

# MITSUBISHI

## Air Conditioner Accessory

### DRAIN WATER LIFT-UP KIT (PAC-KE03DM-G)

## Installation Manual



### Caution

Confirm correct model before installation and care should be taken during installation.

WT04650X01

## Safety Precautions

Before beginning installation, please read and understand these "Safety Precautions." The following system is used to stress the importance of the safety-related item. Always read and follow them.



### WARNING

There is a high potential that an error in handling could result in serious injury or death.



### CAUTION

There is the potential that an error in handling could result in serious injury corresponding to a condition.

After reading this manual, pass it on to others who will be using the equipment. Those who will be operating the equipment should store this manual in a safe place where it is easily accessible for reference. This manual should also be provided to anyone moving or repairing the equipment.



### WARNING

#### **Always have the unit installed by Authorized Mitsubishi Representative or similar professional.**

Improper installation by the user could result in problems such as water leakage, electric shock or fire.

#### **Install the unit according to this Installation Manual.**

If the unit is installed improperly, water leakage, electric shock or fire may result.

#### **Always use the designated cables and connect them properly. When connecting the terminals, make sure that external forces from the cable are not being conveyed to the terminal and then tighten them securely.**

Improper or loose connections could cause excessive heat or fire.

#### **Have all electric work performed by a properly licensed electrician. Electric work should be performed in strict adherence to procedures within this Installation Manual and current legislation. Always provide a dedicated power supply.**

If the capacity of the power supply is inadequate, it could result in problems such as electric shock or fire.

#### **Only use Mitsubishi-approved accessories, such as an air cleaner, humidifier or electric heater.**

Always have such accessories installed by an Authorized Mitsubishi Representative or similar professional. Improper installation by the user may result in water leakage, electric shock or fire.

#### **Never modify the unit and always have repairs performed by an Authorized Mitsubishi Representative.**

Improper repair could result in problems such as water leakage, electric shock or fire.

## PRECAUTIONS BEFORE INSTALLATION



### CAUTION

#### Never use for special applications such as storing food, plants, precision equipment or art.

- The quality of these items may deteriorate.

#### Always provide adequate signal noise protection when installing in facilities such as hospitals and communication stations.

- Equipment at these facilities, such as inverters, in-house generators, high-frequency medical equipment, two-way communication equipment, may cause the air conditioner to operate improperly. Conversely, the signal noise from the air conditioner may affect the operation of medical equipment and two-way communication equipment and this could interfere with the medical treatment being given to patient's or cause disturbances or interference in video broadcasting equipment.

#### Never use the unit in special environments.

- Special environments with high concentrations of oil, steam or sulphuric gases will reduce the performance of the air conditioning unit and cause its parts to deteriorate.

#### Never install the unit where run-off could result in damage.

- If the humidity in the room exceeds 80% or if the drain becomes clogged, water may drain off of the indoor unit. When the unit is used for heating, there may be drainage from the outdoor unit. If required, provide collector and drain for the outdoor unit.

## PRECAUTIONS BEFORE REMOVAL AND ELECTRIC WORK



### CAUTION

#### Route wiring so that there is no tension.

- Tension could cause the wire to break and this could result in excessive heat or fire.

#### Dispose of packing materials properly.

#### Use care when transporting the unit.

- Always use two or more people for lifting a product weighing 20 kg. or more.
- Some products are packaged with plastic wrapping bands. Never use these for lifting or transporting the product.
- Never touch the fins on the heat exchanger. They are sharp and could cause cuts.
- Never allow children to play with the plastic bags used for packaging. Always tear them up when disposing. A child could suffocate in these bags.

## PRECAUTIONS BEFORE TEST RUN



### CAUTION

#### Never touch the switch with wet hands.

- Electric shock could occur.

#### Never operate the air conditioner with the air filter removed.

- Particles will enter into the air conditioner and cause damage.

#### Never operate the air conditioner with the panel or guard removed.

- Due to the high risk of personnel injury through contact with electrical, rotating and high temperature components.

#### Never turn off the power supply immediately after stopping the unit.

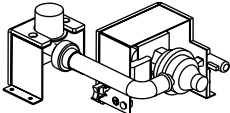
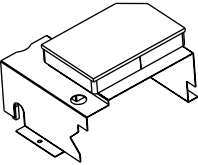
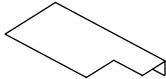
- Wait five minutes or more before turning off the power supply. Turning off the power supply before that time could result in water leakage or damage.

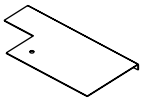


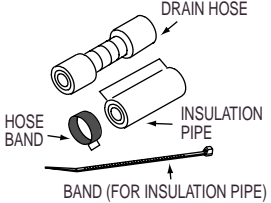
## Model name

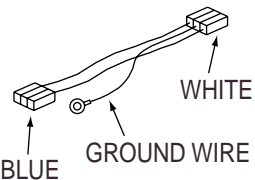


Model grouping	Control class	Performance type	Target models
group A1 (M-NET/A control)	M-NET, A control model	20~80	PEFY-P20VMM-E PEFY-P25VMM-E PEFY-P32VMM-E PEFY-P40VMM-E PEFY-P50VMM-E PEFY-P63VMM-E PEFY-P71VMM-E PEFY-P80VMM-E
group A2 (M-NET/A control)	M-NET, A control model	100~140	PEFY-P100VMM-E PEFY-P125VMM-E PEFY-P140VMM-E
group B1 (New A control)	New A control model	20~71	PEAD-RP35EA, PEHD-P35EAH PEAD-RP35EA2 PEAD-RP50EA, PEHD-P50EA PEAD-RP60EA, PEHD-P60EA PEAD-RP71EA, PEHD-P71EA
group B2 (New A control)	New A control model	100~140	PEAD-RP100EA, PEHD-P100EAH PEAD-RP100EA2 PEAD-RP125EA, PEHD-P125EA PEAD-RP140EA, PEHD-P140EA

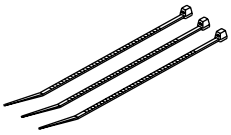
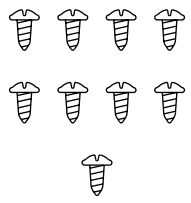
## Provided Parts

In addition to this Installation Manual, the following parts are provided with the accessory. Please check that all of the parts are available.

ITEM	① DRAIN PUMP ASSY.	② PUMP COVER ASSY.	③ DRAIN PAN COVER
SHAPE			
Q'TY	1	1	1
Target models	group A1	○	○
	group A2	○	○
	group B1	○	○
	group B2	○	○

ITEM	④ DRAIN PAN COVER	⑤ RUBBER PLUG	⑥ INSULATION PIPE	⑦ DRAIN HOSE SET
SHAPE				
Q'TY	1	1	1	1
Target models	group A1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	group A2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	group B1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	group B2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ITEM	⑧ LEAD WIRE(PUMP)	⑨ LEAD WIRE(SENSOR)	⑩ LEAD WIRE(SENSOR)
SHAPE			
Q'TY	1	1	1
Target models	group A1	<input type="radio"/>	<input type="radio"/>
	group A2	<input type="radio"/>	<input type="radio"/>
	group B1	<input type="radio"/>	<input type="radio"/>
	group B2	<input type="radio"/>	<input type="radio"/>

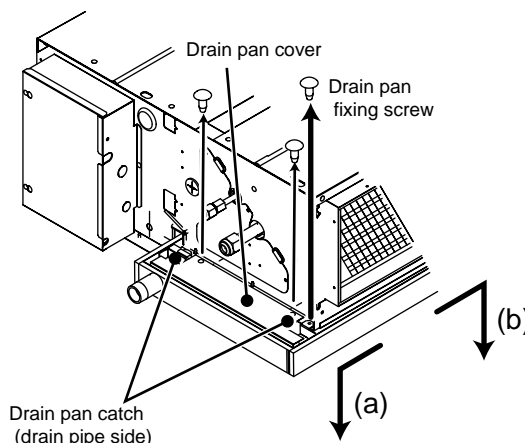
ITEM	⑪ BAND	⑫ PTT SCREW 4X10
SHAPE		
Q'TY	3	8+1(RESERVE)
Target models	group A1	<input type="radio"/>
	group A2	<input type="radio"/>
	group B1	<input type="radio"/>
	group B2	<input type="radio"/>

# 1 Installing the Drain Pump

The Drain Pump must be fitted before installing the indoor unit.

## 1. Removing the Drain pan

- (1) Remove the screw that fixes the drain pan.
- (2) Slide the drain pan in the direction (a), and unhook the drain pan catch near the drain pipe.
- (3) Slide the drain pan in the direction (b), and unhook the drain pan catch on the other side.
- (4) Remove the 2 screws that fix the drain pan cover, and remove it.

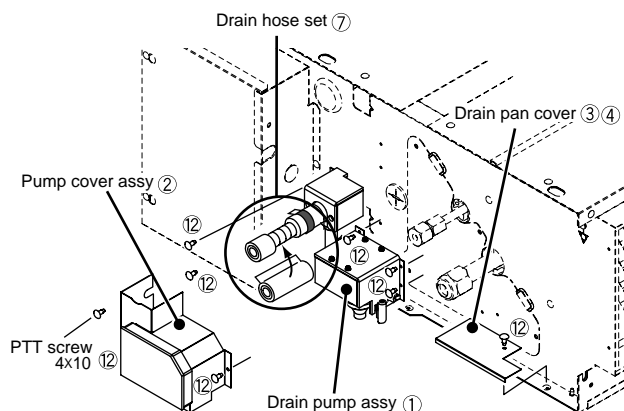


## 2. Installing the Drain pump

- (1) Use five PTT Screws ⑫ to fit the Drain pump assy ①.
- (2) Use two PTT Screws ⑫ to fit the Pump cover assy ②.
- (3) Use one PTT Screw ⑫ to fit the Drain pan cover ③④.

**<Caution>** At this time, install drain pan cover ③ onto P20 to 80 models, and drain pan cover ④ on P100 to 140 models.

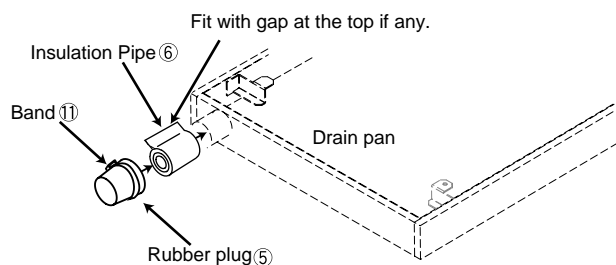
- (4) Install the drain hose set ⑦ onto the drain socket. Insert the drain hose into the socket, and fix with the hose band. After connecting the drain pipe, insulate with insulation pipe. (Fix with the enclosed band.)



Note: Do not pinch the sensor wire with Pump cover assy ②.

## 3. Plug the original drain port with the Rubber plug.

- (1) Put insulation pipe ⑥ round the drain pipe to prevent dewing.
- (2) Plug the original drain port with Rubber plug ⑤.
- (3) Tie Rubber plug ⑤ securely on the drain port by Band ⑪ in order to prevent leakage.

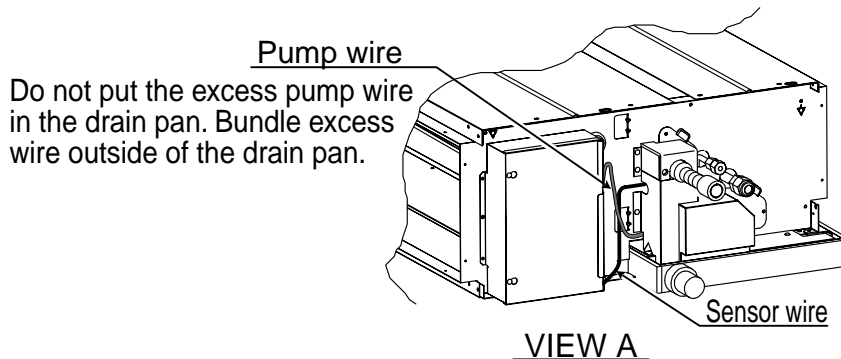
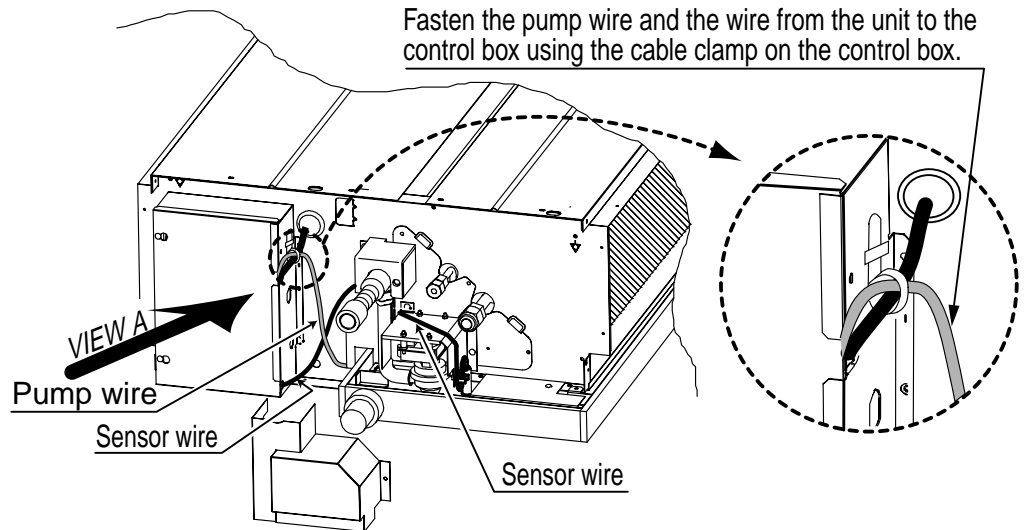


## 2 Wiring

### (1) Wiring connection

For group A1, A2	For group B1, B2	Ground Wire Connection
<p>INDOOR P.W.B.</p> <p>⑧ LEAD WIRE (PUMP)</p> <p>CNP</p> <p>DRAIN PUMP</p> <p>REFER TO "GROUND WIRE CONNECTION."</p> <p>CN31</p> <p>⑨ LEAD WIRE (SENSOR) : YELLOW</p> <p>DRAIN SENSOR</p>	<p>INDOOR P.W.B.</p> <p>⑧ LEAD WIRE (PUMP)</p> <p>CNP</p> <p>DRAIN PUMP</p> <p>REFER TO "GROUND WIRE CONNECTION."</p> <p>CN31</p> <p>⑩ LEAD WIRE (SENSOR) : WHITE</p> <p>DRAIN SENSOR</p>	<p>⑧ LEAD WIRE (PUMP)</p> <p>GROUND WIRE</p> <p>GROUND WIRE ON THE UNIT</p>
<p>Connect the drain sensor connector to CN31 . Connect the drain pump to CNP with lead wire ⑧.</p>	<p>Connect the drain sensor connector to CN31 . Connect the drain pump to CNP with lead wire ⑧.</p>	<p>Screw the ground wire to the ground screw together with the ground wire on the unit.</p>

(2) Once the wiring has been completed, use Band ⑪ to bundle the excess wiring. Make sure that the lead connectors do not come in contact with the edge sections of the sheet metal.



### 3 Drain piping

- (1) The drain piping should be set so that it has a gradient of more than 1/100 from the discharge side. Use care in routing the pipe so that no traps or rises are formed in the layout. (Please refer to Fig. 3-1)
- (2) The drain should not extend for more than 20 meters laterally (not including the difference between low and high points). In addition, if the drain piping is long, make sure to use support brackets along the way to eliminate dipping in the piping. Don't connect to air leakage pipe. There are times when the water will spurt out of the drain.
- (3) Use hard vinyl piping for the drain piping. (This is the common VP-25 type with an external diameter of  $\varnothing 32$ .) Always use a vinyl-based adhesive at all joints to prevent leakage.
- (4) If there is a collector pipe, as shown in Fig. 3-2, position the collector pipe 10 cm lower than the drain port of this unit. In addition, make sure the collector pipe has a gradient of more than 1/100.
- (5) Do not install a vapor trap (odor lock) at the discharge port of the drain piping.
- (6) Carefully position the discharge port of the drain pipe so that there will be no possibility of odors being created.
- (7) Do not insert the drain pipe into a sewer (soil) pipe.
- (8) The mounting port for the drain pipe can be up to 500 mm higher than the lower surface of the indoor unit. If there is some obstruction in the ceiling, carefully route the drain pipe around it with minimal rise. (Refer to Fig. 3-3)
- (9) Always use the drain hose for the indoor unit that has been provided. Do not apply unreasonable force to the drain hose.  
**Caution:** Keep the rise in the drain pipe to an absolute minimum. If there is a long rise, water will flow back when the power is turned off. If the unit is left off for a season, fungus and algae could develop and cause odors.
- (10) Always use insulation on the drain pipe.

Fig.3-1

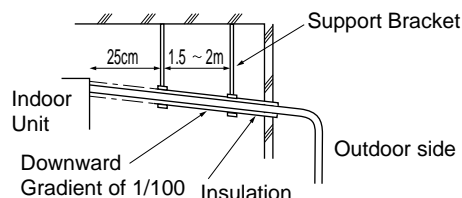


Fig.3-2

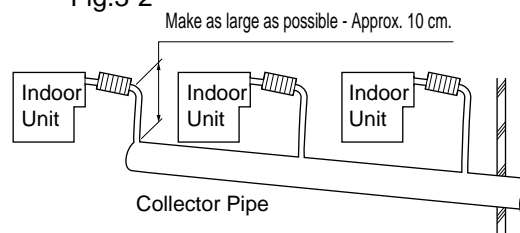
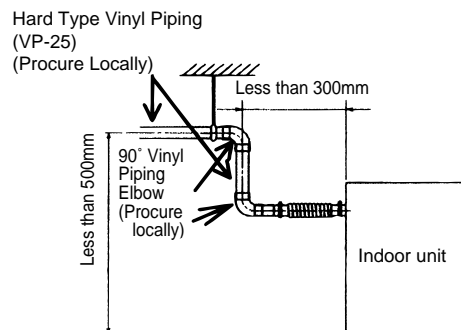


Fig.3-3



#### ⚠ CAUTION

Route the drain piping so that it ensures proper drainage. Ensure that there is enough warmth to prevent dewing. Improper piping insulation can result in water leakage which could damage the area where the unit has been installed.

## 4 Confirm Drainage

Confirm that the DRAIN-UP system is operating properly in both heating and cooling cycles and that drainage is being performed correctly. Also check during operation that there is no water leaking from any of the joints.

\* If the unit is being installed in a new site, it is best to do the installation before the ceiling is built.

- (1) Use a water feed pump or other method to pour some water into the drain pan. When doing this, make sure that no water spills from the drain pan. Also use care not to splash water on the drain pump or drain sensor at this time.
- (2) Turn on the power for the indoor unit. Use the remote controller to select "Test Operation" mode. (Refer to the Installation Manual provided with the indoor unit for details.) Press the "Change Operation" button and set the unit to "Cooling." Confirm that drainage is taking place by looking at the clear hose.
- (3) After confirmation has been made, turn off the power. If it's during the heating season, remove the Rubber plug and allow the water to drain out. Be sure to replace the plug once the water has been drained out.

Please double check the installation.