

MODEL NO. :- RS/RU-PV9**, RS/RU-PV12**,
RS/RU-PV18**, RS/RU-PV24**

Required tools for Installation Works

| | | | |
|--|---------------------|--------------------|----------------------|
| 1 Phillips screw driver | 6 Pipe cutter | 11 Thermometer | 55 N•m (5.6 kgf•m) |
| 2 Level gauge | 7 Reamer | 12 Megameter | 65 N•m (6.6 kgf•m) |
| 3 Electric drill, hole core drill (ø70 mm) | 8 Knife | 13 Multimeter | 100 N•m (10.2 kgf•m) |
| 4 Hexagonal wrench (4 mm) | 9 Gas leak detector | 14 Torque wrench | 15 Vacuum pump |
| 5 Spanner | 10 Measuring tape | 18 N•m (1.8 kgf•m) | 16 Gauge manifold |
| | | 42 N•m (4.3 kgf•m) | |

SAFETY PRECAUTIONS

- Read the following "SAFETY PRECAUTIONS" carefully before installation.
- Electrical work must be installed by a licensed electrician. Be sure to use the correct rating of the power plug and main circuit for the model to be installed.
- The caution items stated here must be followed because these important contents are related to safety. The meaning of each indication used is as below.
- Incorrect installation due to ignoring of the instruction will cause harm or damage, and the seriousness is classified by the following indications.

| | |
|----------------|---|
| WARNING | This indication shows the possibility of causing death or serious injury. |
| CAUTION | This indication shows the possibility of causing injury or damage to properties only. |

The items to be followed are classified by the symbols:

| | |
|--|--|
| | Symbol with white background denotes item that is PROHIBITED. |
| | Symbol with dark background denotes item that must be carried out. |

- Carry out test running to confirm that no abnormality occurs after the installation. Then, explain to user the operation, care and maintenance as stated in instructions. Please remind the customer to keep the operating instructions for future reference.

WARNING

- Do not install outdoor unit near handrail of veranda. When installing air-conditioner unit on veranda of a high rise building, child may climb up to outdoor unit and cross over the handrail causing an accident.
- Do not use unspecified cord, modified cord, joint cord or extension cord for power supply cord. Do not share the single outlet with other electrical appliances. Poor contact, poor insulation or over current will cause electrical shock or fire.
- Do not tie up the power supply cord into a bundle by band. Abnormal temperature rise on power supply cord may happen.
- Do not insert your fingers or other objects into the unit, high speed rotating fan may cause injury.
- Do not sit or step on the unit, you may fall down accidentally.
- Keep plastic bag (packaging material) away from small children, it may cling to nose and mouth and prevent breathing.
- When installing or relocating air conditioner, do not let any substance other than the specified refrigerant, eg. air etc mix into refrigeration cycle (piping). Mixing of air etc. will cause abnormal high pressure in refrigeration cycle and result in explosion, injury etc.
- Do not add or replace refrigerant other than specified type. It may cause product damage, burst and injury etc.

- For R410A model, use piping, flare nut and tools which is specified for R410A refrigerant. Using of existing (R22) piping, flare nut and tools may cause abnormally high pressure in the refrigerant cycle (piping), and possibly result in explosion and injury.
- Thickness for copper pipes used with R410A must be more than 0.8 mm. Never use copper pipes thinner than 0.8 mm.
- It is desirable that the amount of residual oil less than 40 mg/10 m.

- Engage authorized dealer or specialist for installation. If installation done by the user is incorrect, it will cause water leakage, electrical shock or fire.

- Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock or fire.

- Use the attached accessories parts and specified parts for installation. Otherwise, it will cause the set to fall, water leakage, fire or electrical shock.

- 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.
- For electrical work, follow the local national wiring standard, regulation and this installation instruction. An independent circuit and single outlet must be used. If electrical circuit capacity is not enough or defect found in electrical work, it will cause electrical shock or fire.

- Do not use joint cable for indoor / outdoor connection cable. Use the specified indoor/outdoor connection cable, refer to instruction **3. CONNECT THE CABLE TO THE INDOOR UNIT** and connect tightly for indoor/outdoor connection. Clamp the cable so that no external force may have impact on the terminal. If connection or fixing is not perfect, it will cause heat up or fire at the connection.

- Wire routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, it will cause fire or electrical shock.

- This equipment is strongly recommended to be installed with Earth Leakage Circuit Breaker (ELCB) or Residual Current Device (RCD), with sensitivity of 30mA at 0.1 sec or less. Otherwise, it may cause electrical shock and fire in case of equipment breakdown or insulation breakdown.

- During installation, install the refrigerant piping properly before running the compressor. Operation of compressor without fixing refrigeration piping and valves at opened condition will cause suck-in of air, abnormal high pressure in refrigeration cycle and result in explosion, injury etc.

- During pump down operation, stop the compressor before remove the refrigeration piping. Remove the refrigeration piping while compressor is operating and valves are opened will cause suck-in of air, abnormal high pressure in refrigeration cycle and result in explosion, injury etc.

- Tighten the flare nut with torque wrench according to specified method. If the flare nut is over-tightened, after a long period, the flare may break and cause refrigerant gas leakage.

- After completion of installation, confirm there is no leakage of refrigerant gas. It may generate toxic gas when the refrigerant contacts with fire.

- Ventilate if there is refrigerant gas leakage during operation. It may cause toxic gas when the refrigerant contacts with fire.

- This equipment must be properly earthed. Earth line must not be connected to gas pipe, water pipe, earth of lightning rod and telephone. Otherwise, it may cause electrical shock in case of equipment breakdown or insulation breakdown.

CAUTION

- Do not install the unit at place where leakage of flammable gas may occur. In case gas leaks and accumulates at surrounding of the unit, it may cause fire.
- Do not release refrigerant during piping work for installation, re-installation and during repairing a refrigeration parts.
- Take care of the liquid refrigerant, it may cause frostbite.
- Do not install this appliance in a laundry room or other location where water may drip from the ceiling, etc.
- Do not touch the sharp aluminium fin, sharp parts may cause injury.

- Carry out drainage piping as mentioned in installation instructions. If drainage is not perfect, water may enter the room and damage the furniture.

- Select an installation location which is easy for maintenance.

- Power supply connection to the room air conditioner.

- Use power supply cord 3 x 1.5 mm² (1.0 - 2.0HP) or 3 x 2.5 mm² (2.5HP) type designation 60245 IEC 57 or heavier cord. Connect the power supply cord of the air conditioner to the main using one of the following method. Power supply point should be in easily accessible place for power disconnection in case of emergency. In some countries, permanent connection of this air conditioner to the power supply is prohibited.

- 1) Power supply connection to the receptacle using power plug.

- Use an approved 15A (1.0 - 2.0HP) or 20A (2.5HP) power plug with earth pin for the connection to the socket.

- 2) Power supply connection to a circuit breaker for the permanent connection.

- Use an approved 16A (1.0 - 2.0HP) or 20A (2.5HP) circuit breaker for the permanent connection. It must be a double pole switch with a minimum 3.0 mm contact gap.

- Installation work.

- It may need two people to carry out the installation work.

| No. | Accessories part | Qty. | No. | Accessories part | Qty. |
|-----|---------------------------------|------|-----|------------------------------------|------|
| 1 | Installation plate | 1 | 5 | Remote control holder | 1 |
| 2 | Installation plate fixing screw | 5 | 6 | Remote control holder fixing screw | 2 |
| 3 | Remote control | 1 | 7 | Drain elbow | 1 |
| 4 | Battery | 2 | | | |

| Model | Horse Power (HP) | Piping size | | Std. Length (m) | Max. Piping Length (m) | Min. Piping Length (m) | Max. Piping Length (m) | Additional Refrigerant (g) | Piping Length for add. gas (m) |
|--------|------------------|----------------|---------------|-----------------|------------------------|------------------------|------------------------|----------------------------|--------------------------------|
| | | Gas | Liquid | | | | | | |
| PV9** | 1.0HP | 9.52mm (3/8") | 6.35mm (1/4") | 5 | 3 | 15 | 10 | 7.5 | 7.5 |
| PV12** | 1.5HP | 12.7mm (1/2") | 6.35mm (1/4") | 5 | 3 | 15 | 10 | 7.5 | 7.5 |
| PV18** | 2.0HP | 12.7mm (1/2") | 6.35mm (1/4") | 5 | 3 | 15 | 10 | 7.5 | 7.5 |
| PV24** | 2.5HP | 15.88mm (5/8") | 6.35mm (1/4") | 5 | 3 | 30 | 25 | 7.5 | 7.5 |

SELECT THE BEST LOCATION

INDOOR UNIT

- Do not install the unit in excessive oil fume area such as kitchen, workshop and etc.

- There should not be any heat source or steam near 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 spaces indicated by arrows from the wall, ceiling, fence or other obstacles.

- Indoor unit of this air conditioner shall be installed in a height of at least 1.8 m.

OUTDOOR UNIT

- If an awning is built over the unit to prevent direct sunlight or rain, be careful that heat radiation from the condenser is not obstructed.

- There should not be any animal or plant which could be affected by hot air discharged.

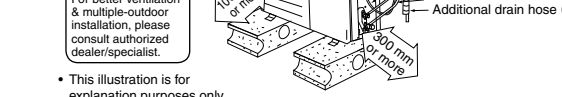
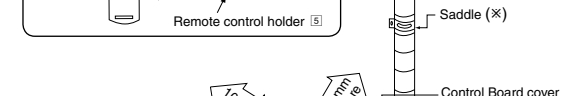
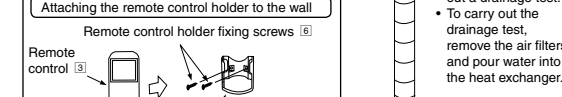
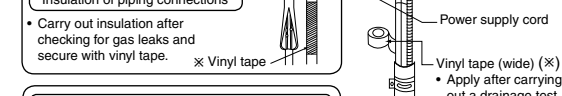
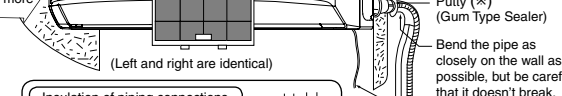
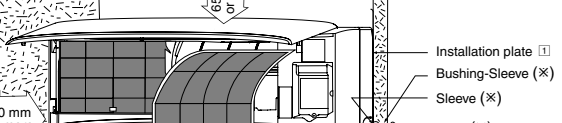
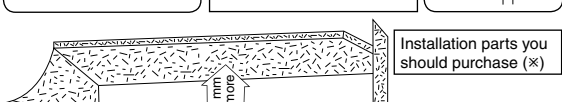
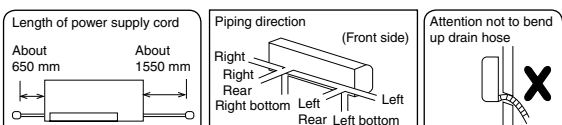
- Keep the spaces indicated by arrows from wall, ceiling, fence or other obstacles.

- Do not place any obstacles which may cause a short circuit of the discharged air.

- If piping length is over the [piping length for additional gas], additional refrigerant should be added as shown in the table.

Example: For PV9**
If the unit is installed at 10 m distance, the quantity of additional refrigerant should be 25 g ... (10-7.5) m x 10 g/m = 25 g

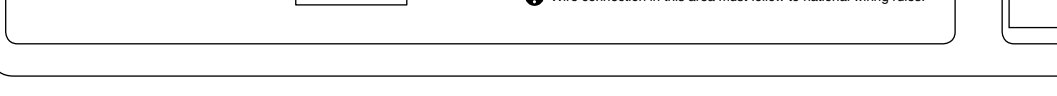
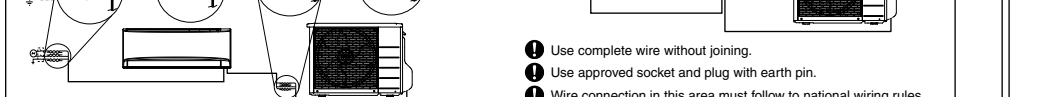
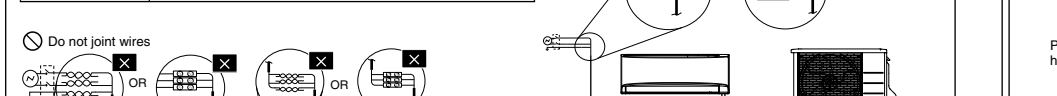
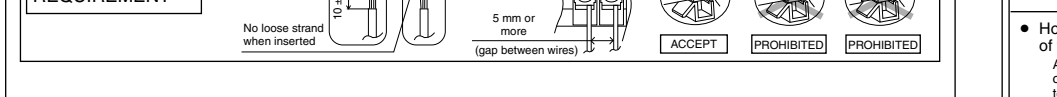
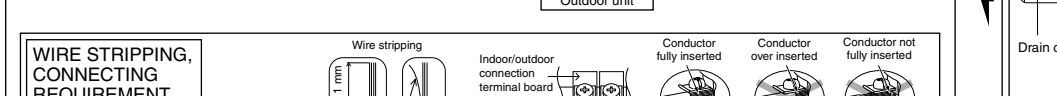
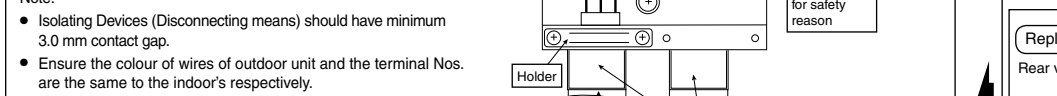
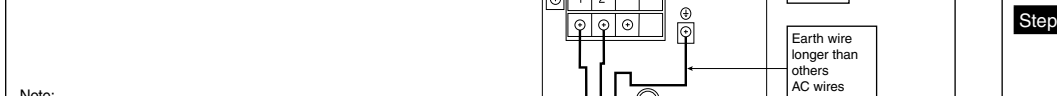
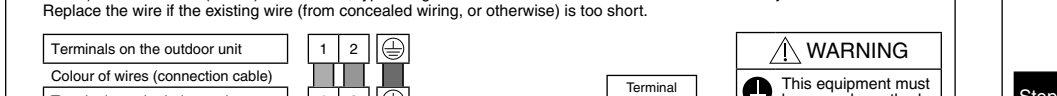
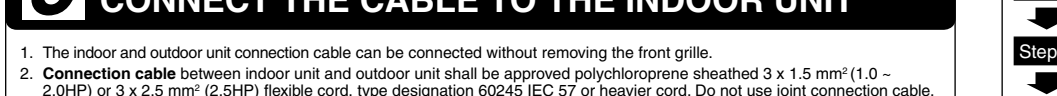
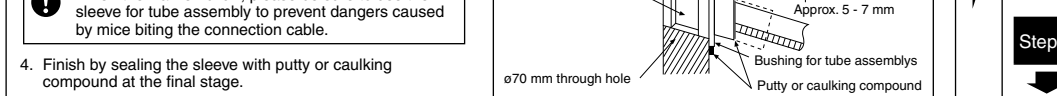
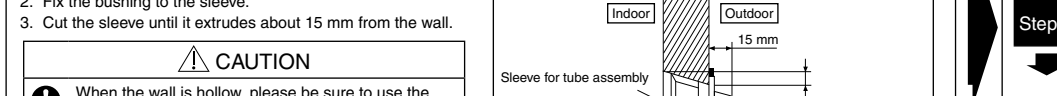
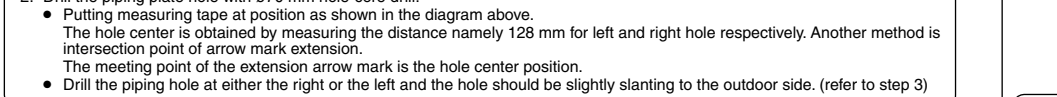
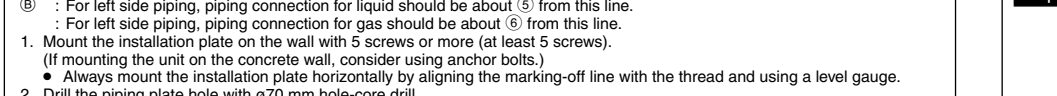
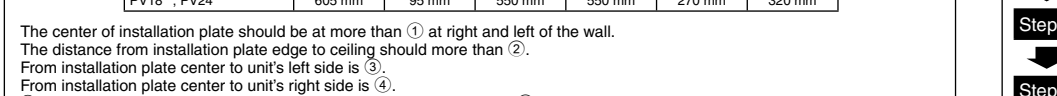
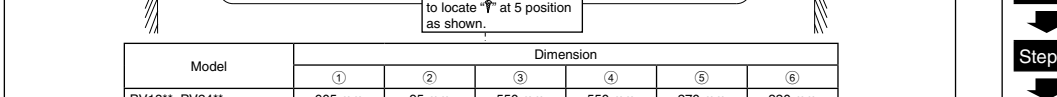
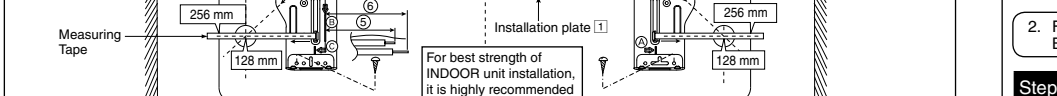
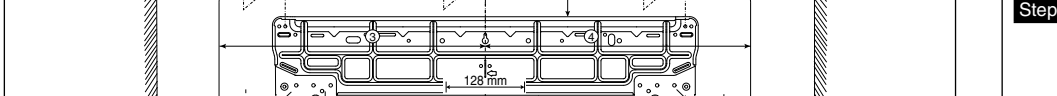
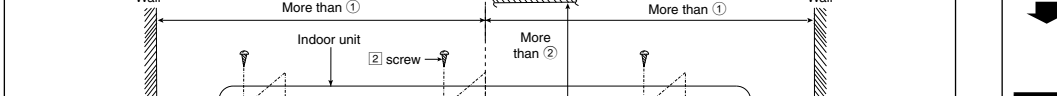
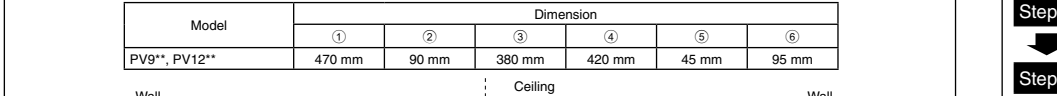
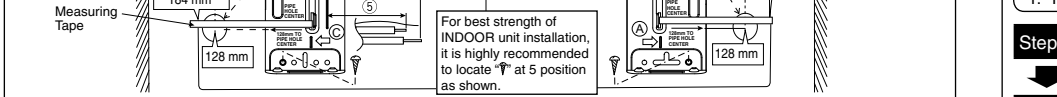
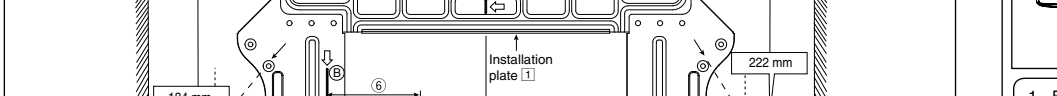
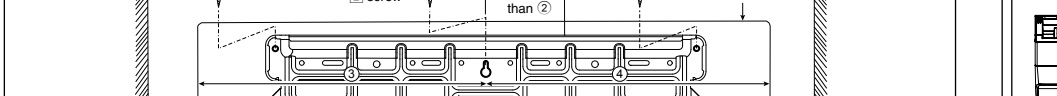
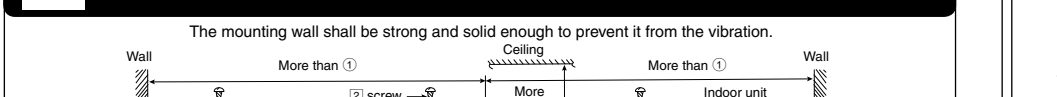
Indoor/Outdoor Unit Installation Diagram



INDOOR UNIT

1 SELECT THE BEST LOCATION

2 HOW TO FIX INSTALLATION PLATE



4 INDOOR UNIT INSTALLATION

