Air conditioners are units that should have the professional technicians do the installation for you.

This Instruction Guide is the universal-purpose version for the models of split wall-mounted air conditioners manufactured by our Co. The appearance of the units that you purchase might be slightly different from the ones described in the Guide, but it does not affect your proper operations and usage.

Please read carefully the sections corresponding to the specific model you choose, and keep the Guide properly so as to facilitate your reference at later time.

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**Selection of installation positions for indoor unit**

* To be installed at the position where the air delivered from the unit can reach every corner of the room;
* To avoid being affected by the outdoor air;
* To avoid blockage to the air inlet or outlet of the unit;
* To avoid too much oil smoke or steam;
* To avoid possible generation, inflow, lingering or leakage of flammable gases;
* To avoid high-frequency facilities (such as high frequency arc welders, etc.);
* To avoid the places where acid solutions are frequently used;
* To avoid the places where some special sprayers (sulfides) are frequently used.
* Not to install a fire alarming device near the air outlet of the unit (during operation, the fire alarm device might be erroneously triggered by the warm air from the unit);

**Make sure of enough space for installation and maintenance.**

* To take into consideration the operational convenience and safety in installation, it is recommended to ensure enough space between the unit and the walls.

**Height limits of indoor and outdoor units.**

* Either the indoor unit or the outdoor unit can be higher, but the height difference must comply the stated requirements.
* Try to reduce the bending of the piping line as much as possible so as to avoid possible negative impacts upon the performances of the units.
*Selection of installation positions for outdoor unit*

* To install the outdoor unit at the places which can stand the load of the machine weight and will not cause big vibrations and noises;
* To install the unit at the places not to be exposed to rain or direct sunshine, and the places with good ventilation;
* The noises generated from the unit will not affect the neighboring places;
* Do not install the unit on non-metal frame;
* Not to install the unit at the places where there might occur the generation, inflow, stay or leakage of inflammable gases;
* Pay attention to the drainage of the condensed water from the base plate during operations;
* To avoid the air outlet being directly against the wind.

Detailed space requirements around the outdoor unit

1. When there are obstacles above the unit

2. When the front (air outlet) is open

3. When there are obstacles only in the front (air outlet)

4. When there are obstacles at the front and rear sides.

5. When there are obstacles all around the unit on four sides. Although the top side is open, the installation is not to be done if there are obstacles all around.

* At least two sides should be kept open.
*Installation fixture of indoor unit*

Pipelines can be connected in the directions of **** and * as indicated in Fig.1. When the pipelines are connected to the directions of *** and *, a groove for the pipes has to be opened at the proper place on the base stand.

1. Installation of wall-mounting plate
Fix the wall-mounting plate firmly on the wall with screws. Make sure of the leveling of the plate. Slanted wall-mounting plate might jeopardize the smooth discharge of the condensed water.

2. Drill holes on the wall
Drill holes at places slightly below the wall-mounting plate, with hole diameter of 65mm (2-3/5") and the outer edge of the hole 5-10mm (1/5-2/5") lower (Fig.2) so that the condensed water can smoothly flow out. Cut the wall penetrating pipe to proper length according to the thickness of the wall (3-5mm (1/10-1/5") longer than the wall thickness) and insert the pipe as indicated in Fig.2.

3. Installation of drain pipe
Install the pipelines of the indoor unit in accordance with the direction of the wall holes. Wrap tightly the drain pipe and the pipelines with tape. Make sure that the drain pipe is underneath the pipelines. (Fig.3) (When the drain pipe passes the room interior, some condensed water might occur to its surfaces if the humidity is very high).

4. Installation of indoor unit
Pass the connection wires, connecting pipelines and drain pipe through the wall hole. Hang the indoor unit on the hooks at the top of the wall-mounting plate so that the hooks at the bottom of the indoor unit match the hooks of the wall-mounting plate. (Fig.4)
**Inspections:**

a. Check if the hooks at the top and bottom are firmly fixed.
b. Check if the position of the master unit is properly leveled.
c. The drain pipe should not curve upward (Fig. 5).
d. The drain pipe should be at the lower part of the wall pipes (Fig. 5).

**Installation fixture of outdoor unit**

* Try to ship the product to the installation location in its original package;
* As the gravity center of the unit is not at the installation center, special caution should be taken when using hoisting cables to lift it up;
* During shipping, the outdoor unit must not be slanted to over 45 degrees (Do not store the unit in a horizontal way).
* Use expansion bolts to fix the mounting supports on the wall;
* Use bolts and nuts to fix the outdoor unit firmly on the supports and keep on the same level;
* If the unit is installed on the wall or at the rooftop, the supports have to be firmly fixed so as to resist earthquake or strong wind.

**Dimensions for parallel units installations**

![Diagram of Dimensions for parallel units installations]

**Pipelines connection**

*Ordinary pipelines connection* (it is suitable for non-quick coupler)

No dust, foreign articles, air or moisture should be allowed to enter the air conditioning system. Careful attention should be paid when pipeline connection for outdoor unit is made. Try to avoid repeated curves as much as possible, otherwise hardening or cracks might be caused to the copper pipes. Suitable wrenches should be used when the pipeline connection is done so as to ensure appropriate torque (refer to following torque Table 1). Excessive torque might damage the joints while too little torque might lead to leakage.
**INSTALLATION & REPAIR GUIDE**

**Split Wall-Mounted air conditioner**

<table>
<thead>
<tr>
<th>Outer diameter of copper pipe</th>
<th>Tightening torque</th>
<th>Strengthened tightening torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 6.35(1/4&quot;)</td>
<td>160kgf.cm(63kgf.inch)</td>
<td>200kgf.cm(79kgf.inch)</td>
</tr>
<tr>
<td>Ø 9.52(3/8&quot;)</td>
<td>300kgf.cm(118kgf.inch)</td>
<td>350kgf.cm(138kgf.inch)</td>
</tr>
<tr>
<td>Ø 12.7(1/2&quot;)</td>
<td>500kgf.cm(197kgf.inch)</td>
<td>550kgf.cm(216kgf.inch)</td>
</tr>
<tr>
<td>Ø 15.88(5/8&quot;)</td>
<td>750kgf.cm(295kgf.inch)</td>
<td>800kgf.cm(315kgf.inch)</td>
</tr>
<tr>
<td>Ø 19.05(3/4&quot;)</td>
<td>1200kgf.cm(472kgf.inch)</td>
<td>1400kgf.cm(551kgf.inch)</td>
</tr>
</tbody>
</table>

*Table 1 Torque based upon the wrench to be used*

*Special pipelines connection* (it is suitable for quick coupler)

In case of the users purchasing the machine for quick coupler, there is no need to do the air purging procedures and the following pipeline connection procedures should be adopted:

1. Remove the dust caps from the indoor and outdoor units, and the connecting pipe.
2. Align the joint counter of connecting pipe with the proper indoor and outdoor joint conic surfaces, tighten the connecting nut manually. Then, make it secure with a wrench as shown Fig. 6, applying to above torque Table 1.
3. Remove the two valve core caps from the outdoor unit.
4. Turn on the high and low pressure valve cores with an socket wrench, then tighten the two valve core caps of the outdoor unit (Fig.7).
5. Finally, wrap the hot insulating cotton around the joints of indoor and outdoor units.

*Notes on installation of quick coupler:*

1. Connecting pipe bending minimum radius parameters (Table 2)
2. Quick coupler assembly and disassembly limit: the assembly and disassembly times are inadvisably more than 7.

*Table 2 Minimum bending radius*

<table>
<thead>
<tr>
<th>Normal diameter(mm)</th>
<th>Minimum bending radius(mm)</th>
<th>cooling capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN8(5/16&quot;)</td>
<td>80(3&quot;)</td>
<td>2100<del>2300W (7000</del>8000BTU)</td>
</tr>
<tr>
<td>DN10-12 (1/2&quot;)</td>
<td>100(4&quot;)</td>
<td>2500<del>5100W (9000</del>18000BTU)</td>
</tr>
<tr>
<td>DN14-16 (5/8&quot;)</td>
<td>150(6&quot;)</td>
<td>6100<del>7000W (22000</del>24000BTU)</td>
</tr>
</tbody>
</table>
Air purging

Air purging with vacuum pump

1. Check that pipelines connection have been properly connected, remove the charging port cap, and connect the manifold gauge and the vacuum pump to the charging valve by service hoses as shown Fig.8.

2. Open the valve of the low pressure side of manifold gauge, then, run the vacuum pump. Vacuum the indoor unit and the connecting pipes until the pressure in them lowers to below 1.5mmHG (The operation time for vacuuming is about 10 minutes). When the desired vacuum is reached, close the valve of the low pressure of the manifold and stop the vacuum pump.

3. Disconnect the service hoses and fit the cap to the charging valve.

4. Remove the blank caps, and fully open the spindles of the 2-way and 3-ways valves with a service valve wrench.

5. Tighten the blank caps of the 2-way and 3-ways valves, applying the above torque Table 1.

Adding refrigerant

Refrigerant must be added if the piping measures more than 5 metres (16'5") in length. This operation can only be performed by a professional technician, for the additional amount, see the table 3 below.

<table>
<thead>
<tr>
<th>Liquid pipe diameter</th>
<th>Additional refrigerant amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø6.35 (1/4&quot;)</td>
<td>(piping length-5)mx30g</td>
</tr>
<tr>
<td>(piping length-16)ftx0.3oz</td>
<td>(piping length-5)mx65g</td>
</tr>
<tr>
<td>Ø9.52 (3/8&quot;)</td>
<td>(piping length-16)ftx0.7oz</td>
</tr>
</tbody>
</table>

Gas leakage inspection

After the pipeline connection is done, use a leakage inspection device or soap suds to carefully check if there is any leakage at the joints. This is an important step to ensure the quality of installation. Once a leakage is detected, proper treatment should be taken immediately.
**Connection of power cable**
1. Remove the drawer of the outdoor unit.
2. **Non-quick coupler:** connect the indoor power and control wires with the matched outdoor wires in accordance with the electric schematic diagram and make sure that the connection is firmly done (Fig. 9).
   **Quick coupler:** directly connect quick cable couplers with indoor and outdoor quick cable couplers after disassembly of the outdoor unit connecting box cover (Fig. 10).
3. Use a press plate to fix the wires firmly, and re-install the drawer.

Note: Do not connect the wires in a wrong way, otherwise electric malfunctions will be caused and even damages to the units will occur. The appliance shall be installed in accordance with national wiring regulation. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard. The plug shall be accessible after installing the appliance. If the model have not plug that a switch which have a contact separation of at least 3 mm (1/10") in all poles shalled be added in fixed wiring.

**Finishing touches**
* Use thermal tube to wrap the joints and wrap the tube tightly with ethylene tapes.
* Fix the wrapped pipelines on the exterior wall with clamps.
* Fill in the gaps left over by the pipeline hole and wall hole to prevent rain-water from entering.

**Test running**
* Connect to the power source, check if the function selection keys on the remote controller are working properly.
* Check if the room temperature adjustments and timer settings are working properly.
* Check if the drain is smooth.
* Check if there is any abnormal noise or vibration during operation.
* Check if there is leakage of refrigerant.

**Is the unit installed correctly?**

**Suitable Installation Position**
* Isn't there anything which prevents ventilation or obstructs operation in front of the indoor unit?
* Do not install the unit following place.
* Inflammable gases may leak.
* Oil splashes a lot.
* In case where the unit is used in such places as poisonous or sultry gases are generated or seaside district exposed to sea breezes corosion may cause malfunction. Consult with your distributor.
* Air conditioner body and remote controller must be 1 m (39-3/4") or more away from a TV or a radio.
* Drain the dehumidified water from the indoor unit to a place which drains well.

**Pay attention to operation noise**
* When installing the unit, choose a place which can stand the weight of the unit well and does not increase the operation noise or vibration. Especially where there is a possibility that vibration be transmitted to the house, fix the unit by inserting attached vibration-proof pads between the unit and fittings.
*Choose the place where hot air and operation noise from the outlet of the outdoor unit do not annoy the neighborhood.

*Things left near the outlet and inlet of the outdoor unit cause malfunction or increased operation noise. Do not leave obstacles near the outlet and inlet.

*If irregular sound is heard during operation, consult with your distributor.

*Inspection and Maintenance

*According to the service conditions and operating environment, the inside of the air conditioner will become dirty after several seasons (3 to 5 years) of service, resulting in decreased operating performance. Inspection and maintenance are recommended in addition to usual cleaning (The air conditioner can be used for a longer period and without anxiety.)

*As to inspection and maintenance, consult your dealer or any one of business offices of dealing companies. (Service charge is required in this case.)

*We recommend to perform inspection and maintenance during an off seasons.

*Self Diagnosis Functions*

Our company provides the thoughtful services for customer, air conditioners had been installed self diagnosis system to display the information for the units.

<table>
<thead>
<tr>
<th>Self-check information</th>
<th>Self-check code of luminotron/ (Self-check code of running lamp)</th>
<th>Digital self-check code/ (Polychrome screen self-check code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hint to defrosting</td>
<td>Flicker 1 time/1s</td>
<td>Indicates &quot;dF&quot; or defrosting indicator displays</td>
</tr>
<tr>
<td>Hint to defense against cold wind</td>
<td>Flicker 1 time/3s</td>
<td>Fan motor picture not running</td>
</tr>
<tr>
<td>Failure of room temperature sensor</td>
<td>Flicker 2 times/4s (Flicker 2 times/8s)</td>
<td></td>
</tr>
<tr>
<td>Failure of coiled pipe sensor</td>
<td>Flicker 3 times/5s (Flicker 1 time/8s)</td>
<td>E3/(L1)</td>
</tr>
<tr>
<td>Abnormality of outdoor unit</td>
<td>Flicker 4 times/6s (luminating)</td>
<td>E4/(E5)</td>
</tr>
<tr>
<td>Without feedback of internal fan motor</td>
<td>Flicker 5 times/7s (Flicker 6 times/8s)</td>
<td>E5/(L6)</td>
</tr>
<tr>
<td>Zero crossing signal without current</td>
<td>Flicker 6 times/8s</td>
<td>E6</td>
</tr>
<tr>
<td>External feedback failure</td>
<td>Flicker 7 times/9s</td>
<td>E7</td>
</tr>
<tr>
<td>Overheat protection</td>
<td>Flicker 8 times/10s</td>
<td>E8</td>
</tr>
<tr>
<td>Water pump failure</td>
<td>Flicker 9 times/11s</td>
<td>E9</td>
</tr>
</tbody>
</table>

Note: Above self check information is commonly applicable in our most air conditioners, but some are special, you can refer to the User’s Manual for information or contact the dealer or authorized maintenance people for help.