Installation and connection

Select the model and the number of outdoor unit connection piping kits that you need based on the sales catalog, design engineering, and the data book and installation manual of outdoor unit.

CAUTION

- When brazing the refrigerant pipes, be sure to put the nitrogen first to prevent from oxidizing the inner pipe. If not, the oxidization scale brings the refrigerant cycle clogging and result in malfunction.
- Use clean new pipes for the refrigerant pipes, and do not let water, moisture or dust get into the pipes during installation.
- Ask an authorized dealer or qualified installation professional to install this product.
- Installation work must be carried out by following this installation manual and using exclusive tools and pipes for the refrigerant R410A.

1 Installation mode

Gas joint

Install them horizontally with a maximum gradient of ±15° for even distribution. (Do not install them perpendicularly or upright.)

<Gas joint reverse orientation installation>

Liquid/balance pipe joint

No restrictions on the installation orientation by the direction of refrigerant flow. However, on the liquid joint the installation cannot have the connecting pipe too long (Figure 2).

Liquid pipes

Gas pipes

Gas joint upright orientation installation

Gas joint reverse orientation installation

Vertical installation

Vertical installation
2 Connection Method

<Gas joint>
Determine the installation orientation of the L-pipe according to the piping connections from the outdoor unit, and select a socket that matches the diameter of the locally procured pipes.

<Liquid joint>
Select a socket to match the diameter of the locally procured piping and install it.

<Balance pipe joint>
For 2 outdoor units system, connect directly between the header unit and the follower unit.

3 Example of pipe connections
Install and connect the piping between the outdoor units as shown in the diagram below.

NOTE
- Select the socket (No. in the diagram) fitting to the pipe diameter connected to the outdoor unit.
- After cutting the pipe, be sure to remove the burrs and polish the end surface. When some squash or deformation, etc. occurs, improve the pipe insertion condition by using the flare tool.
- Confirm whether no dust, water, foreign matters, etc. exists on the gas joint, the liquid joint, the balance pipe joint and the socket to be inserted.

<For connections to the bottom>
Remove the knock-out hole from the bottom of the outdoor units. (Refer to the installation manual of the outdoor unit.)

4 Heat insulating for pipes
- Insulate the joints of the liquid pipe, gas pipe, and balance pipe individually.
- Insulator for the liquid joint and the balance pipe joint are not provided. Please procure it locally.

<Gas pipe>
- Use heat insulators with heat resistance of 248 °F or more for the gas pipe.
- In order to prevent dripping condensation, do not leave any gap between heat insulator for branching joint (included in package) and heat insulator for pipe (locally procured). And then, wrap the seam with heat insulator with thickness of 0.4” or more (locally procured).

How to apply the insulation to the gas joint
- To heat insulate the T-joints, use a commercially available joint cover (for T-shape) that is with 0.4” or more thickness, or one applied with machining as shown in the figure.
- Seal the T-joints completely without any gap to prevent condensation and dripping water.

<Liquid /balance pipe>
- To heat insulate the T-joints, use a commercially available joint cover (for T-shape) that is with 0.4” or more thickness, or one applied with machining as shown in the figure.
- Seal the T-joints completely without any gap to prevent condensation and dripping water.

NOTE
- There are no specific requirements on the length of the straight pipe before the joint for either the gas or liquid sides.

<For connections to the front>

NOTE
- Insulate the joints of the liquid pipe, gas pipe, and balance pipe individually.
- Insulator for the liquid joint and the balance pipe joint are not provided. Please procure it locally.

<Gas pipe>
- Use heat insulators with heat resistance of 248 °F or more for the gas pipe.
- In order to prevent dripping condensation, do not leave any gap between heat insulator for branching joint (included in package) and heat insulator for pipe (locally procured). And then, wrap the seam with heat insulator with thickness of 0.4” or more (locally procured).

How to apply the insulation to the gas joint
- To heat insulate the T-joints, use a commercially available joint cover (for T-shape) that is with 0.4” or more thickness, or one applied with machining as shown in the figure.
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<Liquid /balance pipe>
- To heat insulate the T-joints, use a commercially available joint cover (for T-shape) that is with 0.4” or more thickness, or one applied with machining as shown in the figure.
- Seal the T-joints completely without any gap to prevent condensation and dripping water.