SAFETY PRECAUTIONS

Please read these safety precautions carefully before installation and be sure to follow the precautions below. They are all important for ensuring safety.

WARNING This symbol indicates the possibility of death or serious injury.

CAUTION This symbol indicates the possibility of injury or damage to property.

1) Install according to the installation instructions strictly. Installation is defective, it will cause water leakage, electrical shock or fire.
2) Use all the included accessories parts and specified parts for installation. Otherwise, it will cause fire, electric shock or damage.
3) Install at a strong and firm location which is able to withstand the set’s weight. If the strength is not enough or installation is not properly done, the set will drop and cause injury.
4) For electrical work, follow the local national wiring standard, regulation and this installation instructions. An independent circuit and single outlet must be used. If electrical circuit capacity is not enough or is not determined in the installation instructions, it will cause fire or electric shock.
5) Use the specified cable and connect tightly and clamp the cable so that no external force will be acted on the terminal. If connection or fixing is not perfect, it will cause heat-up or fire at the connection.
6) Wiring routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, it will cause overheating of terminal, fire or electrical shock.
7) When carrying out piping connection, take care not to let air substances other than the specified refrigerant go into refrigeration cycle. Otherwise, it will cause lower capacity, abnormal high pressure on the terminal. If connection or fixing is not perfect, it will cause heat-up or fire at the connection.
8) Do not modify the length of the power supply cord or use of extension cord, and do not share the single outlet with other electrical appliances. Otherwise, it will cause fire or electrical shock.

CAUTION
1) This equipment must be grounded and installed with ground leakage current breaker. It may cause electrical shock if grounding is not perfect.
2) Do not install the unit at a place where leakage of flammable gas may occur. In case gas leaks and accumulates at surrounding of the unit, it may cause fire.
3) Do not draw the piping anywhere except according to installation instructions. If damages is not perfect, water may enter the room and damage the furniture.

SELECT THE BEST LOCATION

Indoor unit
- There should be no arreys or source or stream near the unit.
- There should be no any obstacles blocking the airflow around the unit.
- A place where air circulation in the room is good.
- A place where drainage can be easily done.
- A place where noise prevention is taken into consideration.
- Do not install the unit near the door way.
- Ensure the space is indicated by arrow marks from the wall/ceiling/ceiling or other obstacles.
- There should be any direct sunlight. If unavoidable, sunlight prevention should be taken into consideration.

Outdoor unit
- An evening is built over the unit to prevent direct sunlight or rain/be careful that heat radiation from the condenser is destructed. There should be no any animal or plant which could be affected by heat radiation.
- Keep the spaces indicated by arrow from wall/ceiling, fence or other obstacles.
- Do not place any obstacles which may cause a short circuit of the discharged air.

Settlement of outdoor unit
- Anchor the outdoor unit with a bolt and nut of 10 or a bolt tightly and horizontally on a concrete or rigid mount.

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NOTE: the mounting wall is strong and solid enough to prevent it from vibration.

Install the unit on the wall correctly. Otherwise, it will cause electric shock or fire.

INSTALLATION PLATE MOUNTING

1. Fit the installation plate horizontally on structural parts of the wall with space around the installation plate.
2. If the wall is made of brick, concrete or the like, drill five or eight 5mm diameter holes in the wall. Insert Clip anchor for appropriate mounting screws.

Mount the installation plate and drill holes in the wall according to the wall structure and corresponding mounting points on the installation plate. The installation plate provided with the machine differ from application to application. The dimensions are in "mm" unless otherwise stated.

Correct orientation of Installation Plate.

Installation must be performed in accordance with the requirement of NEC and CEC by authorized personnel.

If the power cord is damaged, replacement work shall be performed by authorized personnel only.

Consult with the sales agency or manufacturer for details.

1. Determine hole positions according to left and right side of the installation plate. The hole center is obtained by measuring the distance as shown in the fig. below.
2. Drill the piping hole plate with 6.5mm hole-core drill. Drill the piping hole at either the right or the left and the hole should be slightly slanted to the outside door.
3. Always take steps to protect the pipe when drilling metal, grid, metal plate or the like.

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Electrical work
Safety regulations for electrical work
1. If there is a serious safety problem about the power supply, the technician should refuse to install the air conditioner and explain to the client until the problem is solved.
2. Power voltage should be in the range of 90%~110% of rated voltage.
3. The surge protector and main power switch with a 1.5 times capacity of Max. Current of the unit should be installed in power circuit. Ensure their conditioner is grounded well.
4. All wiring must comply with local and national wiring regulations. Do not operate your air conditioner in a wet room such as a bathroom or laundry room.
5. An oil-appear connection device which has at least 1mm clearances in allpipes, and have a leakage current that may exceed 10mA, the residual current device (RCD) having rated residual operating time and current exceeding 50mA, and discontinuity must be incorporated in fixed wiring in accordance with the wiring rules.
6. For the unit adopts auxiliary electric heater, keep at least 1 meter away from the nearest combustible materials.
7. According to the attached Electrical Connection Diagram located on the panel of the indoor & outdoor unit to connect the wires.
8. All wirings must comply with local and national electrical codes and be installed by qualified and skilled electricians.
9. An individual branch circuit and single receptacle/switch for this air conditioner must be available. See the following table for suggested wire sizes and fuse specifications.

Suggest Minimum Wire Size (AWG: American Wire Gauge):

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<th>Appliance Amps</th>
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<tr>
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NOTE: The wire size is based on power supply cord and interconnected wire and the current of the fuse or switch are determined by the maximum current indicated on the nameplate which located on the side panel of the unit. Please refer to the nameplate before selecting the wire size, fuse or switch.

Connect the cables to the indoor unit

NOTE: Before performing any electrical work, turn off the main power to the system.
1. The inside and outside connecting cable can be connected without removing the front grille.
2. Lift the indoor unit panel up, remove the electrical box cover by loosening the screw.
3. Ensure the colour of external outdoor unit and the indoor one are the same to the indoor's respectively.
4. Wrap those cables not connected with terminals with insulation tapes, so that they will not touch any electrical components. Secure the cable onto the control board with the cord clamp.

Drainage
1. Run the drain hose sloping downward. Do not install the drain hose as illustrated in wrong figures.
2. Connect the drains in the same manner.-insulation tapes, so that they will not touch any electrical components. Secure the cable onto the control board with the cord clamp.

CONNECTIVE PIPE AND DRAINAGE INSTALLATION

NOTE: Before performing any electrical work, turn off the main power to the system.
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1. Drain joint installation
   - For the left-hand and right-hand piping, remove the pipe cover from the side panel.
   - For the back right and back left piping, install the piping cover by through the drain pipe.
   - The drain joint is slightly different according to the installation condition.
   - When relocating the unit to another place, using vacuum pump to perform evacuation.
   - Turn the stem of the packed valve B about 45° counter clockwise for 6-7 seconds after the gas coming out, then tighten the flare nut again. Make sure the pressure display in the pressure indicator is a little higher than the atmosphere pressure.

2. DRAIN JOINT INSTALLATION
   - The drain joint is slightly different according to the installation condition.
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3. REFRIGERANT PIPE CONNECTION
   - Flaring:
     1. Cut a pipe with a pipe cutter.
     2. Flare nuts on pipe/tube having hole diameter 1/16" to 1/8" removed on the pipe.
     3. Firmly hold copper pipe in a die in the dimension shown in the table below.
   - Tightening connection:
     1. Align pipes to be connected.
     2. Sufficiently tighten the flare nut with fingers, and then tighten it with a spanner and torque wrench as shown.
     3. Excessive torque can break nut during installation conditions.

4. TEST RUNNING
   - Perform test operation after completing gas leakage check at the nut connections and electrical safety check.
   - Connect the control board cover from the outdoor unit by loosening the screw.
   - Connect the flexible cables to the terminals as identified with their respective matched numbers on the terminal block of indoor and outdoor units.
   - Secure the cable onto the control board with the cord clamp.

5. AIR PURGING AND TEST OPERATION
   - The indoor unit must be leak tested and evacuated to remove any noncondensables and moisture from the system.
   - Check that each tubing/liquid and gas side tube) between the indoor and outdoor units have been properly connected and all wiring for the test run has been completed.
   - Pipe length and refrigerant amount:
     - More than 7.5m/25ft
     - The pipe length and refrigerant amount will affect the capacity and energy efficiency of the unit. The nominal efficiency is tested basing on the pipe length of 7.5m(25ft).
   - Connect the charge hose to the vacuum port of the manifold gauge set.

OUTDOOR UNIT INSTALLATION PRECAUTION
- Install the outdoor unit on a rigid base to prevent increasing noise level and vibration.
- Determine the air outlet direction where the discharged air is not blocked.
- In case that the installation is exposed to strong wind such as a seaside, make sure the fan operating properly by putting the unit leftside along the wall or using a dust or shield plates.
- Specially in windy area, install the unit to prevent the admission of wind.
- If suspended structure is exposed to strong wind such as a seaside, make sure the fan operating properly by putting the unit leftside along the wall or using a dust or shield plates.

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