MITSUBISHI ELECTRIC

Package air-conditioner Optional parts Installation Manual for Joint Pipe

(PAC-SG72/73/74/75RJ-E, PAC-SH30/50RJ-E)

C ETL US LISTED Intertek 33223
Only PAC-SH30/50RJ-E have acquired ETL.

Always observe for safety

- Carefully read this section "Always observe for safety", and securely install the optional parts.
- Be sure to observe the cautions described here: They include critical contents for safety.
- The following indications show the classification of danger and possible consequences following incorrect installation.

⚠WARNING	Incorrect installation could lead to death or serious injury.
⚠CAUTION	Incorrect installation could lead to injury or damage to house and household articles.

- After installation, perform a test run and make sure that there is no abnormality, and then hand this manual to customer explaining the "Always observe for safety", how to use and clean, etc.
  Ask your customer to keep this installation sheet with the instruction manual at all time. Also ask the customer to transfer these manuals to a new user if the user changes.

⚠WARNING

Ask the dealer or specialist for installation.
- If installed incorrectly by user, water leak, electric shock, fire, etc. could result.

Securely perform installation using tools and piping parts specially made for the refrigerant R410A, according to this installation manual.
- Since pressure of HFC type refrigerant R410A being used increases higher about 1.6 times compared with conventional refrigerant, if specified piping parts are not used or installation is not correct, it could cause explosion or injury, and in less severe cases, water leak, electric shock or fire.

If the unit is installed in a small room, make sure that limit density will not be exceeded even if refrigerant leaks.
- Consult your dealer for proper countermeasures against exceeding limit density.
  If limit density is exceeded, it may cause lack of oxygen hazard.

Ventilate if refrigerant leaks.
- If refrigerant touches heat source, it could cause generation of harmful gas.

When installing or reinstalling after moving, do not mix any material inside refrigerant cycle other than refrigerant specified (R410A).
- If air, etc. is mixed, pressure inside of refrigerant cycle may become abnormally high, which could cause explosion, etc.

Never remodel.
- Consult your dealer for repair. If remodeled or repaired incorrectly by user, it may cause water leak, electric shock or fire.

Do not move and re-install by user itself.
- If installation is not correct, it may cause water leak, electric shock or fire. Ask your dealer or vendor.

After installation is complete, make sure that refrigerant does not leak.
- If refrigerant leaks inside the room and reaches heat source such as fan heater, stove, etc., it could cause generation of harmful gas.

Before installation

⚠Caution

Do not use in unusual circumstances
- Do not use in a place where there is much oil (including machine oil), steam, sulfration gas, or high salt content (seaside area), or where outdoor unit is blocked by snow cover. Doing so could damage the performance of the unit and parts may be broken.

Do not install in a place where flammable gas could be generated, flow in, remain or leak.
- Gas accumulating around the unit could cause fire or explosion.

Before performing installation (moving)

⚠Caution

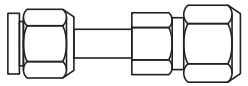
Securely apply heat-insulation to refrigerant pipe so that no condensation occurs.
- If heat-insulation is incorrect, condensation could occur on the surface of pipes and dewdrops could accumulate on ceiling, floor or important goods.

Tighten flare nuts using torque wrench according to the specified method.
- If tightened too strongly, there could occur breakage of flare nut or leakage of refrigerant after a long period of time.

Before installing these optional parts, be sure to read **Always observe for safety** in the installation manual attached to the outdoor unit and observe instructions given there.

Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
- PAC-SG72RJ-E (unit side: 6.35 diameter, onsite pipe side: 9.52 diameter)
- PAC-SG73RJ-E (unit side: 9.52 diameter, onsite pipe side: 12.70 diameter)
- PAC-SG74RJ-E (unit side: 12.70 diameter, onsite pipe side: 15.88 diameter)
- PAC-SG75RJ-E (unit side: 15.88 diameter, onsite pipe side: 19.05 diameter)
- PAC-SH30RJ-E (unit side: 9.52 diameter, onsite pipe side: 6.35 diameter)
- PAC-SH50RJ-E (unit side: 15.88 diameter, onsite pipe side: 12.70 diameter)

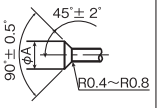


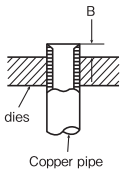
Installation procedure (carefully read the following before installing.)

This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.

※When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor unit.

1) Apply flare processing to onsite pipes to adapt to R410A, according to the table on the right.
   Use optional accessory flare nut at this time.
   ※Check the installation manual attached to the outdoor unit for advisability on whether or not onsite (existing) pipes can be used.
   ※When pipe of 19.05 diameter is used, be sure to turn ON the SW8-1 on outdoor unit control board.

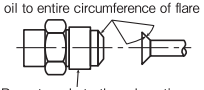
Outer diameter of copper pipe (mm)	Processing size of flare section (mm)	Flare shape
ϕ6.35	8.7~9.1	
ϕ9.52	12.8~13.2	
ϕ12.70	16.2~16.6	
ϕ15.88	19.3~19.7	
ϕ19.05	23.6~24.0	



Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
ϕ 6.35(1/4")	0~0.5	1.0~1.5
ϕ 9.52(3/8")	0~0.5	1.0~1.5
ϕ12.70(1/2")	0~0.5	1.0~1.5
ϕ15.88(5/8")	0~0.5	1.0~1.5
ϕ19.05(3/4")	0~0.5	1.0~1.5

※When flare processing for refrigerant R410A is applied using current tool, refer to the table above. B size can be secured using copper pipe gauge for margin adjustment.

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerator oil (locally procured) on flare surface.

Refrigerator oil application point
Apply refrigerator oil to entire circumference of flare sheet surface.

※Do not apply to thread section. (If applied to threads, flare nut can easily be loosened.)

3) Securely tighten flare nut using torque wrench according to the table on the right.

〈Proper tightening torque using torque wrench〉

Outer diameter of copper pipe (mm)	Tightening torque N·m (kgf·cm)
ϕ6.35	14~18(140~180)
ϕ9.52	34~42(340~420)
ϕ12.70	49~61(490~610)
ϕ15.88	68~82(680~820)
ϕ19.05	100~120(1000~1200)

4) After refrigerant pipe is connected, be sure to perform gas leakage inspection for onsite connection pipes (including this optional part) and indoor/outdoor unit.

5) Heat insulation is necessary for this optional part: Wrap heat insulator (locally procured) around the onsite pipes and also the optional part (for dewdrop dripping prevention).

6) Perform test run according to the installation manual of the unit, making sure to also perform operation check.

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