

AIR CONDITIONER (SPLIT TYPE)
Installation Manual

Elbow Piping Kit

Model name :

TCB-KP12CUL
TCB-KP22CUL

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Please read this Installation Manual carefully before installing the Air Conditioner.

- This Manual describes the installation method of the ELBOW PIPING KIT.
- For installation of the outdoor unit, follow the Installation Manual attached to the outdoor unit.

ADOPTION OF NEW REFRIGERANT

This Air Conditioner is a new type which adopts a new refrigerant HFC (R410A) instead of the conventional refrigerant R22 in order to prevent destruction of the ozone layer.

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1 PRECAUTIONS FOR SAFETY

- Ensure that all Local, National and International regulations are satisfied.
- Read this “PRECAUTIONS FOR SAFETY” carefully before Installation.
- The precautions described below include the important items regarding safety. Observe them without fail.
- After the installation work, perform a trial operation to check for any problem.
Follow the Owner’s Manual to explain how to use and maintain the unit to the customer.
- Turn off the main power supply switch (or breaker) before the unit maintenance.
- Ask the customer to keep the Installation Manual together with the Owner’s Manual.



CAUTION

New Refrigerant Air Conditioner Installation

- **THIS AIR CONDITIONER ADOPTS THE NEW HFC REFRIGERANT (R410A) WHICH DOES NOT DESTROY OZONE LAYER.**

The characteristics of R410A refrigerant are ; easy to absorb water, oxidizing membrane or oil, and its pressure is approx. 1.6 times higher than that of refrigerant R22. Accompanied with the new refrigerant, refrigerating oil has also been changed. Therefore, during installation work, be sure that water, dust, former refrigerant, or refrigerating oil does not enter the refrigerating cycle.

To prevent charging an incorrect refrigerant and refrigerating oil, the sizes of connecting sections of charging port of the main unit and installation tools are charged from those for the conventional refrigerant.

Accordingly the exclusive tools are required for the new refrigerant (R410A).

For connecting pipes, use new and clean piping designed for R410A, and please care so that water or dust does not enter. Moreover, do not use the existing piping because there are problems with pressure-resistance force and impurity in it.



WARNINGS

- **Ask an authorized dealer or qualified installation professional to install/maintain the air conditioner.**
Inappropriate installation may result in water leakage, electric shock or fire.
- **Turn off the main power supply switch or breaker before attempting any electrical work.**
Make sure all power switches are off. Failure to do so may cause electric shock.
- **Connect the connecting cable correctly.**
If the connecting cable is connected in a wrong way, electric parts may be damaged.
- **When moving the air conditioner for the installation into another place, be very careful not to enter any gaseous matter other than the specified refrigerant into the refrigeration cycle.**
If air or any other gas is mixed in the refrigerant, the gas pressure in the refrigeration cycle becomes abnormally high and it resultingly causes pipe burst and injuries on persons.
- **Do not modify this unit by removing any of the safety guards or by by-passing any of the safety interlock switches.**
- **Exposure of unit to water or other moisture before installation may cause a short-circuit of electrical parts.**
Do not store it in a wet basement or expose to rain or water.
- **After unpacking the unit, examine it carefully if there are possible damage.**
- **Do not install in a place that might increase the vibration of the unit.**
- **To avoid personal injury (with sharp edges), be careful when handling parts.**

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- **Perform installation work properly according to the Installation Manual.**

Inappropriate installation may result in water leakage, electric shock or fire.

- **When the air conditioner is installed in a small room, provide appropriate measures to ensure that the concentration of refrigerant leakage occur in the room does not exceed the critical level.**

- **Install the air conditioner securely in a location where the base can sustain the weight adequately.**

- **Perform the specified installation work to guard against an earthquake.**

If the air conditioner is not installed appropriately, accidents may occur due to the falling unit.

- **If refrigerant gas has leaked during the installation work, ventilate the room immediately.**

If the leaked refrigerant gas comes in contact with fire, noxious gas may generate.

- **After the installation work, confirm that refrigerant gas does not leak.**

If refrigerant gas leaks into the room and flows near a fire source, such as a cooking range, noxious gas might generate.

- **Electrical work must be performed by a qualified electrician in accordance with the Installation Manual. Make sure the air conditioner uses an exclusive power supply.**

An insufficient power supply capacity or inappropriate installation may cause fire.

- **Use the specified cables for wiring connect the terminals securely fix.**

To prevent external forces applied to the terminals from affecting the terminals.

- **Conform to the regulations of the local electric company when wiring the power supply.**

Inappropriate grounding may cause electric shock.

- **Do not install the air conditioner in a location subject to a risk of exposure to a combustible gas.**

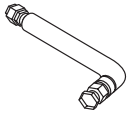
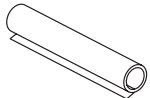
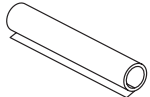
If a combustible gas leaks, and stays around the unit, a fire may occur.

2 ELBOW PIPING KIT

■ CAUTIONS

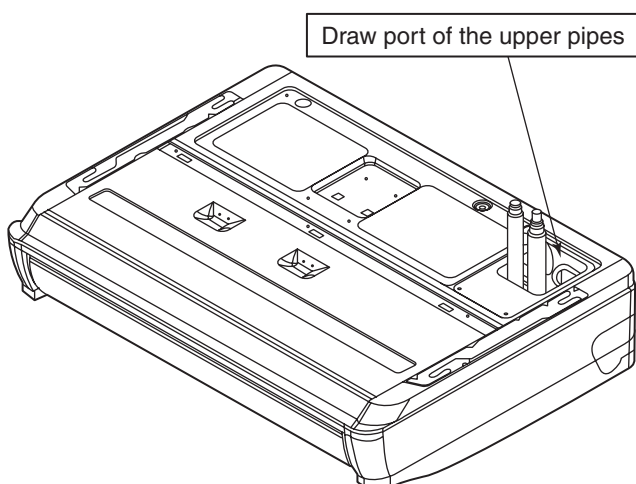
- For details of installation work, refer to the Installation Manual attached to the indoor unit.
- When installing this kit together with a Drain Pump Kit (TCB-DP22CUL), refer to the Installation Manual attached to the Drain Pump Kit.
- Please preserve this Manual with the Owner's Manual of the indoor unit.

■ Parts List

Name	Shape	Q'ty
Elbow type pipe (Gas side)		1
Elbow type pipe (Liquid side)		1
Pipe thermal insulator (Gas side)		1
Pipe thermal insulator (Liquid side)		1
Installation Manual	This manual	1
Banding band		2

■ Before Installation

Before installation, open the draw port of the upper pipes of the indoor unit.
(Sheeted knockout hole)



■ Connection of Pipes

- Be sure to use a double spanner to connect the pipes.
- Using a torque wrench, tighten surely with the specified tightening torque the connecting section of flare pipes which connect each unit of the indoor and outdoor units.

For the tightening torque, see the following table.

Outer dia. of connecting pipe	Tightening torque ft lbs (N·m)
1/4" (Ø6.4)	10.3" to 13.3" (14 to 18)
3/8" (Ø9.5)	24.3" to 31.0" (33 to 42)
1/2" (Ø12.7)	36.9" to 45.7" (50 to 62)
5/8" (Ø15.9)	50.2" to 60.5" (68 to 82)

■ Thermal Insulating Process

- Apply thermal insulation to pipes at liquid side and gas side separately.
- Using thermal insulators attached to this part and the indoor unit, apply thermal insulation to connecting section of the pipes surely without clearance.
- When fixing insulator to the elbow type pipe temporarily with the banding band attached to the Elbow Piping Kit, wrap the insulator using vinyl tape so that there is no clearance.

