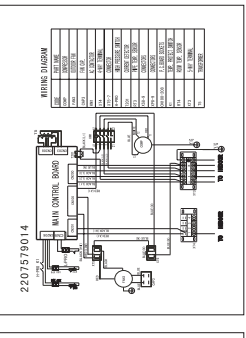
36,000-1Ph 50Hz Heating (Outdoor)



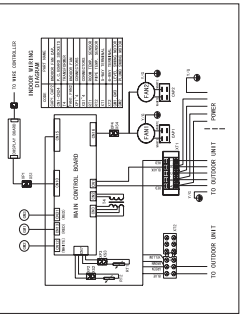
36,000-3Ph 50Hz Heating (Outdoor)



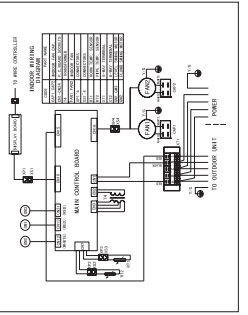
48,000 50/60Hz Cooling (Outdoor)



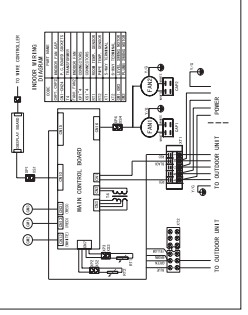
48,000 50Hz Heating (Indoor)



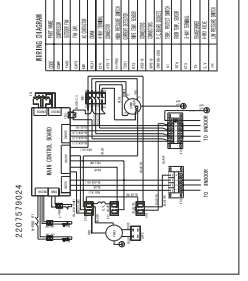
60,000 50/60Hz Cooling (Indoor)



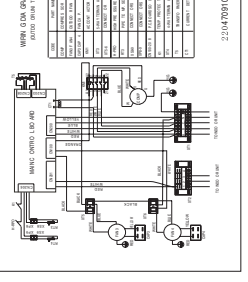
60,000 50Hz Heating (Indoor)



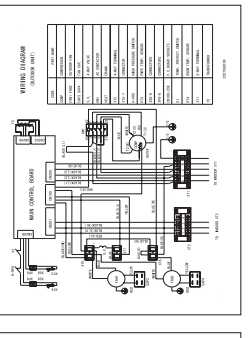
48,000 50Hz Heating (Outdoor)



60,000 50/60Hz Cooling (Outdoor)

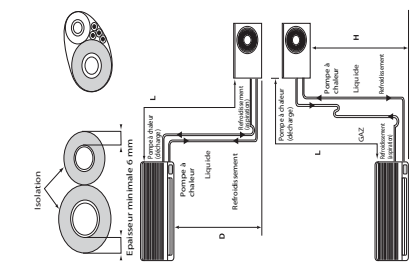


60,000 50Hz Heating (Outdoor)





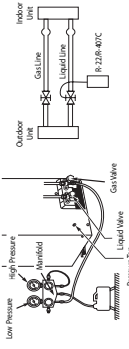
■ **Maximum Piping Lengths** : See Technical Specification  
**Note** : Where the difference in elevation between the indoor unit and the outdoor unit is greater than 5 meters, install an oil trap every 5 meters.



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

■ **Refrigerant Piping Connectors (FLARE CONNECTIONS)**  
 To avoid alteration of unit capacities, check that piping lengths and changes in elevation are kept to a strict minimum.  
 Before connection the refrigerant lines, follow the procedures below (if precharged 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 R-22/R-407C refrigerant that will be sufficient for an interconnecting piping length of 7 meters.

### TEST OPERATION

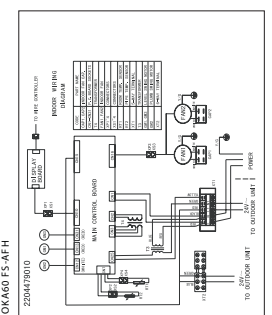
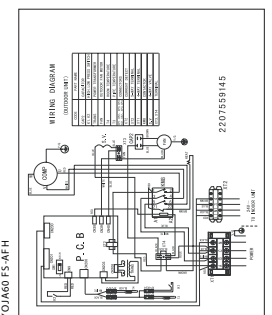
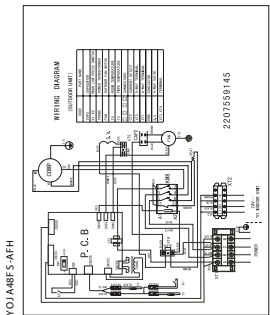
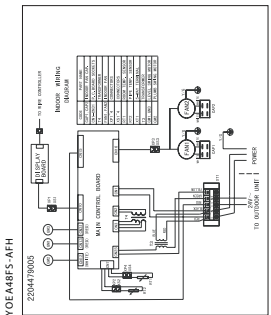
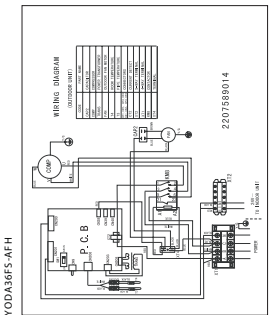
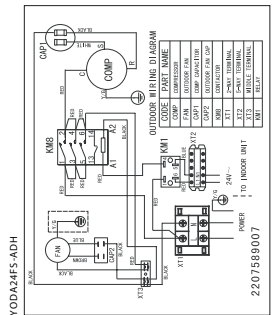
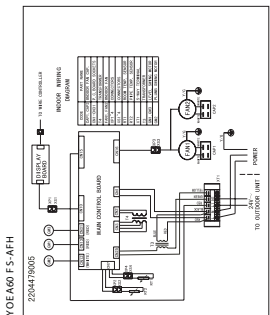
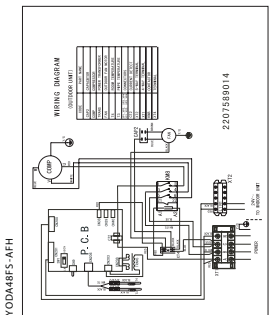
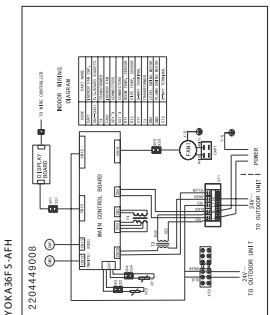
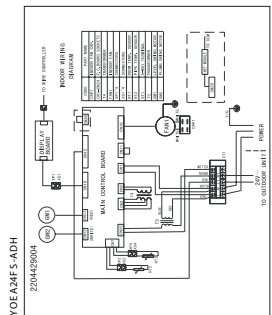
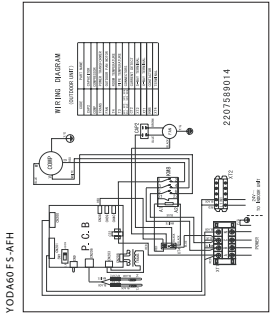
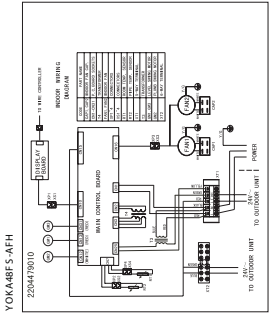
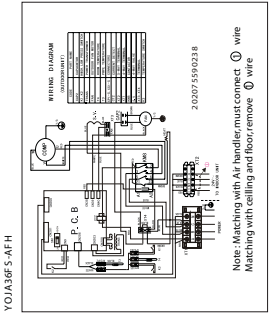
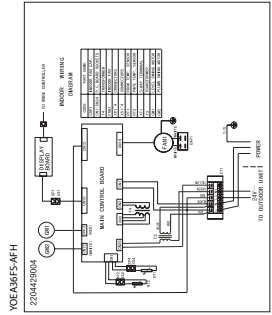
#### CHECK THIS ITEM BEFORE START OPERATION

**Outdoor**  
 Check the fit are 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 tightened securely.  
 • Check the pipe insulation.  
 • Check the drainage.  
 • Check the connection of the grounding wire.

### TROUBLESHOOTING 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 connector or relay. 5. Power source is disconnected. 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. Reconnect the power source. 6. Check Thermostat setting. 7. Find the cause then replace Capacitor. 8. Check and re-tighten. 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. Power source changes 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.	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.	1. Changeover valve damaged or blocked open (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.







TECHNICAL SPECIFICATION

Technical Specification : Floor/Ceiling (10 SEER, Vertical discharge) R-22 60Hz Rev.1

Table with 12 columns: Models, Indoor Unit, Outdoor Unit, and various technical specifications like Power Supply, Power Consumption, Refrigerant Type, etc.

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

DE-COMMISSIONING/DISMANTLING & DISPOSAL

All work must only be carried out by competent persons using suitable protective clothing and safety precautions.



Unit is remotely controlled and may start without warning

Risk of electric shock

Read the Manual

- 1. Isolate all sources of electrical supply to the unit... 2. Remove all refrigerant from each system... 3. Packaged unit can generally be removed... 4. After removal from position the unit parts may be disposed...



TECHNICAL SPECIFICATION

Technical Specification : Floor/Ceiling Type YOEAY/OKA 24-60 ADH Rev. 1

Table with 12 columns: Models, Indoor Unit, Outdoor Unit, and various technical specifications like Power Supply, Power Consumption, Refrigerant Type, etc.

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