

HITACHI INDOOR UNIT INSTALLATION MANUAL MODEL RAK-DJ25PHAT RAK-DJ35PHAT RAK-DJ50PHAT

Carefully read through the procedures of proper installation before starting installation work. Tools Needed For Installation Work (Mark ⊙ is exclusive use tool for R410A, R32) ⊕ ⊕ ⊕

SAFETY PRECAUTION

Read the safety precautions carefully before operating the unit. The contents of this section are vital to ensure safety. Please pay special attention to the following sign. WARNING Incorrect methods of installation may cause death or serious injury.

WARNING

Please request your sales agent or qualified technician to install your unit. Water leakage, short circuit or fire may occur if you do the installation work yourself.

Please observe the installation stated in the installation manual during the process of installation. Make sure that the units are mounted at locations which are able to provide full support to the weight of the units.

CAUTION

A circuit breaker must be installed in the house distribution box for the direct connected power supply cables to the outdoor unit. Exchange the location of drain hose and drain cap while installing the pipe from the left side as shown in below.

THE CHOICE OF MOUNTING SITE

The unit should be mounted at stable, non-vibratory location which can provide full support to the unit. The clearance distances from top, right and left are specified in figure below.

CAUTION

No nearby heat source and no obstruction near the air outlet is allowed. The clearance distances from top, right and left are specified in figure below. The location must be convenient for water drainage and pipe connection with the Outdoor unit.

Figure showing the Installation of Indoor Unit.

Diagram of indoor unit installation with dimensions and a list of indoor components including Hanger, Screw for Hanger, AAA size Battery, Remote Controller, etc.

PIPING FROM THE LEFT SIDE (BACKWARD, DOWNWARD, HORIZONTAL)

Preparation Changed of Drain Hose and Installation Procedures. Exchange the location of drain hose and drain cap while installing the pipe from the left side as shown in below. Be sure to plug in the drain hose until the insulating material folds upon itself.

CAUTION

The rubber strap used for fixing the insulator should not be tied with great force. Otherwise, this will damage heat insulation and causes water condensation. Please pull the lower part of the Indoor unit outwards to check if the unit is hooked onto the hanger.

INSTALLATION AFTER CONNECTION OF REFRIGERATING PIPES

The refrigerating pipe should be adjusted to fit into the hole on the wall and then ready for further connection. The terminals of 2 connected pipes must be covered with insulator used for terminal connection.

THE CONNECTION OF REFRIGERATING PIPE DURING THE INSTALLATION OF INDOOR UNIT

The refrigerating pipes and connecting cord transform and are attached. The end of the refrigerating pipes are at locations marked with "◁" symbol. Hang the indoor unit onto the hanger.

INSTALLATION OF REFRIGERATING PIPES AND AIR REMOVAL

Preparation of Pipe. Use a pipe cutter to cut the copper pipe and remove burr. Please be careful when bending the copper pipe. Remove burr and jagged edge will cause leakage. Point the side to be trimmed downwards during trimming to prevent copper chips from entering the pipe.

Table with 3 columns: Outer Diameter of pipe (φ), Torque N·m (kgf·cm), and Valve head cap. Rows include Small diameter side, Large diameter side, and Valve core cap.

Table for Rigid Flaring Tool. Columns: Diameter (φ), For R410A, R32 tool, and For R22 tool. Rows include Outer diameters 6.35 (1/4"), 9.52 (3/8"), and 12.7 (1/2").

Pipe Connection

CAUTION In case of removing flare nut of an indoor unit, first remove a nut of small diameter side, or a seal cap of big diameter side will fly out. Be sure to tighten the flare nut to the specified torque with a torque wrench.

CONNECTION OF POWER CORD

WARNING THIS APPLIANCE MUST BE EARTHED. Method to remove the low cover. Pull at the 1 and 2 in the directions as shown by arrows to remove the cover.

How to connect the optional parts. For cable connection to control P.W.B., you need to remove front cover and electrical box cover. Each connecting location is as below.

1 Installation of Hanger, Wall Penetration and Installation of Protection Pipe

CAUTION The draining of the water container inside the Indoor unit can be done from the left. Therefore the hanger must be fixed horizontally or slightly tilted towards the side of drain hose.

Procedures of Installation and Precautions. Procedures to fix the hanger. 1. Drill holes on wall. 2. Push plug into the holes. 3. Fix the hanger on wall with 4.1 x 32 screw.

Installation Of Remote Controller

The remote controller can be placed in its holder which is fixed on wall or beam. To operate the remote controller at its holder, please ensure that the unit can receive signal transmitted from the controller.

Wall Penetration and Installation of Protection Pipe

Drill a φ65mm hole on wall which is slightly tilted towards the outdoor side. Drill the wall at a small angle. Cut the protection pipe according to the wall thickness.

WARNING

Be sure that the wire is not in contact with any metal in the wall. Please use the protection pipe as wire passing through the hollow part of the wall so as to prevent the possibility of damaged by mouse.

2 Installation Of The Indoor Unit

Cutting Low Cover bush

While installing the pipe from the right, left or bottom side, use a knife to cut openings as shown in figure. Then smoothen the edges of openings with a file.

1 PIPING FROM THE RIGHT SIDE (BACKWARD, DOWNWARD, HORIZONTAL)

Preparation Connect connecting cord. Pull out the pipe, connecting cord and drain hose. Installation Insert the pipe through the wall hole. The upper part of the Indoor unit is hanged on the hanger.

3 Heat Insulation and Finish of the Piping

The connected terminals should be completed sealed with heat insulator and then tied up with rubber strap. Do not tie the terminals with the tape too tight. If any clearance or over-tightening may cause condensation.

4 Installation of Drain Hose

CAUTION Be sure that the drain hose is not loosely connected bend or proper condition like left figure. You are free to choose the side (left or right) for the installation of drain hose. Please ensure the smooth flow of condensed water of the Indoor unit during installation.

HOW TO REMOVE INDOOR UNIT

Push up the [PUSH] sections at the bottom of the indoor unit and pull the bottom plate towards you. Then the claws are released from the stationary plate. (The [PUSH] sections are indicated by 2 arrows in the right figure)

HOW TO REMOVE OR ATTACH THE FRONT COVER

How to remove the front cover. 1. Remove the front panel. 2. Remove the filters. 3. After removing 1 screw, remove the cover of electric box, then remove the 2 screws, pull the center of the front cover towards you and release the claws.

How to Attach the Front Cover. 1. After installing the front cover onto the unit, hook three claws at upper side of the cover securely. 2. Tighten the 2 screws. 3. Assemble the cover of electric box, then tighten the screw.

HITACHI OUTDOOR UNIT INSTALLATION MANUAL

MODEL RAC-DJ25PHAT RAC-DJ35PHAT RAC-DJ50PHAT

Carefully read through the procedures of proper installation before starting installation work. Tools Needed For Installation Work

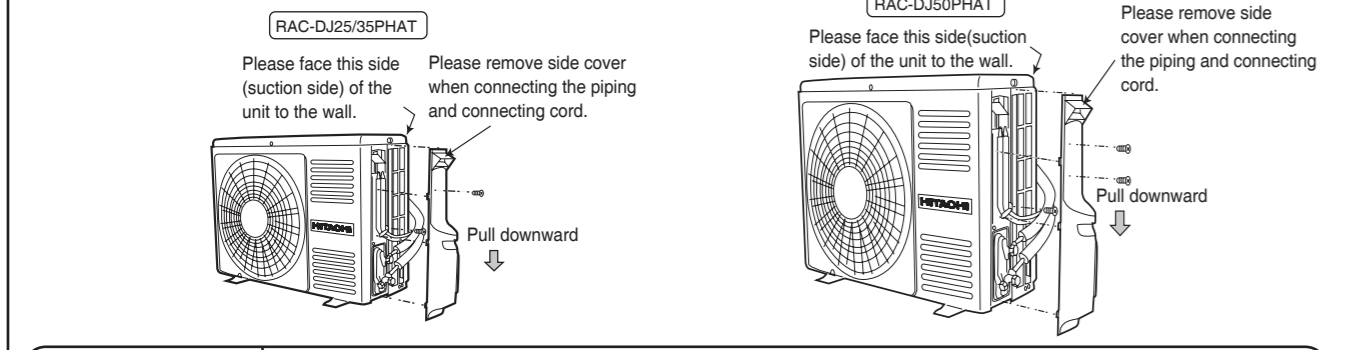
SAFETY PRECAUTION

Read the safety precautions carefully before operating the unit. This appliance is filled with R32. The contents of this section are vital to ensure safety. Please pay special attention to the following sign.

WARNING: Incorrect methods of installation may cause death or serious injury. CAUTION: Improper installation may result in serious consequence. Make sure to connect earth line.

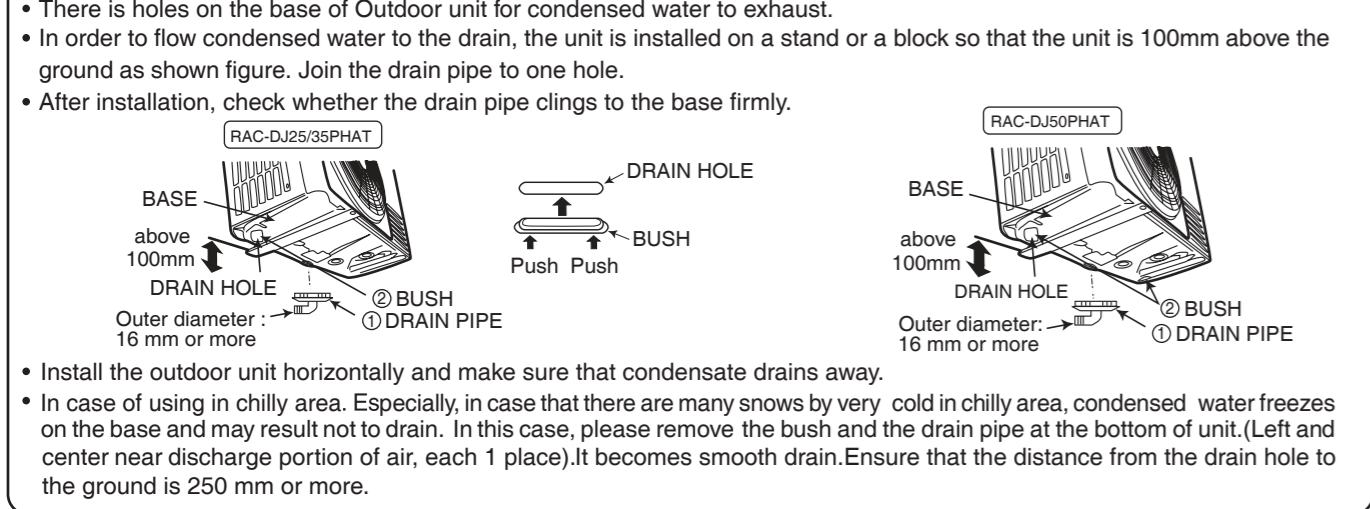
WARNING: Please request your sales agent or qualified technician to install your unit. Water leakage, short circuit or fire may occur if you do the installation work yourself.

Please mount the Outdoor unit of stable ground to prevent vibration and increase of noise level. Decide the location for piping after sorting out the different types of pipe available.



CAUTION: Do not touch the suction port, bottom surface, or aluminum fin of the outdoor unit. Failure to do so may cause an injury.

CONDENSED WATER DISPOSAL OF OUTDOOR UNIT



CAUTION: A circuit breaker must be installed in the house distribution box for the direct connected power supply cables to the outdoor unit. Do not install the unit near a location where there is flammable gas.

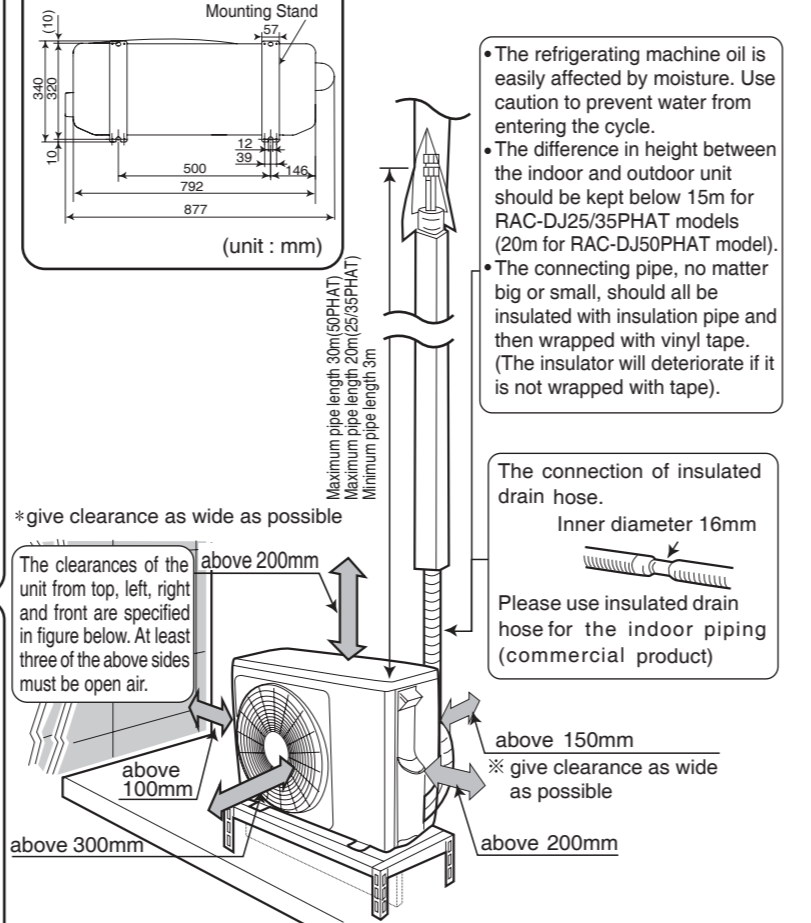
THE CHOICE OF MOUNTING SITE

WARNING: The Outdoor unit must be mounted at a location which can support heavy weight. Otherwise, noise and vibration will increase.

CAUTION: Selecting the installation location: Suitable location that will reduce the impact from rain and direct sun that may affect the unit performance. Besides, ventilation must be good and clear of obstruction.

Figure showing the Installation of Outdoor Unit.

Table with columns: No., Item, Qty. Lists Drain Pipe (1), Bush (1), and Bush (2).



For outdoor unit installation, allow at least 2 sides of space around the unit to ensure ventilation flue.

Drain hose: Drains the dehumidified water from the indoor unit to the outdoor during "cooling" or "dehumidifying" operation.

Air inlets (Rear and left sides): When "heating" operation is performed, cool air blows and when "cooling" or "dehumidifying" operation is performed, warm air blows.

About the outdoor unit: When "Stop" is selected during operation of the indoor unit, the fan of the outdoor unit continues turning for 10 to 60 seconds to cool the electric parts down.

1 Preparation of Pipe

Use a pipe cutter to cut the copper pipe and remove burr. CAUTION: Remove burr and jagged edge will cause leakage. Point the side to be trimmed downwards during trimming to prevent copper chips from entering the pipe.

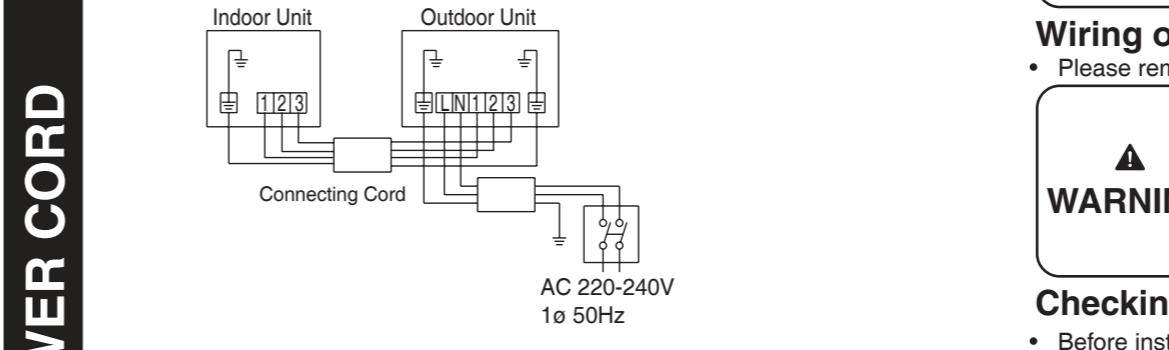
2 Pipe Connection

CAUTION: In case of removing flare nut of an indoor unit, first remove a nut of small diameter side, or a seal cap of big diameter side will fly out. Free from water into the piping when working.

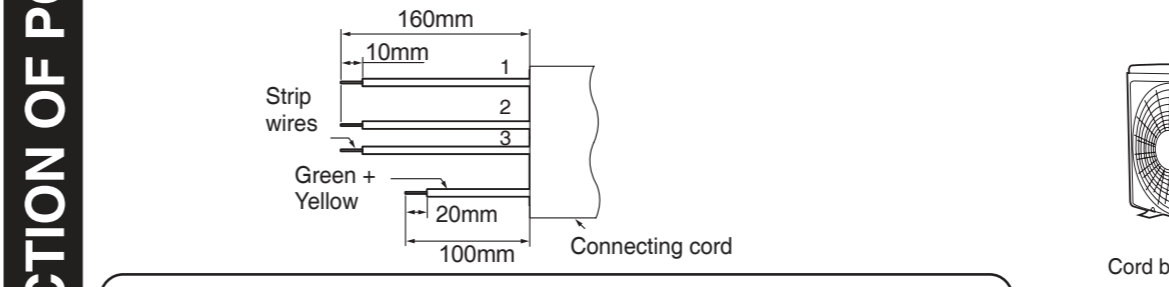
Table showing Outer diameter of pipe (ø) and Torque N·m for R410A, R32, and R22 tools.

CONNECTION OF POWER CORD

WARNING: THIS APPLIANCE MUST BE EARTHED. Procedures of Wiring: Indoor Unit, Outdoor Unit, Connecting Cord, AC 220-240V 1ø 50Hz.



Detail of Cutting the Connecting Cord



WARNING: The naked part of the wire core should be 10mm fix it to the terminal tightly. Then try to pull the individual wire to check if the contact is tight.

Investigate the power supply capacity and other electrical conditions at the installing location. Depending on the model of room air conditioner to be installed, request the customer to make arrangements for the necessary electrical work etc.

Power Source And Operation Test

Power Source: Never remodel the power plug nor extend the long-distance cord. Keep additional length for the power cord and do not render the plug under external force as this may cause poor contact.

Operation test

Please be sure to measure the supply voltage before operation test. Please ensure that the air conditioner is in normal operating condition during the operation test.

3 Remove of Air From The Pipe And Gas Leakage Inspection

Procedures of using Vacuum Pump for Air Removal: As shown in right figure, remove the cap of valve core. Then, connect the charge hose. Remove the cap of valve head. Connect the vacuum pump adapter to the vacuum pump and connect the charge hose to the adapter.

Gas leakage inspection: Please use gas leakage detector to check if leakage occurs at connection of Flare nut as shown on the right. If gas leakage occurs, further tighten the connection to stop leakage.

WARNING: Leave some space in the connecting cord for maintenance purpose and be sure to secure it with the cord band. Secure the connecting cord along the coated part of the wire using the cord band. Do not exert pressure on the wire as this may cause overheating or fire.

Wiring of the Outdoor Unit

WARNING: If you cannot attach the side plate due to the connection cord, please press the connecting cord in the direction to the front panel to fix it. Be sure that the hooks of the side cover fixed in certainly. Otherwise water leakage may occur and this causes short circuit or faults.

Checking for the electric source and the voltage range

Before installation, the power source must be checked and necessary wiring work must be completed. To make the wiring capacity proper, use the wire gauge list below for the wiring from house distribution fuse box to the outdoor unit in consideration of the blocked rotor current.

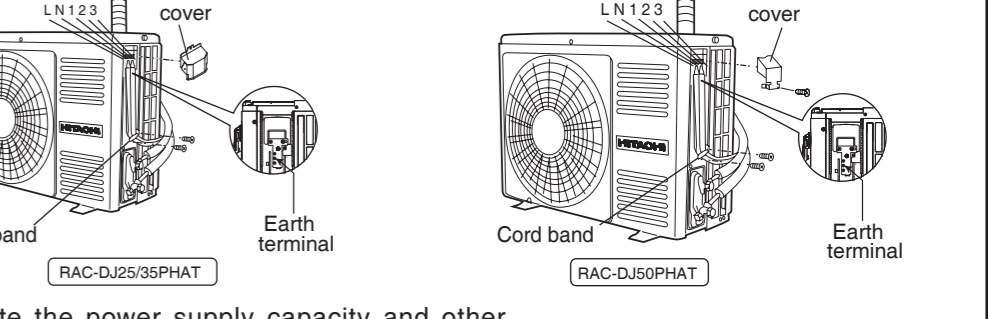


Table showing Fuse Capacity for RAC-DJ25/35PHAT (15A time delay fuse) and RAC-DJ50PHAT (25A time delay fuse).

Table showing Wire length and Wire cross-section for different wire gauges.

Refrigerant

Table showing Refrigerant (kg), GWP, and CO2 eq for RAC-DJ25PHAT, RAC-DJ35PHAT, and RAC-DJ50PHAT.

REFRIGERANT INFORMATION

CAUTION: Don't operate for over 5 minutes with the situation that the spindle of the service valve is closed. This will cause the defect. Don't operate by Cool Mode or Dry Mode with the door and windows opened.

FINAL STAGE OF INSTALLATION

REFRIGERANT INFORMATION