Contents

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 classifications for danger and possible consequences following incorrect handling.

⚠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 ask your customer to keep the installation manual at all times.

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

⚠WARNING

Ask dealer or specialist for installation.

●If installed incorrectly by user, water leak, electric shock, fire, etc. could happen.

Securely perform installation using tools and piping parts specially made for the refrigerant R410A, referring to this installation manual.

●Since pressure of HFC type refrigerant R410A is about 1.6 times higher than the conventional refrigerant, if specified piping parts are not used or installation is not correct, it could cause explosion or injury, and even in less severe cases, water leak, electric shock or fire can happen.

When installing or reinstalling the unit, do not mix anything into the refrigerant cycle other than the specified refrigerant (R410A).

●If air, etc. is mixed, pressure within the refrigerant cycle may become abnormally high, which could cause explosion, etc.

When the unit is installed in a small room, make sure to keep density not exceed even when refrigerant leaks.

●Consult your dealer for proper countermeasures to keep the density. If the density exceeds, oxygen may leak.

Ventilate when refrigerant leaks.

●If refrigerant touches heat source, it could produce harmful gas.

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 reinstall by yourself.

●If installation is not correct, it may cause water leak, electric shock or fire. Ask your dealer or vendor.

After installation is completed, make sure that refrigerant does not leak.

●If refrigerant leaks in the room and reaches heat source such as fan heater, oil heater, etc., harmful gas may be produced.

⚠CAUTION

Before installation

Do not use in unusual circumstances

●Do not use in a place where there is much oil (including machine oil), steam, sulfation gas, or high salt content (seaside area), or where outdoor unit can be covered with snow. This could affect the performance of 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 test run

Turn on the power at least 12 hours before starting test run.

●If test run is started immediately after power is turned on, it may cause trouble. Do not turn off power during the season when the unit is being used.

Do not touch refrigerant pipe with a bare hand during operation.

●Refrigerant pipe becomes hot or cold according to the flow condition of refrigerant. Touching pipe with a bare hand could cause frost or burn injury.

Before performing installation and electrical construction:

Securely apply heat-insulation to refrigerant pipe so that no condensation occurs.

●If heat-insulation is insufficient, condensation could occur on the surface of pipes and dew drops could accumulate on ceiling, floor or important goods.

Tighten flare nuts using torque wrench with the specified method.

●If tightened too strongly, there could occur breakage of flare nut or leakage of refrigerant after a long period.

Do not place polyethylene bags in reach of children.

● Putting it over the head could result in suffocation.

If wiring for power supply is necessary, use only specified wires that comply with current capacity.

● Using inappropriate wires could cause leak, heat generation,

If drain piping is necessary, lay piping for secure drain, referring to instruction manual, and maintain the temperature to prevent condensation.

●Incomplete piping will cause water leak, which could wet ceiling, floor or household goods.

If refrigerant piping is necessary, insulate pipes properly so that condensation does not occur.

●Incomplete insulation will cause condensation on surface of pipes, etc. and moisture will drip, which could wet ceiling, floor or other areas.

⚠ CAUTION

Cautions on use of the units with refrigerant R407C/R410A

When existing pipes are to be used, take care to secure cleanliness and gas leakage prevention.

- Refer to the installation manual to check whether or not the current pipes can be used.
- Do not reuse flare nut, to prevent gas leakage. Replace with a new flare nut suitable for refrigerant specified by the outdoor unit, and also apply flare processing suitable for newly specified refrigerant.

Use phosphor deoxidized copper for refrigerant pipe. Make sure that inner surface of pipe is clean and there is no harmful material, such as Sulfur, oxide, dirt, swarf, etc. (contamination).

- If any contamination found within refrigerant pipes, it may cause deterioration of refrigerant oil, etc.

Keep pipes used for installation indoors and apply seal to both ends just before brazing.
(Keep joints, such as elbow, packed in plastic bag.)

- If dirt, dust or water enter the refrigerant cycle, it may cause deterioration of oil or compressor.

Use ester oil, etheral oil or alkyl bezel oil (small quantity) as refrigerant oil applied to flare section.

- If too much mineral oil is mixed, it may cause deterioration of refrigerant oil.

Do not use any refrigerant other than those specified by outdoor unit.

- Never use inappropriate refrigerant (R22, etc.), it may cause deterioration of refrigerant oil with chlorine.

Use appropriate tools for refrigerant filled in outdoor unit.

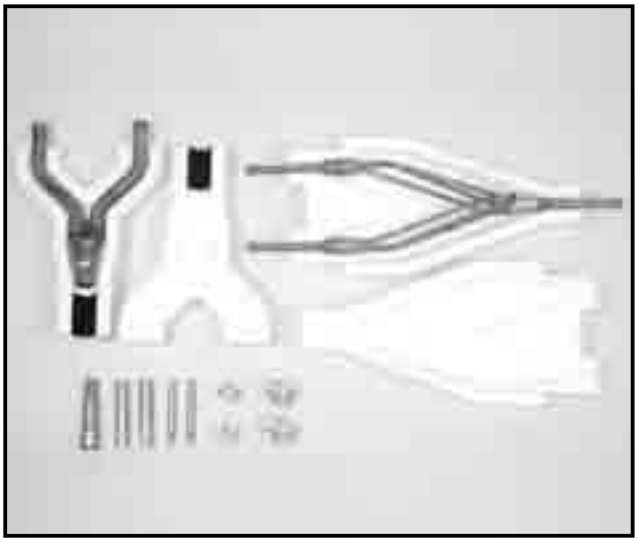
- Check the installation manual attached to the outdoor unit for special tools to be used.

Pay attention to control tools.

- If dirt, dust or water, etc. enters into refrigerant cycle, it may cause deterioration of refrigerant oil.

* When the outdoor unit is installed in front of a building or in a street, this air discharge guide can be used to change the discharge direction of warm air (in cooling mode) or cool-failine air (in heating mode) from the outdoor unit. The outlet air can be directed upwards, downwards or to both sides. This guide is also effective to protect the unit installed in a place where high winds may blow towards the air outlet.

Photo



Descriptions

Branch pipe for Multi-System Twin type Twin use. (50:50)

Applicable Models

- PU-P71/100/125/140
- PUH-P71/100/125/140
- PUHZ-RP71/100/125/140

for Twin 50:50 use

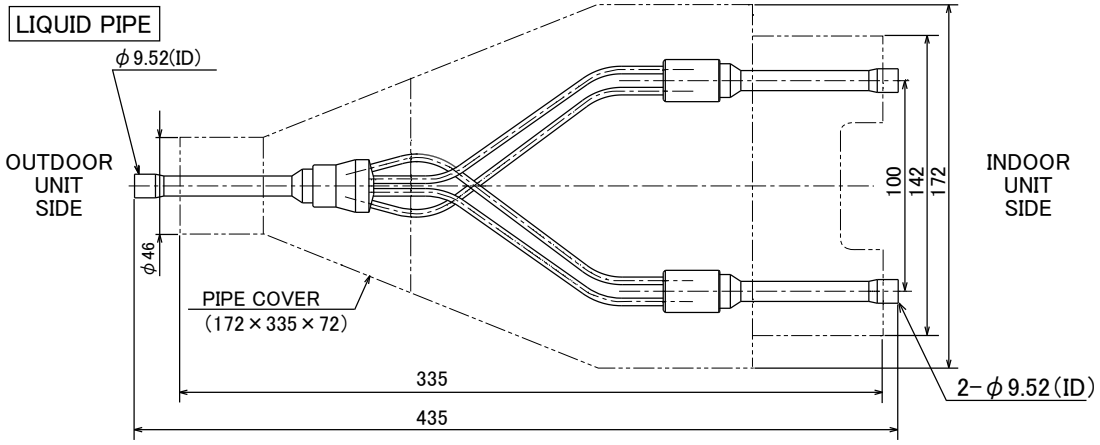
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into two (50:50)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Styrofoam molding (1 each for liquid pipe and gas pipe)
	Joint	5 joints (3 types)

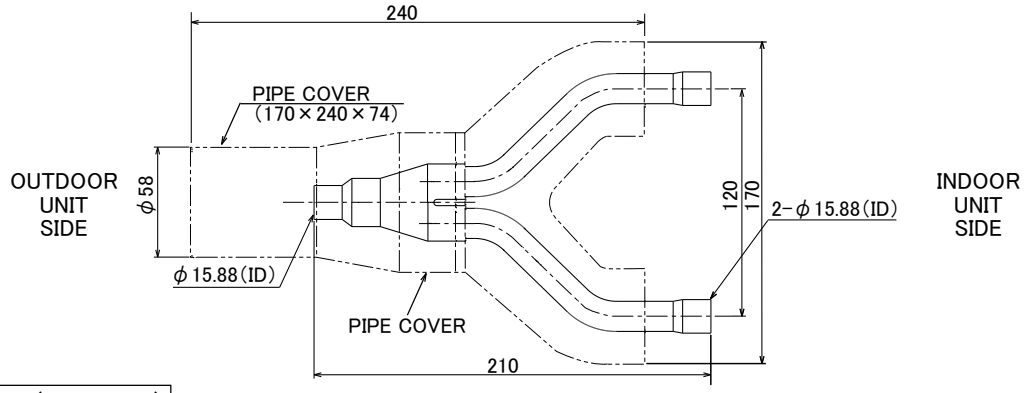
Dimensions

Unit : mm

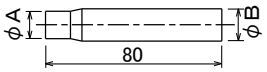
LIQUID PIPE



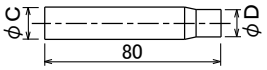
GAS PIPE



JOINT(Accessory)



ΦA(ID)	ΦB(OD)	Amount
6.35	9.52	2
12.7	15.88	2



ΦC(ID)	ΦD(OD)	Amount
19.05	15.88	1

How to Use / How to Install

Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Twin Distributing Pipe

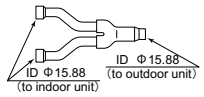
Make sure that you have all the following parts before installation.

① Instruction sheet	② Gas pipe	③ Liquid pipe	④ Pipe cover (for gas pipe)	⑤ Pipe cover (for liquid pipe)	⑥ Joint pipe	Flare nut
This sheet 1 sheet	1pc	1pc	1pc	1pc	Φ9.52 → Φ6.35 ···· 2pcs Φ15.88 → Φ12.7 ···· 2pcs Φ15.88 → Φ19.05 ···· 1pcs	1/4F ····2pcs 1/2F ····2pcs For R410A indoor unit.

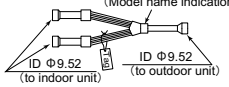
● See the following for the specifications of gas pipe ② ,and liquid pipe ③ ,

■MSDD-50SR

② Gas pipe



③Liquid pipe



※ Procure the following at local site in addition to the above
- Tape for heat insulator sealing
- Extended pipe for refrigerant pipe

Pipe size and limit to refrigerant pipe

■For R407C fixed speed models (Table 1-1)

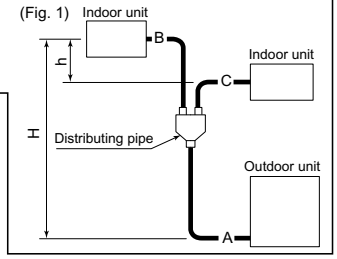
Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
71(3Hp)	Φ15.88 (5/8)	Φ15.88 (5/8)	Φ9.52 (3/8)	Φ9.52 (3/8)	—	50m or less	|B−C| = 8m or less	H = 40m or less	h = 1m or less	15 or less
100~140 (4~6Hp)	Φ19.05 (3/4)									
200(8Hp)	Φ25.4 (1)	Φ19.05 (3/4)	Φ12.7 (1/2)		A + B = A + C = 50m or less	70m or less				
250(10Hp)	Φ28.6 (1-1/8)									

■For R410A Power Inverter models (Table 1-2)

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
71(3Hp)	Φ15.88 (5/8)	RP1.6, 2, 35, 50 Φ12.7(1/2) RP2.5~5, 60~125 Φ9.52(3/8)	Φ9.52 (3/8)	RP1.6, 2, 35, 50 Φ6.35(1/4) RP2.5~5, 60~125 Φ9.52(3/8)	—	50m or less	|B−C| = 8m or less	H = 30m or less	h = 1m or less	15 or less
100~140 (4~6Hp)						75m or less				
200(8Hp)	Φ25.4 (1)				A + B = A + C = 80m or less	80m or less		H = 40m or less		
250(10Hp)	Φ28.6 (1-1/8)		Φ12.7 (1/2)							

Note 1: Limit the number of bends for refrigerant pipes to 8 in each of the 〈A+B〉 and 〈A+C〉 ranges.
※See the installation manual provided with the main unit for details on chargeless pipe length and refrigerant additional charge amount.

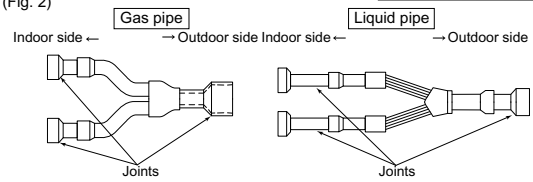
(Fig. 1)



Pipe connections

Combination pattern of indoor and outdoor units and joints to be used:

(Fig. 2)



1. Perform work, taking care with the followings:
   - Be sure to check the combination pattern of indoor and outdoor units and joints to be used (Table 2).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint ⑥ into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidization soldering.
   - There is no restriction on the orientation of distributing pipe (this product)during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Remove the tag of liquid pipe ③ after checking it.
2. Pipe connections
   - The provided joints ⑥ will be necessary depending on the capability of model used: See (Table 2), and connect the joints as shown in (Fig. 2).
   - Do not bend or widen the distributing pipe (liquid pipe).

■For R407C fixed speed (Table 2-1)

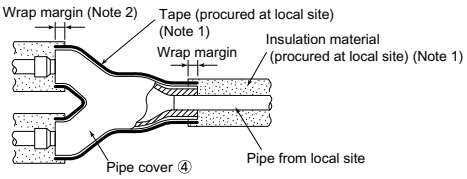
Outdoor unit	Indoor unit	Joint to be used
71(3Hp)	35+35 (1.6+1.6)	No joint is necessary.
100(4Hp)	50+50 (2+2)	Outer Φ15.88−inner Φ19.05 [outdoor gas pipe side]
125(5Hp)	60+60 (2.5+2.5)	
140(6Hp)	71+71 (3+3)	
200(8Hp)	100+100 (4+4)	Outer Φ15.88−inner Φ19.05 [indoor gas pipe side]
250(10Hp)	125+125(5+5)	Outer Φ25.4−inner Φ28.6 [outdoor gas pipe side]

※Installation positions in brackets ( ).

■ For R410A Power Inverter (Table 2-2)

Outdoor unit	Indoor unit	Joint to be used
71(3Hp)	35+35 (1.6+1.6)	Outer Φ15.88−inner Φ12.7 [outdoor gas pipe side]
100(4Hp)	50+50 (2+2)	Outer Φ9.52−inner Φ6.35 [indoor liquid pipe side]
125(5Hp)	60+60 (2.5+2.5)	No joint is necessary.
140(6Hp)	71+71 (3+3)	
200(8Hp)	100+100 (4+4)	Outer Φ12.7−inner Φ9.52 [outdoor liquid pipe side]
250(10Hp)	125+125 (5+5)	Outer Φ25.4−inner Φ28.6 [outdoor gas pipe side]

Heat insulation work



Notes:
1. Cover the entire refrigerant pipe (procured at local site) with heat insulation material. When using generally available heat insulation material, heat-
2. resistant insulation material (at least 12 mm thick). Pipe covers ④ and ⑤ will shrink slightly at high temperatures: Provide wrap margins with insulation

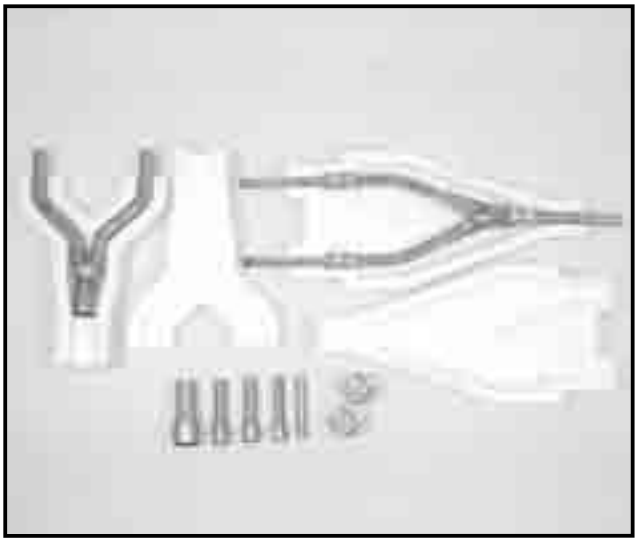
- Fit gas pipe ② into pipe covers ④, and then seal the mated portion of pipe covers ④ using heat insulation seal tape (procured at local site).
- Process liquid pipe ③ in the same way.

Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

Distribution Pipe

MSDD-50WR-E

Photo



Descriptions

Branch pipe for Multi-System Twin type Twin use. (50:50)

Applicable Models

- PU-P200/250
- PUH-P200/250
- PUHZ-RP200/250

for Twin 50:50 use

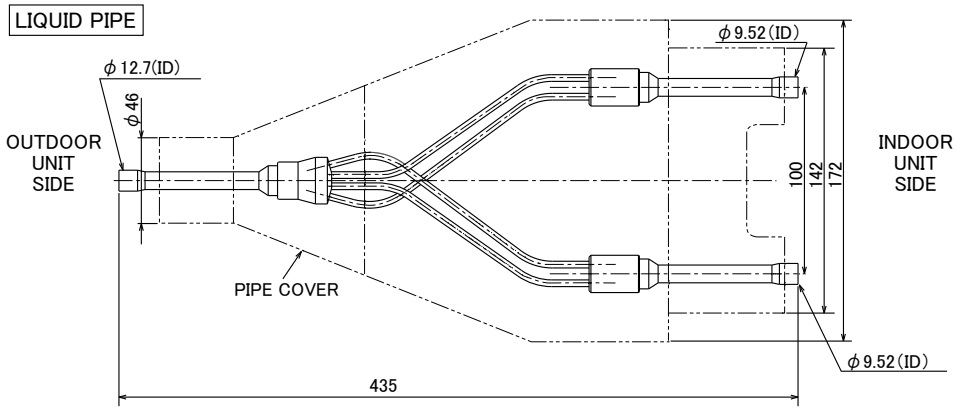
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into two (50:50)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Styrofoam molding (for liquid pipe and gas pipe)
	Joint	5 joints (4 types)

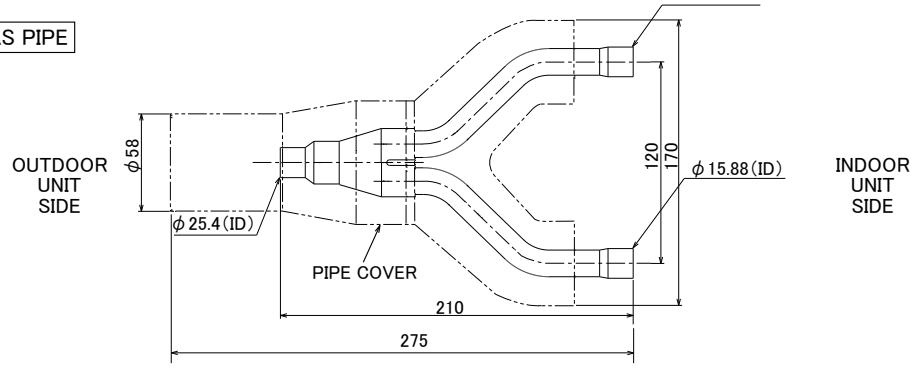
Dimensions

Unit : mm

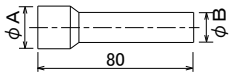
LIQUID PIPE



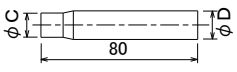
GAS PIPE



JOINT(Accessory)



ΦA(ID)	ΦB(OD)	Amount
28.6	25.4	2
15.88	12.7	1
19.05	15.88	2

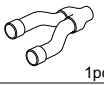
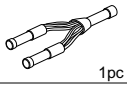


ΦC(ID)	ΦD(OD)	Amount
9.52	12.7	1

How to Use / How to Install

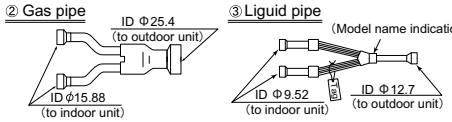
Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Twin Distributing Pipe

Make sure that you have all the following parts in packing box before installation.

① Instruction sheet	② Gas pipe	③ Liquid pipe	④ Pipe cover (for gas pipe)	⑤ Pipe cover (for liquid pipe)	⑥ Joint pipe	Flare nut
 This sheet 1 sheet	 1pc	 1pc	 1pc	 1pc	 Φ12.7→Φ 9.52····4pcs Φ12.7→Φ 15.88····4pcs Φ15.88→Φ19.05····2pcs Φ25.4→Φ28.6····1pcs	 5/8F····2pcs For R410A indoor unit.

● See the following for the specifications of gas pipe ② ,and liquid pipe ③ ,

■MSDD-50WR



※ Procure the following at local site in addition to the above
- Tape for heat insulator seal
- Extended pipe for refrigerant pipe

Pipe size and limit to refrigerant pipe

■For R407C fixed speed models (Table 1-1)

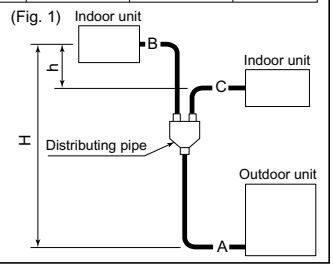
Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side							
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side	Indoor-Outdoor	A+B+C=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
71(3Hp)	ϕ15.88 (5/8)	Φ15.88 (5/8)	Φ9.52 (3/8)	Φ9.52 (3/8)	—	50m or less	|B−C| = 8m or less	H = 40m or less	h = 1m or less	15 or less
100~140 (4~6Hp)	ϕ19.05 (3/4)									
200(8Hp)	ϕ25.4 (1)	Φ19.05 (3/4)	Φ12.7 (1/2)		A + B = A + C = 50m or less	70m or less				
250(10Hp)	ϕ28.6 (1-1/8)									

■For R410A Power Inverter models (Table 1-2)

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side							
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side	Indoor-Outdoor	A+B+C=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
71(3Hp)	Φ15.88 (5/8)	RP1.6, 2, 35, 50 Φ12.7(1/2) RP2.5~5, 60~125 Φ9.52(3/8)	Φ9.52 (3/8)	RP1.6, 2, 35, 50 Φ6.35(1/4) RP2.5~5, 60~125 Φ9.52(3/8)	—	50m or less	|B−C| = 8m or less	H = 30m or less	h = 1m or less	15 or less
100~140 (4~6Hp)						75m or less				
200(8Hp)	Φ25.4 (1)				A + B = A + C = 80m or less	80m or less		H = 40m or less		
250(10Hp)	Φ28.6 (1-1/8)		Φ12.7 (1/2)							

Note 1: Limit the number of bends for refrigerant pipes to 8 in each of the 〈A+B〉 and 〈A+C〉 ranges.
※See the installation manual provided with the main unit for details on chargeless pipe length and refrigerant additional charge amount.

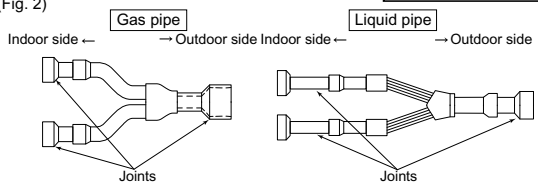
(Fig. 1)



Pipe connections

Combination pattern of indoor and outdoor units and joints to be used:

(Fig. 2)



1. Perform work, taking care with the followings:
   - Be sure to check the combination pattern of indoor and outdoor units and joints to be used (Table 2).
   - Be sure to observe the limits to refrigerant pipe length and number of bends (Table 1).
   - Insert the refrigerant pipe (procured at local site) and joint ⑥ into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidization soldering.
   - There is no restriction on the orientation of distributing pipe (this product)during installation.
   - Take care that no foreign object, such as dust, enters during pipe connecting work.
   - Remove the tag of liquid pipe ③ after checking it.
2. Pipe connections
   - The provided joints ⑥ will be necessary depending on the capability of model used: See (Table 2), and connect the joints as shown in (Fig. 2).
   - Do not bend or widen the distributing pipe (liquid pipe).

■For R407C fixed speed (Table 2-1)

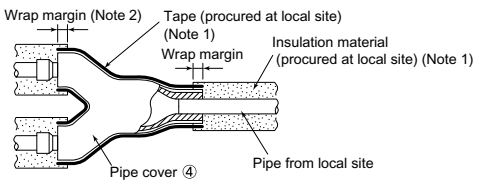
Outdoor unit	Indoor unit	Joint to be used
71(3Hp)	35+35 (1.6+1.6)	No joint is necessary.
100(4Hp)	50+50 (2+2)	Outer Φ15.88−inner Φ19.05 [outdoor gas pipe side]
125(5Hp)	60+60 (2.5+2.5)	
140(6Hp)	71+71 (3+3)	
200(8Hp)	100+100 (4+4)	Outer Φ15.88−inner Φ19.05 [indoor gas pipe side]
250(10Hp)	125+125 (5+5)	Outer Φ25.4−inner Φ28.6 [outdoor gas pipe side]

※Installation positions in brackets ( ).

■For R410A Power Inverter (Table 2-2)

Outdoor unit	Indoor unit	Joint to be used
71(3Hp)	35+35 (1.6+1.6)	Outer Φ15.88−inner Φ12.7 [outdoor gas pipe side]
100(4Hp)	50+50 (2+2)	Outer Φ9.52−inner Φ6.35 [indoor liquid pipe side]
125(5Hp)	60+60 (2.5+2.5)	No joint is necessary.
140(6Hp)	71+71 (3+3)	
200(8Hp)	100+100 (4+4)	Outer Φ12.7−inner Φ9.52 [outdoor liquid pipe side]
250(10Hp)	125+125 (5+5)	Outer Φ25.4−inner Φ28.6 [outdoor gas pipe side]

Heat insulation work



Notes:
1. Cover the entire refrigerant pipe (procured at local site) with heat insulation material. When using generally available heat insulation material, heat-
2. resistant insulation material (at least 12 mm thick). Pipe covers ④ and ⑤ will shrink slightly at high temperatures: Provide wrap margins with insulation

- Fit gas pipe ② into pipe covers ④, and then seal the mated portion of pipe covers ④ using heat insulation seal tape (procured at local site).
- Process liquid pipe ③ in the same way.

Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

Distribution Pipe

MSDD-50AR-E

Photo

Descriptions

For double-branching of the refrigerant piping to connect 2 branch boxes. (Flare connection type)

Applicable Models

- MXZ-8A140VA
- PAC-AK30BC
- PAC-AK50BC

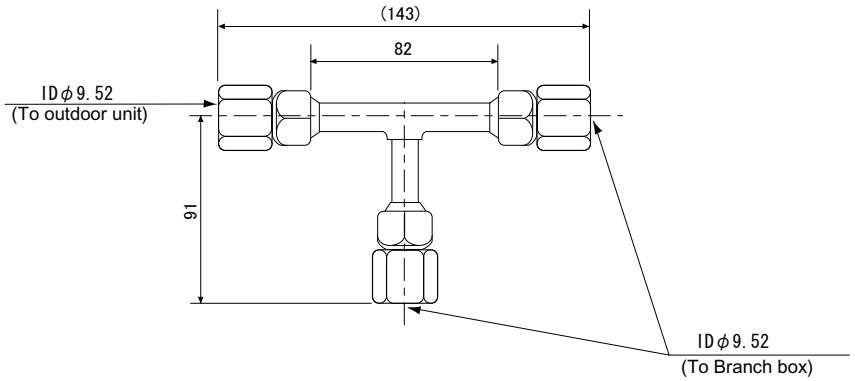
Specifications

TO BE CONFIRMED

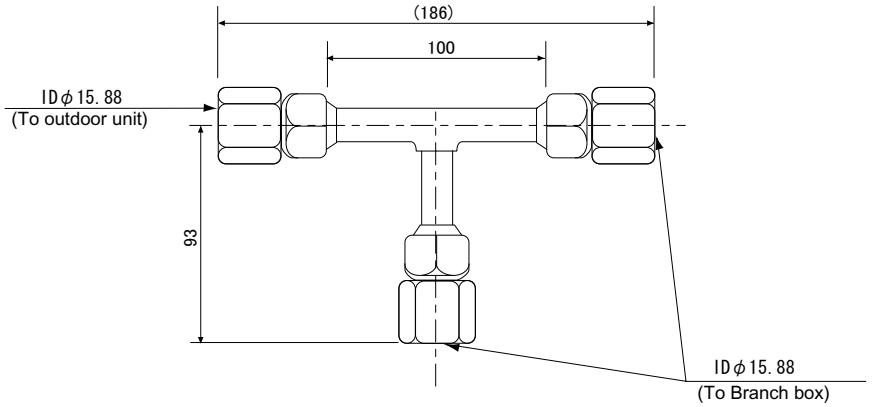
Dimensions

Unit : mm

LIQUID PIPE



GAS PIPE



How to Use / How to Install

2–BRANCH PIPE(JOINT) (MSDD–50AR–E)

※In case of 2 branch box connection for flare connection

Applicable model
MXZ-8A140VA(R410A type)
PAC-AK50BC
PAC-AK30BC

The kit contains followings

① Manual	② Liquid pipe (small: ϕ9.52)	③ Gas pipe (large: ϕ15.88)	④ Heat-insulation cover(small)	⑤ Heat-insulation cover(large)
This one-sheet manual	X1	X1	X1	X1

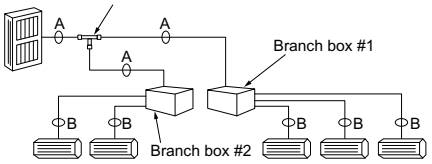
Note:Besides these, please procure the following locally:
(1)Tape for sealing the heat insulation covers.
(2)Extension pipes for the refrigerant system.

During installation, be careful about the followings

1. Note the limit length of the refrigerant pipe refer to the installation manual of outdoor unit and branch box.
2. Note the limits for installing the indoor units refer to the installation manual of outdoor unit and branch box.
3. In connecting pipes, take care not to let any dirt or other foreign matter enter any pipe.
4. Put a heat insulato into every refrigerant pipe.

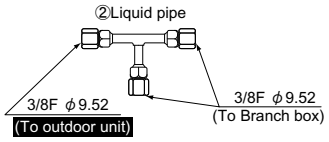
Outline of system and pipe size

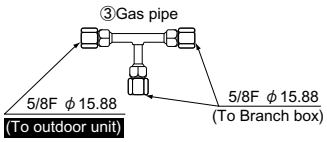
Outdoor unit 2branches pipe(joint):optional part explained by this manual



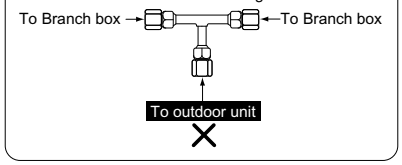
	A	B
Liquid(mm)	ϕ9.52	Refer to installation manual of outdoor unit and branch box
Gas(mm)	ϕ15.88	

▪ See the following for the specifications of liquid pipe, and gas pipe ▪

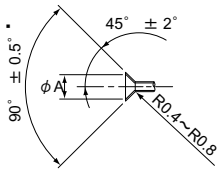


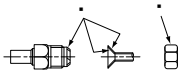


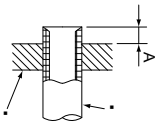
〈Prohibition〉
Please do not make the following connection.



▪ Installing the refrigerrant piping







▪ Die
▪ Copper pipe

▪ When bending the pipes, be careful not to break them.Bend radii of 100mm to 150mm are sufficient.
▪ Make sure the pipes do not contact the compressor. Abnormal noise or vibration may reuslt.

▪ Flare cutting dimensions
▪ Flare nut tighening torgue

Copper pipe O.D. (mm)	Flare dimensions ϕA dimensions (mm)
ϕ9.52	12.8-13.2
ϕ15.88	19.3-19.7

Copper pipe O.D. (mm)	Flare nut O.D. (mm)	Tightening torque (N·m)★
ϕ9.52	22	34-32
ϕ15.88	29	68-82

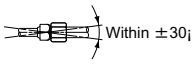
▪ Pipes must be connected starting from the indoor unit. Flare unts must be tightened with a torgus wrench.
▪ Flare the liguid pipes and gas pipes and apply a thin layer of refringeration oil (Applied on site).
▪ When usual pipe seaaling is used, refer to Table 1 for flaring of R410A refrigerant pipes.
The size adjustment gauge can be used to confirm A measurements.

Table 1

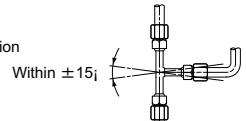
Copper pipe O.D. (mm)	A (mm)	
	Flare tool for R410A	Flare tool for R22-R407C
	Clutch type	
ϕ9.52(3/8″)	0-0.5	1.0-1.5
ϕ15.88(5/8″)	0-0.5	1.0-1.5

Installation direction of joint

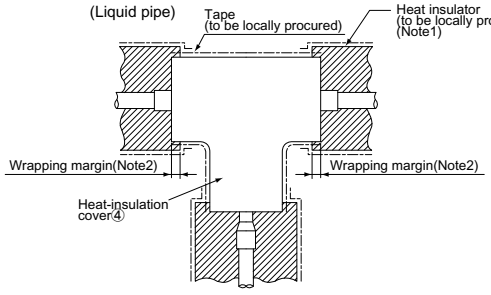
Horizontal direction



Vertical direction



Installing Heat Insulation Cover and Heat Insulators



▪ The liquid pipe (small: ϕ9.52) Make it fit the heat-insulation cover(small). Seal the mating of the heat-insulation cover with the tape for sealing heat insulators (to be locally procured).

▪ Do the same with the gas pipe (large: ϕ15.88),using the heat-insulation cover (large), as with the liquid pipe (small).

Note 1 : Install a heat insulator on every part of the refrigerant pipes (to be locally procured).
If you want to use commercially-available heat insulators,use heat-resistant heat insulators (at least 12mm thick).

Note 2 : The pipe covers shrink a little under high heat.
Therefore, allow for some wrapping margin in the heat insulators.

Photo

Descriptions

For double-branching of the refrigerant piping to connect 2 branch boxes. (Brazing type)

Applicable Models

- MXZ-8A140VA
- PAC-AK30BC
- PAC-AK50BC

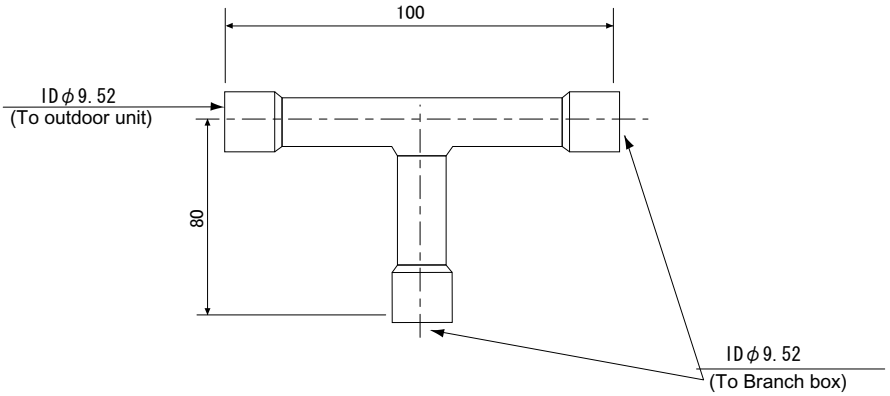
Specifications

TO BE CONFIRMED

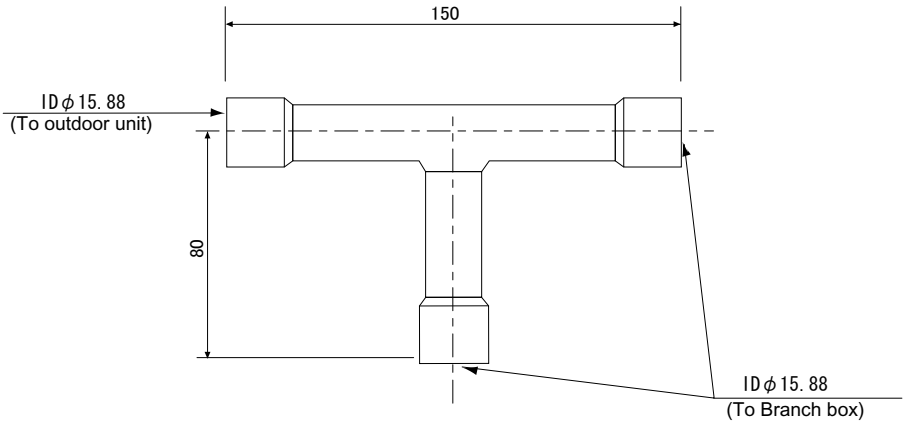
Dimensions

Unit : mm

LIQUID PIPE



GAS PIPE



How to Use / How to Install

2–BRANCH PIPE(JOINT) (MSDD–50BR–E)

※In case of 2 branch box connection for welding

Applicable model
MXZ-8A140VA(R410A type)
MXZ-7A140VC(R22 type)

The kit contains followings

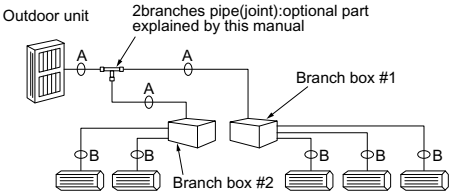
① Manual	② Liquid pipe (small: ϕ9.52)	③ Gas pipe (large: ϕ15.88)	④ Heat-insulation cover(small)	⑤ Heat-insulation cover(large)	⑥ Pipe (Gas pipe use: ϕ15.88→ϕ19.05)
This one-sheet manual	X1	X1	X1	X1	X3

Note:Besides these, please procure the following locally:
(1)Tape for sealing the heat insulation covers.
(2)Extension pipes for the refrigerant system.

During installation, be careful about the followings

1. Note the limit length of the refrigerant pipe refer to the installation manual of outdoor unit and branch box.
2. Note the limits for installing the indoor units refer to the installation manual of outdoor unit and branch box.
3. Us solder in connecting any branch joint with any piping system or with the pipe. Insoldering, use oxygen-free solder.
4. Each branch joint has a stopper.
   In connecting any pipe to any branch joint, thrust the pipe home till it ocks.
5. In connecting pipes, take care not to let any dirt or other oreign matter enter any pipe.
6. Put a heat insulator into every refrigerant pipe.

Outline of system and pipe size



(1)Outdoor unit:R410A type (MXZ-8A140VA)

	A	B
Liquid(mm)	ϕ9.52	Refer to installation manual of outdoor unit and branch box
Gas(mm)	ϕ15.88	

(2)Outdoor unit:R22 type (MXZ-7A140VC)

	A	B
Liquid(mm)	ϕ9.52	Refer to installation manual of outdoor unit and branch box
Gas(mm)	ϕ19.05	

See the following for the specifications of liquid pipe, and gas pipe ▪

When outdoor unit is R22 type (MXZ-7A140VC), please connect three pipe⑥ to Gas pipe③ according to Fig.1.

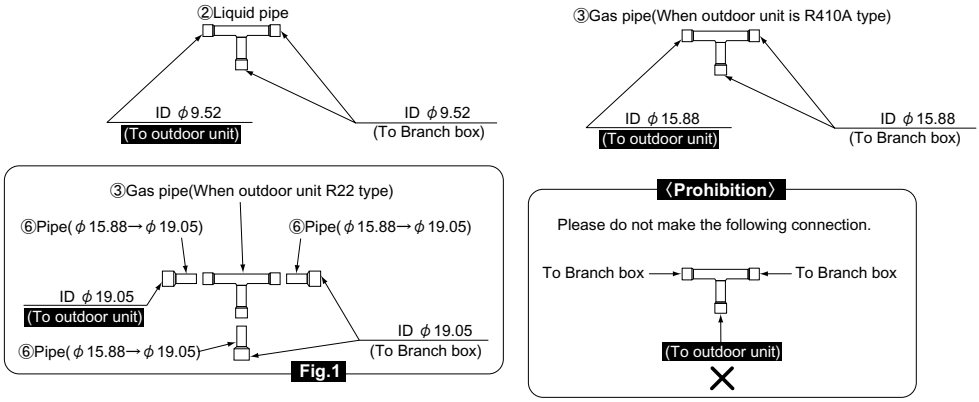
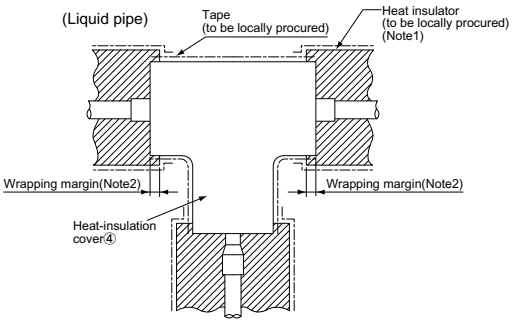


Fig.1

Installation direction of joint

Installing Heat Insulation Cover and Heat Insulators



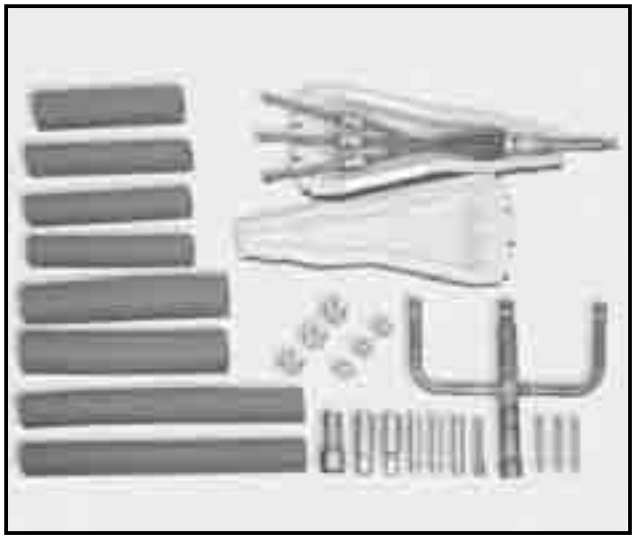
▪ The liquid pipe (small) Make it fit the heat-insulation cover (small) . Seal the mating of the heat-insulation cover with the tape for sealing heat insulators(to be locally procured).

▪ Do the same with the gas pipe(large), using the heat-insulation cover (large), as with the liquid pipe (small).

Note 1 : Install a heat insulator on every part of the refrigerant pipes (to be locally procured).
If you want to use commercially-available heat insulators, use heat-resistant heat insulators(at least 12mm thick).

Note 2 : The pipe covers shrink a little under high heat.
Therefore, allow for some wrapping margin in the heat insulators.

Photo



Descriptions

3-branch pipe for Multi-System Triple use.(33:33:33)

Applicable Models

- PU-P140/200/250
- PUH-P140/200/250
- PUHZ-RP140/200/250

for 33:33:33 Triple use

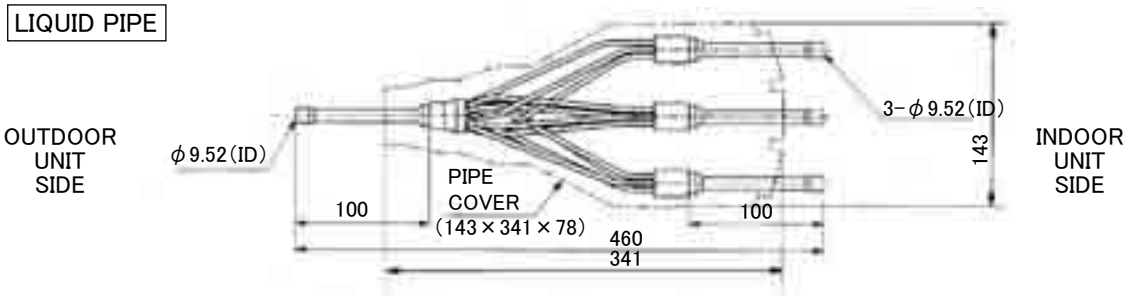
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into three (33:33:33)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Polyethylene foam molding (for liquid pipe) EPT sponge rubber type (for gas pipe)
	Joint	9 joints (5 types)

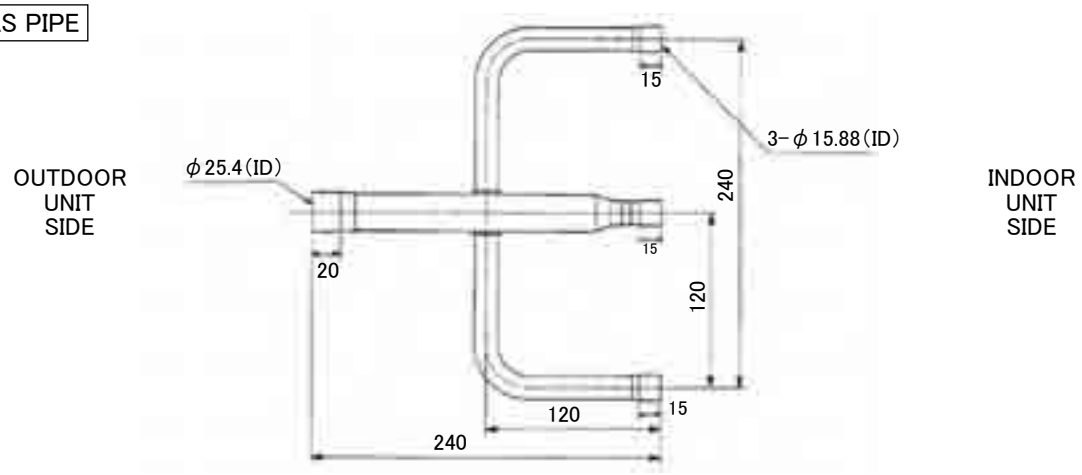
Dimensions

Unit : mm

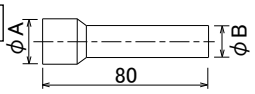
LIQUID PIPE



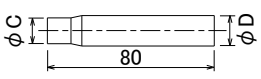
GAS PIPE



JOINT(Accessary)



ΦA(ID)	ΦB(OD)	Amount
12.7	9.52	1



ΦC(ID)	ΦD(OD)	Amount
12.7	15.88	3
19.05	25.4	1
6.35	9.52	3
15.88	25.4	1

How to Use / How to Install

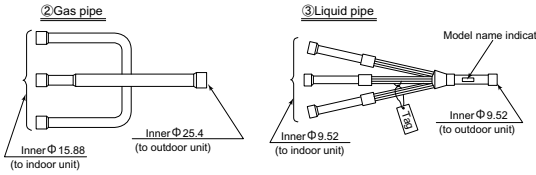
Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Triple Distributing Pipe exclusively used with Free Compo Multi-Units

MSDT-111R-E〔Indoor unit same-capacity triple 33:33:33〕…… Outdoor unit PU(H)-P6, 140GA type (R407C fixed speed)
Outdoor unit PUHZ-RP6, 140HA type (R410A power inverter)
Outdoor unit PUH-P8～10, 200～250MYA type (R407C fixed speed)
Outdoor unit PUHZ-RP8～10, 200～250HA type (R410A power inverter)

・ Make sure that you have all the following parts in packing box before beginning installation:

① Instruction sheet	② Gas pipe	③ Liquid pipe	④ Pipe cover (for gas pipe)	⑤⑥ Pipe covers (for gas pipe)	⑦ Pipe cover (for liquid pipe)	⑧⑨ Pipe covers	⑩ Bands	⑪ Joint	⑫ Flare nut
This sheet 1 sheet	1pc	1pc	With V cut 1pc	⑤Outer Φ50×250−1pc ⑥Outer Φ43×350−2pc	2pcs	⑧Outer Φ42×180−1pc ⑨Outer Φ38×200−3pcs	8pcs	See Table 1.	・1/4F‥3pcs ・1/2F‥3pcs For R410A indoor unit.

●See the following for the specifications of gas pipe ② and liquid pipe ③ :



※Procure the following at local site in addition to the above:
- ・Tape for heat insulator seal
- ・Extended pipe for refrigerant pipe

Joint specifications and provided numbers 〈Table 1〉

Sizes of joint pipe ends (mm)	Numbers provided
・ Outer Φ9.52－Inner Φ6.35	3
・ Outer Φ9.52－Inner Φ12.7	1
・ Outer Φ15.88－Inner Φ12.7	3
・ Outer Φ25.4－Inner Φ19.05	1
・ Outer Φ25.4－Inner Φ15.88	1
・ Outer Φ25.4－Inner Φ28.6	1

・ Pipe size and limit to refrigerant pipe

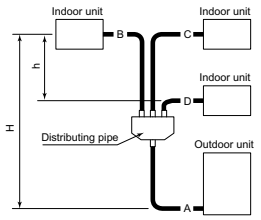
■For R407C fixed speed models **〈Table 2-1〉**

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C+D=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
140 (6Hp)	Φ19.05 〈3/4〉	Φ15.88 〈5/8〉	Φ9.52 〈3/8〉	Φ9.52 〈3/8〉	—	50m or less	|B−C| = |B−D| = |C−D| = 8m or less	H = 40m or less	h = 1m or less	15 or less
200 (8Hp)	Φ25.4 〈1〉		Φ12.7 〈1/2〉		A+B= A+C= A+D= 50m or less	70m or less				
250 (10Hp)	Φ28.6 〈1-1/8〉									

■For R410A Power Inverter models **〈Table 2-2〉**

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C+D=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
140 (6Hp)	Φ15.88 〈5/8〉	Φ12.7 〈1/2〉	Φ9.52 〈3/8〉	Φ6.35 〈1/4〉	—	75m or less	|B−C| = 8m or less	H = 30m or less	h = 1m or less	15 or less
200 (8Hp)	Φ25.4 〈1〉	Φ15.88 〈5/8〉		Φ9.52 〈3/8〉	A+B= A+C= A+D= 80m or less	80m or less		H = 40m or less		
250 (10Hp)	Φ28.6 〈1-1/8〉		Φ12.7 〈1/2〉							

〈Fig. 1〉



Note 1: Limit the number of bends for refrigerant pipes to 8 in each of the 〈A+B〉, 〈A+C〉 and 〈A+D〉 ranges.
※See the installation manual provided with the main unit for details on charge-less pipe length and refrigerant additional charge amount.

・ Pipe connections

1. Perform work, taking care with the following:
   - ・Be sure to check the combination pattern of indoor and outdoor units, joints to be used 〈Table 3〉, pipe size 〈Table 1〉 and joint used ⑪.
   - ・Be sure to observe the limits to refrigerant pipe length and number of bends 〈Table 2〉.
   - ・Insert the refrigerant pipe (procured at local site) and joint ⑪ into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidization soldering.
   - ・There is no restriction on the orientation of distributing pipe (this product)during installation.
   - ・Take care that no foreign object, such as dust, enters during pipe connecting work.
   - ・Remove the tag of liquid pipe ③ after checking it.
2. Pipe connections
   - ・The provided joints ⑪ will be necessary depending on the capability of model used: See 〈Table 3〉, and connect the refrigerant piping.
   - ・Do not bend or widen the distributing pipe (liquid pipe).

Combination pattern of indoor and outdoor units and joints to be used:

■For R407C fixed speed **〈Table 3-1〉**

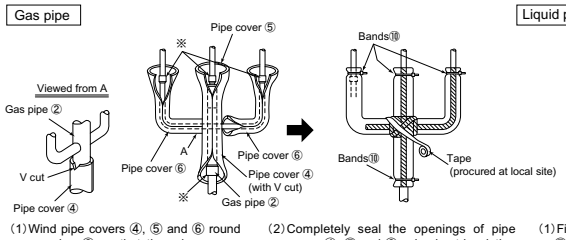
Outdoor unit	Indoor unit	Joint to be used
140 (6Hp)	50+50+50 (2+2+2)	・ Outer Φ25.4－inner Φ19.05〔outdoor gas pipe side〕×1, ・ outer φ15.88－inner φ12.7×3〔indoor gas pipe side〕
200 (8Hp)	60+60+60 (2.5+2.5+2.5)	・ Outer Φ9.52－inner Φ12.7〔indoor gas pipe side〕×3
250 (10Hp)	71+71+71 (3+3+3)	・ Outer Φ25.4－inner Φ28.6〔outdoor gas pipe side〕×1

■For R410A Power Inverter **〈Table 3-2〉**

Outdoor unit	Indoor unit	Joint to be used
140 (6Hp)	50+50+50 (2+2+2)	・ Outer Φ25.4－inner Φ15.88〔outdoor gas pipe side〕×1, ・ outer Φ15.88－inner Φ12.7〔indoor gas pipe side〕×3, ・ outer φ9.52－inner Φ6.35〔indoor gas pipe side〕×3,
200 (8Hp)	60+60+60 (2.5+2.5+2.5)	No Joint is necessary
250 (10Hp)	71+71+71 (3+3+3)	・ Outer Φ9.52－inner Φ12.7〔outdoor liquid pipe side〕×1, ・ outer Φ25.4－inner Φ28.6〔outdoor gas pipe side〕×1

※Installation positions in brackets〔 〕.

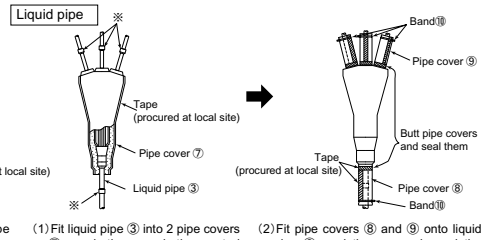
・ Heat insulation work



(1) Wind pipe covers ④, ⑤ and ⑥ round gas pipe ② so that there is no gap. Securely fit the V-cut portions of pipe cover ④ into the roots of pipe on both sides to install the pipe cover.

(2) Completely seal the openings of pipe covers ④, ⑤ and ⑥ using heat insulation seal tape (procured at local site). Wind seal tape round the pipe crossing portion in a crossed way so that there is no gap.

(3) Use band ⑩ to tighten the ends of each pipe cover.



(1) Fit liquid pipe ③ into 2 pipe covers ⑦, and then seal the mated portion of pipe covers ⑦ using heat insulation seal tape (procured at local site).

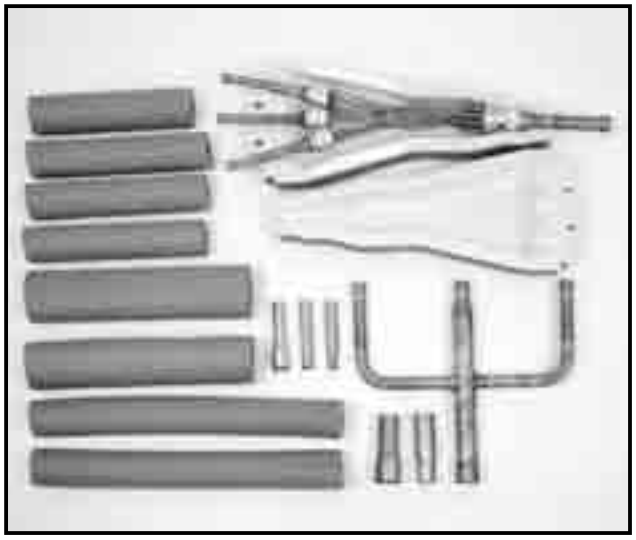
(2) Fit pipe covers ⑧ and ⑨ onto liquid pipe ③, and then securely seal the mated portion of pipe covers ⑦ using heat insulation seal tape (procured at local site).

(3) Use band ⑩ to tighten the ends of each pipe cover.

Notes:
1. Cut off any surplus pipe cover to make appropriate length.
2. Use pipe covers to completely cover the connection portions of refrigerant pipe (procured at local site), gas pipe ② and liquid pipe ③.
3. Cover the entire refrigerant pipe (procured at local site) with heat insulation material. When using generally available heat insulation material, make sure it is heat-resistant insulation material (at least 12 mm thick).

Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

Photo



Descriptions

3-branch pipe for Multi-System Triple use. (25:25:50)

Applicable Models

- PU-P140
- PUH-P140/200/250
  for 25:25:50 Triple use

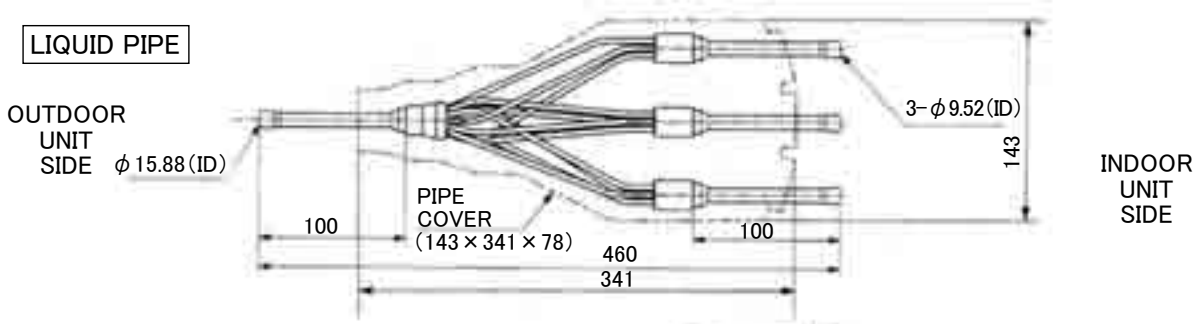
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into three (25:25:50)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Polyethylene foam molding (for liquid pipe) EPT sponge rubber type (for gas pipe)
	Joint	9 joints (7 types)

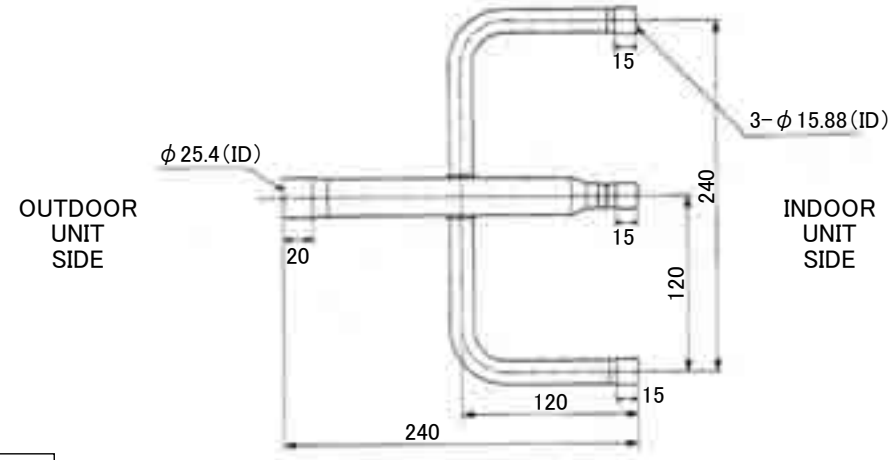
Dimensions

Unit : mm

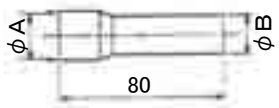
LIQUID PIPE



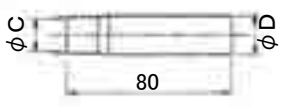
GAS PIPE



JOINT(Accessary)

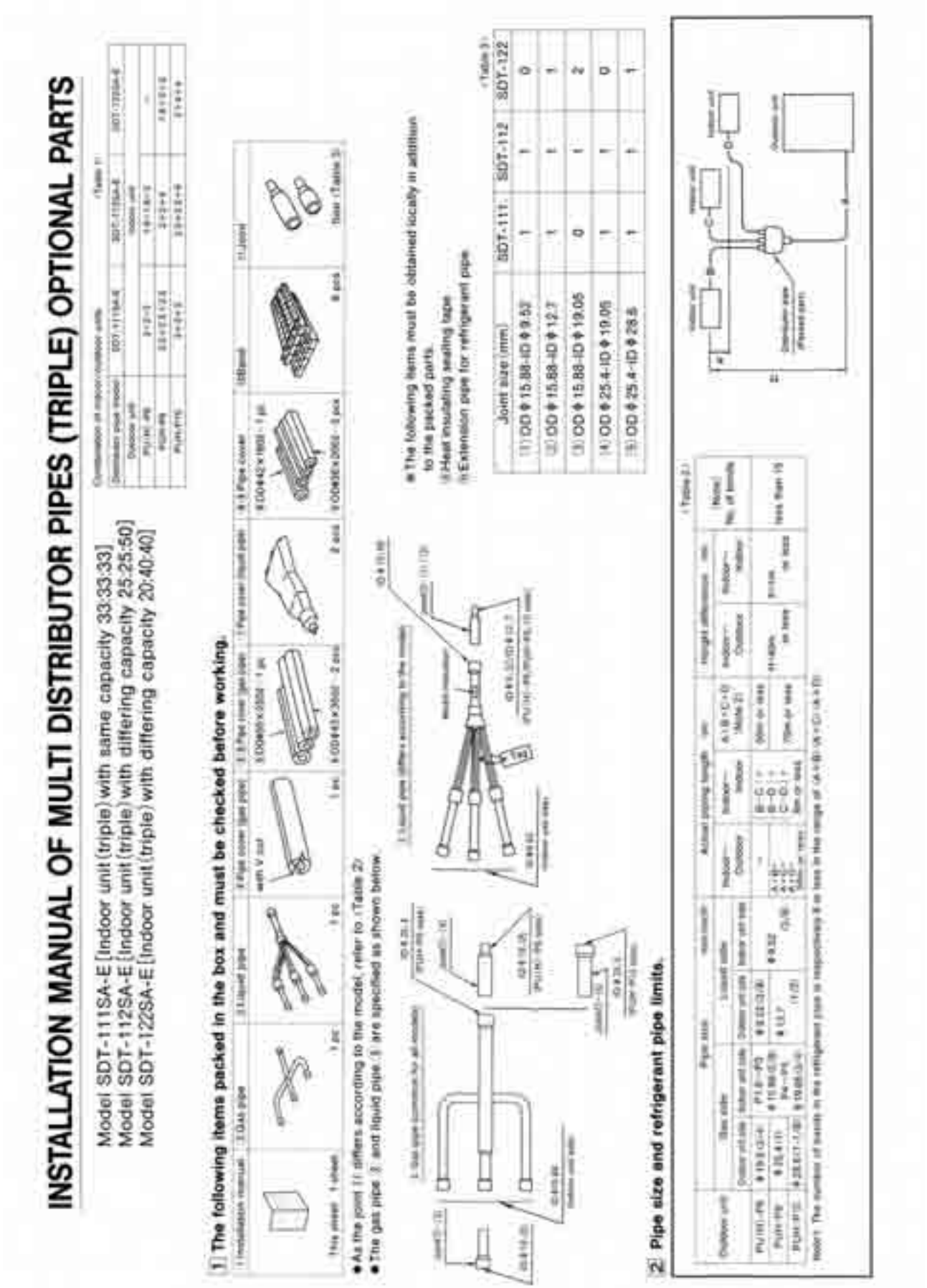


ΦA(ID)	ΦB(OD)	Amount
12.7	9.52	1
19.05	15.88	1
28.6	25.4	1



ΦC(ID)	ΦD(OD)	Amount
6.35	9.52	2
9.52	15.88	1
12.7	15.88	2
19.05	25.4	1

How to Use / How to Install



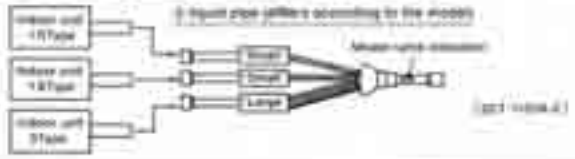
3 Pipe connection

(1) Note the following during work
- Be sure to recheck the combination (Table1) of the indoor/outdoor units.
- Observe the refrigerant pipe length limits and no. of bend limits (Table2).
- Insert the refrigerant pipe (obtain locally) into the flared end of the distributor pipe (packed) until the former pipe stops.
  Use oxidization-free solder for connection when possible.
- The installation direction of the distributor pipe (packed) is not regulated.
- Take care to prevent dirt, foreign materials, etc., from entering the pipe when connecting the pipe.
- After checking remove the tag from the liquid pipe ③.

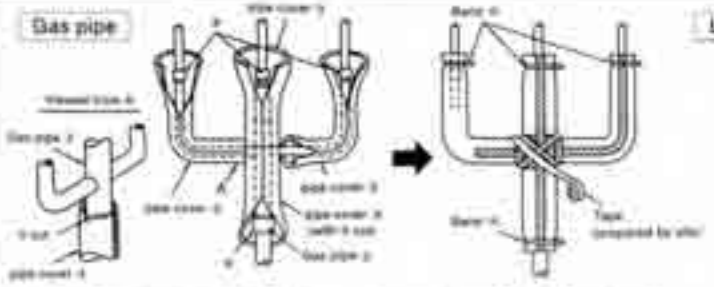
(2) Pipe connection
- Referring to (Table2), check the pipe size, and connect the refrigerant pipe.
- Do not bend or expand any distributor pipe (liquid pipe).

(3) Triple combination with differing capacities
- Even if the capacity of the indoor unit differs depending on the combination, the pipe size may be the same. In this case, connect the pipes to ensure proper distribution according to the following. (only liquid pipe side)
- If the capacity of the indoor unit is larger, connect the liquid pipe ③ to the "Large" side.
- If the capacity of the indoor unit is smaller, connect the liquid pipe ③ to the "Small" side.

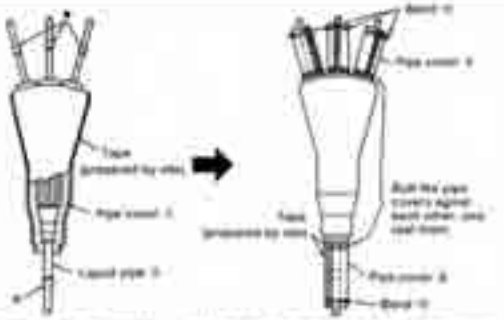
(Example)



4 Heat insulating work



(1) Wrap the pipe covers ④, ⑤ and ⑥ on the gas pipe ② without clearance as shown above. Moreover, securely press the V cut areas of the pipe cover ④ against the pipe base on both sides during assembling.
(2) Securely seal the cut areas of the pipe covers ④, ⑤ and ⑥ with heat insulating sealing tape (obtained locally). Wrap the seal tape in a cross to eliminate clearance at the cross area of the pipe.
(3) Fasten the end of each pipe cover with band ⑪.



(1) Install the liquid pipe ③ while aligning it with the pipe cover ⑦ (2 pcs). Seal the joint area of the pipe cover ⑦ with heat insulating sealing tape (obtained locally).
(2) As shown above, install the liquid pipe ③ on the pipe covers ⑧ and ⑨, and securely seal with heat insulating sealing tape (obtained locally).
(3) Fasten the end of each pipe cover with band ⑪.

Note
1. Cut the excessive part of each pipe cover.
2. Securely cover the joint areas (※) of the refrigerant pipe (obtained locally) to the gas pipes ② and liquid pipe ③ with the pipe covers.
3. Cover the entire refrigerant pipe (obtained locally) with heat insulating material. If commercial heat insulating material is used, it must be 12mm or thicker.

5 Control wiring for indoor unit

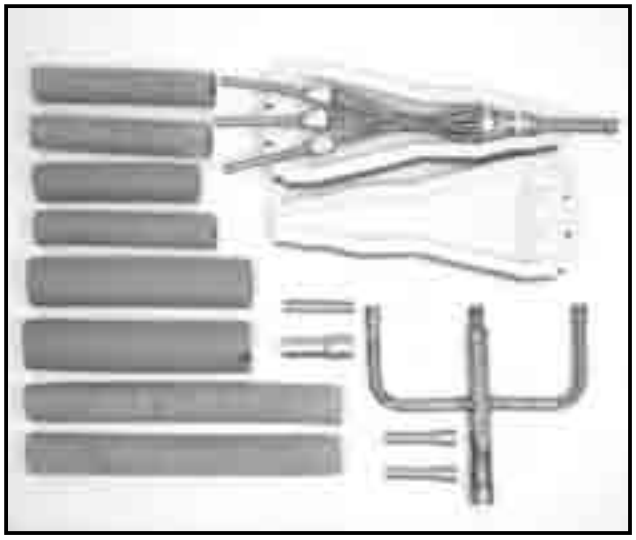
● Specifications of each control cable

	①	②
Control cable	Prepared by site	Enclosed with the remote controller
Control circuit voltage	220~240V	DC12V
Cable thickness	2.5mm² or more	0.3mm² or more
Polarity	Designated	Not designated

Distribution Pipe

SDT-122SA-E

Photo



Descriptions

3-branch pipe for Multi-System Triple use.(20:40:40)

Applicable Models

- PUH-P200
- PUH-P250

for 20:40:40 Triple use

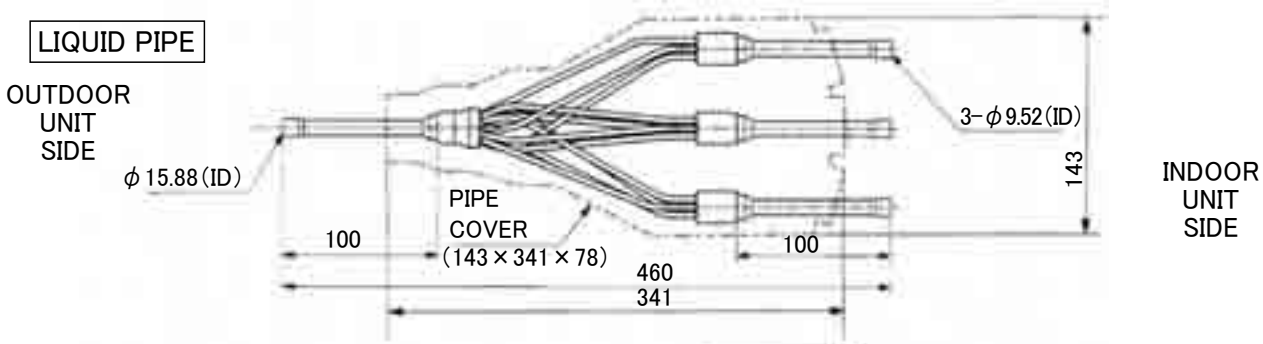
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into three (20:40:40)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Polyethylene foam molding (for liquid pipe) EPT sponge rubber type (for gas pipe)
	Joint	8 joints (5 types)

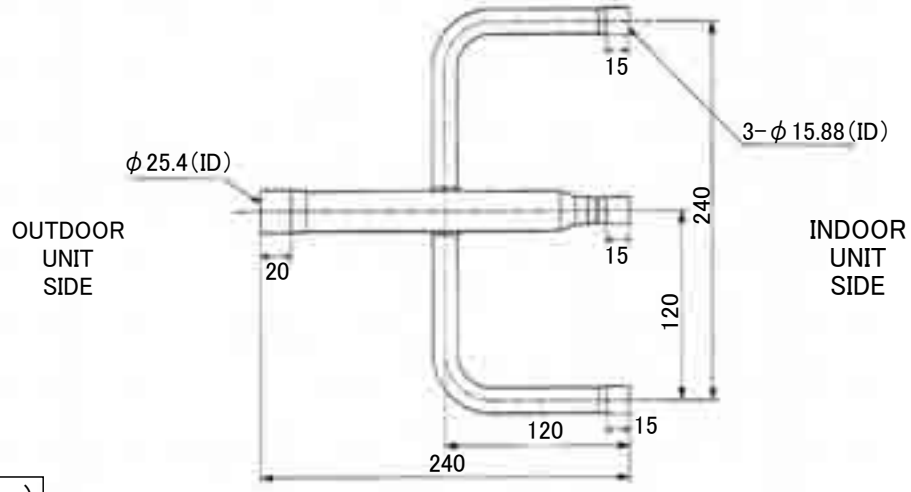
Dimensions

Unit : mm

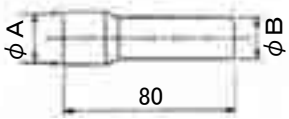
LIQUID PIPE



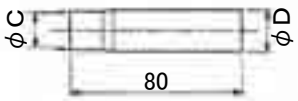
GAS PIPE



JOINT(Accessory)



ΦA(ID)	ΦB(OD)	Amount
12.7	9.52	2
19.05	15.88	2
28.6	25.4	1



ΦC(ID)	ΦD(OD)	Amount
6.35	9.52	1
12.7	15.88	2

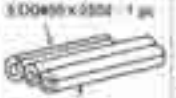
INSTALLATION MANUAL OF MULTI DISTRIBUTOR PIPES (TRIPLE) OPTIONAL PARTS

Model SDT-111SA-E [Indoor unit (triple) with same capacity 33:33:33]
Model SDT-112SA-E [Indoor unit (triple) with differing capacity 25:25:50]
Model SDT-122SA-E [Indoor unit (triple) with differing capacity 20:40:40]

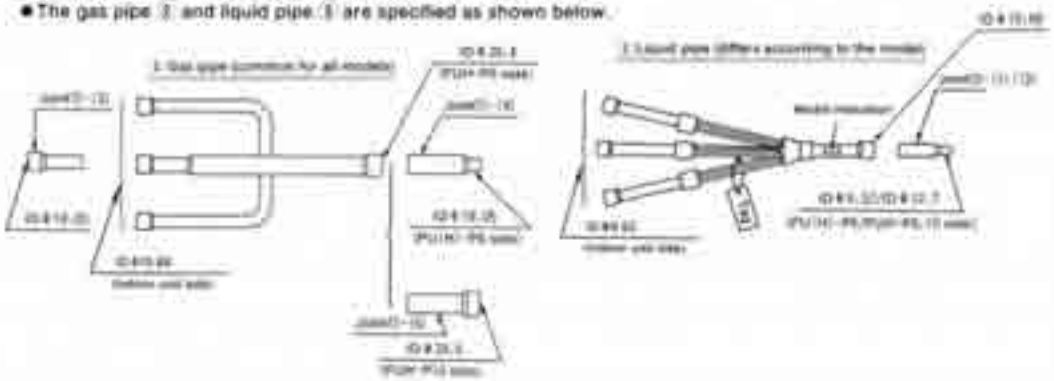
Combination of indoor / outdoor units (Table 1)

Distribution pipe model	SDT-111SA-E	SDT-112SA-E	SDT-122SA-E
Outdoor unit		Indoor unit	
PU(H)-P8	3+2+3	1.6+1.6+3.2	—
PUH-P8	3.2+3.2+3.2	3+3+4	1.6+3.2+3.2
PUH-P10	3+3+3	3.2+3.2+4	3.2+4+4

1 The following items packed in the box and must be checked before working.

① Installation manual	② Gas pipe	③ Liquid pipe	④ Pipe cover (gas pipe)	⑤ Pipe cover (gas pipe)	⑥ Pipe cover (liquid pipe)	⑦ Pipe cover	⑧Band	⑨Joint
								
1 his sheet 1 sheet	1 pc	1 pc	1 pc	2 pcs	2 pcs	2 pcs	8 pcs	Size (Table 3)

- As the joint ⑨ differs according to the model, refer to (Table 2).
- The gas pipe ② and liquid pipe ③ are specified as shown below.



- The following items must be obtained locally in addition to the packed parts.
  - ⑩Heat insulating sealing tape
  - ⑪Extension pipe for refrigerant pipe

(Table 3)

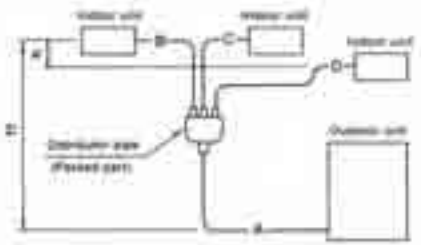
Joint size (mm)	SDT-111	SDT-112	SDT-122
① OD ϕ 15.88-ID ϕ 9.52	1	1	0
② OD ϕ 15.88-ID ϕ 12.7	1	1	1
③ OD ϕ 15.88-ID ϕ 19.05	0	1	2
④ OD ϕ 25.4-ID ϕ 19.05	1	1	0
⑤ OD ϕ 25.4-ID ϕ 28.6	1	1	1

2 Pipe size and refrigerant pipe limits.

(Table 2)

Outdoor unit	Pipe size (mm) Gas side: Outdoor unit side	Gas side: Indoor unit side	Liquid side: Outdoor unit side	Liquid side: Indoor unit side	Actual piping length (m) Indoor—Outdoor	Indoor—Indoor	A+B+C+D (Note 2)	Height difference (m) Indoor—Outdoor	Indoor—Indoor	[Note] No. of bends
PU(H)-P8	ϕ 19.1 (3/4)	P1.6—P3 ϕ 15.88 (5/8) P4—P8 ϕ 19.05 (3/4)	ϕ 9.52 (3/8)	ϕ 9.52 (3/8)	—	B—C 1 m B—D 1 m C—D 1 m 5m or less	50m or less	30m or less	15m or less	less than 15
PUH-P8	ϕ 25.4 (1)		ϕ 12.7 (1/2)		A+B— A+C— A+D— 50m or less		70m or less			
PUH-P10	ϕ 28.6 (1-1/8)									

Note1 The number of bends in the refrigerant pipe is respectively 8 or less in the range of (A+B) (A+C) (A+D).

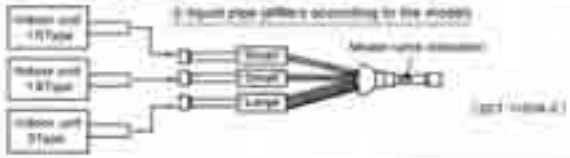


3 Pipe connection

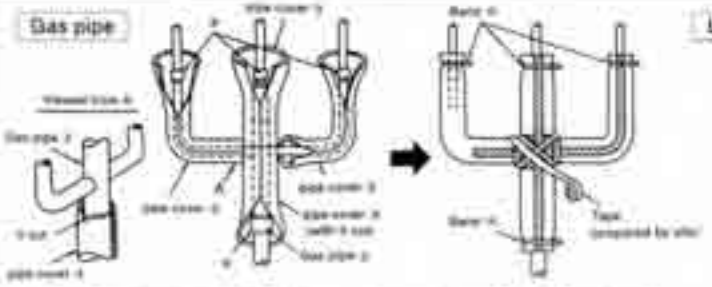
1. Note the following during work
   - Be sure to recheck the combination (Table1) of the indoor/outdoor units.
   - Observe the refrigerant pipe length limits and no. of bend limits (Table2).
   - Insert the refrigerant pipe (obtain locally) into the flared end of the distributor pipe (packed) until the former pipe stops.
     Use oxidization-free solder for connection when possible.
   - The installation direction of the distributor pipe (packed) is not regulated.
   - Take care to prevent dirt, foreign materials, etc., from entering the pipe when connecting the pipe.
   - After checking remove the tag from the liquid pipe ③.
2. Pipe connection
   - Referring to (Table2), check the pipe size, and connect the refrigerant pipe.
   - Do not bend or expand any distributor pipe (liquid pipe).

3. Triple combination with differing capacities
   - Even if the capacity of the indoor unit differs depending on the combination, the pipe size may be the same. In this case, connect the pipes to ensure proper distribution according to the following. (only liquid pipe side)
   - If the capacity of the indoor unit is larger, connect the liquid pipe ③ to the "Large" side.
   - If the capacity of the indoor unit is smaller, connect the liquid pipe ③ to the "Small" side.

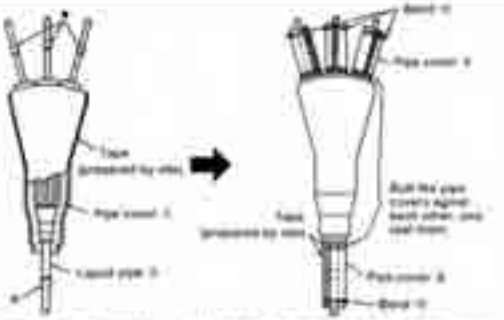
(Example)



4 Heat insulating work



1. Wrap the pipe covers ④, ⑤ and ⑥ on the gas pipe ②, without clearance as shown above. Moreover, securely press the V cut areas of the pipe cover ④ against the pipe base on both sides during assembling.
2. Securely seal the cut areas of the pipe covers ④, ⑤ and ⑥ with heat insulating sealing tape (obtained locally). Wrap the seal tape in a cross to eliminate clearance at the cross area of the pipe.
3. Fasten the end of each pipe cover with band ⑥.



1. Install the liquid pipe ③ while aligning it with the pipe cover ⑦ (2 pcs). Seal the joint area of the pipe cover ⑦ with heat insulating sealing tape (obtained locally).
2. As shown above, install the liquid pipe ③ on the pipe covers ⑥ and ⑨, and securely seal with heat insulating sealing tape (obtained locally).
3. Fasten the end of each pipe cover with band ⑥.

Note
1. Cut the excessive part of each pipe cover.
2. Securely cover the joint areas (✻) of the refrigerant pipe (obtained locally) to the gas pipes ② and liquid pipe ③ with the pipe covers.
3. Cover the extra refrigerant pipe (obtained locally) with heat insulating material. If commercial heat insulating material is used, it must be 12mm or thicker.

5 Control wiring for indoor unit

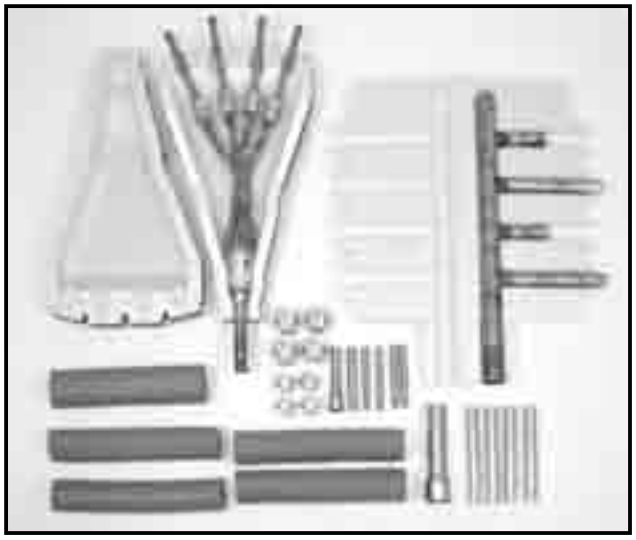
● Specifications of each control cable

	①	②
Control cable	Prepared by site	Enclosed with the remote controller
Control circuit voltage	220~240V	DC12V
Cable thickness	2.5mm² or more	0.3mm² or more
Polarity	Designated	Not designated

Distribution Pipe

MSDF-1111R-E

Photo



Descriptions

4-branch pipe for Multi-System Quadruple use.(25:25:25:25)

Applicable Models

- PU-P200/250
- PUH-P200/250
- PUHZ-RP200/250

  for 25:25:25:25 Quadruple use

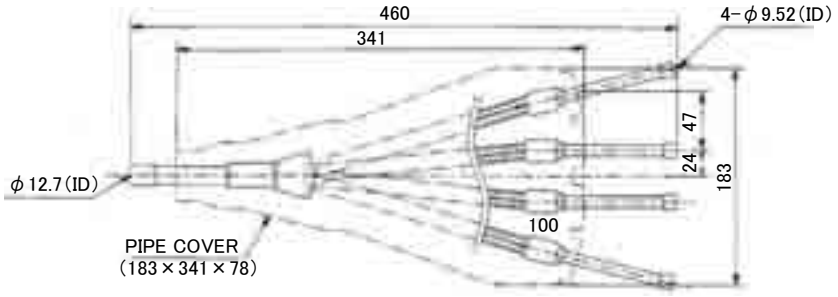
Specifications

Main body	Distribution ratio	Outdoor unit capacity is divided into four (25:25:25:25)
	Number of distribution pipes	1 each for liquid pipe and gas pipe
	Pipe material	Phosphate deoxidized copper C1220T-OL (JIS H3300)
Accessory	Pipe cover	Polyethylene foam molding (for liquid pipe) EPT sponge rubber type (for gas pipe)
	Joint	11 joints (5 types)
	Band	7 bands

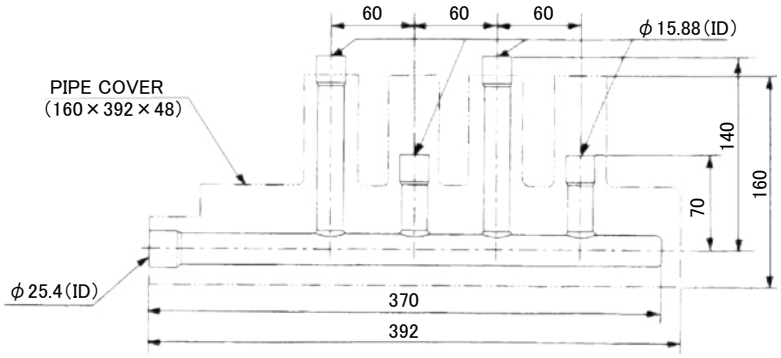
Dimensions

Unit : mm

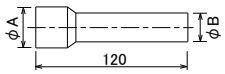
LIQUID PIPE



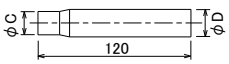
GAS PIPE



JOINT(Accessory)



ΦA(ID)	ΦB(OD)	Amount
28.6	25.4	1
15.88	12.7	1



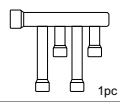
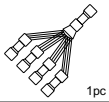
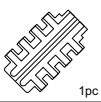
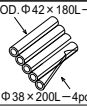
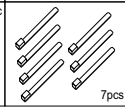
ΦC(ID)	ΦD(OD)	Amount
12.7	15.88	4
6.35	9.52	4
9.52	12.7	1

How to Use / How to Install

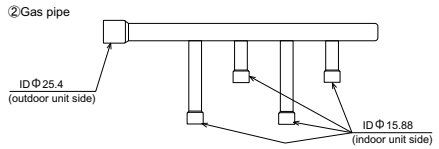
Package Air-conditioner Optional Parts Instruction Sheet for Simultaneous Quadruple Distributing Pipe exclusively used with Free Compo Multi-Units

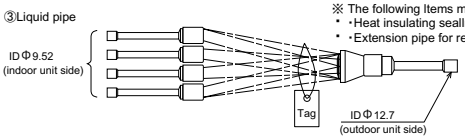
Model MSDF-1111R-E〔Indoor unit(quadruple)With same-capacity 25:25:25:25〕····· Outdoor unit PUH-P8～10, 200～250MYA type (R407C fixed speed)
Outdoor unit PUHZ-RP8～10, 200～250HA type (R410A power inverter)

・ Make sure that you have all the following parts in packing box before beginning installation:

① Installation manual	② Gas pipe	③ Liquid pipe	④ Pipe cover (gas pipe)	⑤ Pipe covers (liquid pipe)	⑥⑦ Pipe cover	⑧ Band	⑨ Joint	⑩ Flare nut
 This sheet 1 sheet	 1pc	 1pc	 1pc	 2pcs	 ⑥OD.Φ42×180L－1pc ⑦Φ38×200L－4pcs	 7pcs	 ・Φ9.52→Φ6.35･･･4pcs ・Φ12.7→Φ9.52･･･1pcs ・Φ12.7→Φ15.88･･1pcs ・Φ15.88→Φ12.7･･4pcs ・Φ25.4→Φ28.6･･･1pcs	 ・1/4F･･4pcs ・1/2F･･4pcs For R410A indoor unit.

● the gas pipe ② and liquid pipe ③ are specified as shown below.





※ The following Items must be obtained locally in addition to the packed parts.
・・Heat insulating seallng tape.
・・Extension pipe for refrigerant pipe.

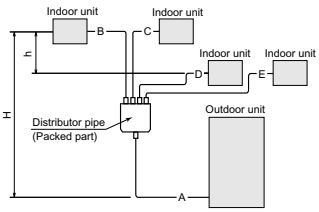
・ Pipe size and refrigerant pipe limits.

■For R407C fixed speed models 〈**Table 1-1**〉

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C+D=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
200 (8Hp)	Φ25.4 〈1〉	Φ15.88 〈5/8〉	Φ12.7 〈1/2〉	Φ9.52 〈3/8〉	A + B = A + C = A + D = A + E = 50m or less	70m or less	|B－C| = |B－D| = |B－E| = |C－D| = |C－E| = |D－E| = 8m or less	H = 40m or less	h = 1m or less	15 or less
250 (10Hp)	Φ28.6 〈1-1/8〉									

■For R410A Power Inverter models 〈**Table 1-2**〉

Outdoor unit capacity	Pipe size (mm)				Actual pipe length (m)			Height Difference (m)		Note 1 Number of bends
	Gas pipe side		Liquid pipe side		Indoor-Outdoor	A+B+C+D=	Indoor-Indoor	Indoor-Outdoor	Indoor-Indoor	
	Outdoor unit side	Indoor unit side	Outdoor unit side	Indoor unit side						
200 (8Hp)	Φ25.4 〈1〉	Φ12.7 〈1/2〉	Φ9.52 〈3/8〉	Φ6.35 〈1/4〉	A + B = A + C = A + D = A + E = 80m or less	80m or less	|B－C| = |B－D| = |B－E| = |C－D| = |C－E| = |D－E| = 8m or less	H = 40m or less	h = 1m or less	15 or less
250 (10Hp)	Φ28.6 〈1-1/8〉	Φ15.88 〈5/8〉	Φ12.7 〈1/2〉	Φ9.52 〈3/8〉						



Note 1: The number of bends in the refrigerant pipes is respectlvely 8 or less in the range of 〈A＋B〉〈A＋C〉〈A＋D〉〈A＋E〉.

・ Pipe connections

1. Perform work, taking care with the following:
   ・Be sure to check the combination pattern of indoor and outdoor units, joints to be used 〈Table 2〉, pipe size and joint used ⑨.
   ・Be sure to observe the limits to refrigerant pipe length and number of bends 〈Table 1〉.
   ・Insert the refrigerant pipe (procured at local site) and joint ⑨ into the expanded pipe portions of distributing pipe (this product) until they stop, and then connect them using anti-oxidization soldering.
   ・There is no restriction on the orientation of distributing pipe (this product)during installation.
   ・Take care that no foreign object, such as dust, enters during pipe connecting work.
   ・Remove the tag of liquid pipe ③ after checking it.
2. Pipe connections
   ・The provided joints ⑨ will be necessary depending on the capability of model used: See 〈Table 2〉, and connect the refrigerant piping.
   ・Do not bend or widen the distributing pipe (liquid pipe).

Combination pattern of indoor and outdoor units and joints to be used:

■For R407C fixed speed 〈**Table 2-1**〉

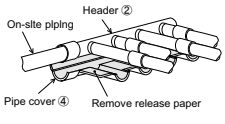
Outdoor unit	Indoor unit	Joint to be used
200 (8Hp)	50+50+50+50 (2+2+2+2)	No Joint is necessary
250 (10Hp)	60+60+60+60 (2.5+2.5+2.5+2.5)	・ OuterΦ25.4－innerΦ28.6〔outdoor gas pipe side〕×1

■For R410A Power Inverter 〈**Table 2-2**〉

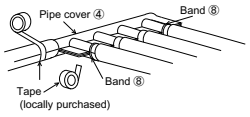
Outdoor unit	Indoor unit	Joint to be used
200 (8Hp)	50+50+50+50 (2+2+2+2)	・ OuterΦ15.88－innerΦ12.7〔indoor gas pipe side〕×4, Outerφ9.52－innerΦ6.35〔indoor liquid pipe side〕×4, OuterΦ12.7－innerΦ9.52〔outdoor gas pipe side〕×1.
250 (10Hp)	60+60+60+60 (2.5+2.5+2.5+2.5)	・ OuterΦ25.4－innerΦ28.6〔outdoor gas pipe side〕×1

・ Heat insulation work

Gas pipe

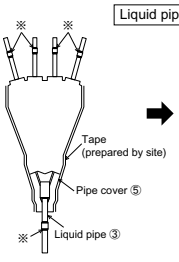


(1) After assembling header ② into pipe cover ④ remove the release paper from inside pipe cover ④ and wrap header ② with pipe cover ④.

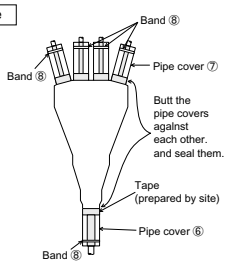


(2) Clamp both ends of the Indoor branch connection of pipe cover ④ with band ⑧ as shown above. Cut off the excess length of the band.
(3) TIghtly seal the joints of the pipe cover with tape (locally purchased).(Incomplete sealing can result in dew condensation.)

Liquid pipe



(1) Install the liquid pipe ③ while aligning it with the pipe cover ⑤ (2 pcs).Seal the joint ares of the pipe cover ⑤ with hest Insulating sealing tape (obtalnlocally).



(1) As shown above, install the liquid pipe ③ on the pipe cover ⑧ and ⑦, and securely seal with heat Insulating sealing tape (obtain locally).
(3) Fasten the end of each pipe cover with band ⑧

Notes:
1. Cut the excesslve part of each pipe cover
2. Securely cover the joint areas (※) of the refrlgerant pipe (obtained locally) to the gas pipes ② and llquid pipe ③ with the pipe covers.
3. Cover the entire refrigerant pipe (obtained locally) with heat insulating materal.if commercial heat insulating material is used, it must be 12mm or thicker.

Please install contents other than this description on the main part of a product with an attached installation description, and use them as it.

Photo

Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit Φ6.35 → Φ9.52)

Applicable Models

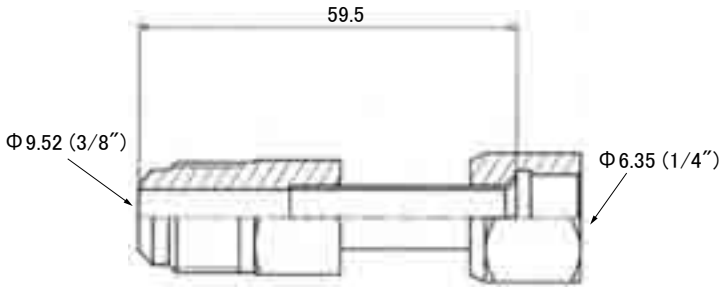
■ PUHZ-RP

Specifications

Pipe diameter	Φ 6.35
Pipe material	C 1220T - OL

Dimensions

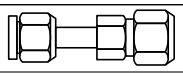
Unit : mm (inch)



How to Use / How to Install

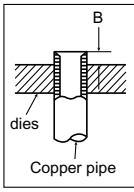
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG72RJ-E (unit side: Φ6.35 diameter, onsite pipe side: Φ9.52 diameter)
PAC-SG73RJ-E (unit side: Φ9.52 diameter, onsite pipe side: Φ12.70 diameter)
PAC-SG74RJ-E (unit side: Φ12.70 diameter, onsite pipe side: Φ15.88 diameter)
PAC-SG75RJ-E (unit side: Φ15.88 diameter, onsite pipe side: Φ19.05 diameter)

Unit side  Onsite piping side

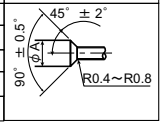
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※ When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor 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.

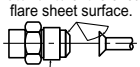


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
φ 6.35(1/4")	0~0.5	1.0~1.5
φ 9.52(3/8")	0~0.5	1.0~1.5
φ12.70(1/2")	0~0.5	1.0~1.5
φ15.88(5/8")	0~0.5	1.0~1.5
φ19.05(3/4")	0~0.5	1.0~1.5

※ 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.

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	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or 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.

Joint Pipe Unit Φ 9.52→Pipe Φ 12.7 PAC-SG73RJ-E

Photo

Descriptions

A part to connect refrigerant pipes of the different diameter.
(Unit Φ9.52 → Φ12.7)

Applicable Models

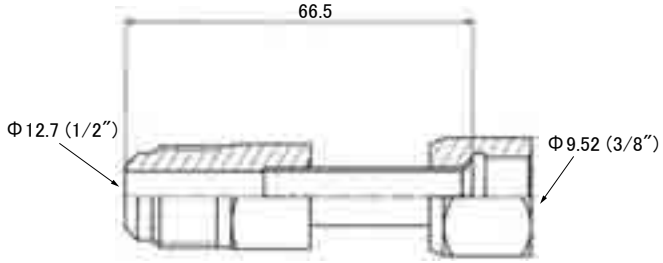
■ PUHZ-RP

Specifications

Pipe diameter	Φ 9.52
Pipe material	C 1220T - OL

Dimensions

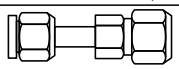
Unit : mm (inch)



How to Use / How to Install

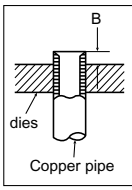
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG72RJ-E (unit side:Φ6.35 diameter, onsite pipe side:Φ9.52 diameter)
PAC-SG73RJ-E (unit side:Φ9.52 diameter, onsite pipe side:Φ12.70 diameter)
PAC-SG74RJ-E (unit side:Φ12.70 diameter, onsite pipe side:Φ15.88 diameter)
PAC-SG75RJ-E (unit side:Φ15.88 diameter, onsite pipe side:Φ19.05 diameter)

Unit side  Onsite piping side

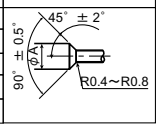
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor 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.

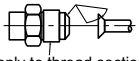


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
φ 6.35(1/4")	0~0.5	1.0~1.5
φ 9.52(3/8")	0~0.5	1.0~1.5
φ12.70(1/2")	0~0.5	1.0~1.5
φ15.88(5/8")	0~0.5	1.0~1.5
φ19.05(3/4")	0~0.5	1.0~1.5

※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.

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	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or 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.

Joint Pipe Unit Φ 12.7→Pipe Φ 15.88 PAC-SG74RJ-E

Photo

Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit Φ12.7 → Φ15.88)

Applicable Models

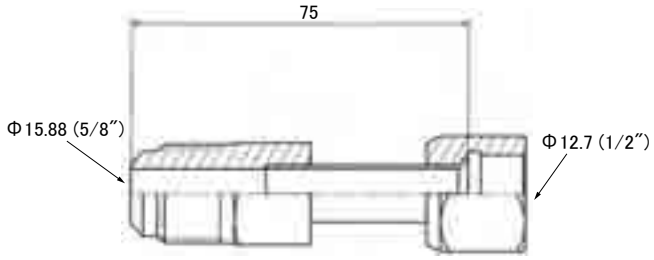
■ PUHZ-RP

Specifications

Pipe diameter	Φ 12.7
Pipe material	C 1220T - OL

Dimensions

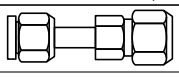
Unit : mm (inch)



How to Use / How to Install

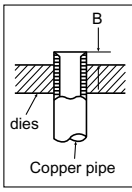
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG72RJ-E (unit side: Φ6.35 diameter, onsite pipe side: Φ9.52 diameter)
PAC-SG73RJ-E (unit side: Φ9.52 diameter, onsite pipe side: Φ12.70 diameter)
PAC-SG74RJ-E (unit side: Φ12.70 diameter, onsite pipe side: Φ15.88 diameter)
PAC-SG75RJ-E (unit side: Φ15.88 diameter, onsite pipe side: Φ19.05 diameter)

Unit side  Onsite piping side

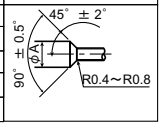
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※ When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor 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.

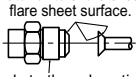


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
φ 6.35(1/4")	0~0.5	1.0~1.5
φ 9.52(3/8")	0~0.5	1.0~1.5
φ12.70(1/2")	0~0.5	1.0~1.5
φ15.88(5/8")	0~0.5	1.0~1.5
φ19.05(3/4")	0~0.5	1.0~1.5

※ 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.

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	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or 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.

Joint Pipe Unit Φ 15.88→Pipe Φ 19.05 PAC-SG75RJ-E

Photo

Descriptions

A part to connect refrigerant pipes of the different diameter.
(Unit Φ15.88 → Φ19.05)

Applicable Models

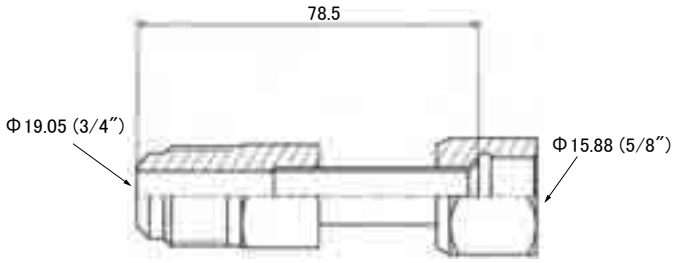
■ PUHZ-RP

Specifications

Pipe diameter	Φ 15.88
Pipe material	C 1220T - OL

Dimensions

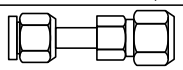
Unit : mm (inch)



How to Use / How to Install

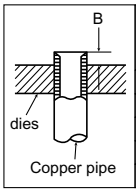
Make sure that you have all the following parts, in addition to this manual in this box:

Joint Pipe
PAC-SG72RJ-E (unit side: Φ6.35 diameter, onsite pipe side: Φ9.52 diameter)
PAC-SG73RJ-E (unit side: Φ9.52 diameter, onsite pipe side: Φ12.70 diameter)
PAC-SG74RJ-E (unit side: Φ12.70 diameter, onsite pipe side: Φ15.88 diameter)
PAC-SG75RJ-E (unit side: Φ15.88 diameter, onsite pipe side: Φ19.05 diameter)

Unit side  Onsite piping side

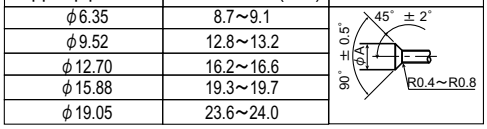
Installation procedure
(carefully read the following before installing.)
This optional part is used to connect indoor/outdoor unit to onsite pipes of different diameters.
※When installing this optional part, be sure to read "Refrigerant pipe connection" in the installation manual attached to outdoor 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.

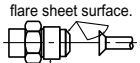


Pipe diameter (mm)	B size (mm)	
	R410A flare tool	R22/R407C flare tool
	Clutch type	
φ 6.35(1/4")	0~0.5	1.0~1.5
φ 9.52(3/8")	0~0.5	1.0~1.5
φ12.70(1/2")	0~0.5	1.0~1.5
φ15.88(5/8")	0~0.5	1.0~1.5
φ19.05(3/4")	0~0.5	1.0~1.5

※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.

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	

2) Remove caps (both ends) for protection against mixing of foreign materials from optional part, and thinly apply refrigerat or 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.

Photo

Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit Φ9.52 → Φ15.88)

Applicable Models

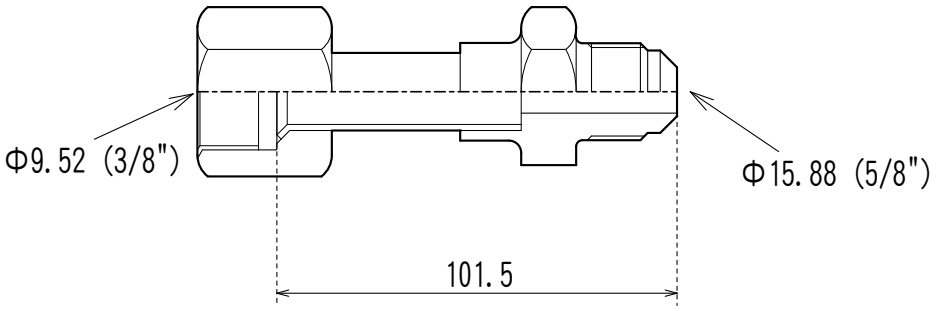
- MXZ-8A140VA
- PAC-AK30BC
- PAC-AK50BC

Specifications

Pipe diameter	Φ 9.52
Pipe material	C 1220T - OL

Dimensions

Unit : mm (inch)



Joint Pipe Unit Φ 6.35→Pipe Φ 9.52 PAC-493PI

Photo

Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit Φ6.35 → Φ9.52)

Applicable Models

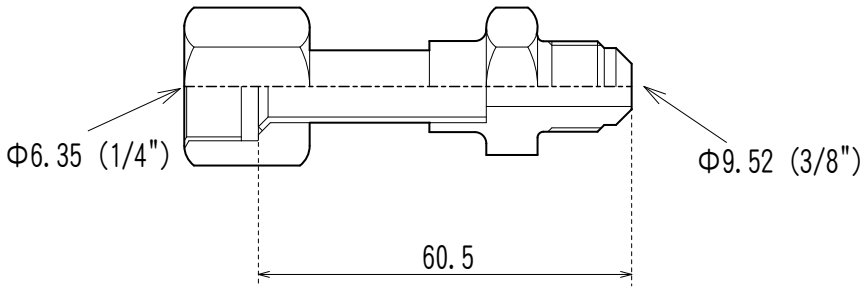
- MXZ-8A140VA
- PAC-AK30BC
- PAC-AK50BC

Specifications

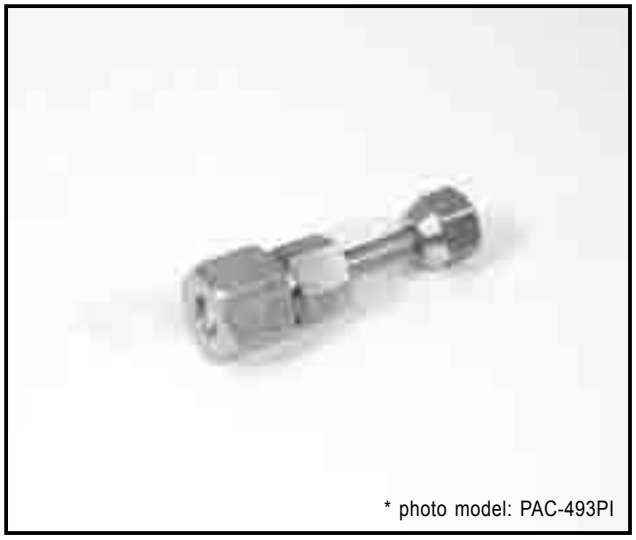
Pipe diameter	Φ 6.35
Pipe material	C 1220T - OL

Dimensions

Unit : mm (inch)



Photo



* photo model: PAC-493PI

Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit Φ9.52 → Φ12.7)

Applicable Models

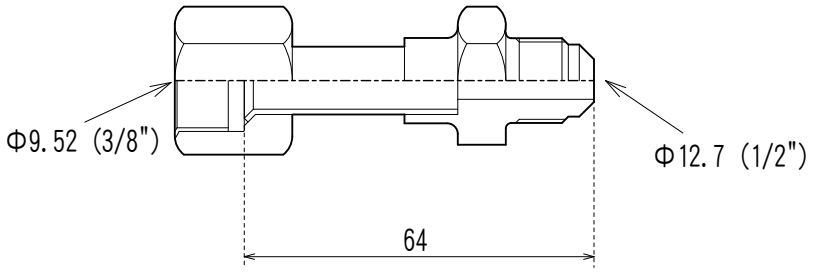
- MXZ-A14/18
- MXZ-3A/4A
- MXZ-8A140VA
- PAC-AK30BA
- PAC-AK50BA

Specifications

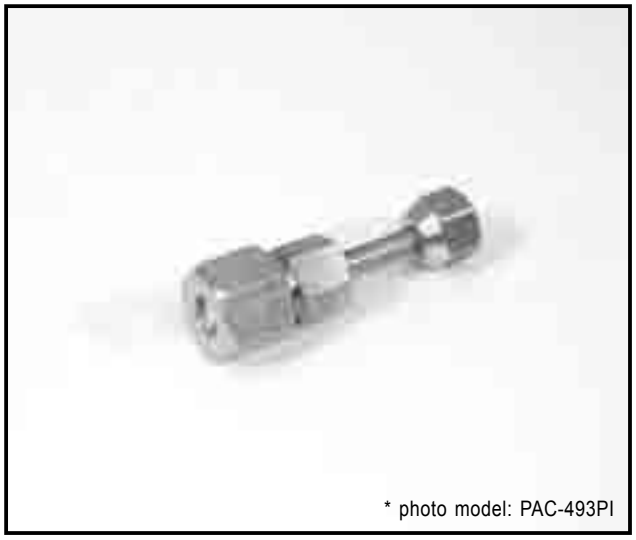
Pipe diameter	Φ 9.52
Pipe material	C 1220T - OL

Dimensions

Unit : mm (inch)



Photo



* photo model: PAC-493PI

Descriptions

A part to connect the refrigerant pipes of the different diameter.
(Unit Φ12.7 → Φ9.52)

Applicable Models

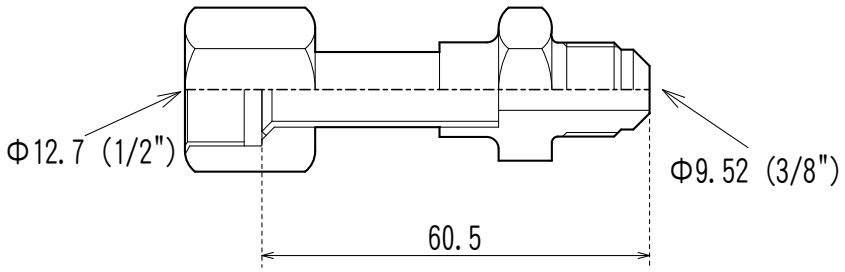
- MXZ-4A
- MXZ-8A140VA
- PAC-AK30BC
- PAV-AK50BC

Specifications

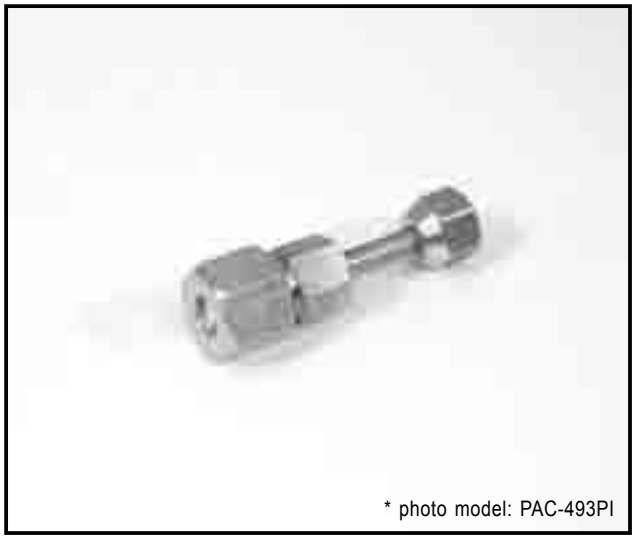
Pipe diameter	Φ 12.7
Pipe material	C 1220T - OL

Dimensions

Unit : mm (inch)



Photo



* photo model: PAC-493PI

Descriptions

A part to connect refrigerant pipes of the different diameter. (Unit Φ12.7 → Φ15.88)

Applicable Models

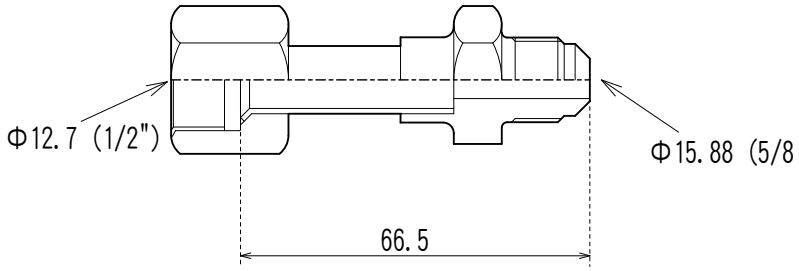
- MXZ-4A
- MXZ-8A140VA
- PAC-AK30BC
- PAV-AK50BC

Specifications

Pipe diameter	Φ 12.7
Pipe material	C 1220T - OL

Dimensions

Unit : mm (inch)



Filter Dryer (for Liquid Pipe of Φ 6.35) PAC-SG81DR-E

Photo

Descriptions

Removes minute dirt particles in the refrigerant pipe, when replacing an air-conditioning unit. (for Liquid Pipe of Φ6.35)

Applicable Models

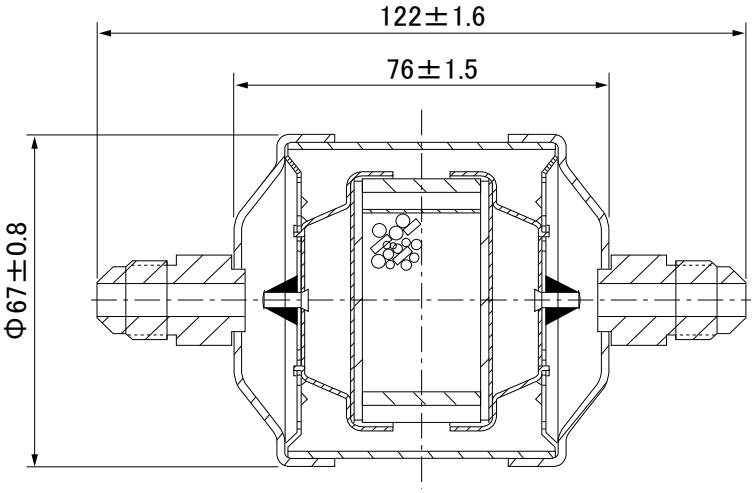
- PUHZ-RP35
- PUHZ-RP50

Specifications

Pipe size	Liquid side : Φ6.35 flare
Applicable refrigrant	R407C / R410A

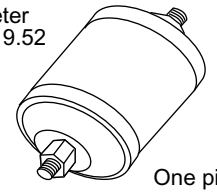
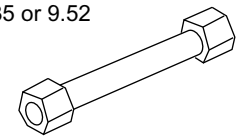
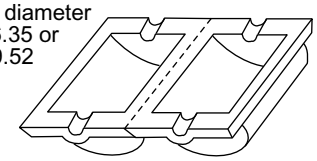
Dimensions

Unit : mm



How to Use / How to Install

Make sure that you have all the following parts.

①Filter dryer PAC-SG81DR-E (for diameter of 6.35) PAC-SG82DR-E (for diameter of 9.52)	②Connection pipe PAC-SG81DR-E (for diameter of 6.35) PAC-SG82DR-E (for diameter of 9.52)	③Heat insulator PAC-SG81DR-E (for diameter of 6.35) PAC-SG82DR-E (for diameter of 9.52)
For diameter of 6.35 or 9.52  One piece	For diameter of 6.35 or 9.52  One piece	For diameter of 6.35 or 9.52  One piece

Installation Procedures (carefully read the following before installation.)

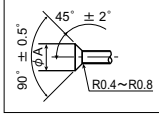
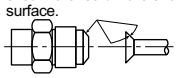
Cautions:
1) This optional part is used to remove moisture within refrigerant pipe to prevent compressor failures. However, if too much impurity inside refrigerant cycle has accumulated, such as amount of mixed moisture, dryer must be replaced after one season elapses. (Amount of allowable moisture absorption: 3 -7 cc)
2) Install the filter dryer to refrigerant pipe mid way on liquid side.
3) Filter dryer can be installed outside of the unit. Installation inside the unit is possible only when installation space can be secured.

1 Preparation for installation

In the following parts, the installation for PUHZ-RP3VHA is highlighted as a representive.

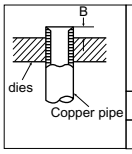
- 1) Refer to the installation manual of the unit for procedure of refrigerant piping and vacuuming, etc. Remove the panel from outdoor unit. (See Fig. 1.)
- 2) Removing the panel
  Remove the service panel, front pipe cover and back pipe cover.
  Remove back pipe cover only when taking it from back pipe.
- 3) Pipe connection
  - When bending pipe, take bending R (R100～R150) just enough, and take care that pipe des not fold.
  - Apply pipe processing without touching compressor. (If the pipe touches, it may cause abnormal sound or vibration.)
  - Apply flare processing to connection pipe, arranging this on site.
  - Thinly apply refrigerator oil (locally procured) to flare sheet surface.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)
φ6.35	8.7～9.1
φ9.52	12.8～13.2

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

〈Proper tightening torque using torque wrench〉

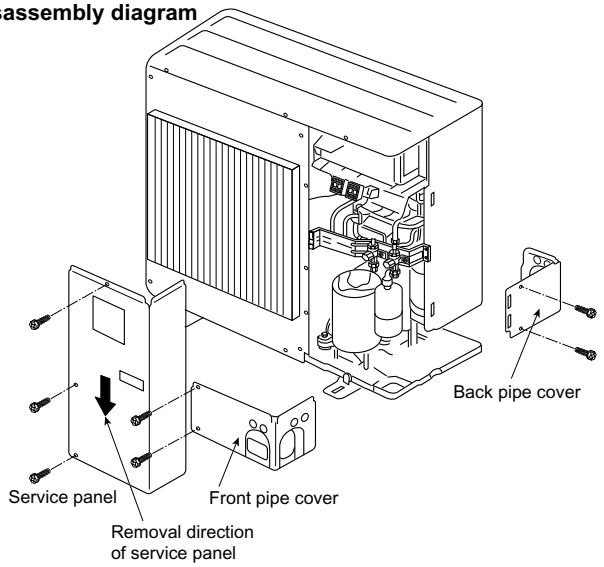
Outer diameter of copper pipe (mm)	Tightening torque N·m (kgf·cm)
φ6.35	14～18(140～180)
φ9.52	34～42(340～420)



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

※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.

【Fig. 1】
Panel disassembly diagram

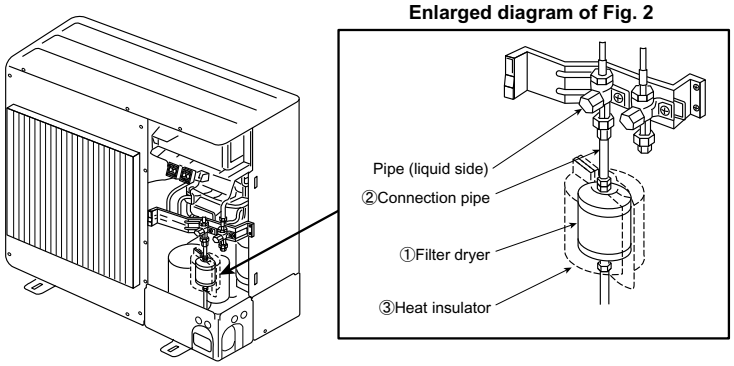


2 Installation of Filter dryer

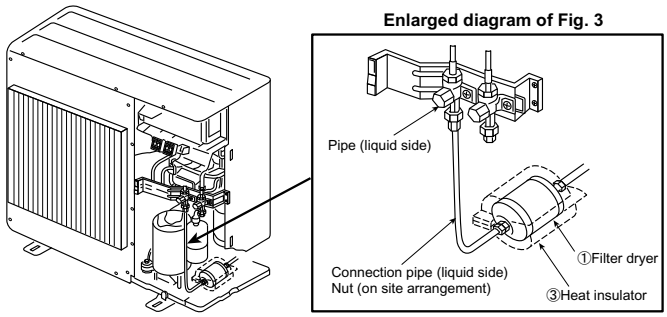
Be sure to install filter dryer on liquid side (narrow side).

・1） When filter dryer is being installed inside the unit, refer to Figs 2 and 3, according to the installation space for dryer. If installation space for dryer cannot be secured, install it outside of the unit.Install referring to Item 2-ii).

【Fig. 2】
Filter dryer installation diagram (Installation inside the unit)

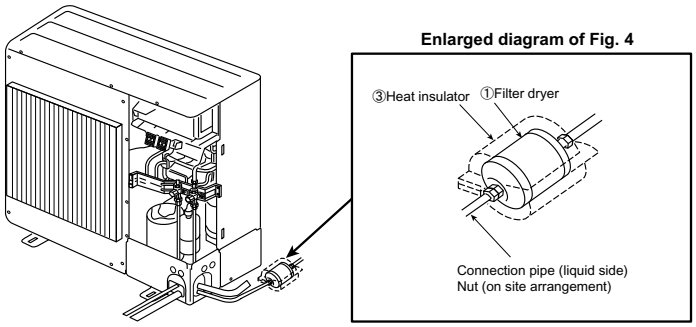


【Fig. 3】
Filter dryer installation diagram (horizontal installation inside the unit)



2） When installing outside of the unit, install it at optional position of extension pipe. Make and arrange connection pipe on the site. (See Fig. 4.)

【Fig. 4】
Filter dryer installation diagram (Installation outside of the unit)



3） Perform heat insulation work. (To prevent dewdrops forming)

・After dryer is installed, wrap heat insulator around dryer section.

※Apply taping to joint of heat insulator ensuring that there is no gap. Also wrap heat insulator around pipe.

3 Filter dryer installation is now complete. Reattach service panel as it was.

4 Test run

1） Perform test run according to the installation manual of the unit, and be sure to perform gas leak check and operation check.

Filter Dryer (for Liquid Pipe of Φ 9.52) PAC-SG82DR-E

Photo

Descriptions

Removes minute dirt particles in the refrigerant pipe, when replacing an air-conditioning unit. (for Liquid Pipr of Φ9.52)

Applicable Models

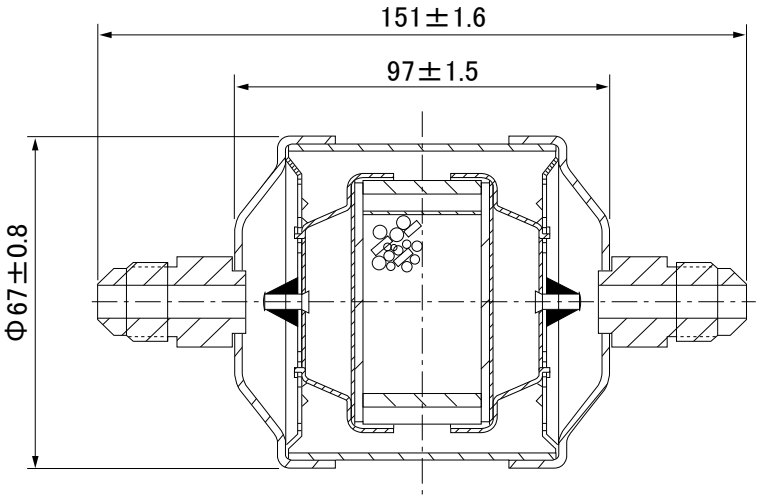
- PUHZ-RP60
- PUHZ-RP71
- PUHZ-RP100
- PUHZ-RP125
- PUHZ-RP140
- MXZ-8A140VA

Specifications

Pipe size	Liquid side: Φ 9.52 flare
Applicable refrigrant	R407C / R410A

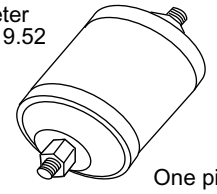
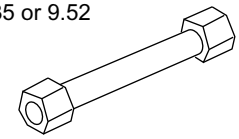
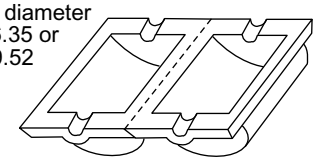
Dimensions

Unit : mm



How to Use / How to Install

Make sure that you have all the following parts.

①Filter dryer PAC-SG81DR-E (for diameter of 6.35) PAC-SG82DR-E (for diameter of 9.52)	②Connection pipe PAC-SG81DR-E (for diameter of 6.35) PAC-SG82DR-E (for diameter of 9.52)	③Heat insulator PAC-SG81DR-E (for diameter of 6.35) PAC-SG82DR-E (for diameter of 9.52)
For diameter of 6.35 or 9.52  One piece	For diameter of 6.35 or 9.52  One piece	For diameter of 6.35 or 9.52  One piece

Installation Procedures (carefully read the following before installation.)

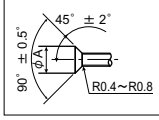
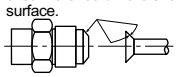
Cautions:
1) This optional part is used to remove moisture within refrigerant pipe to prevent compressor failures. However, if too much impurity inside refrigerant cycle has accumulated, such as amount of mixed moisture, dryer must be replaced after one season elapses. (Amount of allowable moisture absorption: 3 -7 cc)
2) Install the filter dryer to refrigerant pipe mid way on liquid side.
3) Filter dryer can be installed outside of the unit. Installation inside the unit is possible only when installation space can be secured.

1 Preparation for installation

In the following parts, the installation for PUHZ-RP3VHA is highlighted as a representive.

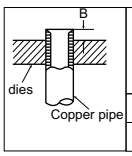
- 1) Refer to the installation manual of the unit for procedure of refrigerant piping and vacuuming, etc. Remove the panel from outdoor unit. (See Fig. 1.)
- 2) Removing the panel
  Remove the service panel, front pipe cover and back pipe cover.
  Remove back pipe cover only when taking it from back pipe.
- 3) Pipe connection
  - When bending pipe, take bending R (R100～R150) just enough, and take care that pipe des not fold.
  - Apply pipe processing without touching compressor. (If the pipe touches, it may cause abnormal sound or vibration.)
  - Apply flare processing to connection pipe, arranging this on site.
  - Thinly apply refrigerator oil (locally procured) to flare sheet surface.

Outer diameter of copper pipe (mm)	Processing size of flare section (mm)
φ6.35	8.7～9.1
φ9.52	12.8～13.2

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

〈Proper tightening torque using torque wrench〉

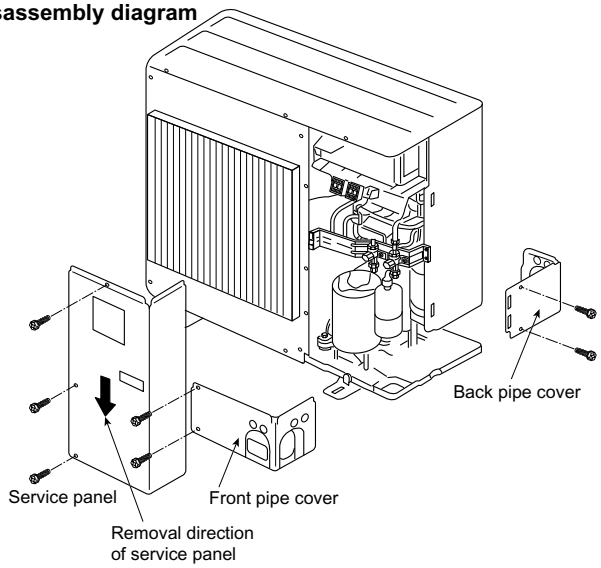
Outer diameter of copper pipe (mm)	Tightening torque N·m (kgf·cm)
φ6.35	14～18(140～180)
φ9.52	34～42(340～420)



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

※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.

【Fig. 1】
Panel disassembly diagram

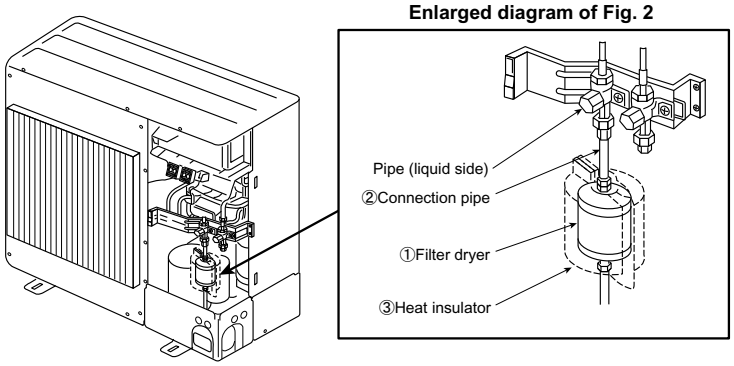


2 Installation of Filter dryer

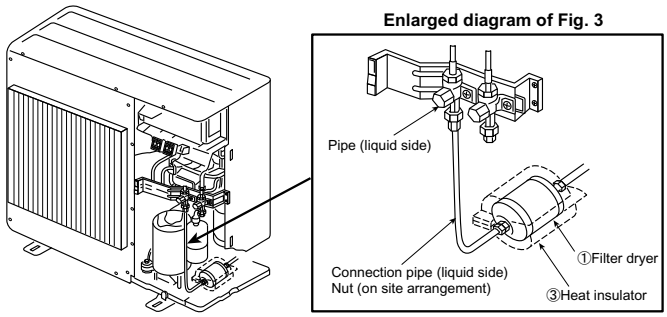
Be sure to install filter dryer on liquid side (narrow side).

・1） When filter dryer is being installed inside the unit, refer to Figs 2 and 3, according to the installation space for dryer. If installation space for dryer cannot be secured, install it outside of the unit.Install referring to Item 2-ii).

【Fig. 2】
Filter dryer installation diagram (Installation inside the unit)

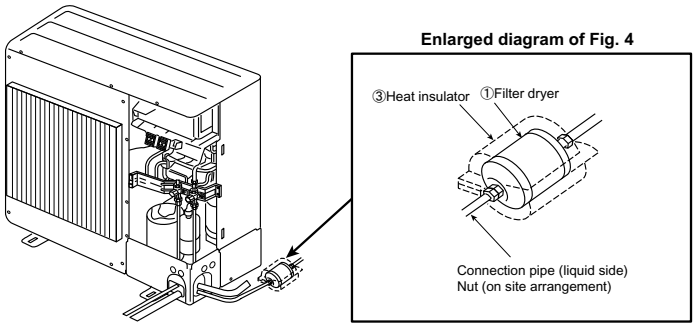


【Fig. 3】
Filter dryer installation diagram (horizontal installation inside the unit)



2） When installing outside of the unit, install it at optional position of extension pipe. Make and arrange connection pipe on the site. (See Fig. 4.)

【Fig. 4】
Filter dryer installation diagram (Installation outside of the unit)



3） Perform heat insulation work. (To prevent dewdrops forming)

・After dryer is installed, wrap heat insulator around dryer section.

※Apply taping to joint of heat insulator ensuring that there is no gap. Also wrap heat insulator around pipe.

3 Filter dryer installation is now complete. Reattach service panel as it was.

4 Test run

1） Perform test run according to the installation manual of the unit, and be sure to perform gas leak check and operation check.

Filter Dryer (for Liquid Pipe of Φ 12.7) PAC-SG85DR-E

Photo

Descriptions

Removes minute dirt particles in the refrigerant pipe. Is used when replacing an air-conditioning unit. (for Liquid Pipe of Φ 12.7)

Applicable Models

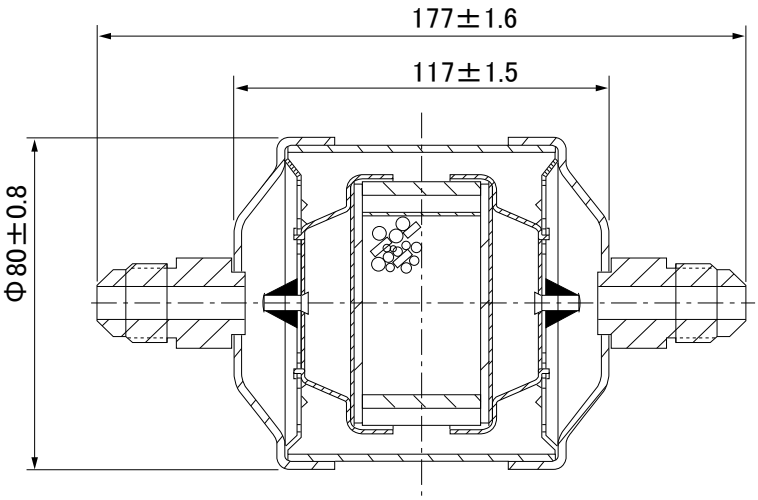
- PUHZ-RP200
- PUHZ-RP250

Specifications

Pipe size	Liquid side: Φ 12.7 flare
Applicable refrigrant	R407C / R410A

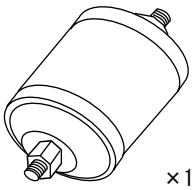
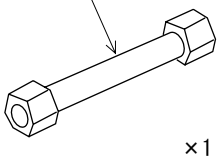
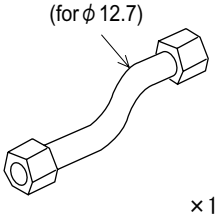
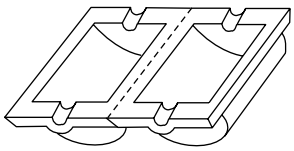
Dimensions

Unit : mm



How to Use / How to Install

Make sure that you have all the following parts.

①Filter dryer	②Connection pipe	③Heat insulator
 ×1	With PAC-SG81DR-E (for ϕ 6.35) or PAC-SG82DR-E (for ϕ 9.52)  ×1 or With PAC-SG85DR-E (for ϕ 12.7)  ×1	 ×1

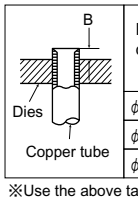
Installation Procedures (carefully read the following before installing)

Cautions
1) This optional part is used to remove moisture inside the refrigerant pipe and prevent fault of compressor. However, if there is excessive contamination inside the refrigerant cycle, such as a large amount of mixed moisture, etc., the dryer must be replaced after it is used during one season (the amount of allowable moisture absorption: 3-7 cc).
2) Install the filter dryer to refrigerant pipe midway on liquid side, using flare connection.
3) The filter dryer can be attached outside the unit. It can also be attached to the inside of unit only if the space for installation can be secured

1 Preparations for Installation

i) Refer to the installation manual of outdoor unit for the procedures of removing outdoor unit panel, refrigerant piping, vacuuming, etc.
ii) Removing panel
- Remove the service panel and cover.

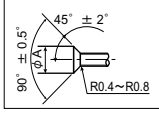
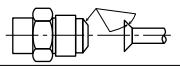
iii) Connecting pipes
- When bending pipe, allow enough bending R (R100-150), and take care that the pipe is not folded.
- Lay out the pipe so that it does not come into contact with the compressor. (Being in contact could cause abnormal sound or vibrations.)
- Apply flare processing to the connection pipe procured at local site.
- Thinly coat the flare sheet surface with refrigerant oil (procured at local site).



Pipe diameter (mm)	Dimension B (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
ϕ 12.7(1/2")	0～0.5	1.0～1.5

※Use the above table as a reference when processing the flare for refrigerant R410A using the conventional tool. Dimension B can be secured when using a copper pipe gauge for outgoing margin adjustment.

Outer diameter of copper pipe (mm)	Processing size of flare portion ϕA (mm)
ϕ6.35	8.7～9.1
ϕ9.52	12.8～13.2
ϕ12.7	16.2～16.6

Flare shape	Refrigerant oil coating point
	Coat the entire circumference of sheet surface with refrigerant oil. 

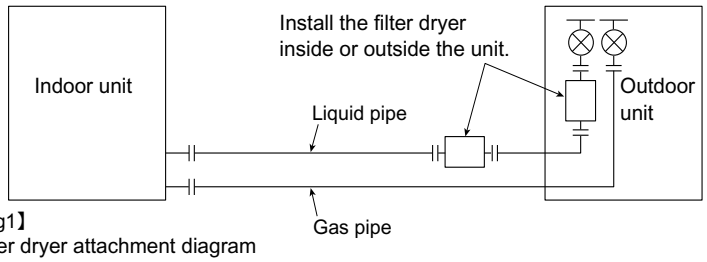
〈Appropriate tightening force with torque wrench〉

Outer diameter of copper pipe (mm)	Tightening force N.m (kgf-cm)
ϕ6.35	14～18（140～180）
ϕ9.52	34～42（340～420）
ϕ12.7	49～61（490～610）

2 Installing Filter Dryer

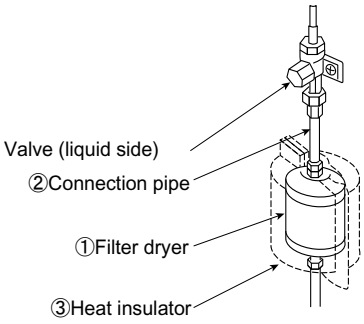
Be sure to attach the filter dryer on the liquid pipe (narrower one)

i) When installing the filter dryer inside the unit, refer to Fig. 1 or Fig. 2 according to the space in unit and install it. If there is no space for the dryer to be installed in unit, install it outside the unit (see Fig. 3).

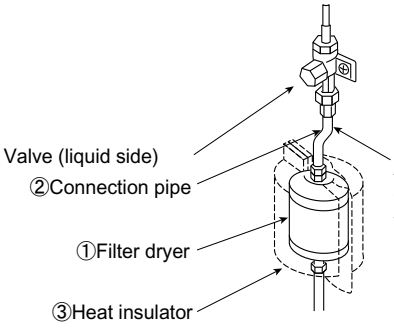


【Fig1】
Filter dryer attachment diagram (installing in unit)

With PAC-SG81DR-E or PAC-SG82DR-E

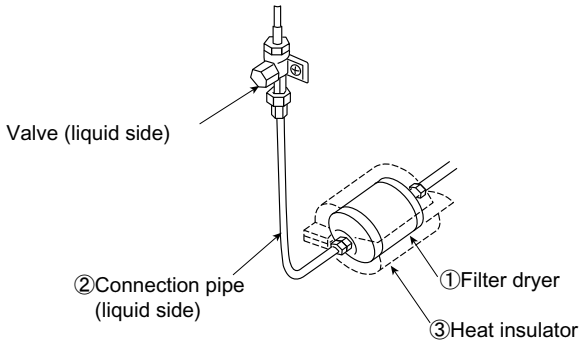


With PAC-SG85DR-E



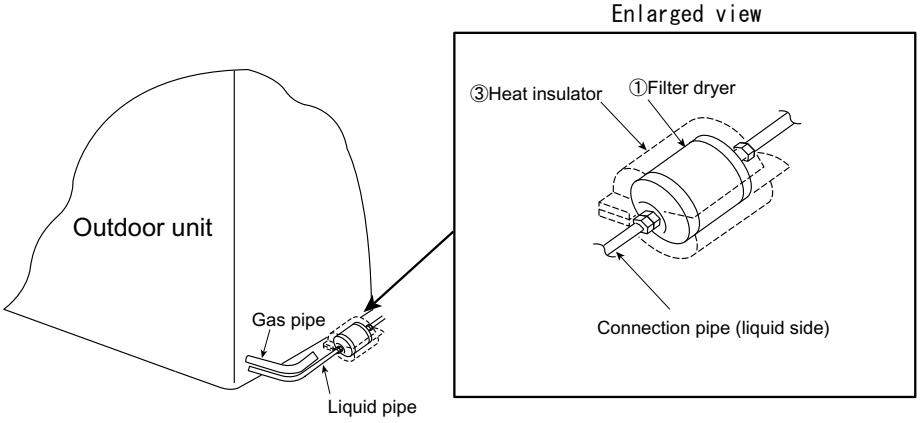
Adjust the pipe attachment orientation, taking care with the position of knockout hole in the bottom of outdoor unit.

【Fig2】Filter dryer attachment diagram (horizontal attachment in unit)



ii） When installing the filter dryer outside the unit, attach it to any position of extended pipe.
Procore the connection pipe at local site.

【Fig3】Filter dryer attachment diagram (attachment outside unit)



iii） Heat insulation (to prevent dripping)

- After attaching the filter dryer, wrap the heat insulator around the dryer.
  ※Tape the seam of heat insulator so that no gap is produced.
- Also wrap heat insulator around other pipes.

3 The attachment of filter dryer is now complete.

Reattach the service panels, etc. to the original position.

4 Test Run

i ）Perform test run according to the installation manual of unit, and be sure to execute gas leakage check and operation check.

Branch Box Outer Cover (for outdoor installation) PAC-AK350CVR-E

Photo

TO BE CONFIRMED

Descriptions

Enables outdoor installation of branch box in case its installation is impossible.

Applicable Models

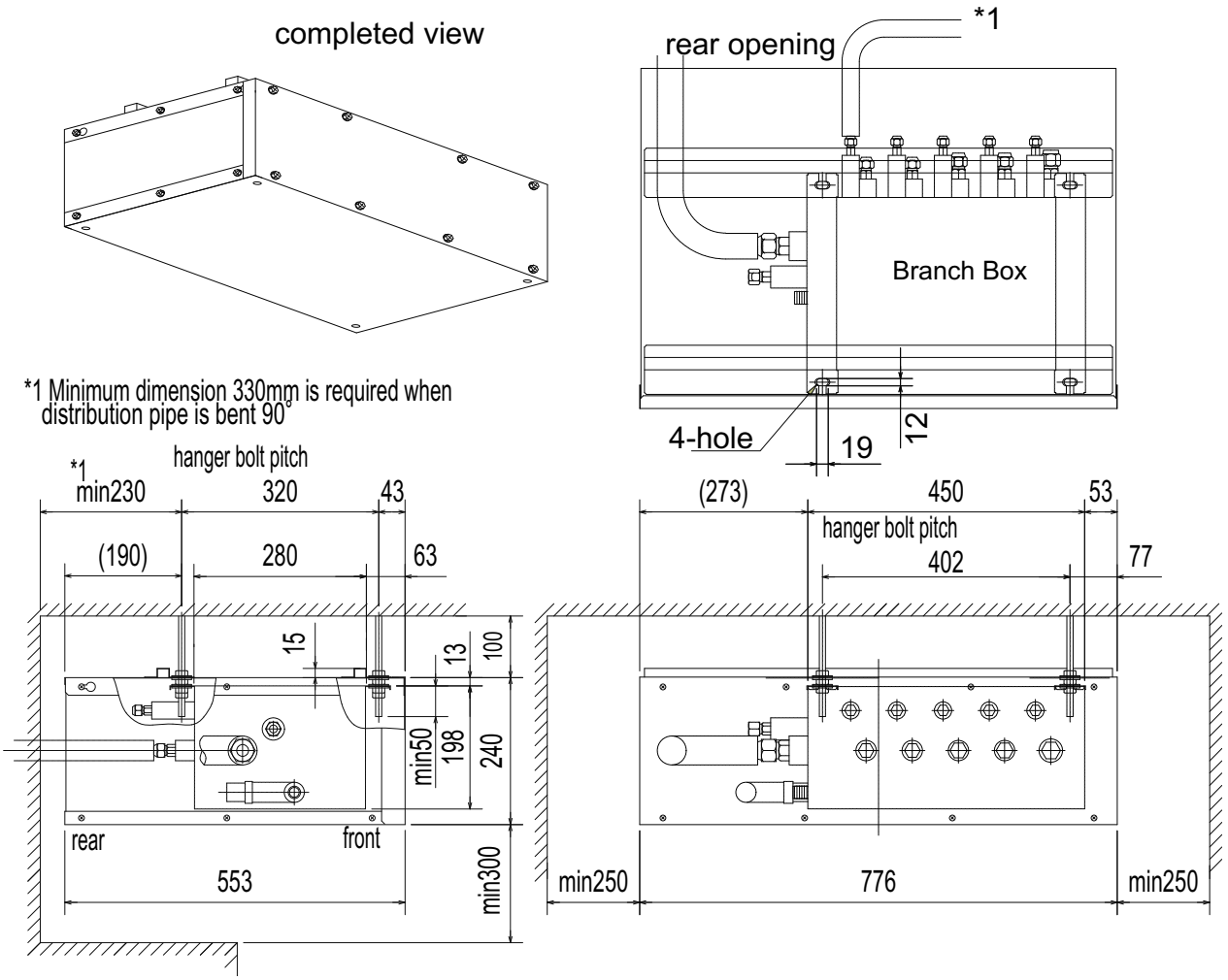
- MXZ-8A140VA
- PAC-AK30BC
- PAC-AK50BC

Specifications

TO BE CONFIRMED

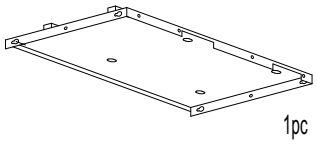
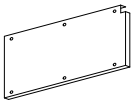
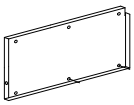
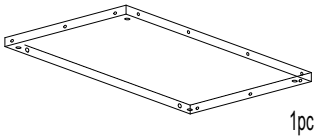
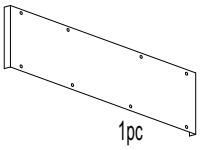
Dimensions

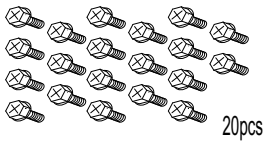
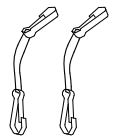
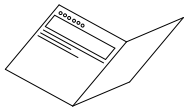
Unit : mm



How to Use / How to Install

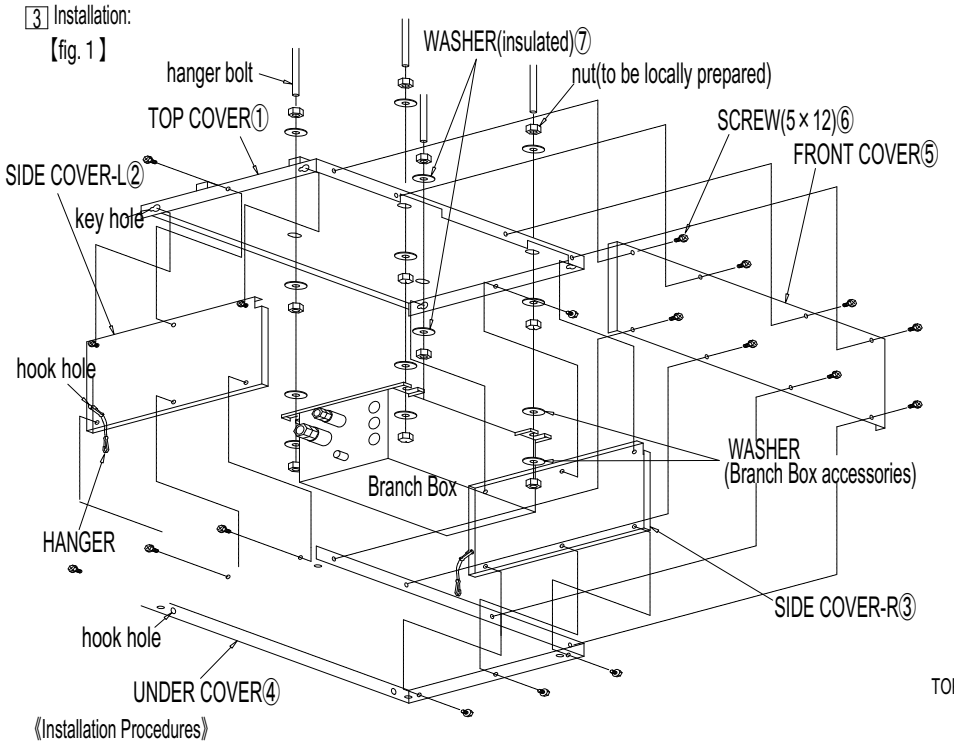
1 Please check if you have all the following parts in the packing before installation:

①TOP COVER	②SIDE COVER-L	③SIDE COVER-R	④UNDER COVER	⑤FRONT COVER
 1pc	 1pc	 1pc	 1pc	 1pc

⑥SCREW(5×12)	⑦WASHER(insulated)	⑧HANGER	⑨INSTALLATION PROCEDURE
 20pcs	 8pcs	 2pcs	 This sheet 1 sheet

3 Installation:

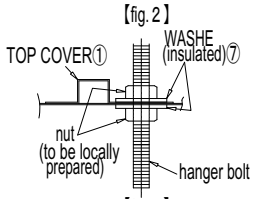
【fig. 1】



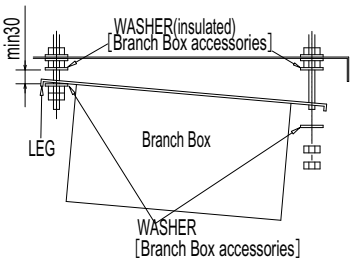
《Installation Procedures》

1.Install hanger bolts to match with the holes on the Branch Box (and the outer cover).
2.Put a nut(to be locally purchased) and a WASHER⑦ to the each hanger bolts.
3.Fix the TOP COVER① to the hanger bolts with WASHERs⑦ and nuts.【fig. 2】
Make sure to level the TOP COVER① before fixing
4.Put one insulated WASHER each (which come with the Branch Box) to 4 hanger bolts.【fig.3】
5.Put one WASHER and one nut each (which come with the Branch Box) to 2 hanger bolts either at front side or back side.【fig. 3】
6.Hook two LEGs on the pre-fixed WASHERs and nuts first. Then insert hanger bolts to two LEGs on the oppostie side and fix them with WASHERs and nuts (which come with the Branch Box).【fig. 4】
Make sure to level the Branch Box before fixing it.
※Make sure that all 16 nuts are tightly fixed.
7.Install pipings and wirings etc, following the installation manual of the Branch Box.
※Piping must be installed within the Outer Cover.
8.Fix the SIDE COVERs②&③ on both sides to the TOP COVER① with SCREWs⑥. First, put SCREWs⑥ tentatively to the holes at the both upper ends of the SIDE COVERs②&③, then hook them to the key holes on the TOP COVER①.
9.Fix the UNDER COVER④ to the SIDE COVERs②&③ with SCREWs⑥. Hook HANGERs⑧ first to the rear holes on the SIDE COVERs②&③ and then hook the other end of the HANGERs to the rear hole on the UNDER COVER④. Thus you can avoid the UNDER COVER④ falling and the installation work will be easier.(facilitated).
10.Fix the FRONT COVER⑤ to the TOP COVER① and the UNDER COVER④ with SCREWs⑥.
※Make sure that all 20 SCREWs are tightly fixed.

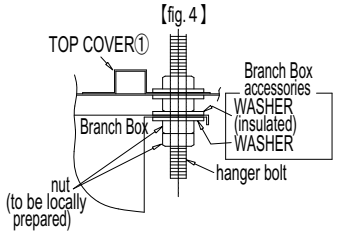
【fig. 2】



【fig. 3】



【fig. 4】



Photo

Descriptions

A part for changing the air direction from outdoor unit. Can also be used to prevent short cycles.

Applicable Models

- PU-P GAA
- PUH-P GAA

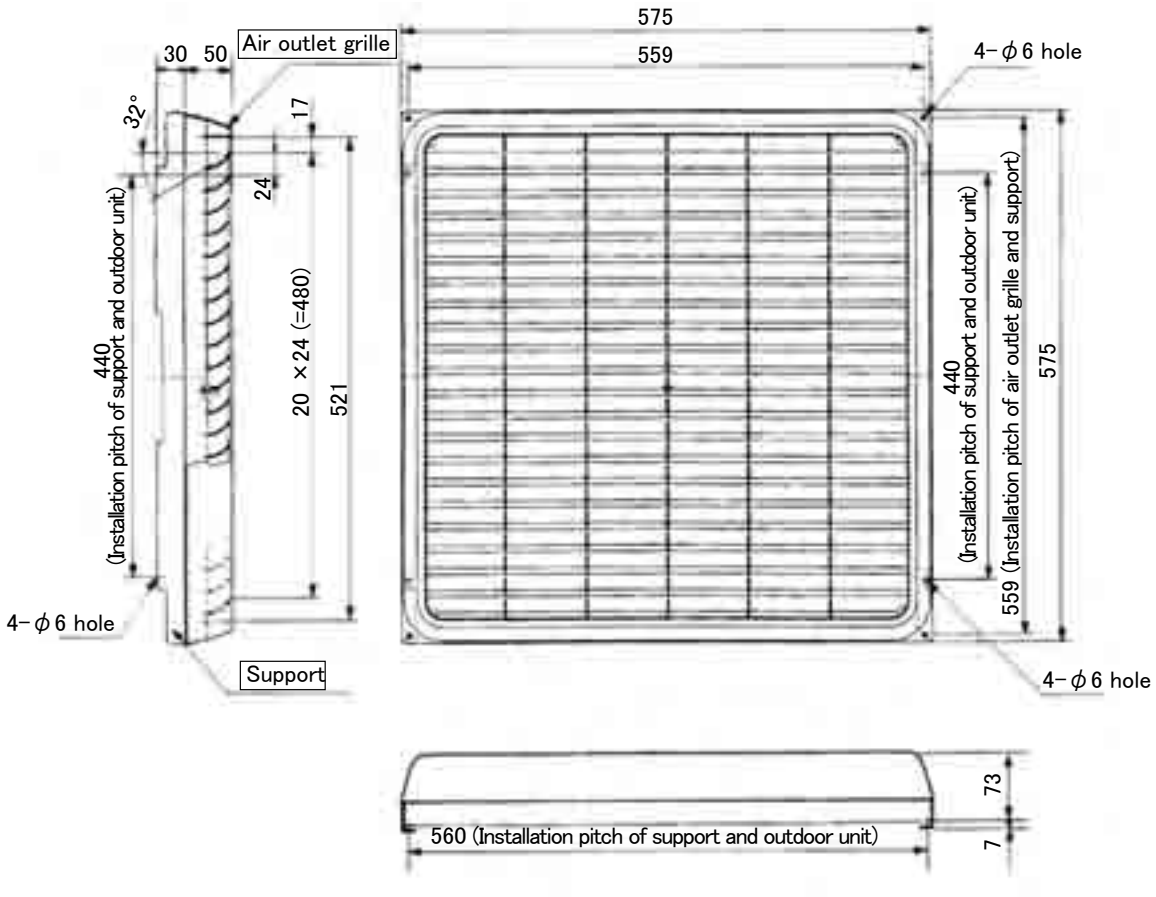
2 pieces required for P100/125/140

Specifications

Exterior	Color (Munsell)	Ivory (5Y 8/1)
	Material	Air outlet grille: AES resin
Weight		3.5kg
Air outlet direction		Changeable between up, down or sideways
Accessory name x Qty. <Material/Surface treatment>		Support x 2 (Alloy hot-dip zinc-coated carbon steel sheet / Acrylic resin coating) Washer faced screw (M5x15) x 8 (Iron wire (SWCH18A)/Zinc nickel plated)

Dimensions

Unit : mm

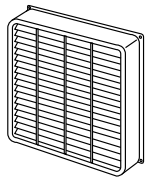
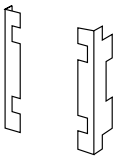


How to Use / How to Install

Note that two sets of this product are necessary for P4 outdoor unit or higher number models.

1 Checking provided parts

Make sure that you have the following parts as well as the installation sheet:

①Blow-off guide × 1	②Supports × 2	③Screws × 8
		

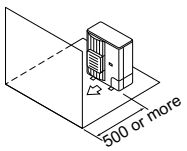
2 Checking Installation Space

(In the following diagrams, dimensions in parentheses are for P4 and higher number models Dimensions not in parentheses are common for all series models. Unit: mm)

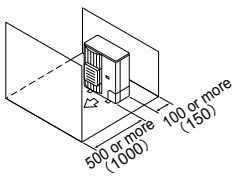
●Secure the necessary surrounding space shown below and select a place with less obstacles, to prevent a short cycle.

1) Surrounding space needed when installing one unit
- Do not use "upward discharge" in cases of figures (4) and (5) below.

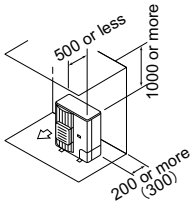
(1) Obstacle at front (open at back, sides and top)



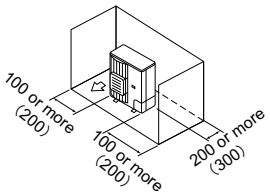
(2) Obstacles at back and front (open at sides and top)



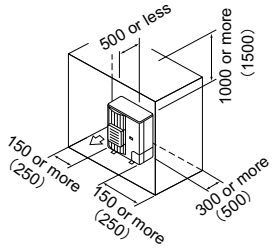
(3) Obstacles at back and top (open at front and sides)



(4) Obstacles at back, and side (open at front and top)

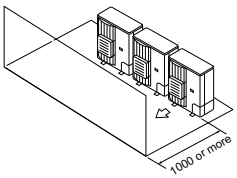


(5) Obstacles at back, sides and top (open at front)

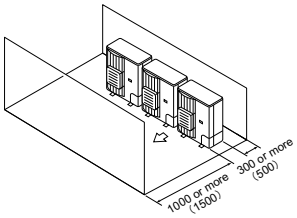


2) Surrounding space needed when installing multiple units
- When installing units horizontally in series, leave at least 10 mm space between units.
- Do not use "upward discharge" in case of figure (3) below.

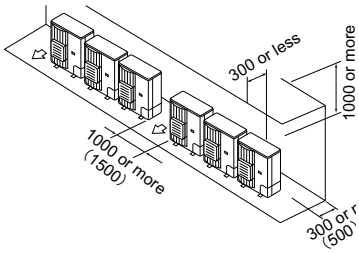
(1) Obstacle at front (open at back, sides and top)



(2) Obstacles at back and front (open at sides and top)

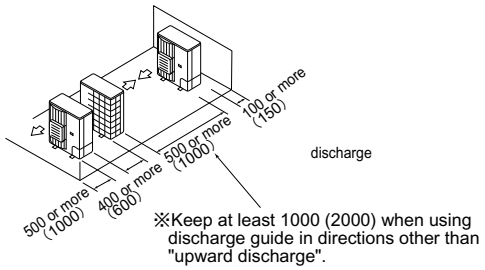


(3) Obstacles at back and top (open at front and sides)

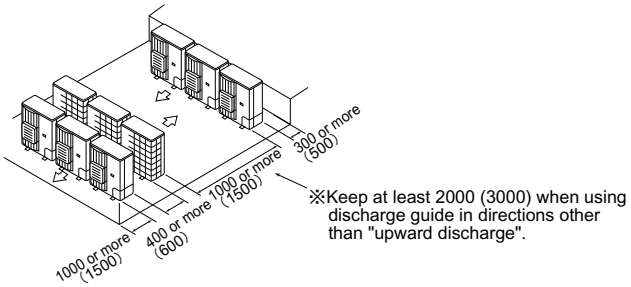


※Limit of 3 units can be installed horizonta in series. When installing a larger numbe of units, maintain the space between uni shown above.

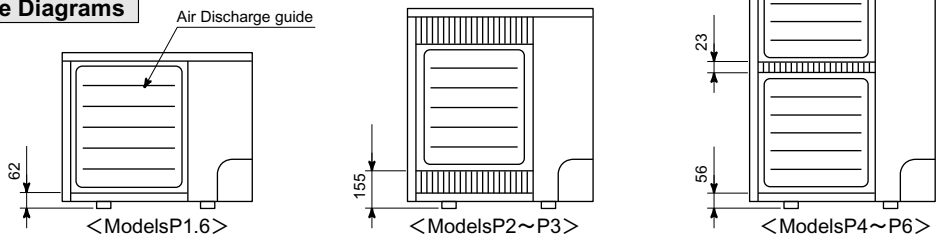
(4) Installing units, one in each row



(5) Installing multiple units in multiple rows

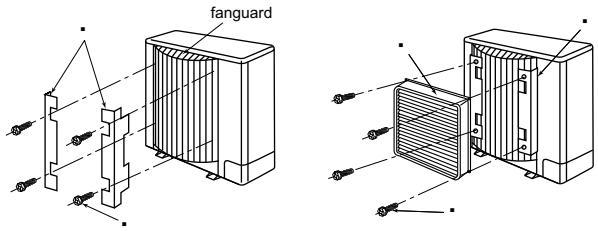


3 Installation Complete Diagrams



4 Installation Method

1) Use 4 screws to attach two supports to the outdoor unit.
   ・Referring to the installation complete diagram in item 3, insert the support into the lower side of fan guard, align the two holes in the top and bottom of support with the black plastic concave sections of outdoor unit, and then tighten them with screws.
2) Use 4 screws to attach discharge guide to supports ▪
   ・Four discharge directions can be selected. Make sure of the orientation of discharge vane, and attach the guide with orientation that suits the conditions at local site.



＜Setting blow-off direction＞

Upward	Downward	Sideways (to left or right)
Discharge vane Blow-off guide		

Air Outlet Guide (to change air blowing direction) PAC-SG58SG-E

Photo

Descriptions

A part to change air direction from outdoor unit. Can also be used to prevent short cycles.

Applicable Models

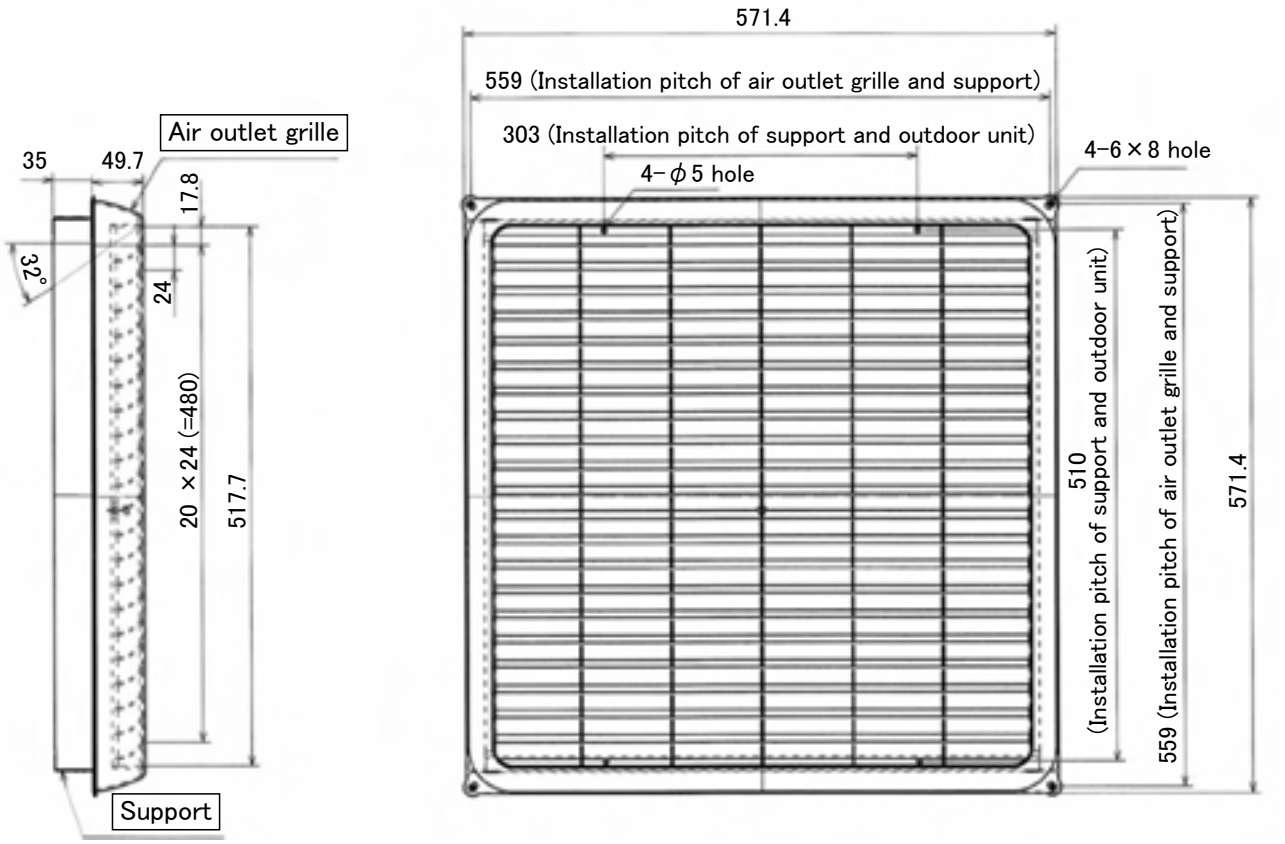
- PUHZ-RP35/50
  only 1 piece required
- PUHZ-RP

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Material	Air outlet grille: PP resin
Weight		2.0kg
Air outlet direction		Changeable between up, down or sideways
Accessory name x Qty. <Material/Surface treatment>		Support x 4 (Alloy hot-dip zinc-coated carbon steel sheet / Acrylic resin coating)
		Screw (M5x10) x 4 (Iron/Zinc nickel alloy plated) Screw (M4x10) x 8 (Iron/Zinc nickel alloy plated)

Dimensions

Unit : mm



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

Note the followings when installing this guide:

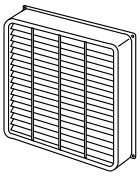
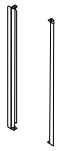
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

Note that two sets of this product are necessary for RP4, RP5, RP6.

1 Checking provided parts

Make sure that you have the following parts

①Air Discharge guide × 1	②Support × 2 (For the upper and lower sides)	③Support × 2 (For right and left)	④Attachment screw × 4	⑥Spacer × 4
	※PAC-SG58SG-E (Screw hole × 6) 	PAC-SG58SG-E (Screw hole × 2) 	PAC-SG58SG-E(5 × 10) PAC-SG59SG-E(5 × 35) ⑤Attachment screw × 8 PAC-SG58SG-E(4 × 10) 	※PAC-SG59SG-E 

2 Checking Installation Space

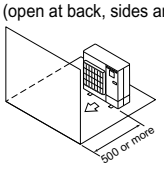
(In the following diagrams, dimensions in parentheses are for RP4 and higher number models. Dimensions not in parentheses are common for all series models. Unit: mm)

●Secure the necessary surrounding space shown below and select a place with less obstacles, to prevent a short cycle.

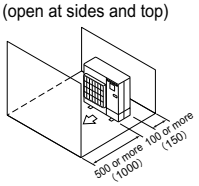
1) Surrounding space needed when installing one unit

・Do not use "upward discharge" in cases of figures (3) and (5) below.

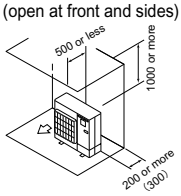
(1) Obstacle at front (open at back, sides and top)



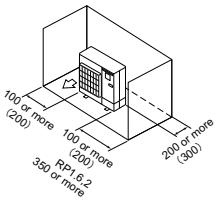
(2) Obstacles at back and front (open at sides and top)



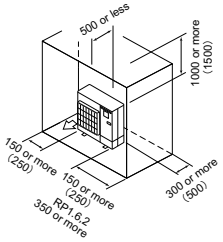
(3) Obstacles at back and top (open at front and sides)



(4) Obstacles at back, and sides (open at front and top)



(5) Obstacles at back, sides and top (open at front)

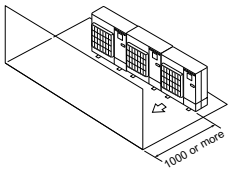


2) Surrounding space needed when installing multiple units

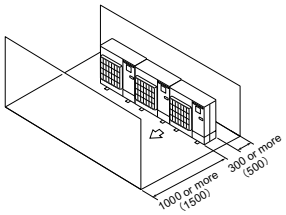
・When installing units horizontally in a series, leave at least 350 mm space between units for 56-type or lower models, and at least 10 mm for 63-type or higher models.

・Do not use "upward discharge" in case of figure (3) below.

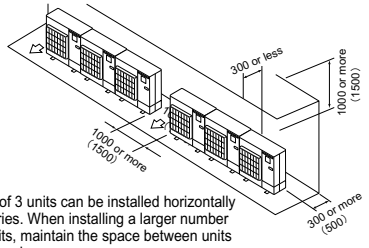
(1) Obstacle at front (open at back, sides and top)



(2) Obstacles at back and front (open at sides and top)

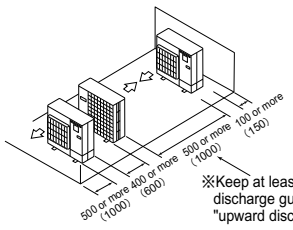


(3) Obstacles at back and top (open at front and sides)



※Limit of 3 units can be installed horizontally in series. When installing a larger number of units, maintain the space between units shown above.

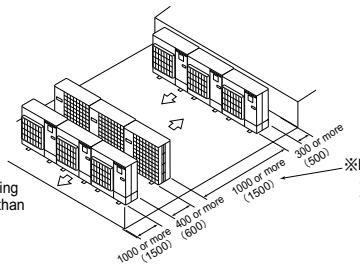
(4) Installing units, one in each row



discharge

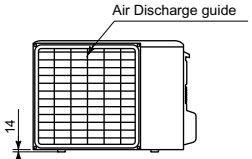
※Keep at least 1000 (2000) when using discharge guide in directions other than "upward discharge".

(5) Installing multiple units in multiple rows

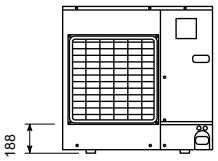


※Keep at least 2000 (3000) when using discharge guide in directions other than "upward discharge".

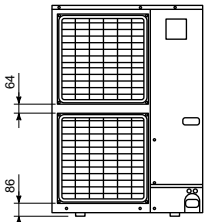
3 Installation Complete Diagrams



＜Models RP1.6,2＞



＜Models RP2.5,3＞



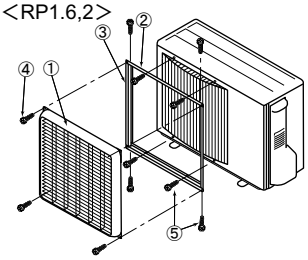
＜Models RP4～RP6＞

4 Installation Method

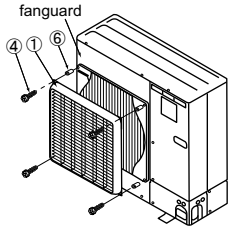
For RP1.6 or 2:
1) Fix the two supports (2) and two supports (3), using four screws (5) to make a frame.
2) Attach the assembled supports to the outdoor unit using four screws (5), and then attach blowout guide (1) to the support (2), using four screws (4).
・Four blowout directions can be selected: Check the orientation of blowout vane, and attach the blowout guide in the direction that matches the situation at local site.

For RP2.5 - 6: (Two sets of support and blowout guide are necessary for two-fan type models.)
1) Remove the 4 screws that hold the existing fan guard.
2) Fit the 4 spacers ▪ into the hole in fan guard, and then use the 4 screws ▪ to install the provided blowout guide ▪ to the outdoor unit above the existing fan guard.
・The four blowout directions can be selected: Check the orientation of blowout vane, and install the blowout guide in the direction that matches the circumstance at local site. (Two sets of fan guide are necessary for RP4 and higher models.)

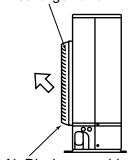
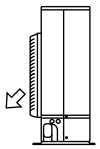
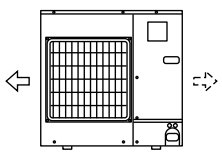
＜RP1.6,2＞



＜RP2.5~＞



＜Setting blow-off direction＞

Upward	Downward	Sideways (to left or right)
Discharge vane  Air Discharge guide		

Air Outlet Guide (to charge air blowing direction) PAC-SG59SG-E

Photo

Descriptions

A part to change air direction from outdoor unit. Can also be used to prevent short cycles.

Applicable Models

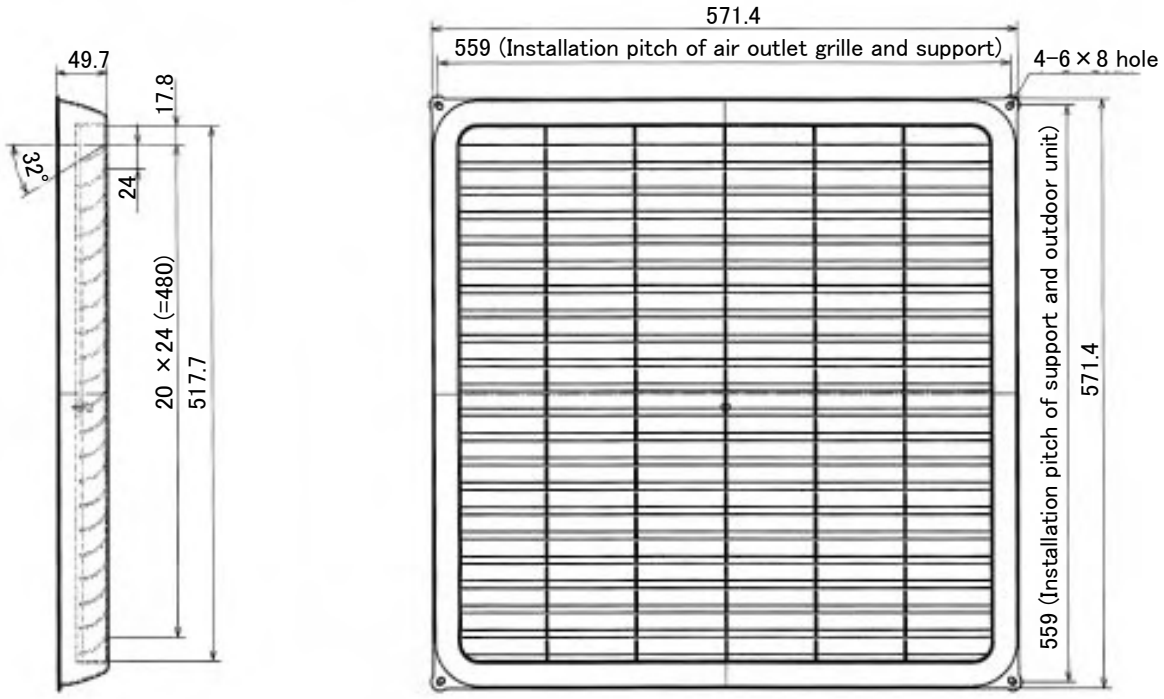
- PUHZ-RP60/71 — only 1 piece required
- MXZ-8A140VA — 2 pieces required
- PUHZ-RP100/125/140VA — 2 pieces required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Material	Air outlet grille: PP resin
Weight		1.2kg
Air outlet direction		Changeable between up, down or sideways
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x35) x 4 (Iron wire (SWCH18A)/Zinc nickel plated)

Dimensions

Unit : mm



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

Note the followings when installing this guide:

1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

Note that two sets of this product are necessary for RP100, RP125, RP140,(RP4, RP5, RP6).

1 Checking provided parts

Make sure that this package has the following parts as well as the installation sheet:

①Air Discharge guide × 1	②Support × 2 (For the upper and lower sides)	③Support × 2 (For right and left)	④Attachment screw × 4	⑥Spacer × 4
	※PAC-SG58SG-E (Screw hole × 6) 	PAC-SG58SG-E (Screw hole × 2) 	PAC-SG58SG-E(5 × 10) PAC-SG59SG-E(5 × 35)  ⑤Attachment screw × 8 PAC-SG58SG-E(4 × 10) 	※PAC-SG59SG-E 

2 Checking Installation Space

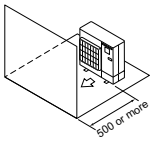
(In the following diagrams, dimensions in parentheses are for RP4,100 and higher number models. Dimensions not in parentheses are common for all series models. Unit: mm)

●Secure the necessary surrounding space shown below and select a place with less obstacles, to prevent a short cycle.

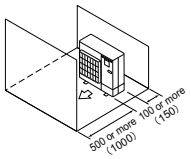
1) Surrounding space needed when installing one unit

・Do not use "upward discharge" in cases of figures (3) and (5) below.

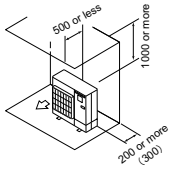
(1) Obstacle at front (open at back, sides and top)



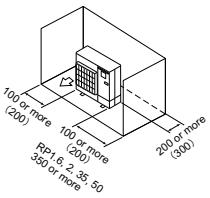
(2) Obstacles at back and front (open at sides and top)



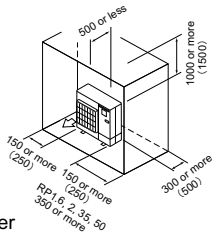
(3) Obstacles at back and top (open at front and sides)



(4) Obstacles at back, and sides (open at front and top)



(5) Obstacles at back, sides and top (open at front)

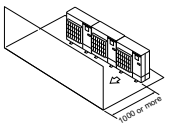


2) Surrounding space needed when installing multiple units

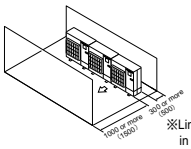
・When installing units horizontally in a series, leave at least 350 mm space between units for RP2, 50 type or lower models, and at least 10 mm for RP2.5, 60 type or higher models.

・Do not use "upward discharge" in case of figure (3) below.

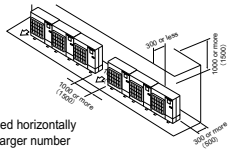
(1) Obstacle at front (open at back, sides and top)



(2) Obstacles at back and front (open at sides and top)

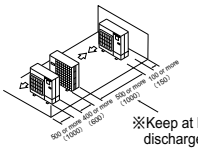


(3) Obstacles at back and top (open at front and sides)



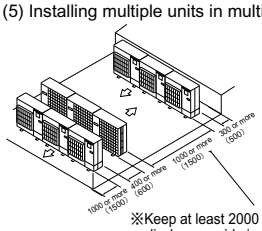
※Limit of 3 units can be installed horizontally in series. When installing a larger number of units, maintain the space between units shown above.

(4) Installing units, one in each row



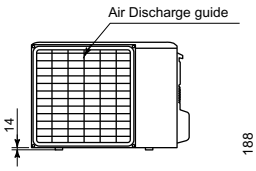
※Keep at least 1000 (2000) when using discharge guide in directions other than "upward discharge".

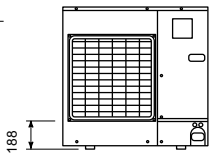
(5) Installing multiple units in multiple rows

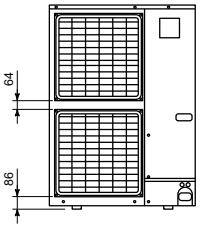


※Keep at least 2000 (3000) when using discharge guide in directions other than "upward discharge".

3 Installation Complete Diagrams







＜Models RP1.6, 2, 35, 50＞ ＜Models RP2.5, 3, 60, 71＞ ＜Models RP4～6,100～140＞

4 Installation Method

For RP1.6, 2, 35, 50 :

1) Fix the two supports (2) and two supports (3), using four screws (5) to make a frame.
2) Attach the assembled supports to the outdoor unit using four screws (5), and then attach blowout guide (1) to the support (2), using four screws (4).

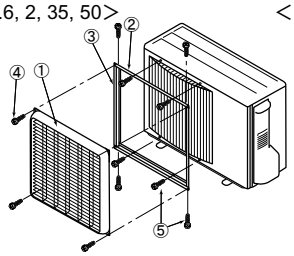
・Four blowout directions can be selected: Check the orientation of blowout vane, and attach the blowout guide in the direction that matches the situation at local site.

For RP2.5～6, 60～140: (Two sets of support and blowout guide are necessary for two-fan type models.)

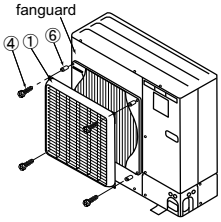
1) Remove the 4 screws that hold the existing fan guard.
2) Fit the 4 spacers ▪ into the hole in fan guard, and then use the 4 screws ▪ to install the provided blowout guide ▪ to the outdoor unit above the existing fan guard.

・The four blowout directions can be selected: Check the orientation of blowout vane, and install the blowout guide in the direction that matches the circumstance at local site. (Two sets of fan guide are necessary for RP4,100 and higher models.)

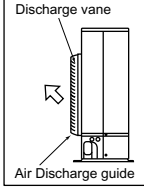
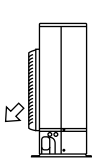
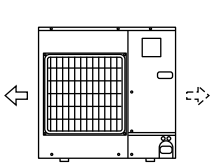
＜RP1.6, 2, 35, 50＞



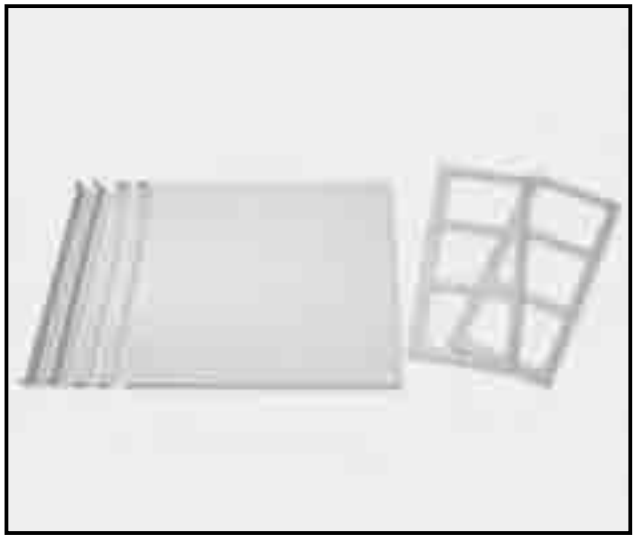
＜RP2.5～6, 60～140＞



＜Setting blow-off direction＞

Upward	Downward	Sideways (to left or right)
Discharge vane  Air Discharge guide		

Photo



Descriptions

Enables operation even when the outside temperature is low. Protect the unit from cold wind.

Applicable Models

■ PUHZ-RP35/50

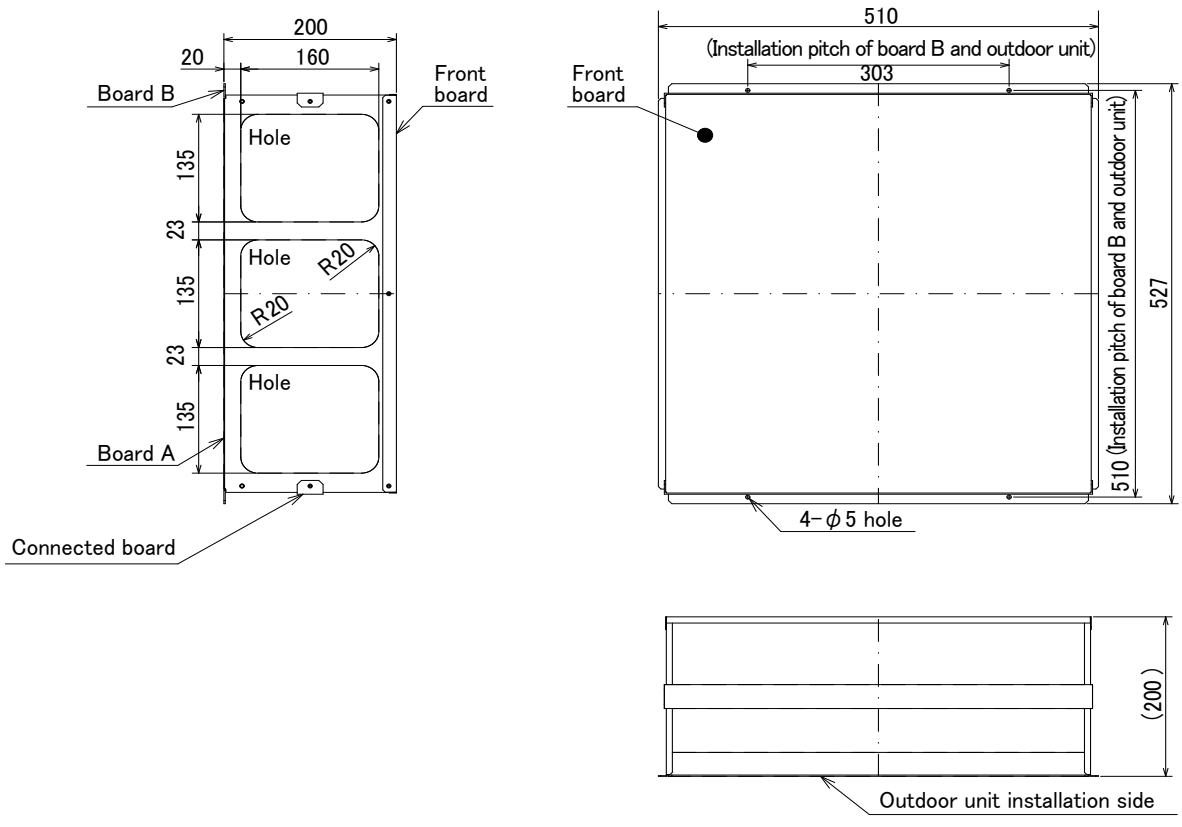
only 1 piece required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		3.4kg
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M4x10) x 18 <SUS410/Passivated>

Dimensions

Unit : mm



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

Note the followings when installing this guide:

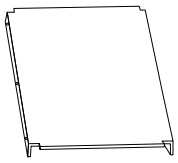
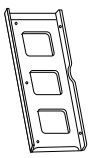
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

For 2-fan type outdoor unit, two pieces are required.

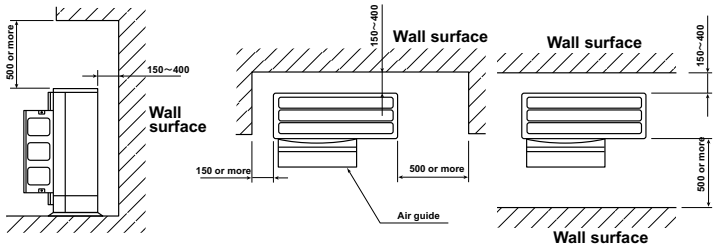
1 Checking parts

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

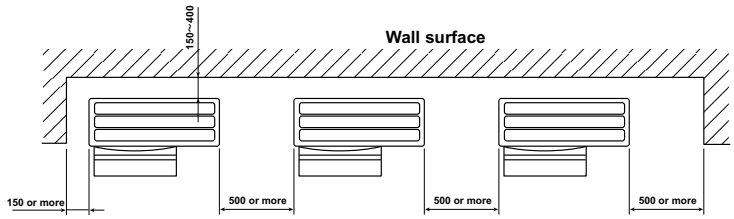
① Front plate 1	② Side plate 2	③ Side plate 2	④ Connecting plate 2	⑤Mounting screw 5 × 3 5 ※Only for PAC-SG57AG-E 4	⑦ Spacer 4	⑨Washer (for screw ⑤) ※Only for PAC-SG57AG-E 4
		※Only for PAC-SG56AG-E 			※**Only for PAC-SG57AG-E** 	
				⑥Mounting screw 4 × 1 0 For PAC-SG56AG-E 14 For PAC-SG57AG-E 6 	⑧Mounting screw 4 × 1 2 4 	⑩Washer (for screw ⑧) 4 

2 Requirements of space for installation

(1) **One unit installation:**



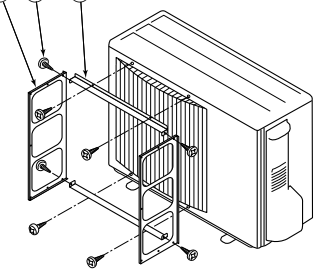
(2) **Multiple unit installation: ※Installation of multiple units in series must be no more than five units.**



3 Installation procedure

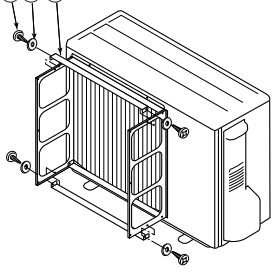
For RP1.6, 2, 35, 50

(1) ② ⑥ ③



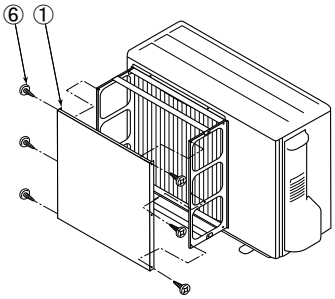
●**Fix side plates ② and ③ (two each) using four screws ⑥ and attach them to outdoor unit using holes on side plate ③.**

(2) ⑧⑩④



●**Attach two connecting plates ④ to side plate ②, using four screws ⑧ with four washers ⑩.**

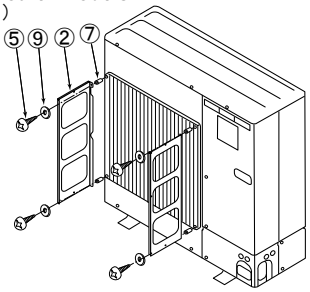
(3) ⑥ ①



●**Attach front plate ① to side plate ②, using six screws ⑥.**

For other models:

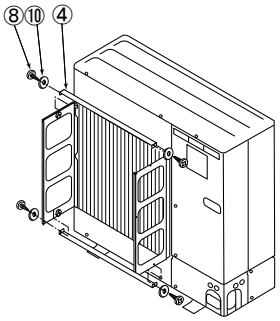
(1) ⑤ ⑨ ② ⑦



●**For RP2.5～6, 60～140, remove the four screws securing fan guard from its circumference.**

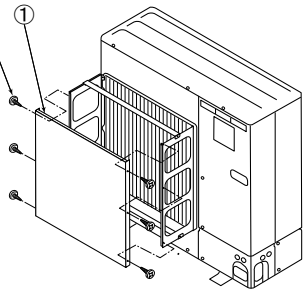
●**Attach two side plates ② to outdoor unit using four screws ⑤.**

(2) ⑧⑩④



●**Attach two connecting plates ④ to side plate ②, using four screws ⑧ with four washers ⑩.**

(3) ⑥ ①



●**Attach front plate ① to side plate ②, using six screws ⑥.**

Air Protect Guide (for cooling at -15℃) PAC-SG57AG-E *

* model change to **PAC-SH63AG-E** from Sep 2005

Photo

TO BE CONFIRMED

Descriptions

Enables operation even when the outside temperature is low. Protect the unit from cold wind.

Applicable Models

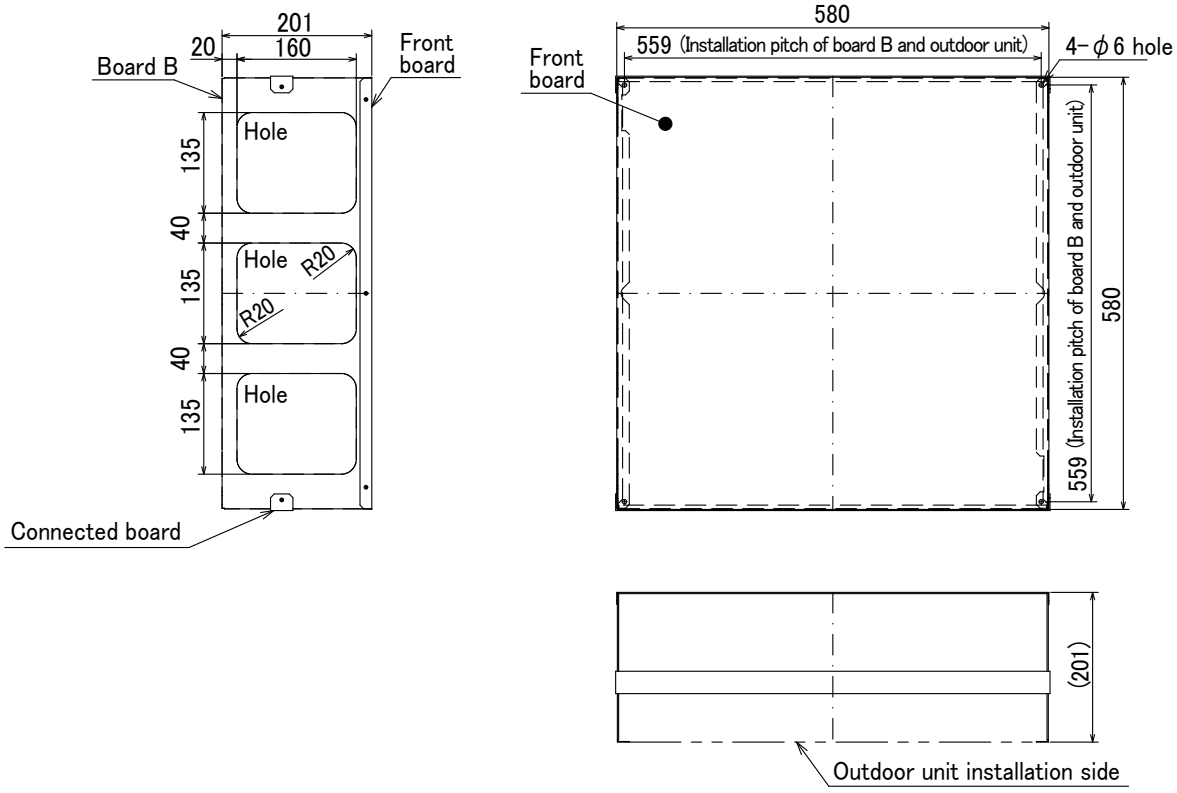
- PUHZ-RP60/71 — only 1 piece required
- MXZ-8A140VA — 2 peices required
- PUHZ-RP100/125/140 — 2 peices required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		4.5kg
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x15) x 4 <Iron wire (SWCH18A)/Zinc nickel plated>

Dimensions

Unit : mm (inch)



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

Note the followings when installing this guide:

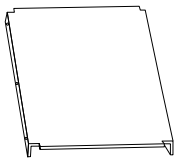
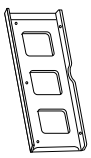
1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

For 2-fan type outdoor unit, two pieces are required.

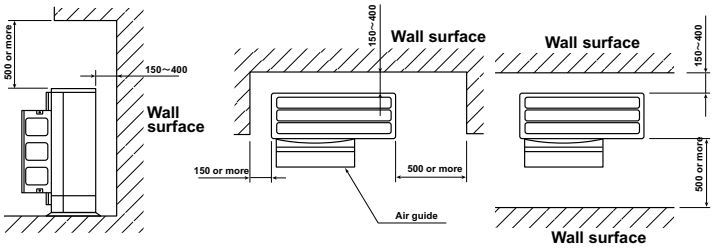
1 Checking parts

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

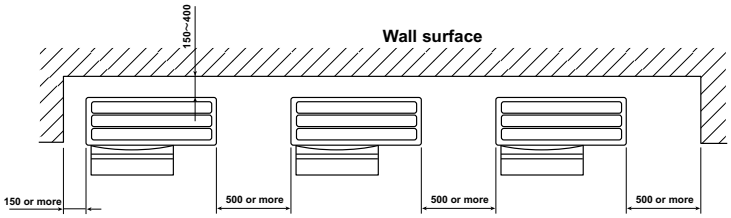
① Front plate 1	② Side plate 2	③ Side plate 2	④ Connecting plate 2	⑤Mounting screw 5 × 3 5 ※Only for PAC-SG57AG-E 4	⑦ Spacer 4	⑨Washer (for screw ⑤) ※Only for PAC-SG57AG-E 4
		※Only for PAC-SG56AG-E 			※**Only for PAC-SG57AG-E** 	
				⑥Mounting screw 4 × 1 0 For PAC-SG56AG-E 14 For PAC-SG57AG-E 6 	⑧Mounting screw 4 × 1 2 4 	⑩Washer (for screw ⑧) 4 

2 Requirements of space for installation

(1) **One unit installation:**



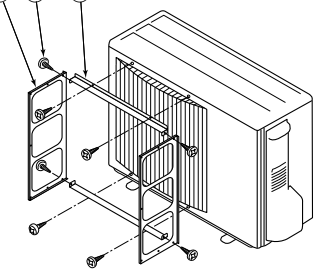
(2) **Multiple unit installation: ※Installation of multiple units in series must be no more than five units.**



3 Installation procedure

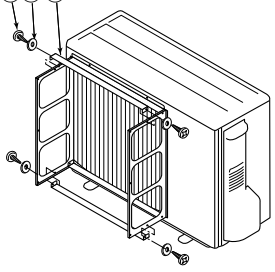
For RP1.6, 2, 35, 50

(1) ② ⑥ ③



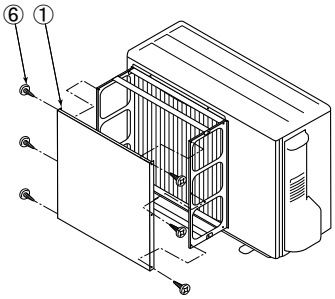
●**Fix side plates ② and ③ (two each) using four screws ⑥ and attach them to outdoor unit using holes on side plate ③.**

(2) ⑧⑩④



●**Attach two connecting plates ④ to side plate ②, using four screws ⑧ with four washers ⑩.**

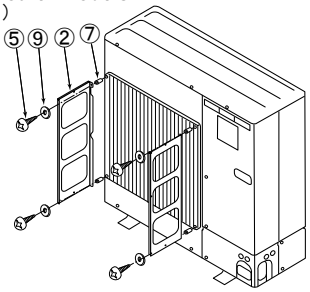
(3) ⑥ ①



●**Attach front plate ① to side plate ②, using six screws ⑥.**

For other models:

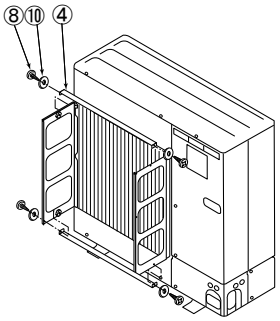
(1) ⑤ ⑨ ② ⑦



●**For RP2.5～6, 60～140, remove the four screws securing fan guard from its circumference.**

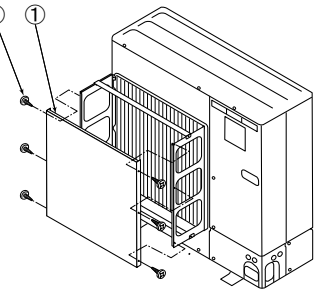
●**Attach two side plates ② to outdoor unit using four screws ⑤.**

(2) ⑧⑩④



●**Attach two connecting plates ④ to side plate ②, using four screws ⑧ with four washers ⑩.**

(3) ⑥ ①



●**Attach front plate ① to side plate ②, using six screws ⑥.**

Air Protect Guide (for cooling at -15℃) PAC-SH63AG-E *

* model change from **PAC-SG57AG-E** from Sep 2005

Photo

TO BE CONFIRMED

Descriptions

Enables operation even when the outside temperature is low. Protect the unit from cold wind.

Applicable Models

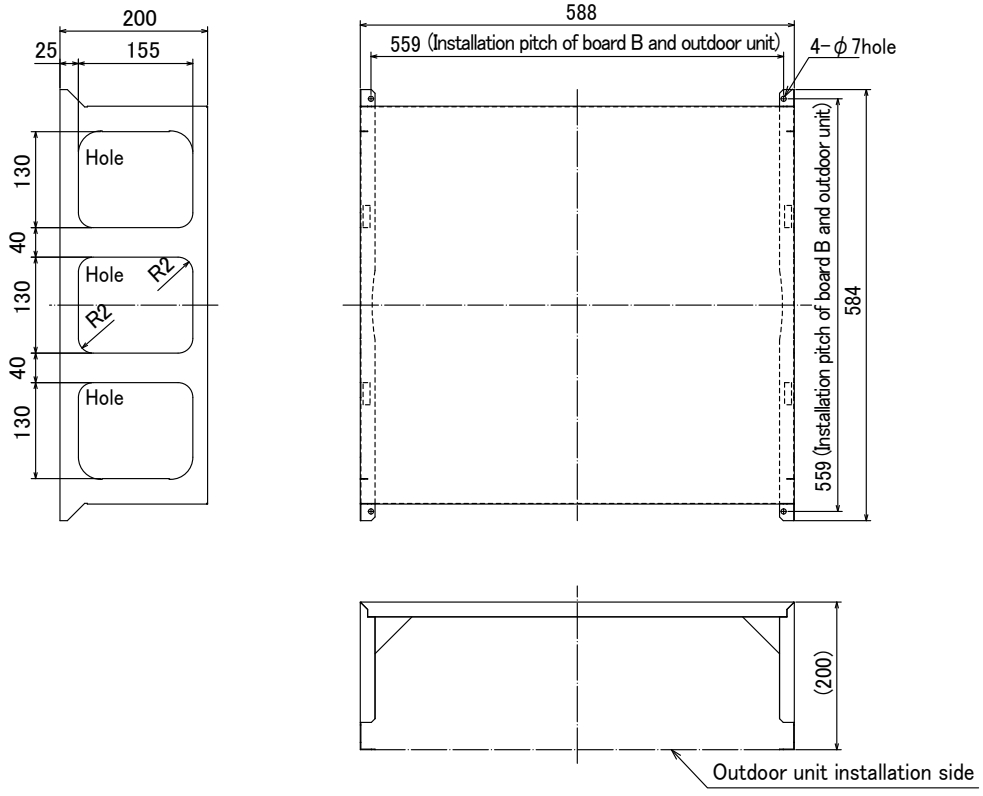
- PUHZ-RP60/71 — only 1 piece required
- MXZ-8A140VA — 2 pieces required
- PUHZ-RP100/125/140 — 2 pieces required

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		3.3kg
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x15) x 4 <Iron wire (SWCH18A)/Zinc nickel plated>

Dimensions

Unit : mm (inch)



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

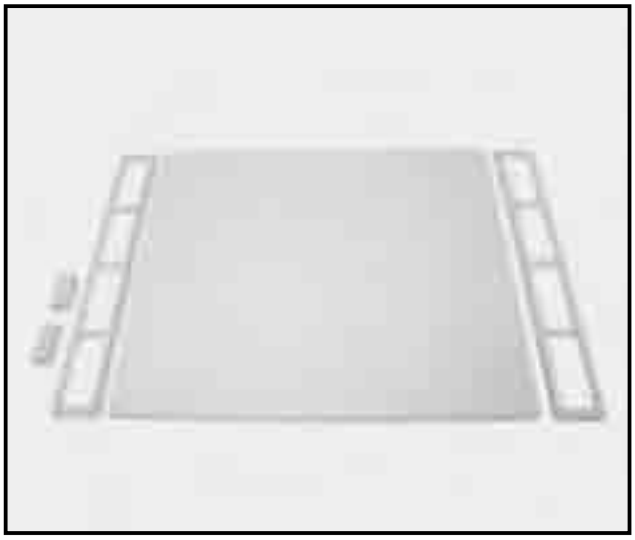
Note the followings when installing this guide:

1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

TO BE CONFIRMED

Photo



Descriptions

Enables operation even when the outside temperature is low. Protect the unit from cold wind.

Applicable Models

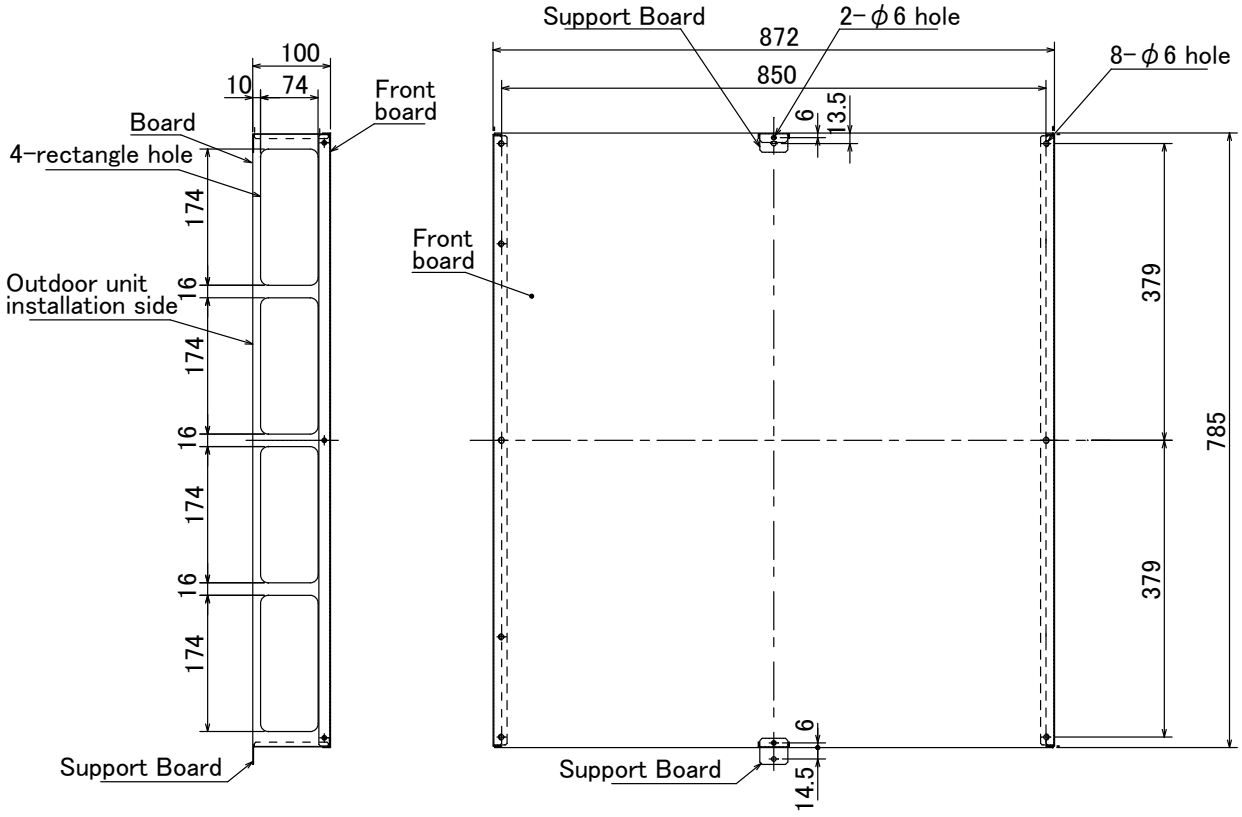
■ PUHZ-RP200/250

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		6.5kg
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x10) x 12 <Iron wire (SWCH18A)/Zinc nickel plated>

Dimensions

Unit : mm



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

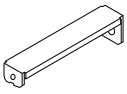
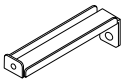
Note the followings when installing this guide:

1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

1 Checking parts

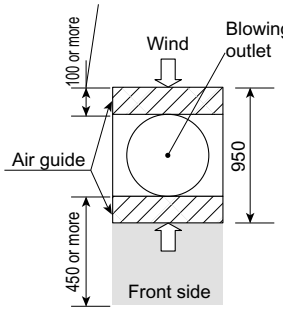
Make sure that you have all the following parts, in addition to this manual in this box:

① Front plate x 1	② Side plate x 2	③ Support x 1	④ Support x 1	⑤ Setscrew 5 x 16 x 16	⑥ Washer x 8
			※PAC-SG86AG-E only 		

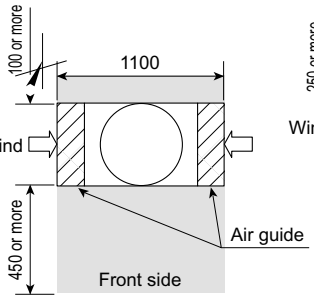
2 Requirements of space for installation

(Unit: mm) ※The following figures show the view from the top.

(1) One unit installation (circumference not blocked)
Install the Air guide according to the orientation of where wind strikes the unit.

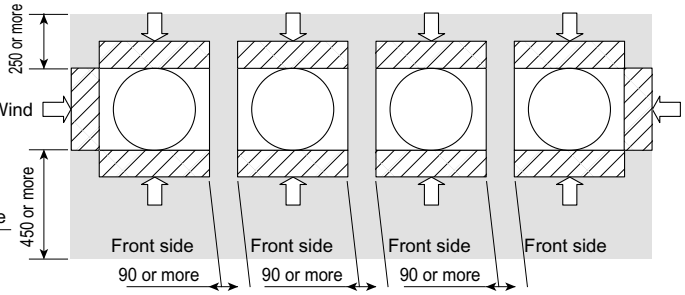


When installing PAC-SG86AG-E:



When installing PAC-SG87AG-E:

(2) Multiple unit installation (circumference not blocked)
Install the Air guide according to the orientation of where wind strikes the unit.



※If there is any obstacle above the unit or if the outdoor unit is surrounded by walls, refer to the manual attached to the outdoor unit.

3 Installation procedure

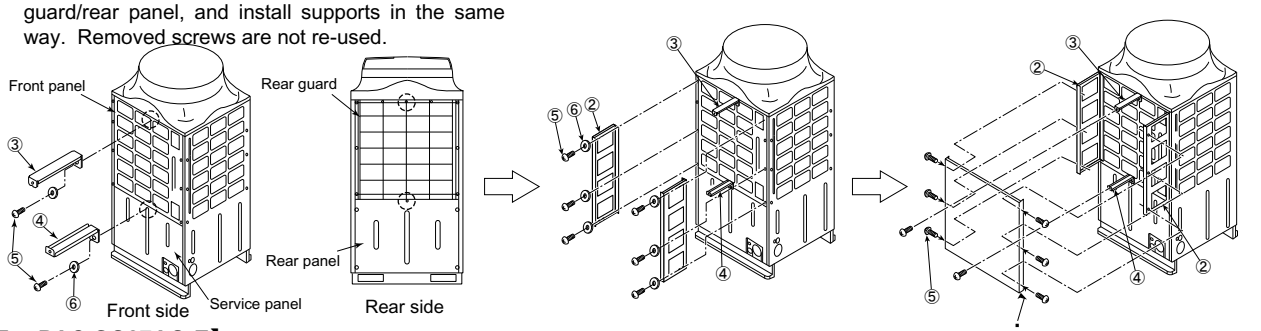
For PAC-SG86AG-E and PAC-SG87AG-E, installation position for the outdoor unit is different.
Make sure before installation: The following figures show the example of installation on the front and right sides; perform installation on the rear or left side in the same way.

【For PAC-SG86AG-E】

(1) Remove screws (shown by dotted circles) from front panel/service panel, and install supports ③ and ④ using screws ⑤ (one screw for each) and washers ⑥ (one washer for each) on outdoor unit. When the Air guide is to be installed on rear side, remove screws (shown by dotted circles) from rear guard/rear panel, and install supports in the same way. Removed screws are not re-used.

(2) Install two side plates ② using washers ⑥ (3 washers for each) screws ⑤ (3 screws for each) on the outdoor unit.

(3) Install front plate ① on side plates ② and supports ③ and ④, using eight screws ⑤.

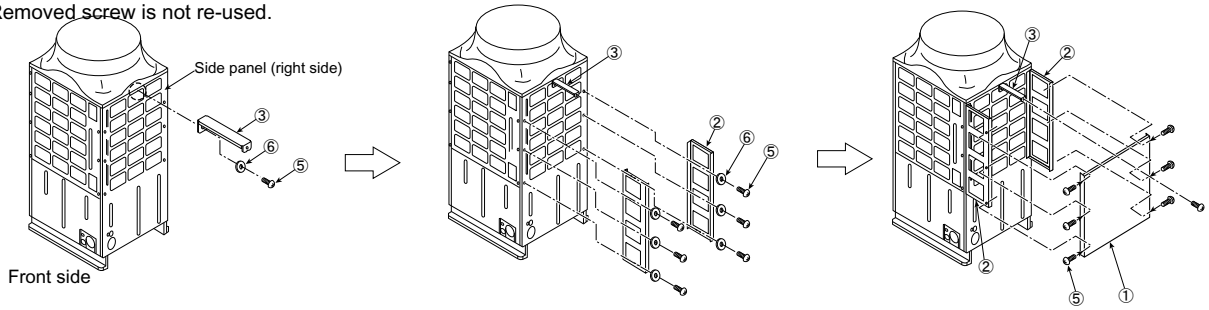


【For PAC-SG87AG-E】

(1) Remove screw (shown by dotted circles) from side panel, and install support ③ on outdoor unit, using one washer ⑥ and one screw ⑤.
Removed screw is not re-used.

(2) Install two side plates ② using washers ⑥ (3 washers for each) screws ⑤ (3 screws for each) on the outdoor unit.

(3) Install front plate ① on side panel ② and support ③, using seven screws ⑤.



Air Protect Guide for cooling at -15℃ (For Right & Left side) PAC-SG87AG-E

Photo

Descriptions

Enables operation even when the outside temperature is low. Protect the unit from cold wind.

Applicable Models

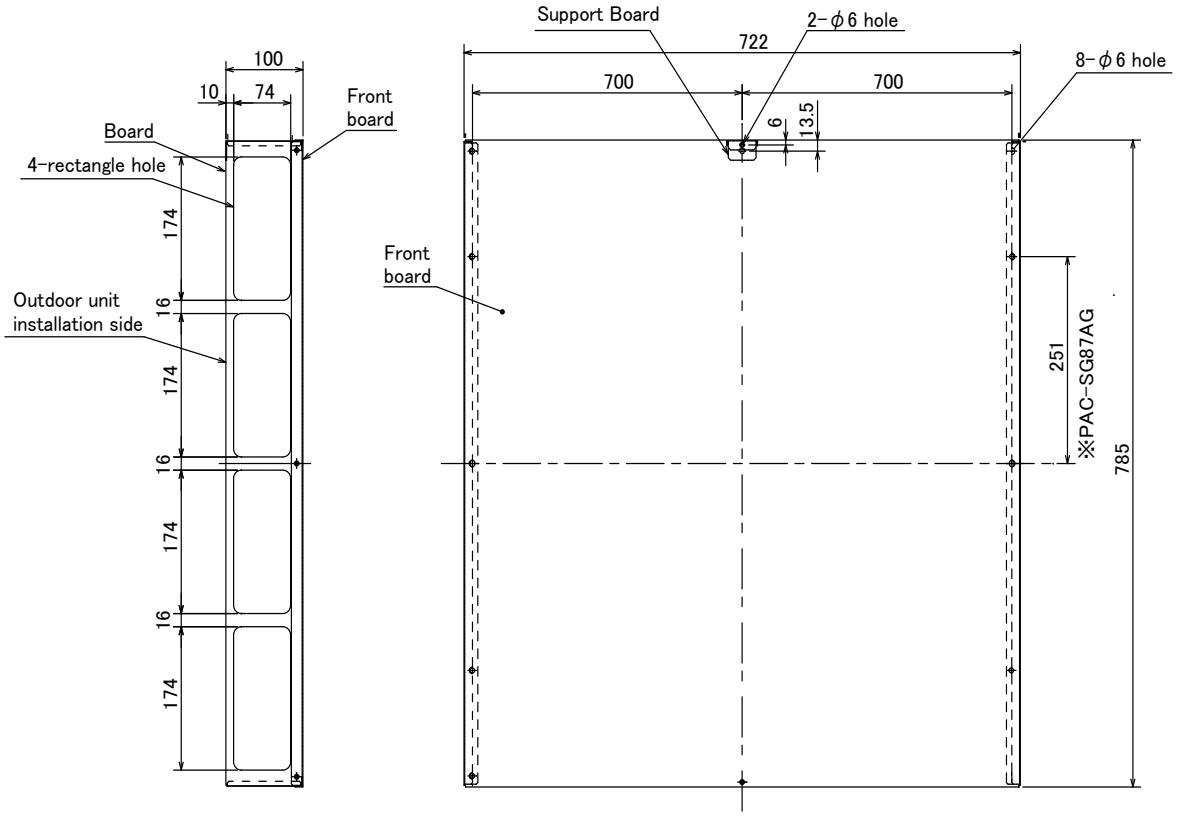
■ PUHZ-RP200/250

Specifications

Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet
Weight		5.5kg
Accessory name x Qty. <Material/Surface treatment>		Washer faced screw (M5x10) x 12 <Iron wire (SWCH18A)/Zinc nickel plated>

Dimensions

Unit : mm



⚠ CAUTION

* Air Guide prevents reverse rotation of outdoor unit fan when it enters low speed rotation mode with fan controller being operated. It is also used for protection of fan when strong winds, such as a typhoon, wind blowing through tall buildings, etc., directly strike the air outlet. In addition, installation of this product is necessary when cooling opetation is to be performed in outdoor tempreture of -5℃ or lower (down to -15℃).

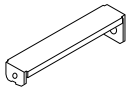
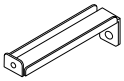
Note the followings when installing this guide:

1) Be sure not to use "upward discharge" in a place where snowing is possible. Snow may accumulate in the guard, which could damage the fan, etc.
2) Attaching this unit will decrease the performance (by 2-3%) and increase noise from outdoor unit (by approx. 1-2 dB).
3) Do not use "upward discharge" when there are any obstacles at the back and on both sides of outdoor unit (air is taken in from top of unit): This could cause a short cycle.
4) To eliminate the influence of external wind, be sure to install the unit with its back facing to wall.
5) Do not install this unit in a place where wind directly blows to the back of the unit.

How to Use / How to Install

1 Checking parts

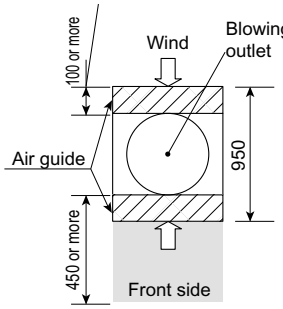
Make sure that you have all the following parts, in addition to this manual in this box:

① Front plate x 1	② Side plate x 2	③ Support x 1	④ Support x 1	⑤ Setscrew 5 x 16 x 16	⑥ Washer x 8
			※PAC-SG86AG-E only 		

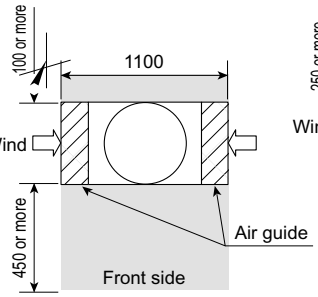
2 Requirements of space for installation

(Unit: mm) ※The following figures show the view from the top.

(1) One unit installation (circumference not blocked)
Install the Air guide according to the orientation of where wind strikes the unit.

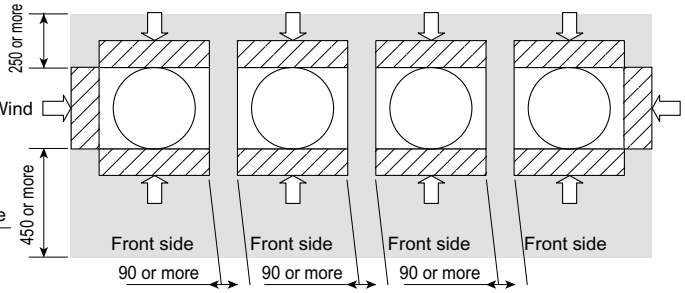


When installing PAC-SG86AG-E:



When installing PAC-SG87AG-E:

(2) Multiple unit installation (circumference not blocked)
Install the Air guide according to the orientation of where wind strikes the unit.



※If there is any obstacle above the unit or if the outdoor unit is surrounded by walls, refer to the manual attached to the outdoor unit.

3 Installation procedure

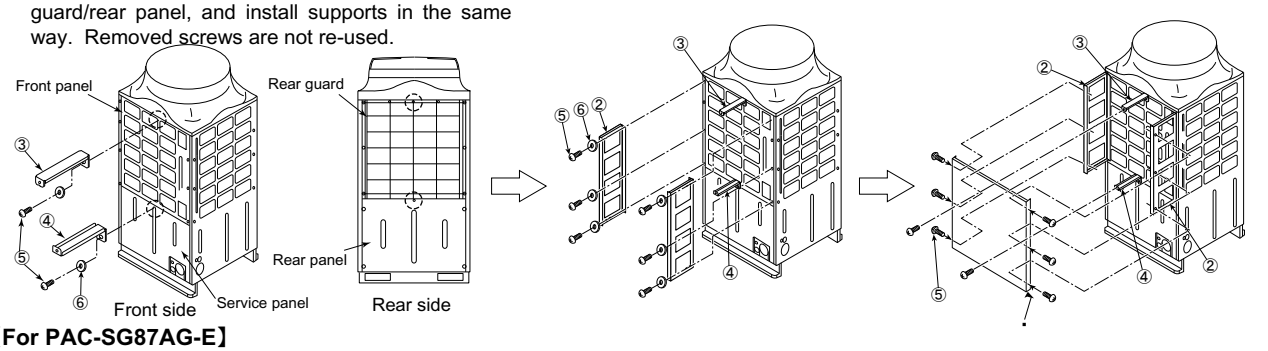
For PAC-SG86AG-E and PAC-SG87AG-E, installation position for the outdoor unit is different.
Make sure before installation: The following figures show the example of installation on the front and right sides; perform installation on the rear or left side in the same way.

【For PAC-SG86AG-E】

(1) Remove screws (shown by dotted circles) from front panel/service panel, and install supports ③ and ④ using screws ⑤ (one screw for each) and washers ⑥ (one washer for each) on outdoor unit. When the Air guide is to be installed on rear side, remove screws (shown by dotted circles) from rear guard/rear panel, and install supports in the same way. Removed screws are not re-used.

(2) Install two side plates ② using washers ⑥ (3 washers for each) screws ⑤ (3 screws for each) on the outdoor unit.

(3) Install front plate ① on side plates ② and supports ③ and ④, using eight screws ⑤.

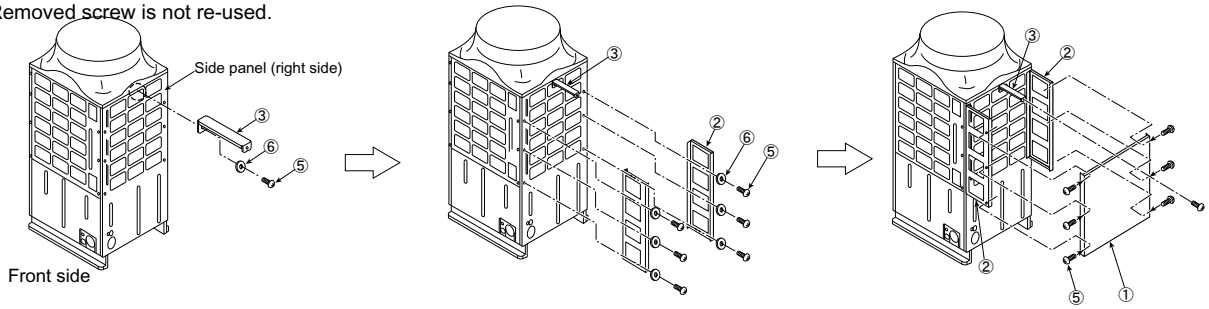


【For PAC-SG87AG-E】

(1) Remove screw (shown by dotted circles) from side panel, and install support ③ on outdoor unit, using one washer ⑥ and one screw ⑤.
Removed screw is not re-used.

(2) Install two side plates ② using washers ⑥ (3 washers for each) screws ⑤ (3 screws for each) on the outdoor unit.

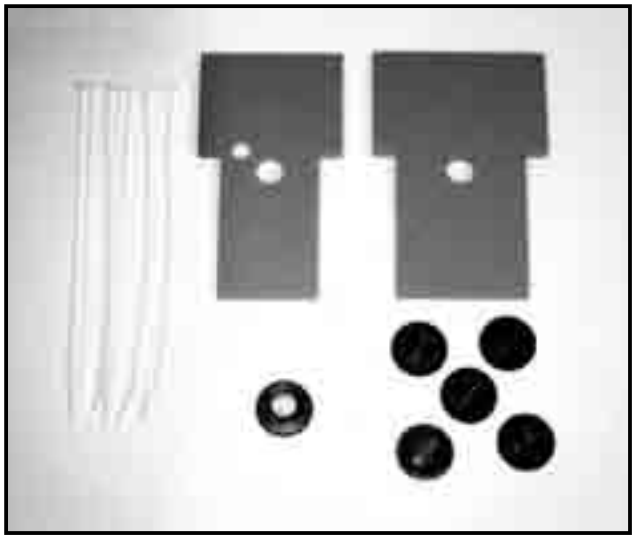
(3) Install front plate ① on side panel ② and support ③, using seven screws ⑤.



Drain Socket

PAC-SF37DS-E

Photo



Descriptions

Cap the unnecessary holes on the outdoor unit (bottom) and centralize the drainage when using a drain pipe.

Applicable Models

- PU-P GAA
- PUH-P GAA

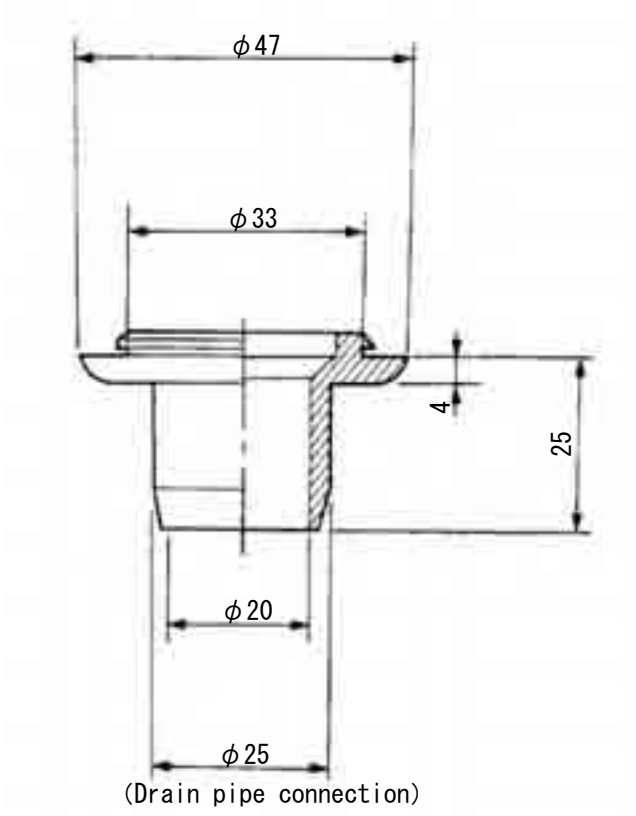
Specifications

Drain pipe	PVC VP-25 or vinyl hose (ID: 25mm)
Operating conditions	No freezing allowed (Never to be used in cold climates)
Material	EPT rubber
Component	Drain socket x 1, Drain cap x 5 Heat insulator x 3 (1 for liquid pipe, 1 large and 1 small insulator for gas pipe), Band x 8

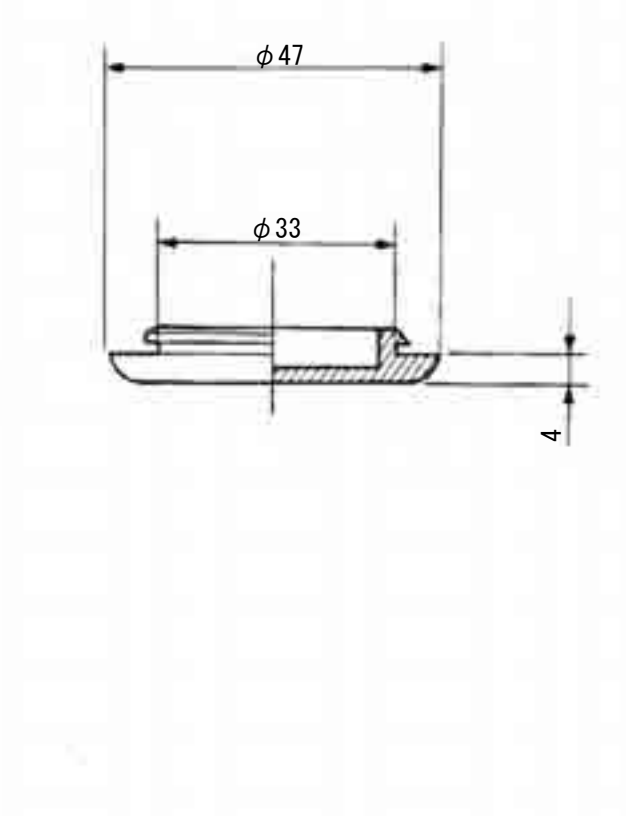
Dimensions

Unit : mm

Drain socket



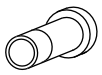
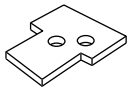
Drain cap

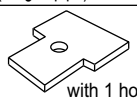
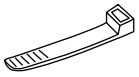


How to Use / How to Install

1 Accessory

Be aware that the following parts are put in the package together with the instruction manual.

①Drain socket ····· 1pcs	②Drain cap ····· 5 pcs	③Insulation part (for liquid pipe) ···· 1pc
		 with 2 holes (common part to all the models)

④Insulation part (for gas pipe) ····· 1 pc	⑤Band ····· 8 pcs
 Common part to all the models. with 1 hole	

2. Installation method for drain unit ☆Prepare the adhesive in the field.

(1) Glue the drain socket ① to the hole that is used to centralize the drainage among several holes at the bottom of the unit with the glue (Prepared in the field)

(2) Glue the drain caps ② to close all the other unnecessary holes with the glue (Prepared in the field)

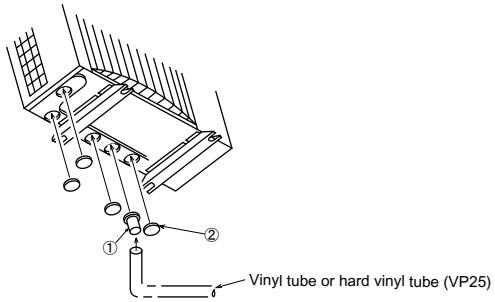
〈Note〉 Apply the glue securely, as the glue will work as seal to prevent water from leaking.

〈Note〉 Use the adhesive for the rubber and metal.

〈Recommended product〉

Supper X sirees made by CEMEDINE Co., Ltd.

(3) Insert a vinyl tube of which inner diameter 25 mm available commercially or a hard vinyl tube VP25 to the drain socket ①.



3. Installation method for insulation parts

Install the insulation parts to stop valve of the outdoor unit.

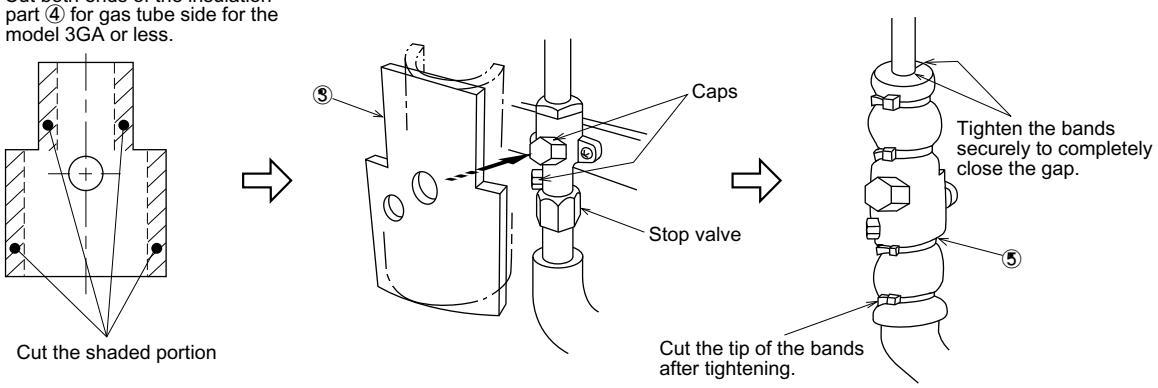
※The insulation parts should be installed after the tube has been connected to the unit.

※Some units are provided with a check valve near stop valve. In this case, cut the insulation parts ③ and ④ so that they will fit the stop valve properly.

(1) Install the insulation part ③ with 2 holes to the liquid pipe side so that the holes fit the valve caps and cover the stop valve entirely.

(2) Fix the insulation part ③ securely with bands ⑤.
Install the other insulation part ④ to the gas pipe side with the same procedure.

・Cut both ends of the insulation part ④ for gas tube side for the model 3GA or less.



Drain Socket

PAC-SG61DS-E

Photo

TO BE CONFIRMED

Descriptions

Cap the unnecessary holes on the outdoor unit (bottom) and centralize the drainage when using a drain pipe.

Applicable Models

- PUHZ-RP35VA
- PUHZ-RP50VA
- PUHZ-RP60VA
- PUHZ-RP71VA
- PUHZ-RP100VA
- PUHZ-RP125VA
- PUHZ-RP140VA
- MXZ-8A140VA

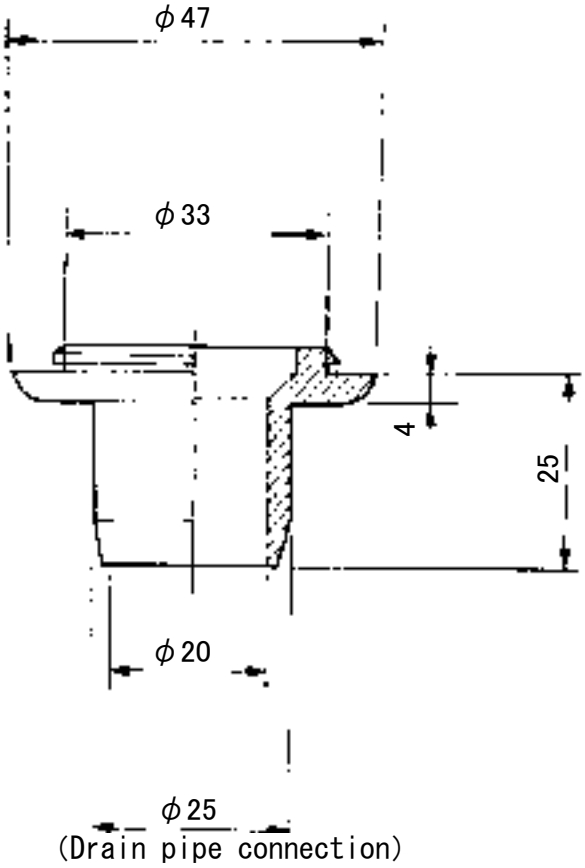
Specifications

Drain pipe	PVC VP-25 or vinyl hose (ID: 25mm)
Operating conditions	No freezing allowed (Never to be used in cold climates)
Material	EPT rubber
Component	Drain socket x 1, Drain cap x 5 Heat insulator x 3 (1 for liquid pipe, 1 large and 1 small insulator for gas pipe), Band x 8

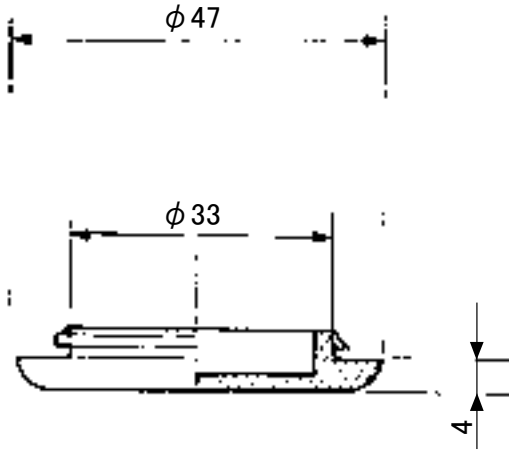
Dimensions

Unit : mm

Drain socket



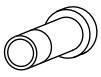
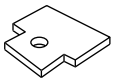
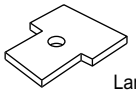
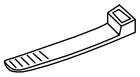
Drain cap



How to Use / How to Install

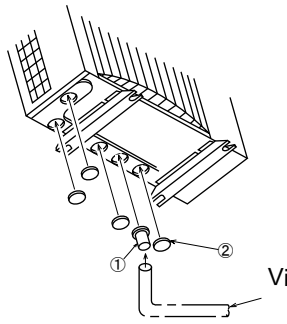
1 Accessory

Make sure that the following parts are put in the package.

・Drain socket ····· 1pcs	・Drain cap ····· 5 pcs	
		
・Insulation part (for liquid pipe) ···· 1pc	・Insulation part (for gas pipe) ····· 1 pc	・Band ····· 8 pcs
 Small size	 Large size	

2. Installation method for drain unit ☆Prepare the adhesive in the field.

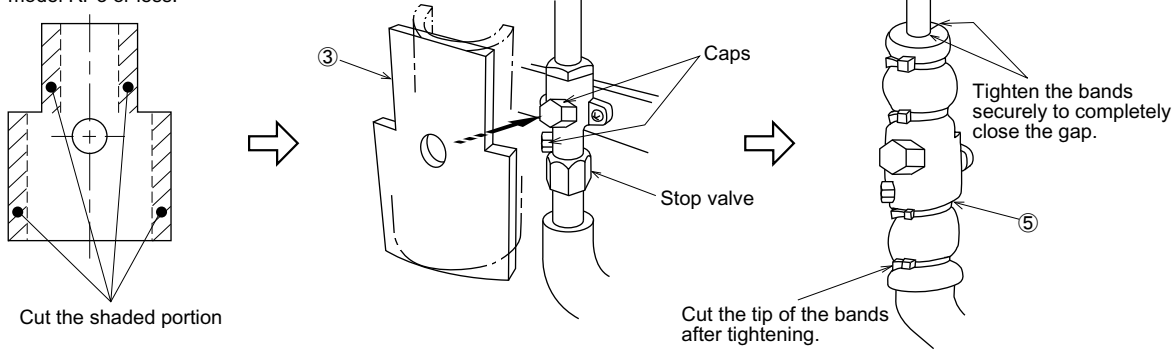
(1) Glue the drain socket① to the hole that is used to centralize the drainage among several holes at the bottom of the unit with the glue (Prepare in the field).
(2) Glue the drain caps ② to close all the other unnecessary holes with the glue (Prepare in the field).
〈Note〉 Apply the glue securely, as the glue (Prepare in the field) will work as seal to prevent water from leaking.
〈Note〉 Use the adhesive for the rubber and metal.
〈Recommended product〉 Supper X series made by CEMEDINE CO., Ltd.
(3) Insert a vinyl tube of which inner diameter 25 mm available commercially or a hard vinyl tube VP25 to the drain socket ①.



3. Installation method for insulation parts

Install the insulation parts to stop valve of the outdoor unit.
※The insulation parts should be installed after the tube has been connected to the unit.
※Some units are provided with a check valve near stop valve. In this case, cut the insulation parts ③ and ④ so that they will fit the stop valve properly.
(1) Install the insulation part ③ with 2 holes to the liquid pipe side so that the holes fit the valve caps and cover the stop valve entirely.
(2) Fix the insulation part ③ securely with bands ⑤.
Install the other insulation part ④ to the gas pipe side with the same procedure.

・Cut both ends of the insulation part ⑤ for gas tube side for the model RP3 or less.



Photo

Descriptions

A drain pan for removing with the drain pipe the drain water generated from the outdoor unit.

Applicable Models

- PU-P35-100GAA
- PUH-P35-100GAA

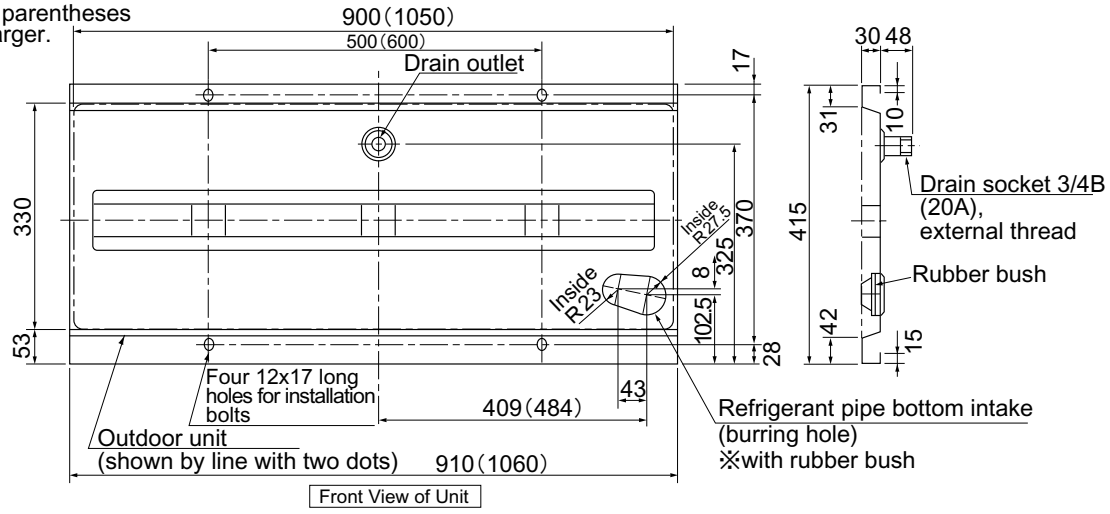
Specifications

Exterior	Color (Munsell)	Ivory (5Y 8/1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet (t1.6)
Weight		8.5kg
Mounting bolt (locally prepared)		M10, length: 60mm or less extrusion from drain pan's undersurface

Dimensions

Unit : mm

Dimensions in parentheses are for P5 or larger.



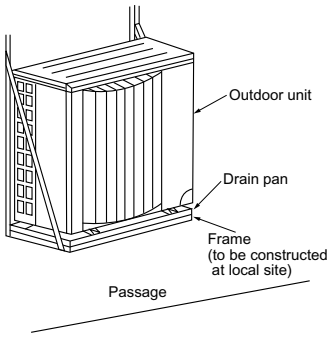
Front View of Unit

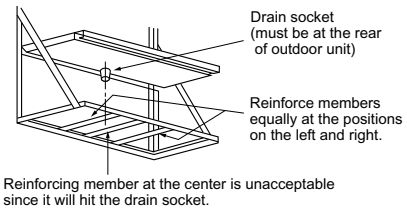
How to Use / How to Install

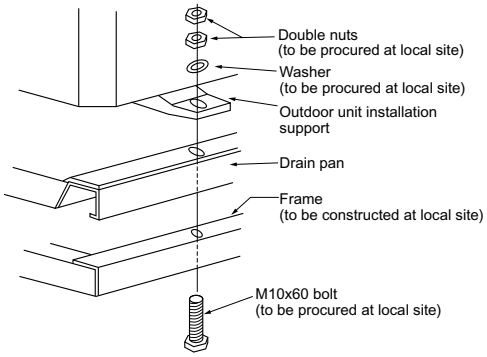
1 Installation Method

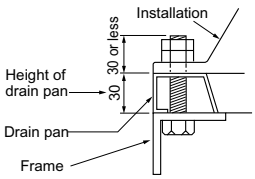
(1) When installing on installation frame

1) The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fall or drop as a result of earthquake, strong wind, etc.
2) The drain socket of drain pan is at the center in the longitudinal direction. When constructing the installation frame, be careful that no part of the frame interferes with the socket.
3) The drain pan is tightened with the outdoor unit. Punch approx. ϕ13 holes in the installation frame at pitches to install the outdoor unit.
4) Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.



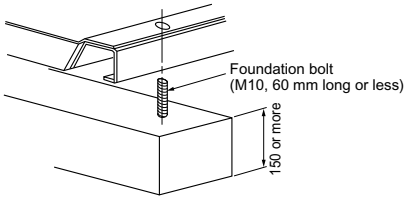


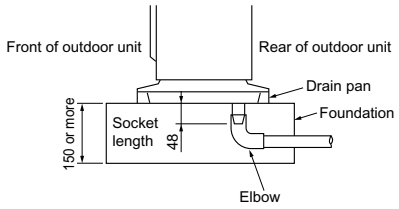




(2) When installing on foundation

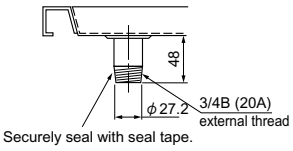
●Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below.
If it is less than 150 mm, drain piping will not be possible because the drain socket protrudes 48 mm.

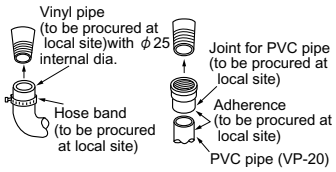


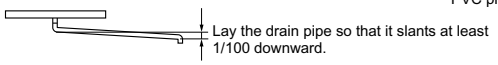


2 Drain Piping

(1) When connecting steel pipe:
Connect 3/4B internally threaded pipe.
(2) When connecting vinyl pipe (soft):
Use a ϕ25 mm internal dia. pipe, and fix the connected section with a hose band, etc.
(3) When connecting PVC pipe (hard):
Use VP-20 and connect with a joint for PVC pipe.
※In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.





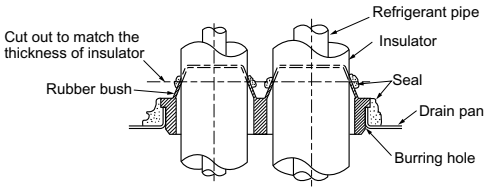


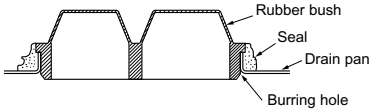
3 Refrigerant Piping

●The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

(1) Piping from the bottom:
Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pie through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.

(2) Piping from other directions:
Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.





Photo

Descriptions

A drain pan for removing with the drain pipe the drain water generated from the outdoor unit.

Applicable Models

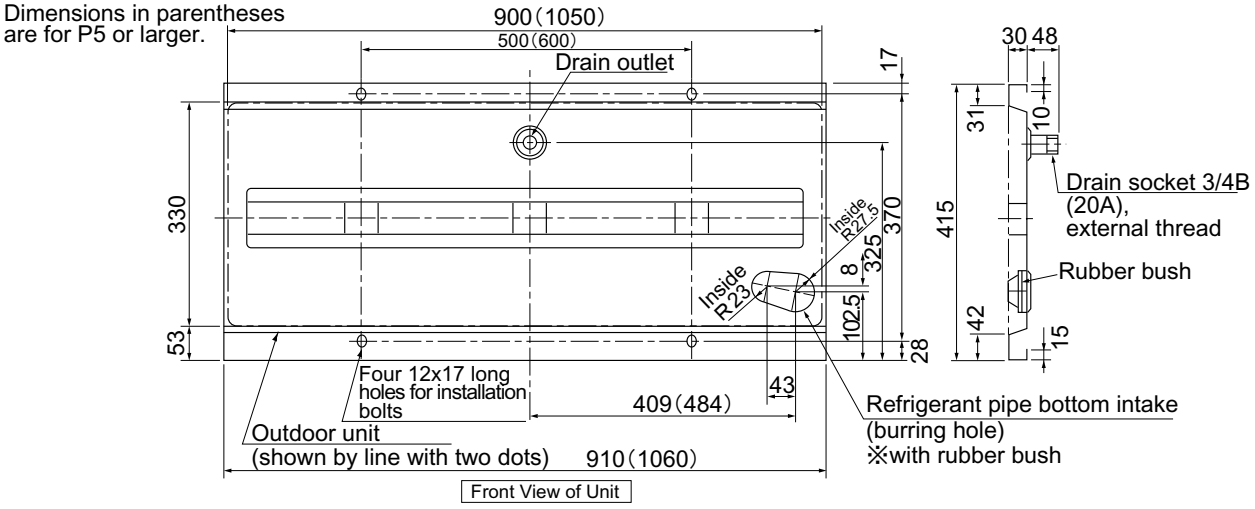
- PU-P125GAA
- PU-P140GAA
- PUH-P125GAA
- PUH-P140GAA

Specifications

Exterior	Color (Munsell)	Ivory (5Y 8/1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet (t1.6)
Weight		9.8kg
Mounting bolt (locally prepared)		M10, length: 60mm or less extrusion from drain pan's undersurface

Dimensions

Unit : mm

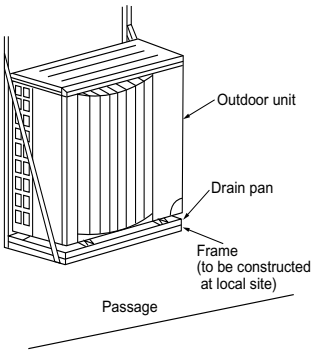


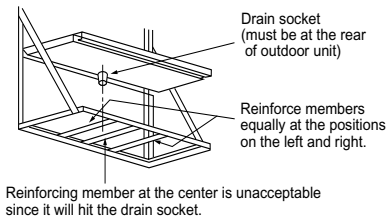
How to Use / How to Install

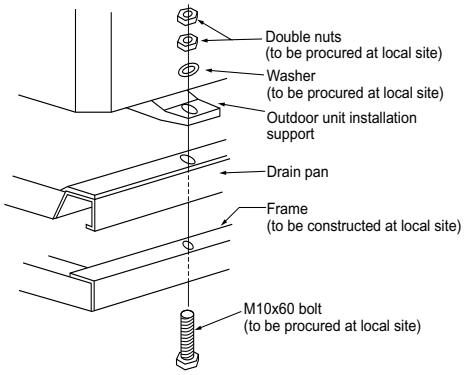
1 Installation Method

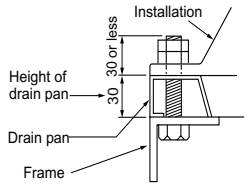
(1) When installing on installation frame

1) The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fall or drop as a result of earthquake, strong wind, etc.
2) The drain socket of drain pan is at the center in the longitudinal direction. When constructing the installation frame, be careful that no part of the frame interferes with the socket.
3) The drain pan is tightened with the outdoor unit. Punch approx. ϕ13 holes in the installation frame at pitches to install the outdoor unit.
4) Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.



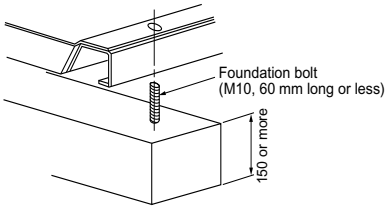


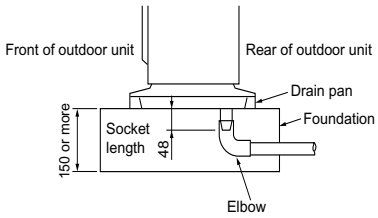




(2) When installing on foundation

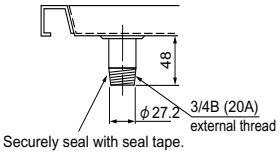
- Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below.
  If it is less than 150 mm, drain piping will not be possible because the drain socket protrudes 48 mm.

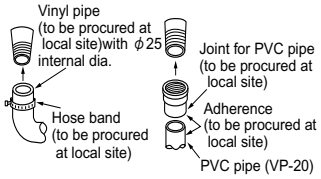


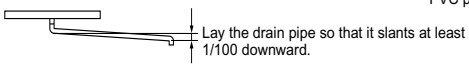


2 Drain Piping

(1) When connecting steel pipe:
Connect 3/4B internally threaded pipe.
(2) When connecting vinyl pipe (soft):
Use a ϕ25 mm internal dia. pipe, and fix the connected section with a hose band, etc.
(3) When connecting PVC pipe (hard):
Use VP-20 and connect with a joint for PVC pipe.
※In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.





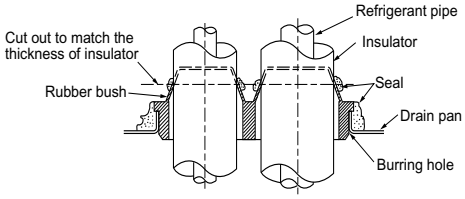


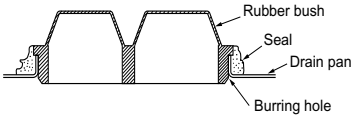
3 Refrigerant Piping

- The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

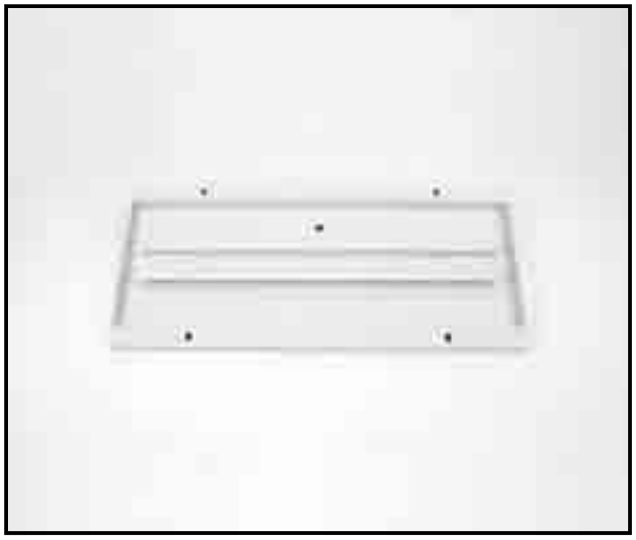
(1) Piping from the bottom:
Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pie through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.

(2) Piping from other directions:
Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.





Photo



Descriptions

A drain pan for the drain water generated from the outdoor unit.

Applicable Models

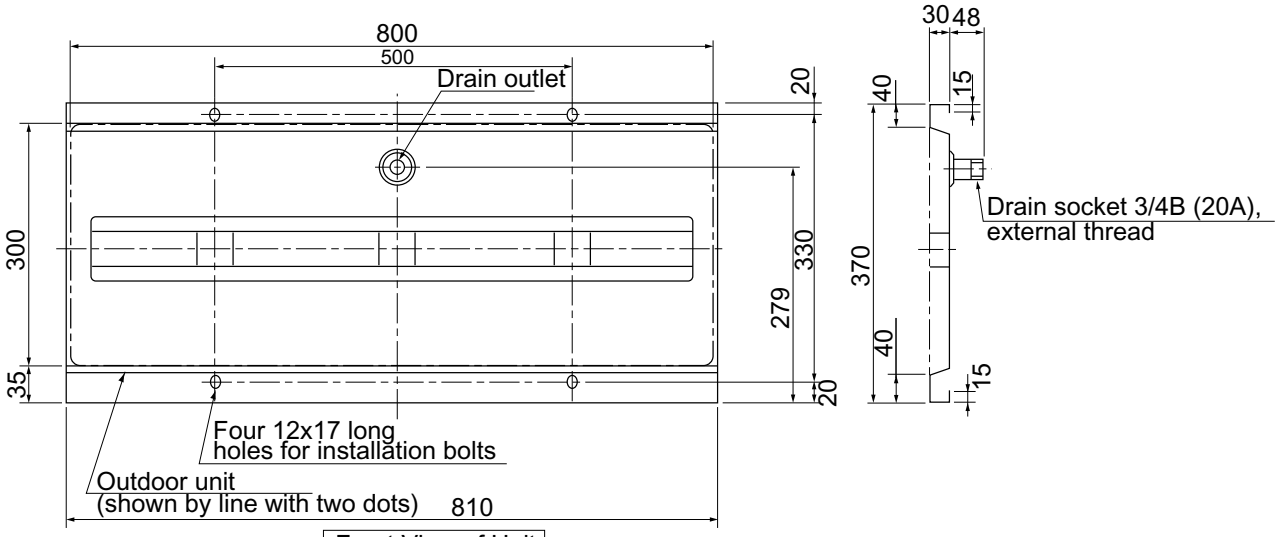
- PUHZ-RP35
- PUHZ-RP50

Specifications

Drain outlet size		R3/4 screw (20A)
Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet (t1.6)
Weight		6.3kg
Mounting bolt (locally prepared)		M10 (or W3/8), length: 48mm or less extrusion from drain pan's undersurface

Dimensions

Unit : mm

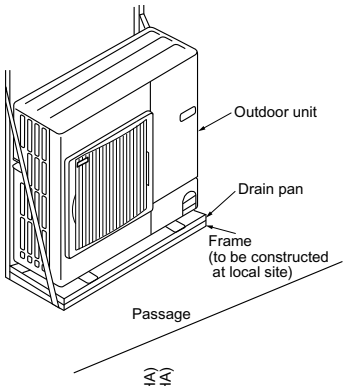


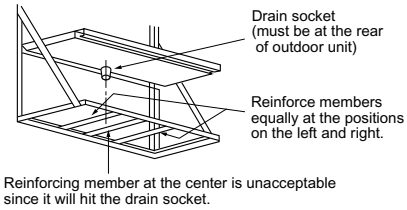
How to Use / How to Install

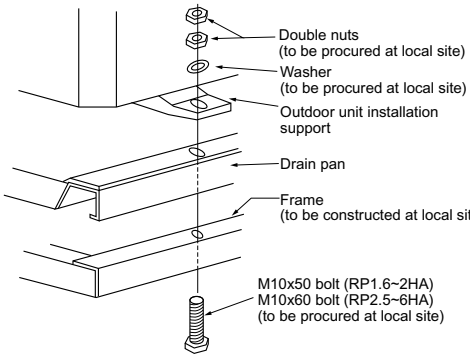
1 Installation Method

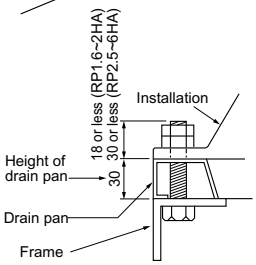
(1) When installing on installation frame

1) The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fall or drop as a result of earthquake, strong wind, etc.
2) The drain socket of drain pan is at the center in the longitudinal direction. When constructing the installation frame, be careful that no part of the frame interferes with the socket.
3) The drain pan is tightened with the outdoor unit. Punch approx. ϕ13 holes in the installation frame at pitches to install the outdoor unit.
4) Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.



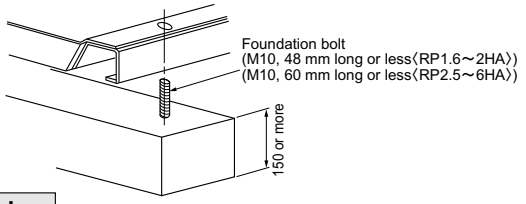


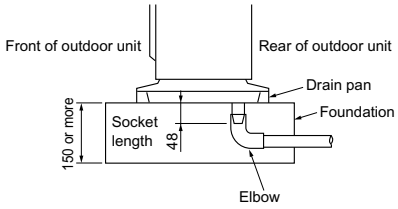




(2) When installing on foundation

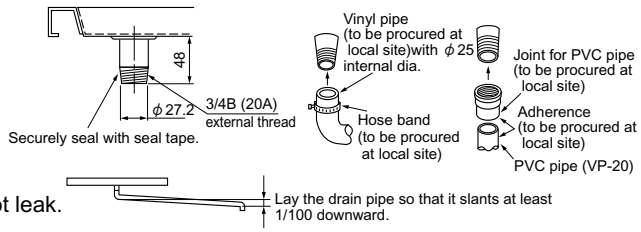
- Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below.
  If it is less than 150 mm, drain piping will not be possible because the drain socket protrudes 48 mm.





2 Drain Piping

(1) When connecting steel pipe:
Connect 3/4B internally threaded pipe.
(2) When connecting vinyl pipe (soft):
Use a ϕ25 mm internal dia. pipe, and fix the connected section with a hose band, etc.
(3) When connecting PVC pipe (hard):
Use VP-20 and connect with a joint for PVC pipe.
※In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.

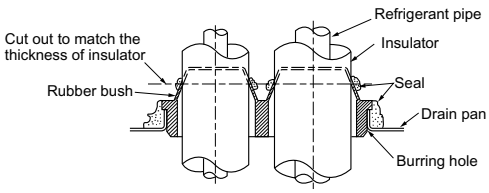


3 Refrigerant Piping

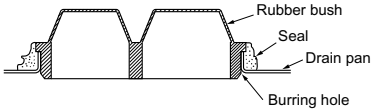
※For PAC-SG64DP-E only

- The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

(1) Piping from the bottom:
Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pie through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.



(2) Piping from other directions:
Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.



Centralized Drain Pan

PAC-SG64DP-E

Photo

Descriptions

A drain pan for the drain water generated from the outdoor unit.

Applicable Models

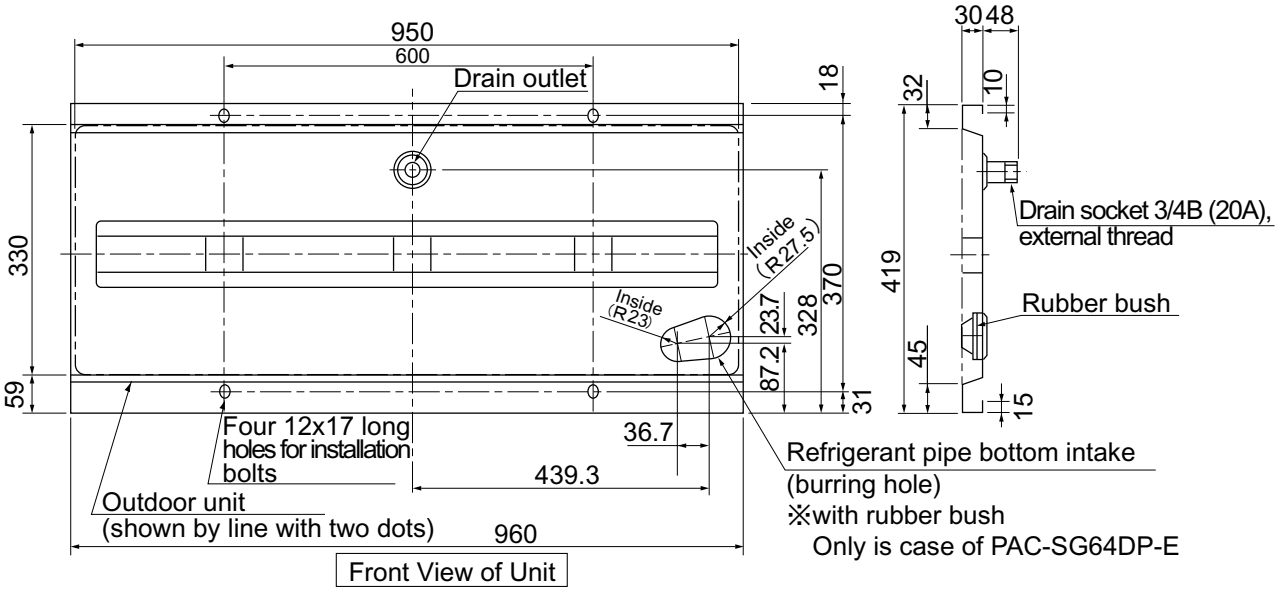
- PUHZ-RP60
- PUHZ-RP71
- PUHZ-RP100
- PUHZ-RP125
- PUHZ-RP140
- MXZ-8A140VA

Specifications

Drain outlet size		R3/4 screw (20A)
Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet (t1.6)
Weight		7.8kg
Mounting bolt (locally prepared)		M10 (or W3/8), length: 60mm or less extrusion from drain pan's undersurface

Dimensions

Unit : mm

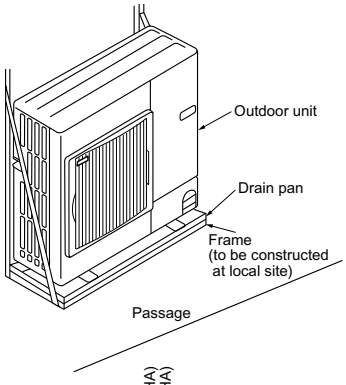


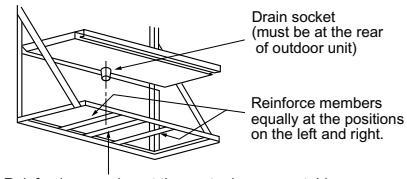
How to Use / How to Install

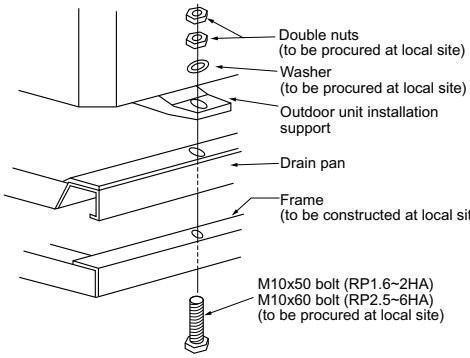
1 Installation Method

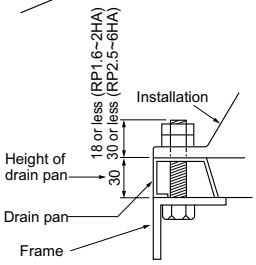
(1) When installing on installation frame

1) The installation frame must have structure and strength that can sufficiently support the outdoor unit and drain pan. Securely install the outdoor unit and drain pan so that they cannot fall or drop as a result of earthquake, strong wind, etc.
2) The drain socket of drain pan is at the center in the longitudinal direction. When constructing the installation frame, be careful that no part of the frame interferes with the socket.
3) The drain pan is tightened with the outdoor unit. Punch approx. ϕ13 holes in the installation frame at pitches to install the outdoor unit.
4) Fix the frame, drain pan and outdoor unit together to join them firmly (at the 4 points). The bolt length must be no more than 60 mm.



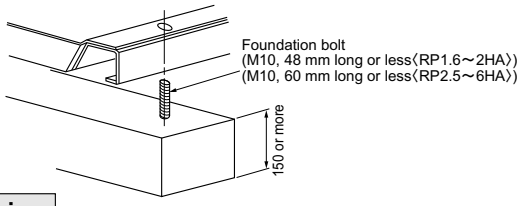


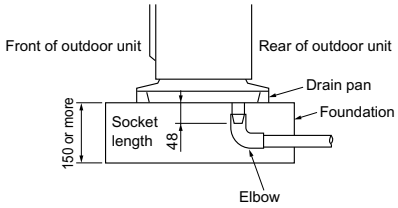




(2) When installing on foundation

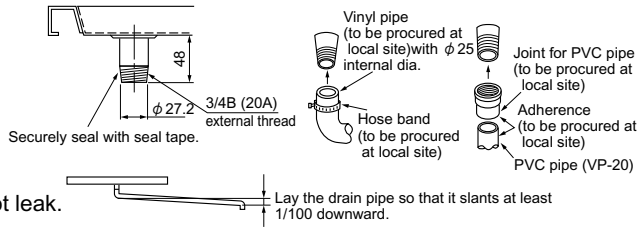
- Since concentrated drain disposal is necessary, make the foundation at least 150 mm high measured from the ground as shown in the figure below.
  If it is less than 150 mm, drain piping will not be possible because the drain socket protrudes 48 mm.





2 Drain Piping

(1) When connecting steel pipe:
Connect 3/4B internally threaded pipe.
(2) When connecting vinyl pipe (soft):
Use a ϕ25 mm internal dia. pipe, and fix the connected section with a hose band, etc.
(3) When connecting PVC pipe (hard):
Use VP-20 and connect with a joint for PVC pipe.
※In all cases, seal the socket threaded section securely with a seal tape, etc., and make sure that water does not leak.

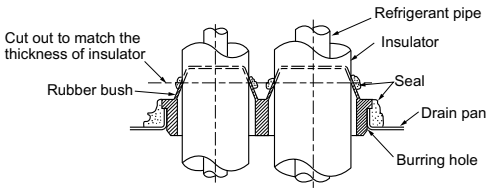


3 Refrigerant Piping

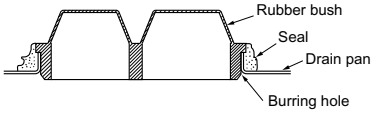
※For PAC-SG64DP-E only

- The refrigerant pipe can be laid in from four directions: front, right, rear and bottom. When laying, be sure to perform the following:

(1) Piping from the bottom:
Cut out the rubber bush to match the thickness of refrigerant pipe insulator. Pass the refrigerant pie through the rubber bush and fit it into the burring hole. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.



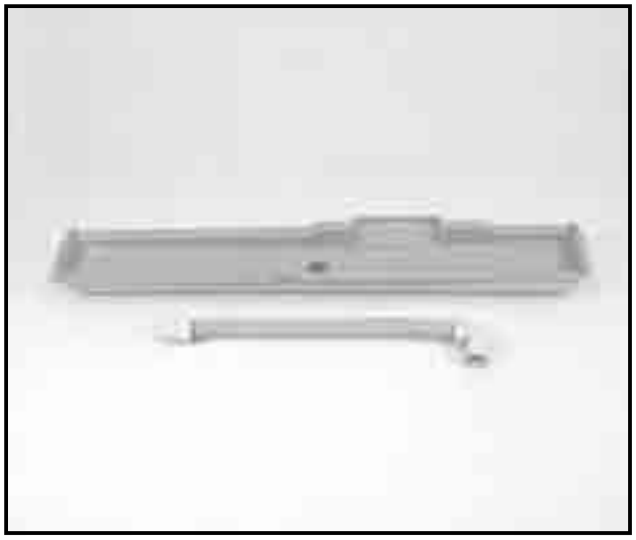
(2) Piping from other directions:
Block the burring hole of the bottom piping section in the drain pan with rubber bush. Seal it with adhesive that is equivalent to Cemedyne 366 (to be procured at local site) to prevent water leak.



Centralized Drain Kit

PAC-SG92DS-E

Photo



Descriptions

A drain pan for the drain water generated from the outdoor unit.

Applicable Models

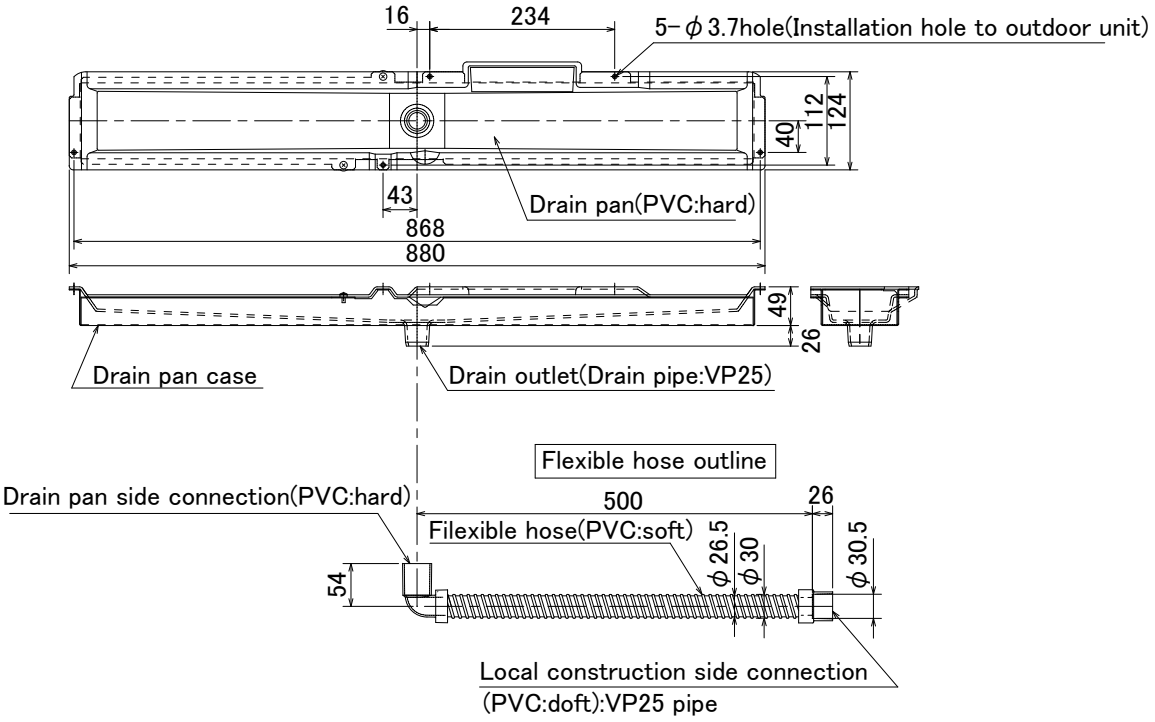
- PUHZ-RP200
- PUHZ-RP250

Specifications

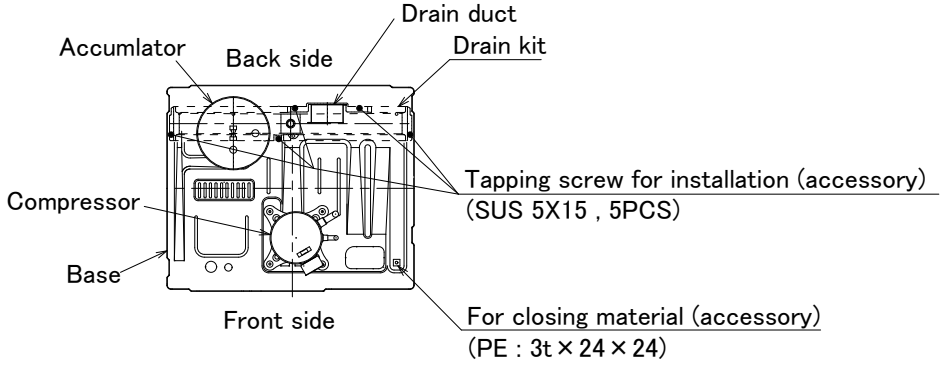
Drain outlet size		VP25 supported
Exterior	Color (Munsell)	Ivory (3.0Y 7.8/1.1)
	Surface treatment	Acrylic resin coating
	Material	Alloy hot-dip zinc-coated carbon steel sheet (t1.0)
Weight		2.5kg
Tapping screw (accessory)		SUS(5x15) x 5

Dimensions

Unit : mm

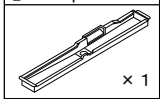
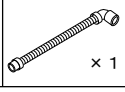


Installation state figure



How to Use / How to Install

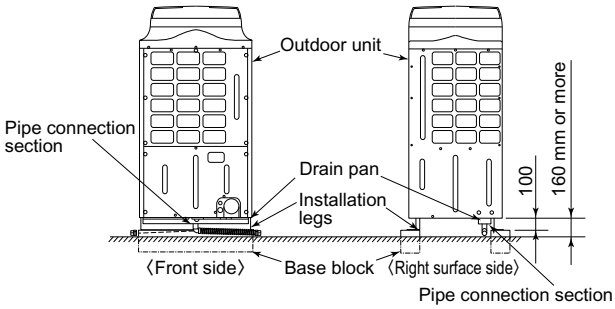
■This product is used for draining when the outdoor unit is installed on a rack above the passageway, etc.
Make sure that you have all the following parts.

①Drain pan kit	②Drain hose	③Screws	④Hole blocking material
 × 1	 × 1	 × 5（5 × 15）	 × 1

1 Cautions on installation

■For installing this product, note the following restrictions:

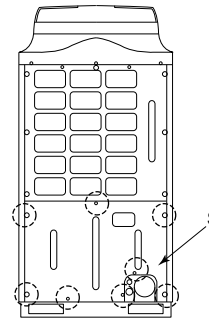
- Do not use this product in cold districts. Inside drain pipe may freeze.
- Be sure to leave a space of at least 160 mm under the bottom surface of outdoor unit, since this kit is to be installedthere.
- If there is no space for installation work at the back of the outdoor unit, install this product before installing the outdoor unit.
- Be sure to apply incline of at least 1/100 to drain pipe.
- Be sure to secure the connection section of drain pipes using silicone sealing agent or PVC adhesive.



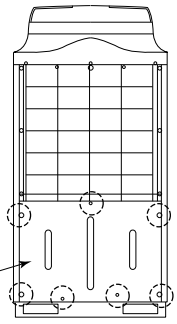
2 Installation procedure

- **Removal of front and rear panels**
  Following Figs. 1 and 2, remove the service panel and rear panel from the outdoor unit.

—Fig. 1—



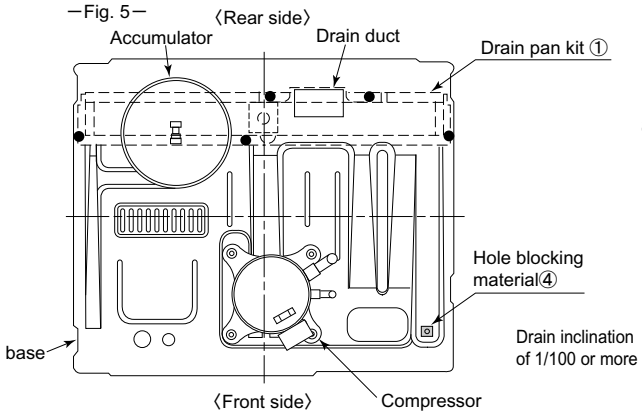
—Fig. 2—



- **Assembling of Drain hose**
  Install the drain hose ② in the socket of the drain pan kit ①. Be sure to use PVC adhesive (locally available) to connect drain hose at this time. (See Fig. 4.)
  ※Pipe locally used corresponds to VP25. (OD.32mm) Required pipe must be locally acquired.

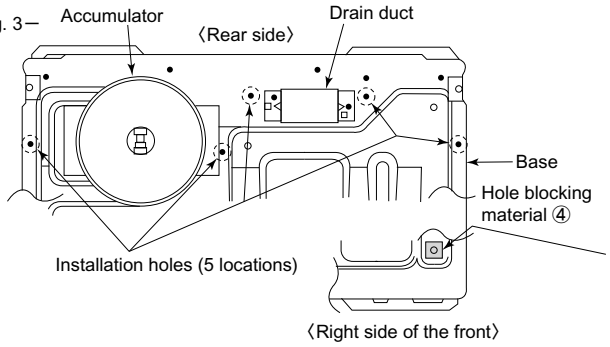
- **Installation of this product**
  After above step (3) is completed, match the drain pan with installation holes at the bottom of the outdoor unit and secure using provided setscrews ③ at 5 locations from inside.

—Fig. 5—

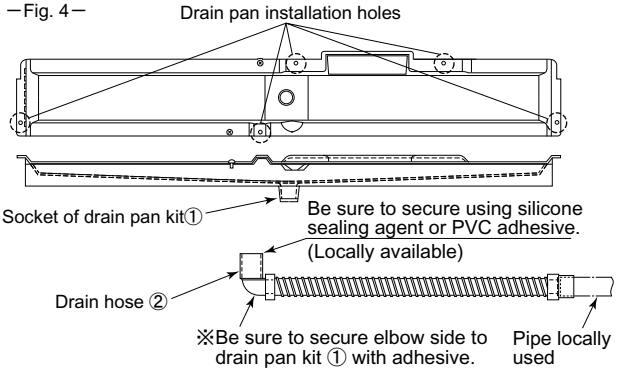


- **Installation of hole blocking material and confirmation of drain pan kit installation hole position**
  Fig. 3 shows the state of bottom surface (base) after service panel and rear panel have been removed. Install the hole blocking material ④ from the front side. Confirm the position of installation hole for drain pan kit ① , and then perform the next step.

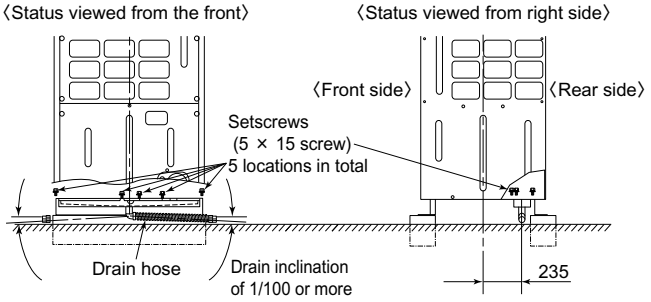
—Fig. 3—



—Fig. 4—



※For drain piping work, be sure to perform the following:
1) Be sure to allow incline of at least 1/100 to the drain hose.
2) Drain hose can be arranged in any orientation.
3) After draining work is completed, run water to check for leakage at drain socket and drainage condition.



3 Re-assembly

■After installation and confirmation of drainage have been completed, install the disassembled parts in the reverse procedure of disassembly.

⚠ WARNING
Incorrect installation of external panels could cause electric shock or fire, due to dust, water leakage, etc.

Photo

TO BE CONFIRMED

Descriptions

Enables air conditioner to turn On / Off according to the set patterns.

Applicable Models

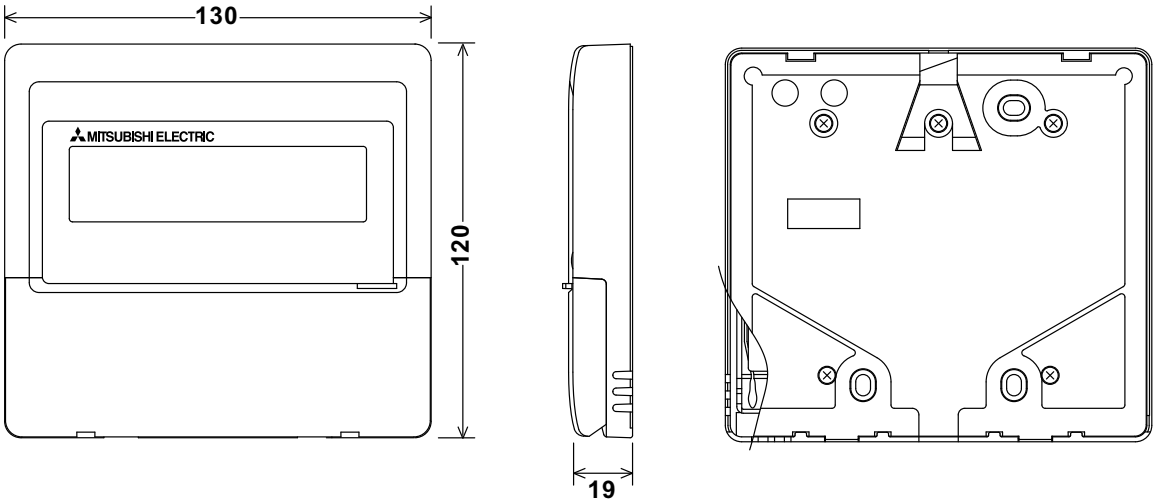
- All PU(H)-RP GA
- All PUHZ-RP outdoor Units

Specifications

External dimensions (mm)		120 x 130 x 19
Installation method		Wall Mount
Clock system		Liquid Crystal Oscillator System
Indications	Time Display	Liquid Crystal Display
	Day Display	Liquid Crystal Display
	Time Setting Display	Liquid Crystal Display
Program Cycle		24 hrs.
Timer Setting Units		30 min.
Number of Set Points		48 points/day
Power rating		5V DC ± 5% (supplied by remote controller)

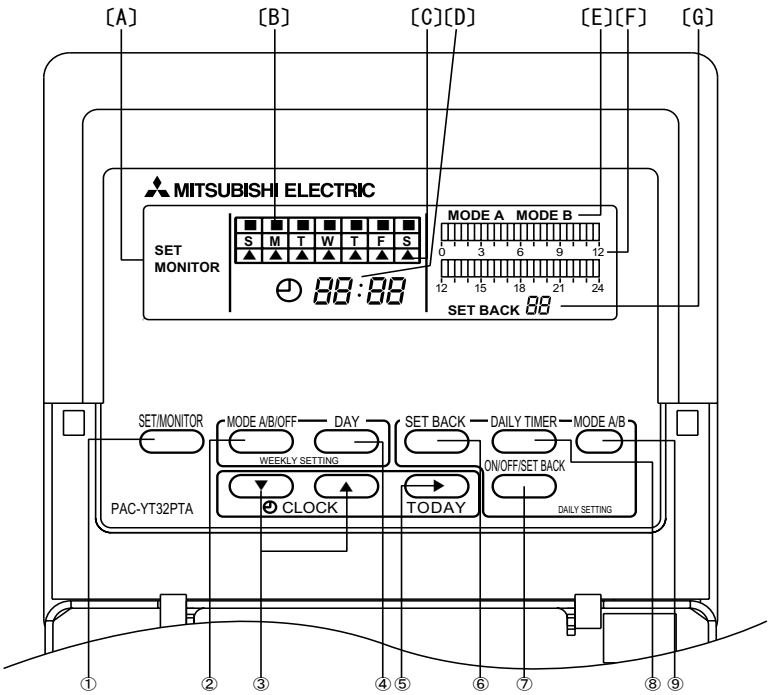
Dimensions

Unit : mm



How to Use / How to Install

1. Name of Parts and their Functions



〔A〕SET/MONITOR DISPLAY:
When SET is displayed, clock adjustment, change of day, and daily and weekly timer settings can be performed. When MONITOR is displayed, all switches except SET/MONITOR SW are invalidated. This is normal status.

〔B〕WEEKLY TIMER SETTING DISPLAY:
Used to select whether the operation pattern set using the PATTERN SETTING can be applied to different days of the week.

〔C〕CURRENT DAY DISPLAY:
Indicates the current day.

〔D〕CURRENT TIME DISPLAY:
During MONITOR status, current time is display.
During daily timer setting, a time desire for timer setting is displayed.

〔E〕OPERATION MODE DISPLAY:
Indicates the operation mode.

〔F〕DAILY TIMER SETTING DISPLAY:
24 hours is divided into 48 blocks and each block is expressed in 30 minutes.
The block display consists of 3 patterns.

〔G〕SET BACK DISPLAY
Indicates the set back value.

① SET/MONITOR Button
Using this switch, select "MONITOR" or "SET" Mode.
"MONITOR": Indicates the current timer setting. All switches expect MODE SELECTOR SW are invalidated then. This is the normal status.
"SET": Set to "SET" mode for clock adjustment, change of day and daily and weekly timer settings.

② MODE A/B/OFF Button
Used for setting timer in day of week unit.

③ CLOCK ADJUSTMENT Button
Used for adjustment of the current time.
Push [▲] SW to advance the time. Each time the button is pushed the time advances by 1 minute, pushing continuously advances by 1 minute at 0.5 second intervals, and when the lower digit of the minute becomes "0" the time advances in 10 minute units.
[▼] SW is used for reversing the time. Each time the button is pushed the time reverses by 1 minute, pushing continuously reverses the time by 1 minute at 0.5 second intervals, and when the lower digit of the minute becomes "0" the time reverses in 10 minute units.

④ DAY SETTING Button
Used when setting the day.

⑤ WEEK DAY SETTING Button
Used for week day setting.
Pushing [▶] SW moves the week day light display in order of **S** → **M** → **T** → **W** ▪ ... enabling to set the week day.

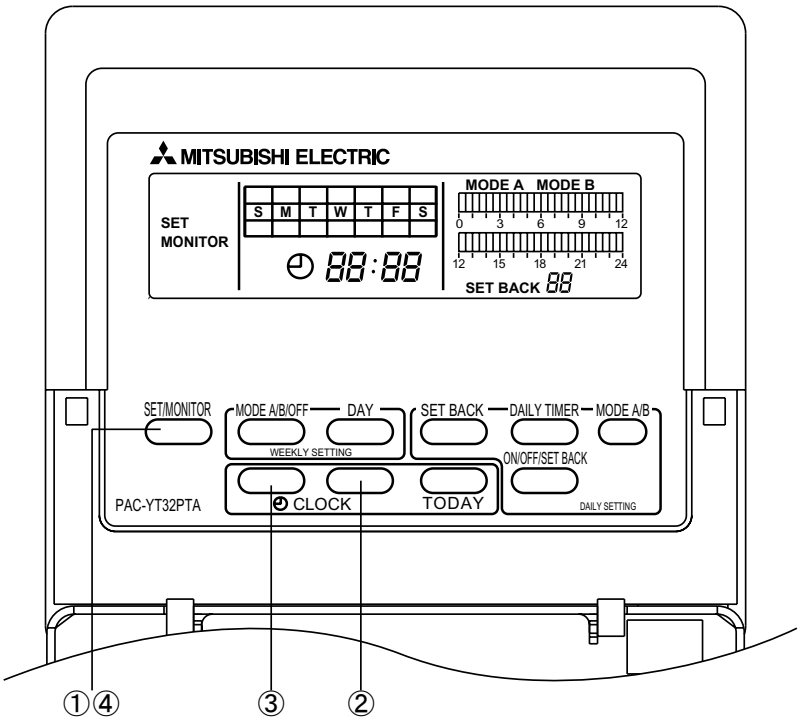
⑥ SET BACK SETTING Button
Used for set back setting.
Set back can be done in the range of 1, 2, 4, 6 and 8°C (2, 4, 8, 12 and 16°F).

⑦ ON/OFF/SET BACK Button
Used to specify the time setting pattern.

⑧ DAILY TIMER Button
Used for timer setting in 30 minute units.

⑨ MODE A/B Button
Used to set A Mode or B Mode when specifying the operation time.

2. Synchronizing with the current time



① Press the [SET/MONITOR] button and select the "SET" Mode.

② If the time is advancing, press the CLOCK ADJUSTMENT button [▲], then set the time.
- Each time the [▲] button is pressed, the time advances 1 minute. If it is pressed continuously, the time advances in 1-minute units, then when the bottom digit becomes 0, it advances in 10-minute units.
  When pressed continuously, the minute digit returns to 0 and advances in 1 hour units.

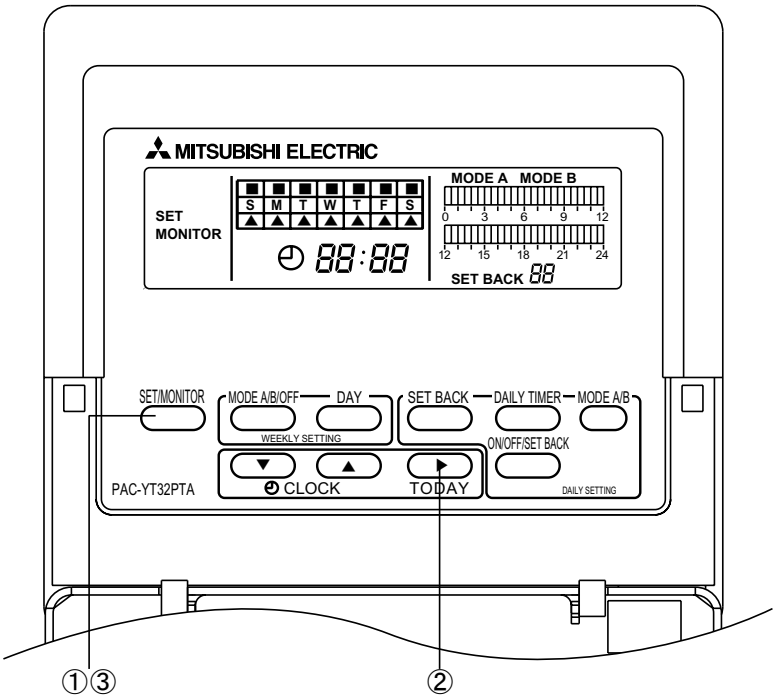
③ To reverse the time, press the [▼] time adjust button and set the time.
- Each time the [▼] button is pressed, the time reverses 1 minutes. If it is pressed continuously, the time advances in 1-minute units, then when the bottom digit becomes 0, it reverses in 10-minute units.
  When pressed continuously, the minute digit returns to 0 and advances in 1 hour units.

* At the point when the CLOCK ADJUSTMENT buttons [▲], [▼] are pressed, the seconds digit is set at 0 and the clock starts running.

④ After the time adjustment is completed, press the [SET/MONITOR] button and return it to the "MONITOR" mode.

* As will be explained later on, the current time display indicates the starting time of the time interval (30 minute units) that is the object of adjustment during adjustment of the daily timer (for example, in the 0:00 to 0:30 interval, 0:00 is displayed). To return the display to the current time display from the starting time interval display, press the [▲] or [▼] CLOCK ADJUSTMENT button once, or press the [SET/MONITOR] button and set the "MONITOR" mode.

3. Setting the Day



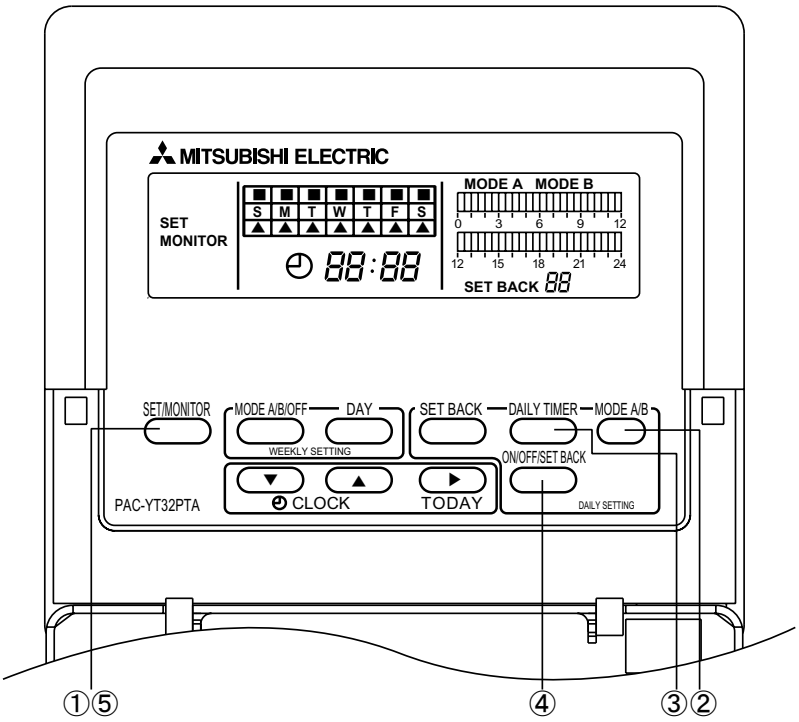
① Press the [SET/MONITOR] button and select the "SET" Mode.

② Pressing the TODAY button [▶] day setting button changes the contents of the lighted display in the order
Sunday → Monday → Tuesday → Wednesday → . . .
Set the current day while checking the liquid crystal display of the current day display.

③ When the setting operation is completed, press the [SET/MONITOR] button and return to the "MONITOR" mode.

NOTE: ・When the power is first switched On and if there has been a power failure for 48 hours or longer, it is necessary to set the current time and day.
・If there is a power failure that is less than 48 hours long, the clock runs from the internal battery.

4. Daily Timer Setting Method



① Press the [SET/MONITOR] button and select the "SET" Mode.

② Press the [MODE A/B] button and select the mode.

③ At this time, the block corresponding to the current time will be blinking. When you want to press the [DAILY TIMER] (advance) button for this blinking block and change the time, the starting time for that time interval is displayed in the current time display.

④ Set the setting button as shown below.
Each time the [ON/OFF/SET BACK] button is pressed, the display in the block changes, in the following order, "Lighting" → "Off" → "Blinking" → "Lighting" → ・・・

[If you desire to turn operation ON] → Press the [ON/OFF/SET BACK] button once → That block will light up.

[If you desire to turn operation OFF] → Press the [ON/OFF/SET BACK] button twice → That block will go off.

[If you desire to have set back operation] → Press the [ON/OFF/SET BACK] button three times → that block will blink.

* Daily Timer Setting (Example)

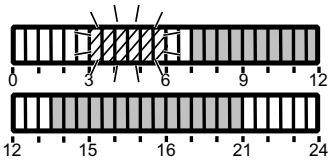
7:00~12:00, 13:30~21:00 Lighted → Air conditioner operation is ON

21:00~3:00, 6:00~7:00 Off → Air conditioner operation is OFF

12:00~13:30

3:00~6:00 (Shaded portion) Blinking Set back operation

Liquid Crystal Display

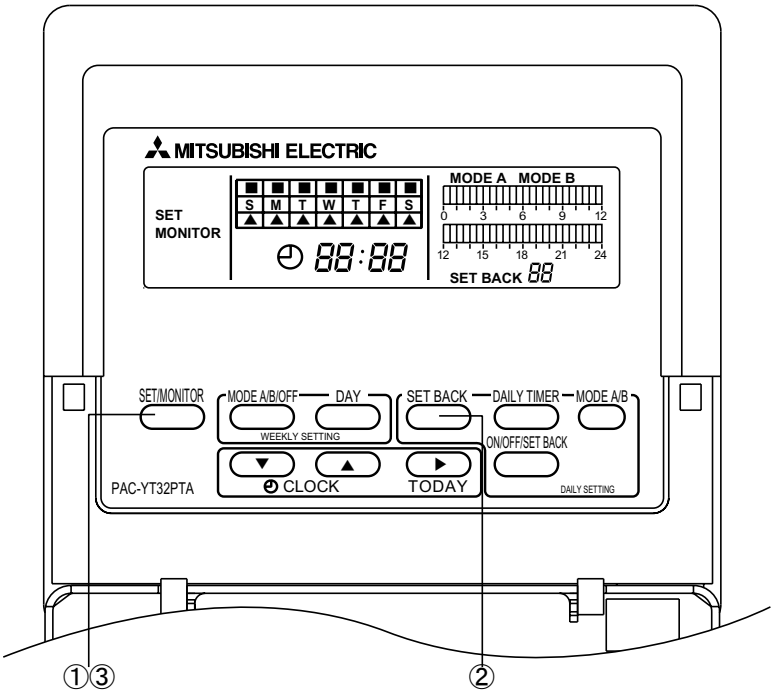


---- Lighted

---- Blinking

⑤ When the setting operation is completed, press the [SET/MONITOR] button and return to the "Monitor" mode.

5. Setting the Amount of Set Back Operation



① Press the [SET/MONITOR] button and select the "SET" Mode.

② Press the [SET BACK] button, then set the amount of set back.
- Each time the [SET BACK] button is pressed, the amount of set back becomes 1˚C (2˚F) greater. The amount of set back can be set at 1, 2, 4, 6 and 8˚C (2, 4, 8, 12 and 16˚F). If it is advanced to 8˚C (16˚F), it returns by 1˚C (2˚F).

③ When the setting operation is completed, press the [SET/MONITOR] button and return to the "MONITOR" mode.
In the "Monitor" mode, if the set back pattern has not been set by the Daily Timer setting method in item 6, the set back amount is not displayed.

④ During set back operation, the set temperature display on the standard remote controller changes.

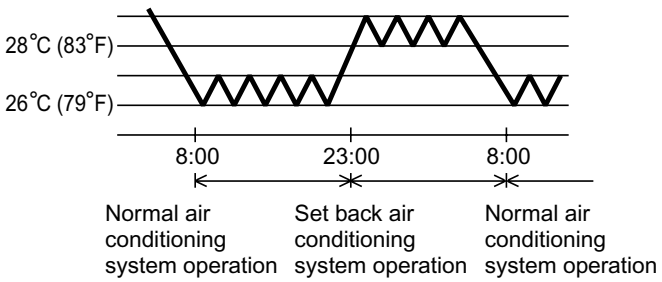
* Set Back Operation

In this operation, a time interval when the air conditioning load becomes lower is designated, and during this time interval, the temperature during air conditioning is set so that it is several degrees higher than the normally set temperature, and during heating, the temperature is set so that it is several degrees lower than the normally set temperature. Through this kind of operation control, running costs can be reduced. The amount of set back can be set at 1, 2, 4, 6 and 8˚C (2, 4, 8, 12 and 16˚F).

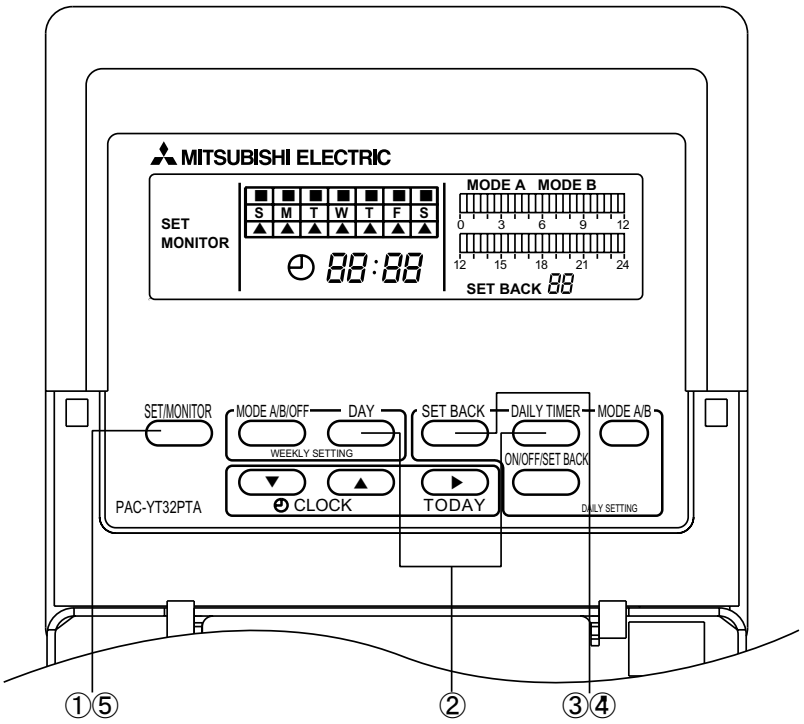
Example) In the case of hotel air conditioning, etc., with 24-hour operation

8:00 ~ 23:00	Air conditioning system operation setting 26˚C (79˚F)
23:00 ~ 8:00	Set Back Operation Set Back Amount: 2˚C (4˚F)

As shown in the graph at right, during the time specified for set back, the thermostat setting rises automatically by 2˚C (4˚F). The setting then returns to the normal setting after the set back time is ended.



6. Setting Centigrade (˚C)/Fahrenheit (˚F) at Set Back Operation



① Press the [SET/MONITOR] button and select the "SET" mode.

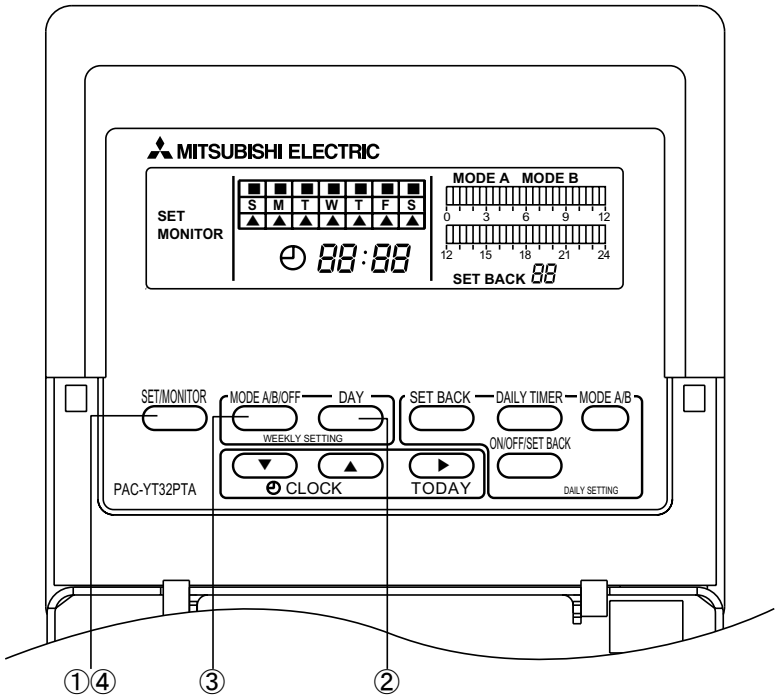
② Press the [DAY] and [DAILY TIMER] buttons simultaneously and select the "C/F" mode.
- Release the "C/F" mode by operating a button other than the [SET BACK] button.
- If no operation is performed within 3 minutes in the "C/F" mode, the set mode is released.

③ During the "C/F" mode, [SET BACK] blinks.
At this time, the SET BACK display changes SET BACK C↔SET BACK F each time the [SET BACK] button is pressed. Set to match the connected remote controller.
- If a Centigrade type remote controller is connected, set to "SET BACK C".
- If a Fahrenheit type remote controller is used, set to "SET BACK F".

④ At the end of setting, press a button other than the [SET BACK] button and switch from the "C/F" setting mode to the "SET" mode.

⑤ Press the SET/MONITOR button and return to the "MONITOR" mode.

7. Weekly Timer Setting Method



① Press the [SET/MONITOR] button and select the "SET" Mode.

② At this time, the upper portion of the current day display blinks.
Press the [DAY] button for this blinking block and set the desired day.

③ The setting button specifies the setting as follows.
Each time the [MODE A/B/OFF] button is pressed, the display in the block changes, in the following order "Lighted" → "Off" → "Blinking" → "Lighted" → · · ·
A Mode: Lighted B Mode: Blinking OFF Mode: Off

④ After the setting operation is completed, press the [SET/MONITOR] button and return to the "MONITOR" mode.

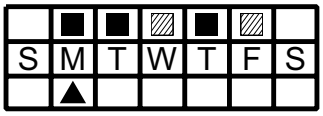
* Weekly Timer Setting (Example)

Monday, Tuesday, Thursday ..... A Mode Operation

Wednesday, Friday ..... B Mode Operation

Saturday, Sunday ..... Stopped

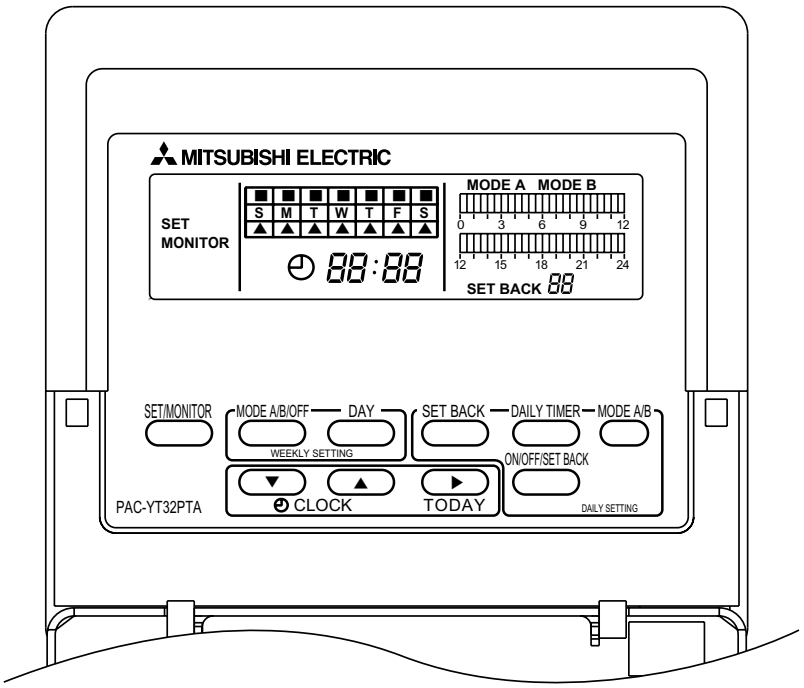
Liquid Crystal Display



■ ···· Lighted

▨ ···· Blinking

8. Explanation of Timer Operation



(1) If connected to the remote controller.

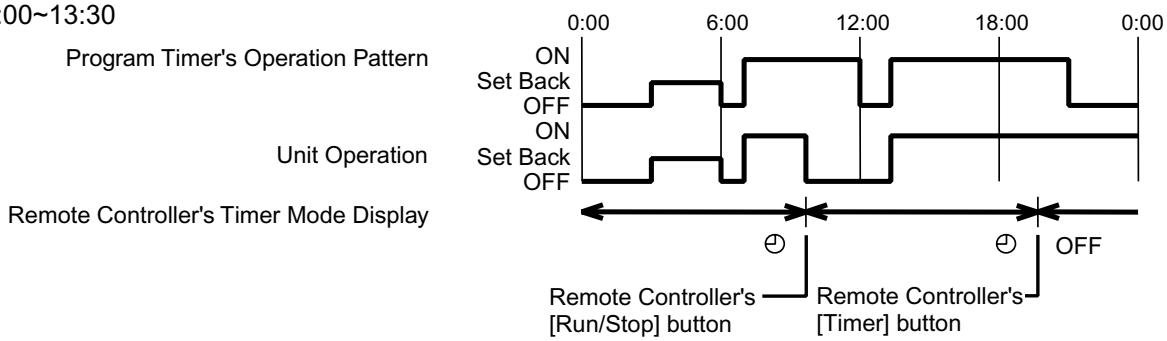
① Press the remote controller's [Timer/Continuous] or [Timer] MODE button and set the system in the "Timer◴" mode.
If it is not in the "Timer◴" mode, the program timer's operation pattern becomes disabled. If the program timer is connected, the 24-hour On/Off timer on the remote controller cannot be used.

② If the Run/Stop button on the remote controller is pressed during operation in the a "Timer" mode, the system stops. Also, If the Run/Stop button is pressed while in the "Timer" mode, the system begins operation in the "Timer" mode.

Explanation is given using the following setting pattern

In the case of the diagram at right

7:00~12:00, 13:30~21:00	Lighted → Air conditioner operation is ON
3:00~6:00 (Shaded portion)	Blinking → Set back operation
21:00~3:00, 6:00~7:00	Off → Air conditioner operation is OFF
12:00~13:30	



9. Power Failure Compensation Time

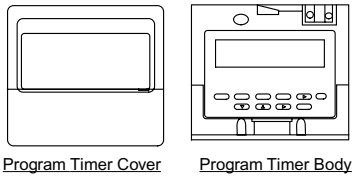
With the program timer, the time function can be backed up by the internal battery during a power failure.
・Power Failure Compensation Time ..... Approx. 48 hours (25°C (77°F))

NOTE: When first turning the power on and after a power failure that has lasted more than 48 hours, it takes approximately 30 minutes until the backup battery is fully recharged.

1 Confirming the Supplied Parts

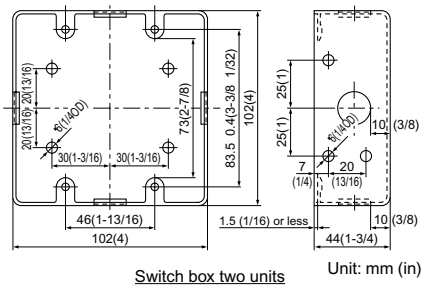
Confirm that the box includes the following parts, in addition to this installation manual:

1. Program Timer (cover, body)
2. 5-wire cable 180 mm (9/16 ft) connector
3. 5-wire cable 500 mm (1-9/16 ft) connector
4. Cross recessed pan head screw (M4 ▪30)
5. Wood screw 4.1 ×16
6. Operation Manual



Switch box

When using a switch box, use the switch box shown in the figure at the right.



Switch box two units

Unit: mm (in)

2 Installation Method

(1) Installation Position

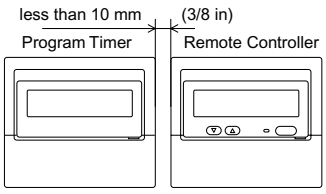
- Carry out wiring using the 5-wire cable provided.
- The wiring route and the wire length are limited, so decide an installation position with care regarding the following points.
- See (4 Wiring Method) concerning connection or wires.

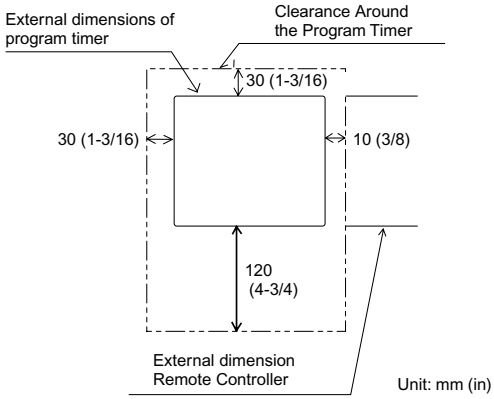
① If a switch box is used,
- Locate the program timer either on the right or left. Either side is OK. However, the length of the 5-wire cable is limited, so keep the distance between the program timer and the remote controller at 10 mm (3/8 in) or less.

② If you are mounting it directly on the wall
- Install the program timer on the left side of the remote controller. Keep the distance between the program timer and the remote controller at 10 mm (3/8 in) or less.

③ Surrounding Interference
- Whether mounting the program timer on the wall or on the switch box, leave a clearance of at least 30 mm (1-3/16 in) around the program timer. (except the side next to the remote controller)

④ Locally Procured Parts (When using a switch box)
- 2-gang switch box
- Thin-walled steel conduit
- Lock nuts, bushings



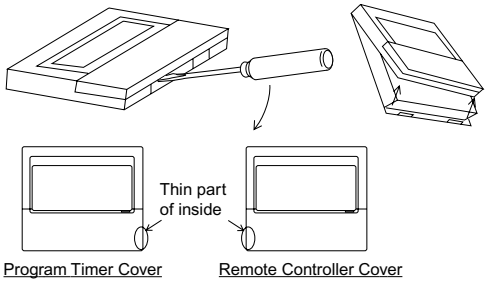


Unit: mm (in)

(2) Remove the program timer's cover.

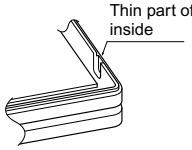
- Insert a minus screwdriver into one of the open slots and move the screwdriver in the arrow direction.

⚠CAUTION	Do not turn the screwdriver in the slot. Doing so may damage the slot.

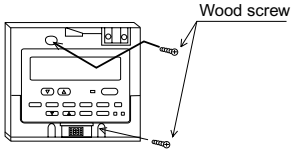


(3) Wiring Lead-in Hole

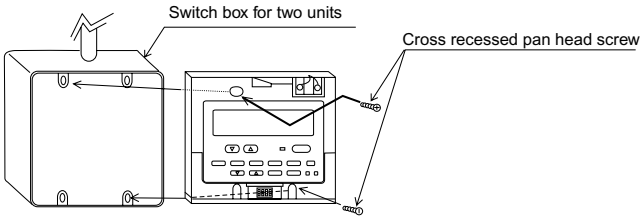
- Thin part of inside, shown in the figure below, have been provided in the back of the cover.
- Remove the thin part of inside from the right side off the program timer and from the left side of the remote controller.



(4) Mount the program timer on the wall or on the switch box.



When installing directly on the wall



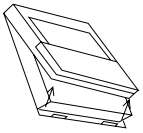
When using the switch box

⚠CAUTION	If the screws are overtightened, it could cause the body to deform or crack.

NOTE: - Choose a flat plane for installation.
- Fasten the switch box at more than two places when installing directly on the wall.
- When reinstalling on the wall, fasten securely using anchors.

(5) Fit the cover in place.

・Connect the wires in accordance with (4 Wiring Method) .



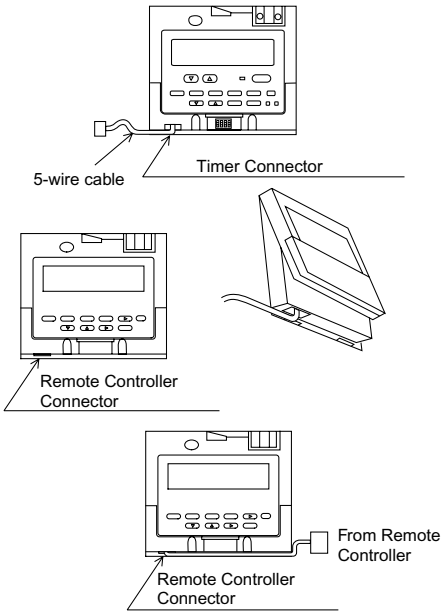
⚠CAUTION	- When the cover is fitted, it will make a clicking sound. Make sure it is fitted securely. - Peel off the protective sheet from the controls when using the program timer.

NOTE: A protection sheet is stuck to the operation section. Peel off this protection sheet before use.

3 Wiring Method

(1) Wiring with the Remote Controller

・Carry out wiring from the remote controller.
・Insert the 5-wire cable of the remote controller to the timer connector. (The part shown by the arrow in the figure at right.)
・The following 2 types of 5-wire cable are packaged, so use the cable which matches with your remote controller.
① Connector small - small type
② Connector large - small type
・After connecting, the cable passes the knockout hole. (See the figure at right.)
・Close the cover.

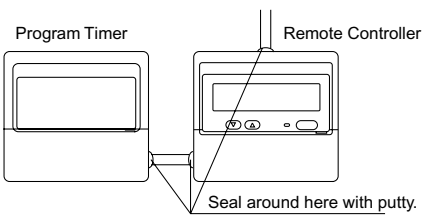


(2) Wiring the Program Timer

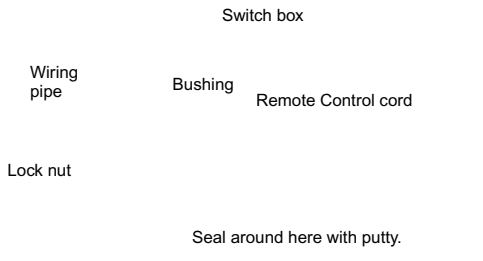
・Insert the 5-wire cable's connector in the remote controller connector on the bottom of the program timer. (The part shown by the arrow in the figure at right.)
・The 5-wire cable connects to the remote controller connector on the program timer. (See the figure at right.)
・Pass the wire along the bottom of the program timer as shown in the figure at right, running it through the knockout hole in the cover.
・Close the cover.

(3) Seal the wire lead-in holes with putty to prevent condensation, water drops, worms, etc. from getting inside.

・If the program timer is mounted directly on the wall, seal the knockout holes in the top case with putty.
・If the remote controller is mounted on the switch box and the program timer is wired from it, seal the joints between the remote controller, wire conduit and program timer with putty.



When installing directly on the wall



If the remote control wire is run from the switch box for installation

Photo

TO BE CONFIRMED

Descriptions

Enables to pick up the room tempreture at the remote position.

Applicable Models

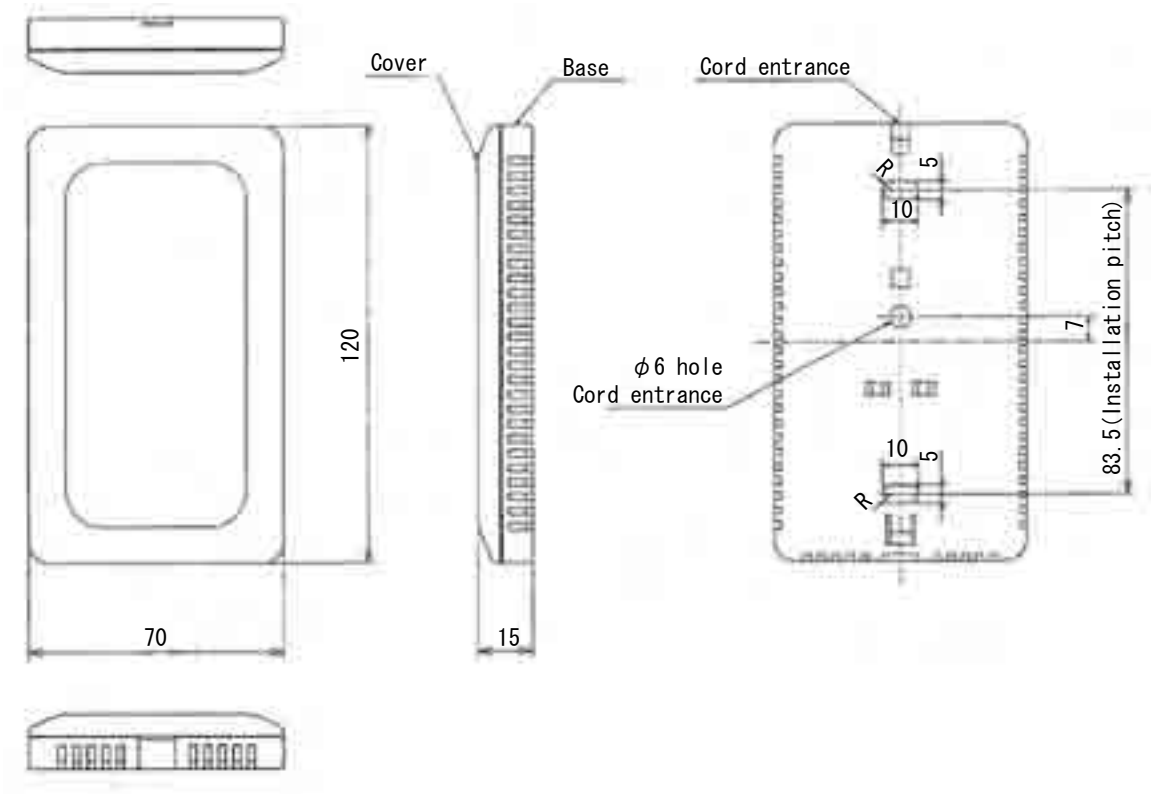
- All PU(H)-RP GA
- All PUHZ-RP outdoor Units (A-control)

Specifications

External dimensions (mm)	120 (H) x 70 (W) x 15 (D)
Exterior	White gray (Munsell 4.48Y 7.92/0.66) Material: ABS resin
Operating conditions	Temperature: -20 to 65℃ Humidity: 30 to 90%RH (no condensation)
Installation method	Mounting on single-type switch box (JIS C8336) or directly mounting on wall
Accessory	2-wire cable (12m), Connector with post, Fixing screw (x2)
When combining with environmental measurement controller	
Temperature measuring range	-20 to 65℃
Measurement resolution	0.1℃ (10 to 35℃), 0.5℃ (other temperature ranges)

Dimensions

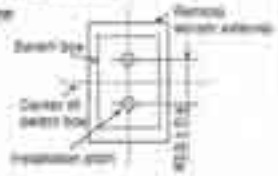
Unit : mm



How to Use / How to Install

1 How to Install

(1)Determine the installation of the remote sensor (switch box).
The following items must be observed.
①Select a place where the remote sensor will detect an average temperature of the room, and where the sensor will not be subject to direct sunlight, heat sources, or the blow-off from the air conditioner, etc.
②Install the sensor within the length of the cable provided (12m). (The cable cannot be extended. If extended, it may cause misoperation due to noise.)
③The following parts must be procured at the site.
- Cross-recessed pan head screw M4 ..... Tow screws
- Single switch box
- Thin steel conduit
- Lock nut, bushing



(2)Connect the wires.
- Connect the 2-core cable to the terminal block in the lower case. Peel the sheath of the 2-core cable as shown in Fig.1 , and correctly wire it as shown in Fig.2.

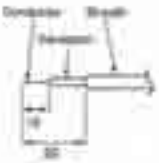


Fig.1

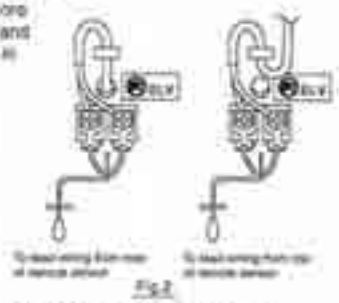


Fig.2

- The wiring connection of the indoor unit's electrical box and remote sensor is as shown in Fig.3. There are three methods of connecting the 2-core cable to the electrical box.

Exchange 2-core cable (connector 20)
①When using the connector attached to the end of the 2-core cable as it is.
②When cutting the connector attached to the end of the 2-core cable and connecting the cable to the terminal block in the I.B. (Indoor Board).
③When using the enclosed post for connection and convert cable.

The above three methods are used according to the indoor unit being used. If the 2-core cable is to be embedded in the wall, follow Fig.4.

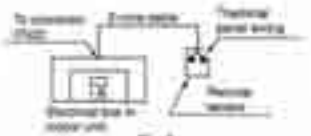


Fig.3

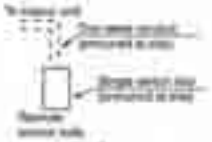
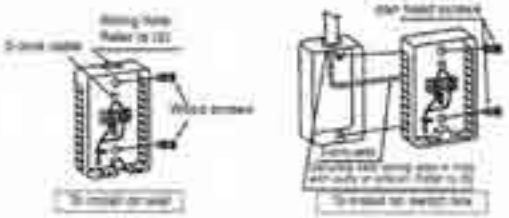


Fig.4

(3)Install the lower case on the wall or switch box.

NOTE The recommended tightening torque for installing the 2-core cable to the terminal block is 1.17N·m.



⚠CAUTION
- If the screws are tightened too hard, the case may break or deform.
- Install the sensor on a flat wall. If installed on a bumpy wall, the case may break or trouble may occur.

(4)Fit the upper case.

Catch the two upper claws first, and fit the case as shown on the left.

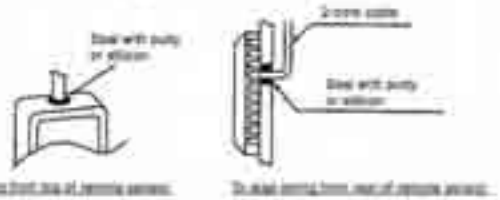
⚠CAUTION
- Securely fit the case until a clothing sound is heard. It may drop off if is not fitted securely.

To remove the case, fit a flat-flap screwdriver into the claw section as shown below, and move the screwdriver in the direction of the arrow.

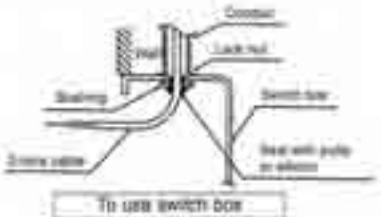
⚠CAUTION
- Do not turn the screwdriver when it is fit into the claw section as the claws may be broken.

(5)Wiring hole for direction installation on wall, etc.
Cut the thin section (shaded section) of the lower case with a knife or pair of nippers, etc. The 2-core cable connected to the terminal block is led out from here.

(6)Securely seal the wiring lead hole with putty or silicon to prevent dew, water drops, cockroaches and other insects from entering.
- When installing directly on the wall, seal the section cut on the lower case with putty or silicon.
If the wiring is to be passed through a hole in the wall (when leading the wiring from the rear of the remote sensor), seal the hole in the same manner.
- When installing on a switch box, seal the connection of the switch box and conduit with putty or silicon.



To install directly on wall



To use switch box

2 Setting of indoor unit

When the remote sensor is connected to the indoor unit and room temepature detection polistion is changed, reset the setting of "Set temp. 4-deg. up" in the heating mode as shown below.

① K control models : DIP switch Nos 1-8 on the control PCB of the indoor unit.
② M-NET control models : DIP switch Nos 3-8 on the control PCB of the indoor unit.
③ A control models : Refer to A-control air-conditioners SERVICE TECHNICAL GUIDE.

Remote On/Off Adapter

PAC-SE55RA-E

Photo

TO BE CONFIRMED

Descriptions

TO BE CONFIRMED

Applicable Models

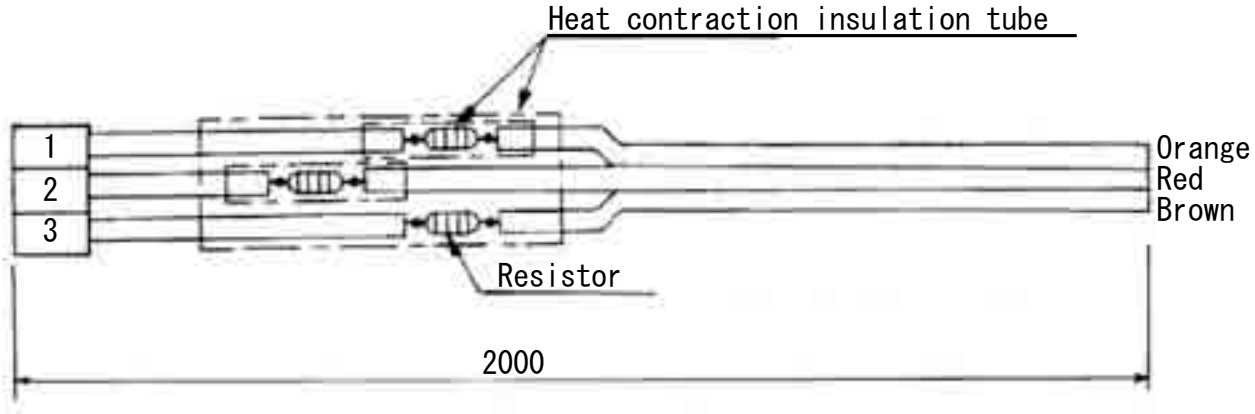
- All PU(H)-RP GA
- All PUHZ-RP outdoor Units (A-control)

Specifications

Function	ON/OFF by external signal External signal ON (remote control disabled) / OFF (remote control enabled) switchable
Input signal	No-voltage contact (ON/OFF level signal)
Connector	3P (connected to CN32 on outdoor unit control board)
Cable type	3-wire cable, for extension: Sheathed vinyl cord or cable (0.5 to 1.25mm2)
Cable length	2m (max. 10m when extended locally)

Dimensions

Unit : mm



How to Use / How to Install

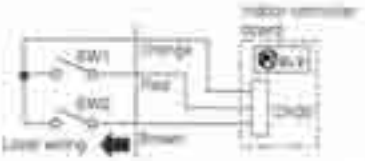
1 Connecting to the Indoor Unit

1. Connect to the connector CN32 on the indoor controller board.
2. Press the connector for the remote ON/OFF adaptor into the CN32 connector.
   The connector can only be connected in one direction only. Do not force the connection.

2 Locally Procured Wiring

With the remote ON/OFF adaptor, variations of connection method with the locally installed circuit will provide different types of operating configurations.
Example: External timer operation, remote control operation

1. Basic Connection Method
   SW1 - Operating switch
   Performs operation/stopping of indoor unit.
   SW2 - Selecting switch
   For selecting whether the operation/stopping is to be performed by external circuit or remote control.*
   * Also includes system controller (central controller).



2. Switch Settings (Refer to table at right for details.)

SW2 - If on:
- Operation/stopping cannot be controlled from remote controller.
  Other operations (such as temperature settings and changing fan speed) can be performed.
- Operation/stopping can be performed by SW1.

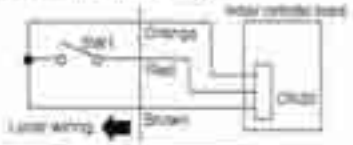
SW2 - If off:
- Operations can be performed from remote controller.
- Operation/stopping cannot be performed by SW1.

		SW2	
		ON	OFF
Remote controller		Cannot perform operation/stopping	Can perform operation/stopping
SW1	ON	Operation	Cannot perform operation/stopping
	OFF	Stopping	

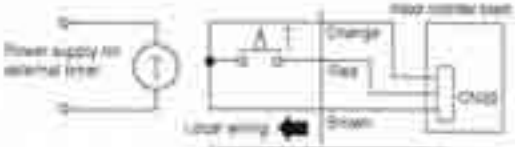
3 Examples of Usage

In either case, there is a 3 to 6 second delay from the time when the operating command is sent until the unit operates.

1. To perform operation/stopping by only remote operation or external timer and to prohibit operation/stopping by the remote controller, use the following circuits.

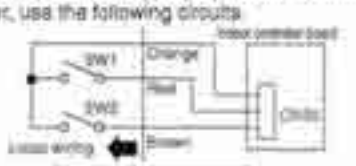


For remote operation

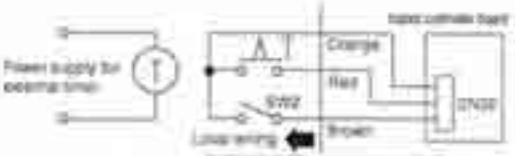


For remote timer operation

2. To perform operation/stopping by remote operation or external timer and allow operation/stopping by the remote controller, use the following circuits.

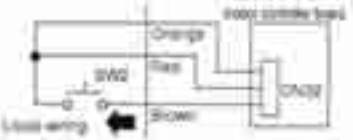


For remote operation



For remote timer operation

3. To start operation by remote operation and then freely use remote controller, use the following circuit.



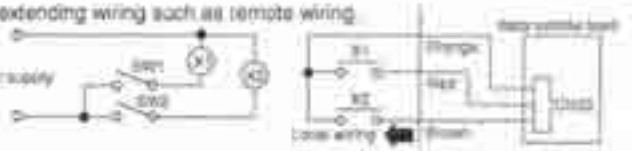
Use a momentary switch (a switch that is turned on manually and turns off automatically) for SW2.
Press SW2 (for 1 second or more) and the operation starts. After this, the remote controller can be used for operations.

4. To permit/prohibit the use of the remote controller by an external circuit.

If SW2 is on, operation cannot be performed by the remote controller.
If SW2 is off, operation is permitted.

4 Wiring Restrictions

Keep the length of wire from the circuit board of the indoor unit within 10 meters. Excessive length could cause improper operation.
Use a transit relay when extending wiring such as remote wiring.



Remote Operation Adapter PAC-SF40RM-E

Photo

TO BE CONFIRMED

Descriptions

TO BE CONFIRMED

Applicable Models

- All PU(H)-RP GA
- All PUHZ-RP outdoor Units

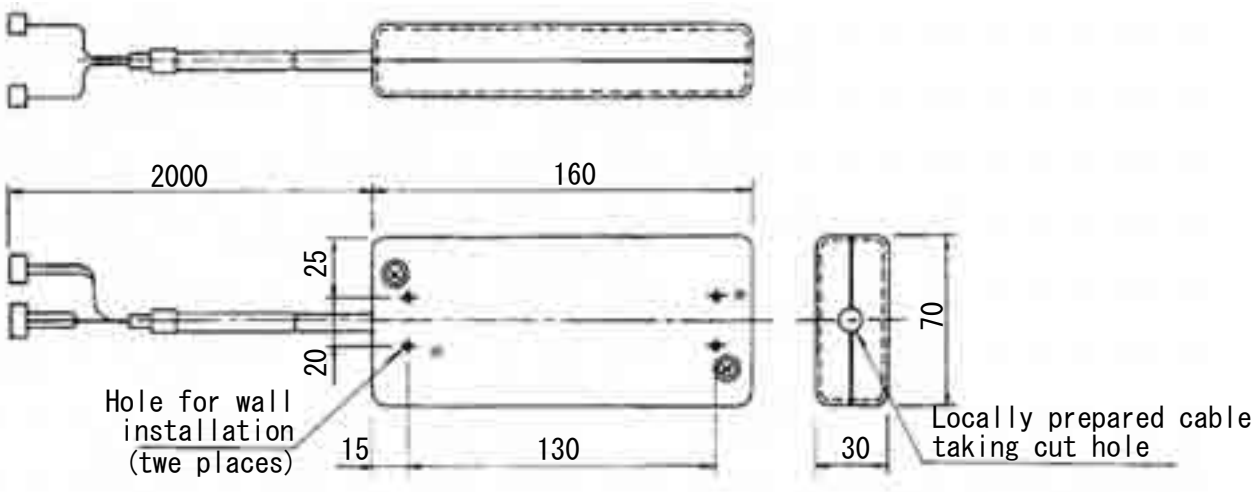
Specifications

Power		Supplied from indoor unit
External dimensions (mm)		160 x 70 x 30
Exterior		Material: ABS resin, Color: Gray (Munsell 3.07Y 6.16/0.33)
Weight		200g
Operating conditions		Indoor only Temperature: 0 to 40℃, Humidity: 35 to 85%RH (no condensation)
Connecting cable (indoor unit)		5-wire (3 + 2) cable with connector (9-pin, 4-pin)
Output signal		No-voltage "a" contact (relay contact method)
	Number of Contacts	2 (Operation / Alarm)
	Contact capacity	200V AC (30V DC)/1A or less
	Minimum load	10mA
Input signal		Pulse signal (instantaneous non-voltage "a" contact), pulse width: 200ms or more
	Number of Contacts	1 (start/stop)
Input/output signal cable (locally prepared)	Type	CV, CVS, or equivalent sheathed vinyl cord/cable
	Diameter	Twisted: 0.5 to 1.25mm2, Single: Φ0.65 to Φ1.2mm
	Distance	Output signal cable: Max. 100m Input signal cable: Max. 10m (Extension relay must be used when exceeding 10m)

* This kit cannot be used with a wireless remote controller.
Water leakage alarm will not be displayed if the unit is built into the ceiling (PDH)

Dimensions

Unit : mm

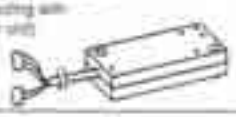


How to Use / How to Install

1 Confirming the Supplied Parts

(1) Parts Provided

Check that the box includes the following parts in addition to this installation manual.

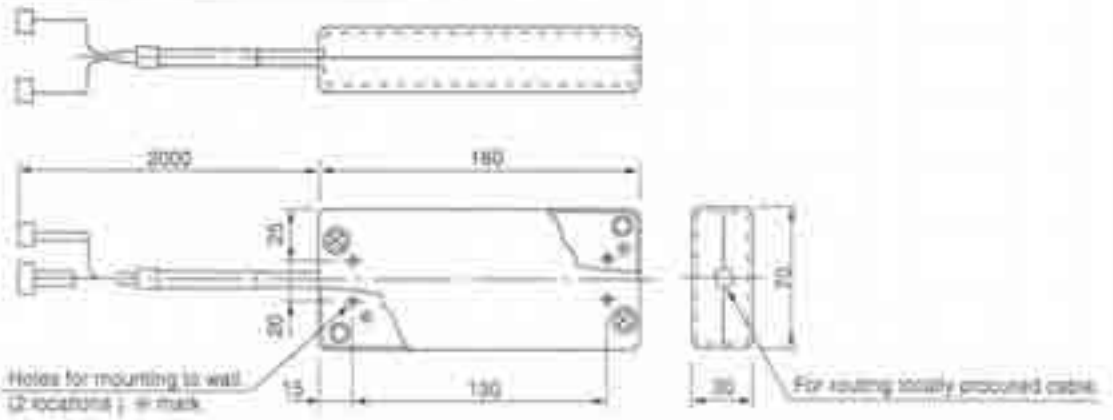
Parts	① Remote operation adaptor unit	② Cord clamp	③ Wall mount bracket
Shape	(with 2 meter wire for connecting with indoor unit) 	(Use this clamp if the local wiring is too thick to be held by the clamp inside the main unit.) 	
Quantity	1	1	1
Parts	④ Screws for mounting ③	⑤ Cushion material	⑥ Tie-wrap
Shape	 3.5 x 12 (Black)	(With adhesive on both sides.) 	(Use this for bundling lead wires.) 
Quantity	4	1	5
Parts	⑦ Cord clamp	⑧ Screws for mounting ①	⑨ Screws for mounting main unit
Shape		 3.5 x 12 (Black)	 3.5 x 12 (Black)
Quantity	5	5	2

(2) Locally Procured Parts

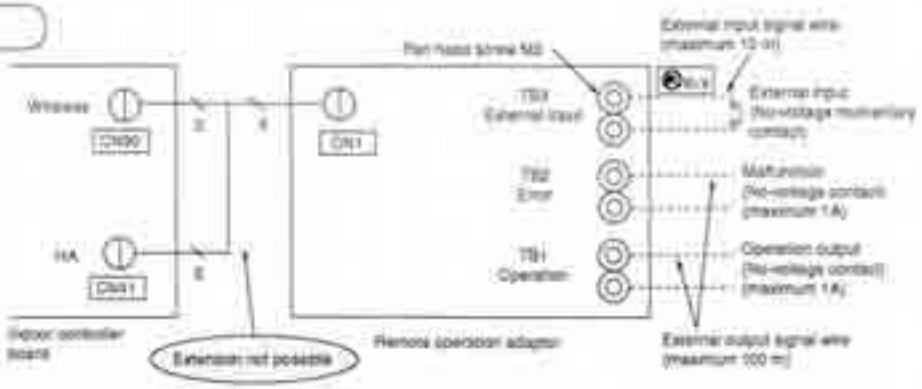
Note : Please keep LVD. LVD:Low Voltage Directive (EC Directive of Europe)
Apply some countermeasure for wiring and relay not to be touched from outside.
※ Wiring should be covered by the insulation tube. ※ Use relay with EU regulation.

Item	Part Name	Model & Specifications
External output function	External signal output wire	Use a vinyl cord with sheath or cable Electric wire type: CV, CVS or equivalent Electric wire size: 0.5 mm² to 1.25 mm² Single wire: ø0.65 mm to ø1.2 mm
	Display lamp, etc.	No-voltage contact AC 220 to 240 V (DC30V), 1A or less
External input function	External signal input wire	Use a vinyl cord with sheath or cable Electric wire type: CV, CVS or equivalent Electric wire size: 0.5 mm² To 1.25 mm² (Single wire: ø0.65 mm to ø1.2 mm)
	Switch	No-voltage momentary contact (Operation ⇔ Stop is switched by input of a pulse of 200 ms or more)

2 External Dimension Drawing



3 Wiring



⚠Caution

1) TB3 is a dedicated terminal for contact input. Do not apply voltage. Applying voltage will cause damage to the circuit board inside the for the indoor unit controller.
2) Always use the cable provided for connecting the unit to the indoor unit. Never make modifications to extend this cable. Extensions could cause the cable to be affected by external noise which could lead to mis-operation.
If an extension is needed, refer to specification chart in "6. Product Specifications" a follow it when extending the external signal wire.

«Connecting to the indoor unit»

① If external output functions are used — Insert the 3-electrode (3 core) side of the cable provided into CN90 on the controller circuit board for the indoor unit.

② If external input functions are used — Insert the 4-electrode (2 core)side of the cable provided into CN41 on the controller circuit board for the indoor unit.

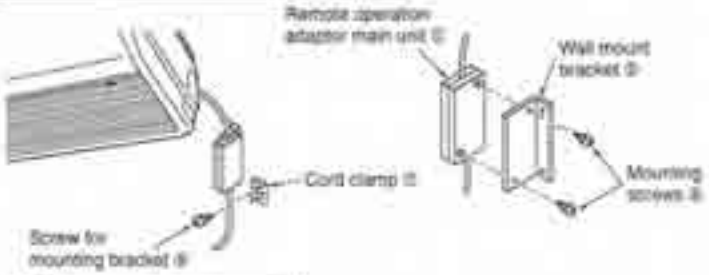
※ The connector can only be inserted in one direction. Be sure to check that the connector is in the proper direction before inserting. Forcing the connector will cause damage.

4 How to Install

There are three ways to mount the remote operation adaptor main unit: [A] Using mounting bracket, [B] Mounting directly, and [C] Using the cushion material.

(1) Installation Example (Suspended Type)

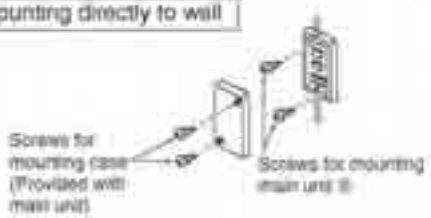
[A] Mounting to wall mounting bracket

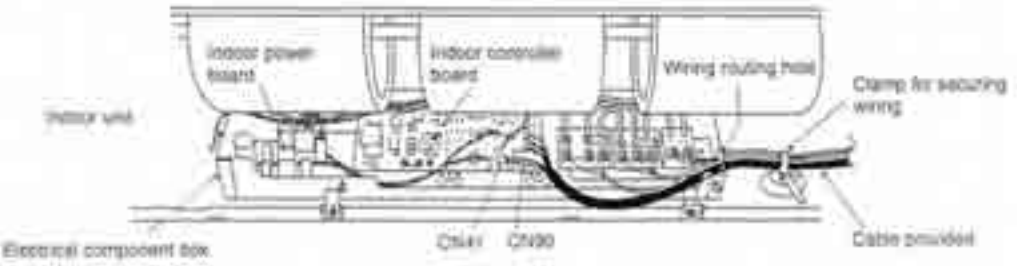


⚠Caution

1) When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2) If there is any loose remaining wire after installation, use a tie-wrap ⑥ to bundle it.

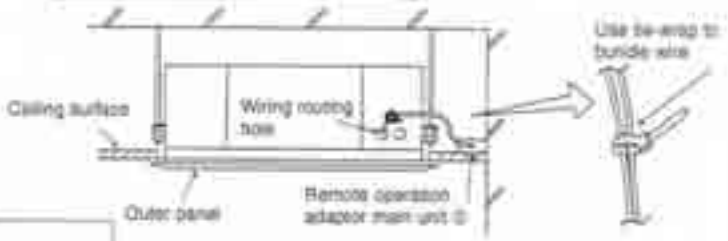
[B] Mounting directly to wall





(2) Installation Example 2 [Cassette Type]

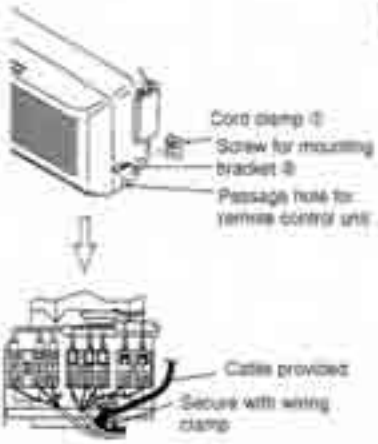
[A] If recess-mounted into ceiling



⚠Caution

1) When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2) If there is any loose remaining wire after installation, use a tie-wrap ⑧ to bundle it.

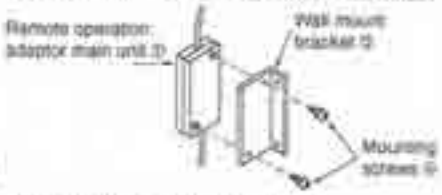
(3) Installation Example 3 [Wall-mounted Type]



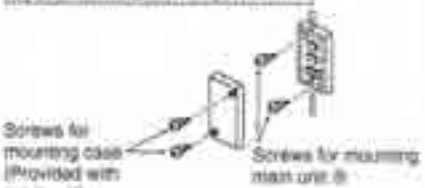
⚠Caution

1) When mounting the remote operation adaptor main unit, be sure to use the mounting hardware to mount it to a wall or beam so that an inspection port is available for servicing.
2) If there is any loose remaining wire after installation, use a tie-wrap ⑧ to bundle it.

[A] Mounting to wall mounting bracket



[B] Mounting directly to wall



[C] Mounting using cushion material

Photo

Descriptions

A-control Mr. SLIM models located in various places within a building can be connected to "M-NET" so that they can be monitored / controlled effectively and meticulously.

Applicable Models

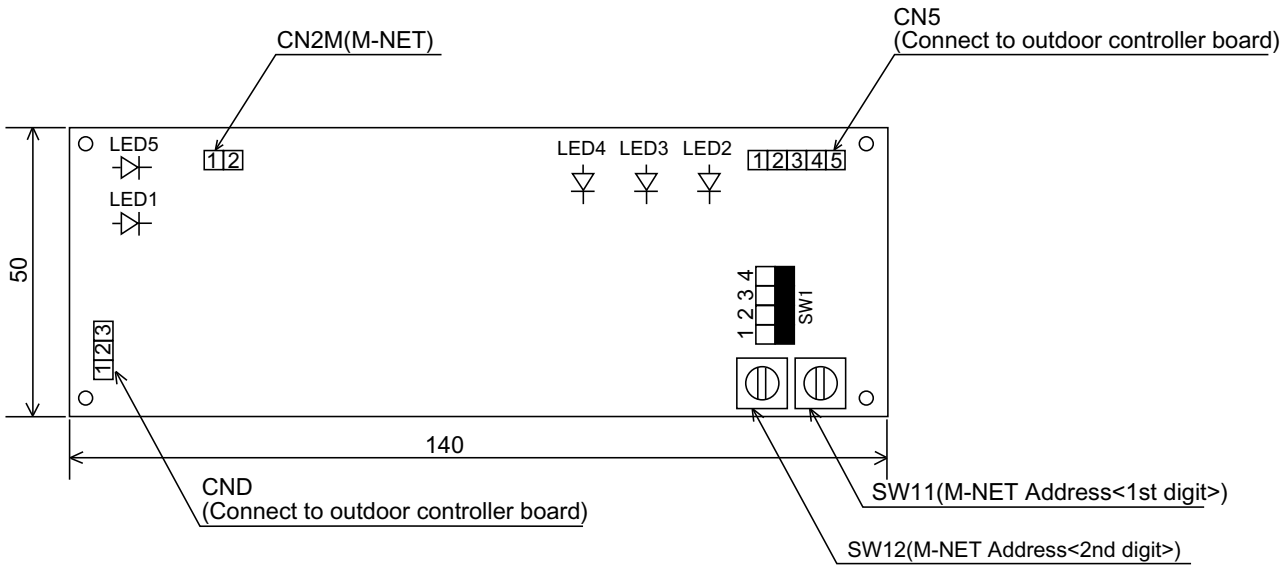
- All PU(H)-RP GA
- All PUHZ-RP outdoor Units (A-control)

Specifications

Power	Supplied from control board
Power consumption	0.6W (at 5V DC, 12V DC)
Operating conditions	Mounted inside the electrical utility box of outdoor unit. (Tempreture : -20 to 60℃ , humidity : 90% or less (no condensation))
Weight	0.3k

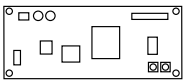
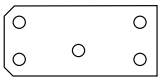
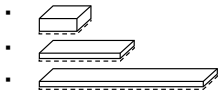
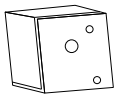
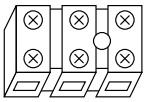
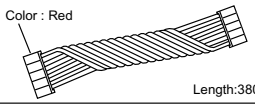
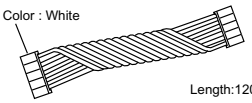
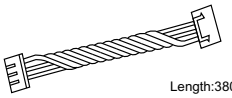
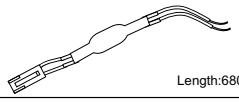
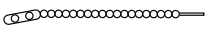
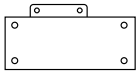
Dimensions

Unit : mm

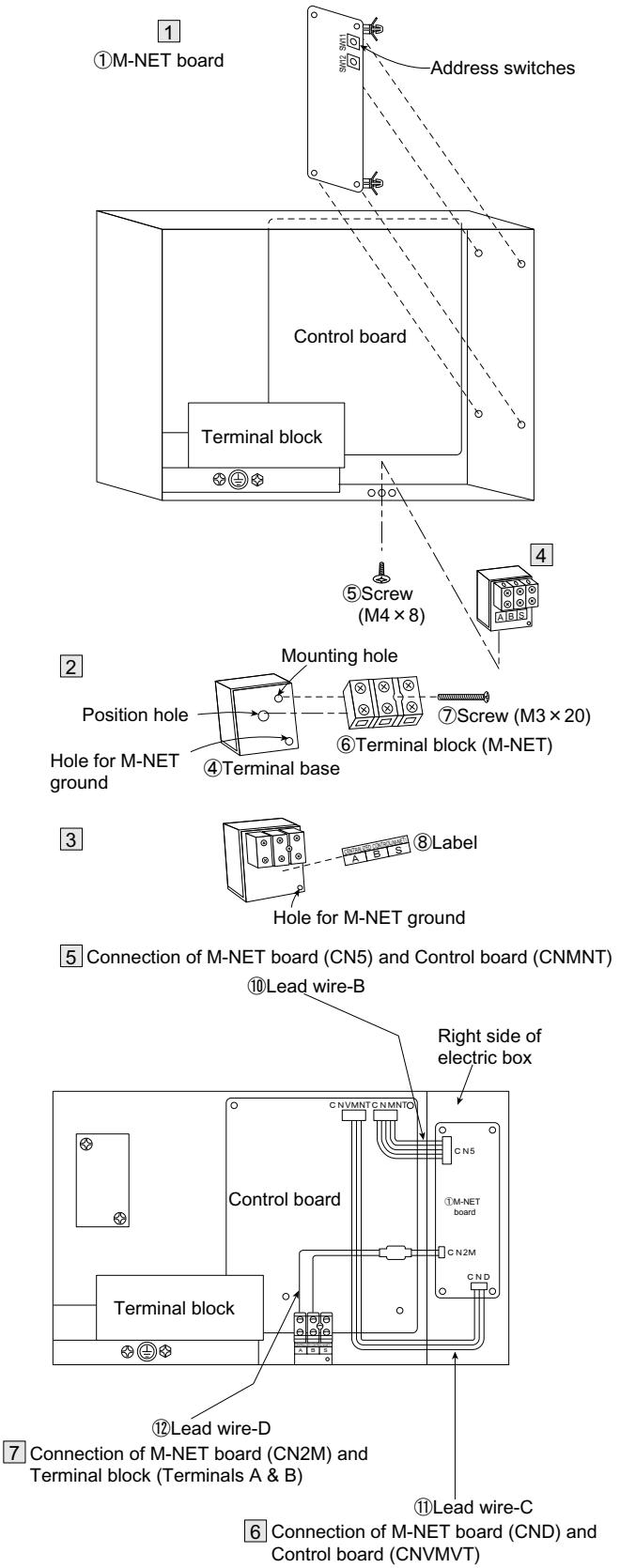


1. Parts List

Applicable models
A : PUHZ-RP1.6/2VHA(－A), RP35/50VHA(－A)
B : PUHZ-RP2.5～6VHA(－A), RP60～140VHA(－A)
C : PU(H)-P1～4VGA(A), P25～100VGAA,
PU(H)-P1.6～6YGA(A), P35～140YGAA
D : PUH-P8/10YE, P8/10MYA, P200/250MYA
E : PUHZ-RP4～6YHA, RP100～140YHA
F : PUHZ-RP8/10YHA(－A), RP200/250YHA(－A)

No.	Description	Figure	Q'ty	Applicable models						Note
				A	B	C	D	E	F	
①	M-NET board (with insulation sheets and supports)		1	○	○	○	○	○	○	
②	Plate (For mounting circuit board)		1	○						
③	Insulation sheets ▪, ▪, ▪		▪ 1	○						
			▪ 1	○						
			▪ 1	○	○					
④	Terminal base		1			○	○			
⑤	Screw (M4×8)		2	○ (1)		○ (1)	○ (1)	○ (2)		
⑥	Terminal block (M-NET)		1	○	○	○	○	○	○	
⑦	Terminal screw (M3x20)		1	○	○	○	○	○	○	
⑧	Label	CENTRALIZED CONTROL(M-NET) A B S BG79H744H02	1	○	○	○	○	○	○	
⑨	Lead wire-A (5 wires)		1	○	○			○	○	Wire Marking : R410A Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
⑩	Lead wire-B (5 wires)		1			○	○			Wire Marking : R407C Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.
⑪	Lead wire-C (3 wires)		1	○	○	○	○	○	○	
⑫	Lead wire-D (2 wires)		1	○	○	○	○	○	○	
⑬	Ground wire and screw (M4×8)		1each	○	○	○	○	○	○	
⑭	Pull tight		2	○	○	○	○	○	○	
⑮	Plate 2 (For mounting circuit board)		1					○		

2. Installation procedures【PU(H)-P1~4VGA(A), P25~100VGAA, PU(H)-P1.6~6YGA(A), P35~140YGAA】



1 Install the M-NET board ① so that the (SW11, SW12) come front.
※Put it securely until it sounds click.

2 Install the Terminal block (M-NET) ⑥ on the Terminal base ④.
※The Terminal base ④ has round boss for positioning.
Match the round boss to the holes of the Terminal base ④.

3 Put the Label ⑧ on the Terminal base ④.
※Not to close the Hole for M-NETground.

4 Install the Terminal base ④ on the bottom inside of the electric box.

5 Connect the lead wire-B ⑩ to both the connector CN5 on the M-NET board ① and the connector CNMNT on the control board.
※Caution
Wire Marking:R407C, Connector color:White
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

6 Connect the lead wire-C ⑪ to both the connector CND on the M-NET board ① and the connector CNVMNT on the control board.

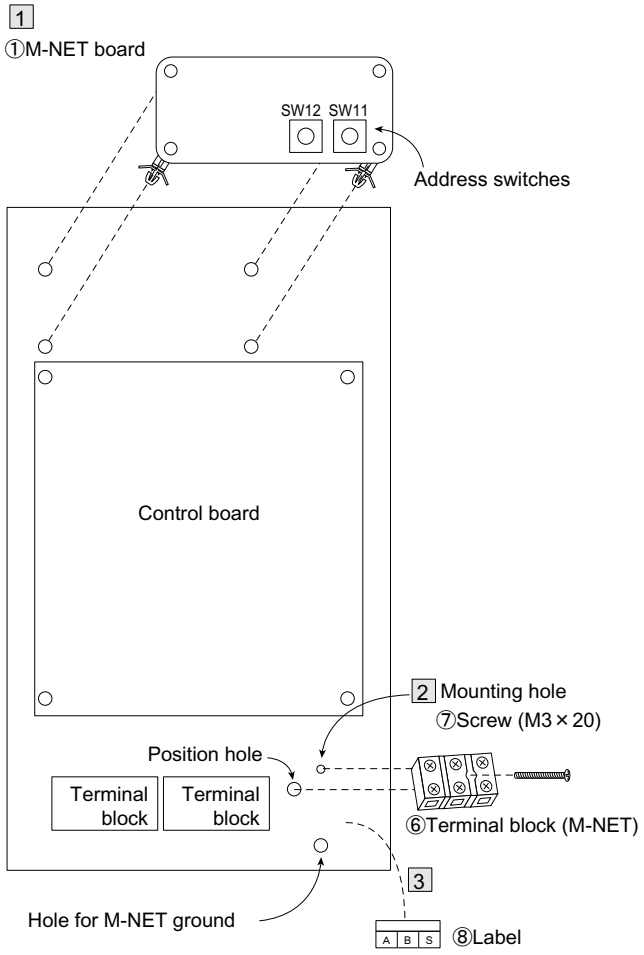
7 Connect the lead wire-D ⑫ to both the connector CN2M on the M-NET board ① and the terminals A & B on the terminal block (M-NET) ⑥.

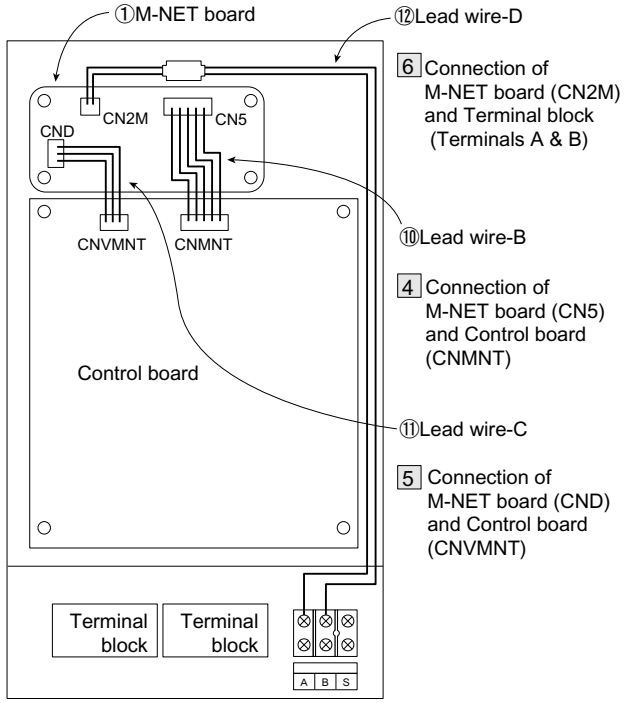
8 The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.
Wiring length is adjusted according to apparatus.

It progresses to the page
“3.Wiring method for M-NET”

Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.
Note2:Take great care that no lead wire is caught on anything when instaling panels.

2. Installation procedures【PUH-P8/10YE, P8/10MYA, P200/250MYA】





1 Install the M-NET board ① so that the (SW11, SW12) come front.
※Put it securely until it sounds click.

2 Install the Terminal block (M-NET) ⑥ on the base of the electric box.

3 Put the Label ⑧ on the base of the electric box.

4 Connect the lead wire-B ⑩ to both the connector CN5 on the M-NET board ① and the connector CNMNT on the control board.
※Caution
Wire Marking:R407C, Connector color:White
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

5 Connect the lead wire-C ⑪ to both the connector CND on the M-NET board ① and the connector CNVMNT on the control board.

6 Connect the lead wire-D ⑫ to both the connector CN2M on the M-NET board ① and the terminals A & B on the terminal block (M-NET) ⑥.

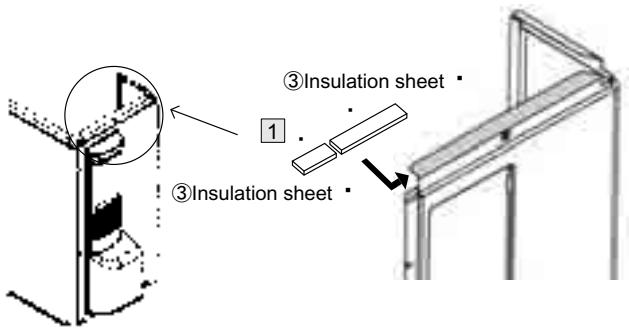
7 The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.
Wiring length is adjusted according to apparatus.

It progresses to the page
“3.Wiring method for M-NET”

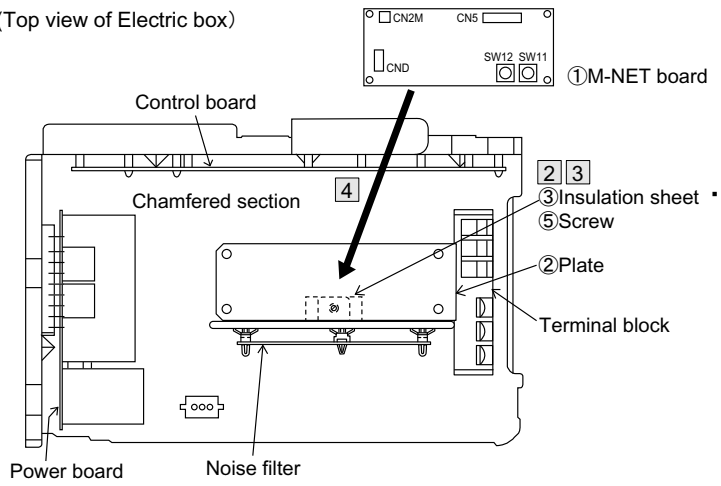
Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.
Note2:Take great care that no lead wire is caught on anything when instaling panels.

2. Installation procedures【PUHZ-RP1.6/2VHA(－A), RP35/50VHA(－A)】

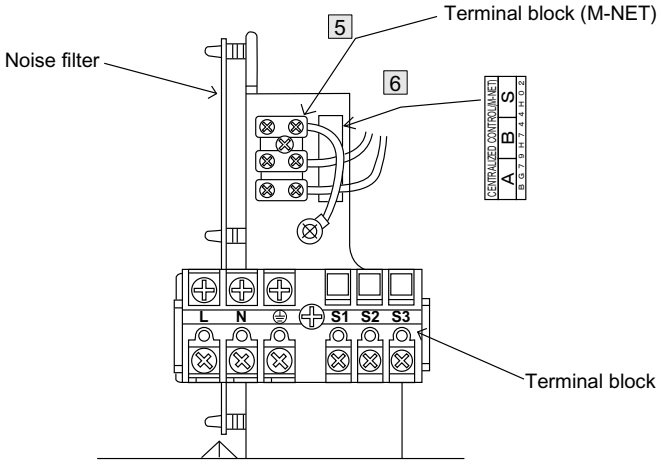
●To protect the wires connected to M-NET board from the edges of sheet-metal component, paste the insulation on the edge surface of panel sheet-metal before proceeding with the following work.



(Top view of Electric box)



(When viewed from the side of Electric box)



1 Affix insulation sheets ・ and ・ ③ to the backside of the flange surface on the top of the side panel.

2 Starting from the bottom, mount Insulation Sheet ・ ③ to the "L" bend section on the back of the noise filter mounting panel.

3 Position the chamfered section of Plate ② so that it faces the fan side (the left side of the drawing) and mount it using Screw ⑤.

4 As shown in the illustration, position M-NET board ① (insulation sheet, with support) on the four corners of Plate ② so that the DIP switches (SW11, SW12) are on the terminal block side and then mount.
※Push it firmly until you hear it "click"

5 Use terminal screw ⑦ to secure terminal block ⑥
※Terminal block ⑥ has a round boss for positioning:Fit the round boss into the positioning hole in steel-plate.

6 Paste label ⑧

7 Use lead wire-A⑨ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.
※Caution
Wire Marking:R410A, Connector color:Red
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

8 Use lead wire-C ⑪ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

9 Use lead wire-D ⑫ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑥ Polarity is not a concern.
※Connect the wire firmly making sure that the screws on terminal block are not loose.

10 The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.
Wiring length is adjusted according to apparatus.

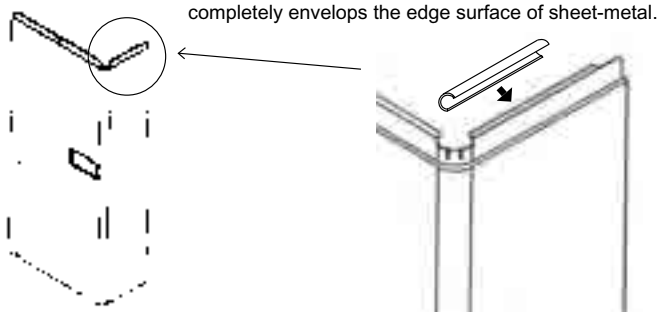
It progresses to the page "3.Wiring method for M-NET"

Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.
Note2:Take great care that no lead wire is caught on anything when instaling panels.

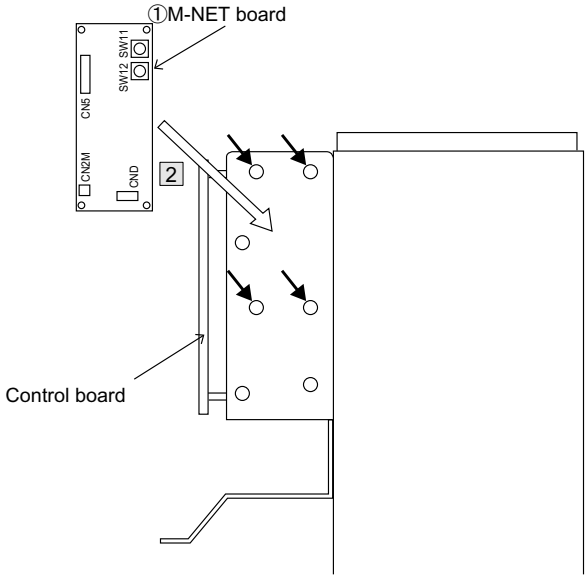
2. Installation procedures【PUHZ-RP2.5～6VHA(－A), RP60～140VHA(－A)】

●To protect the wires connected to M-NET board from the edges of sheet-metal component, paste the insulation on the edge surface of panel sheet-metal before proceeding with the following work.

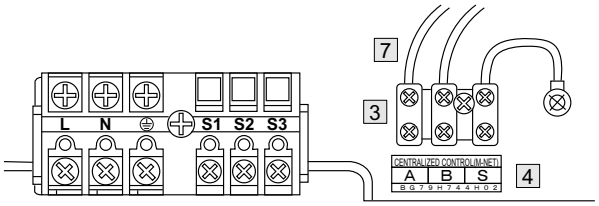
1 Paste insulation sheet ･ ③ on sheet-metal so that it completely envelops the edge surface of sheet-metal.



(When viewed from the side of Electric box)



(When viewed from the side of Electric parts box)



1 Pate insulation sheet ③ on sheet-metal so that it completely envelops the edge surface of sheet-metal.

2 Install M-NET board ① (with insulation sheets and supports) on the side of Electric box so that the rotary switch faces up (at the four points indicated by arrows).
※Push it firmly until you hear it ″click″.

3 Use terminal screw ⑦ to secure terminal block⑥
※Terminal block⑥ has a round boss for positioning:Fit the round boss into the positioning hole in steel-plate.

4 Paste label ⑧ under terminal block ⑥

5 Use lead wire-A ⑨ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.
※Caution
Wire Marking:R410A, Connector color:Red
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

6 Use lead wire-C ⑪ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

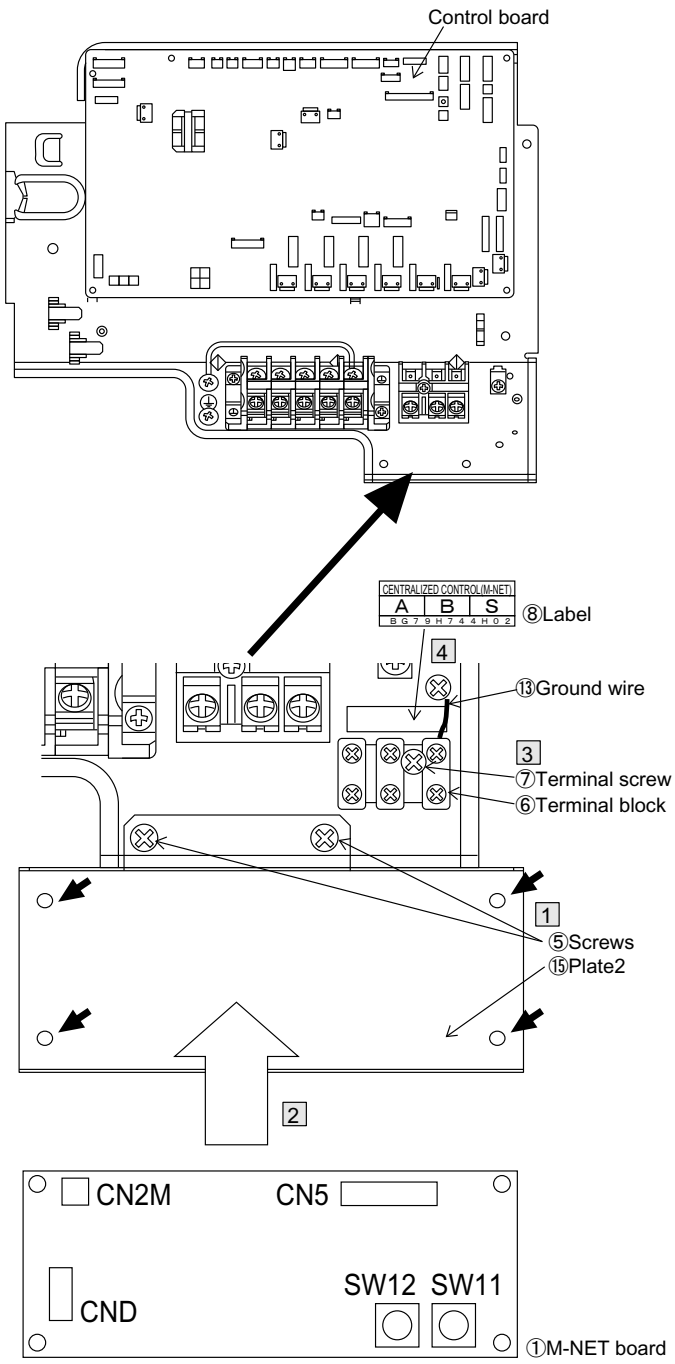
7 Use lead wire-D ⑫ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑥ Polarity is not a concern.
※Connect the wire firmly making sure that the screws on terminal block are not loose.

8 The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.
Wiring length is adjusted according to apparatus.

It progresses to the page
“3.Wiring method for M-NET”

Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.
Note2:Take great care that no lead wire is caught on anything when instaling panels.

2. Installation procedures【PUHZ-RP4～6YHA, PUHZ-RP100～140YHA】



1 Attach the Plate 2 ⑮, using two screws⑤.

2 Install M-NET board ① (with insulation sheets and supports) on the Plate2 ⑮ .
※Push it firmly until you hear it ″click″.

3 Use terminal screw ⑦ to secure terminal block⑥
※Terminal block⑥ has a round boss for positioning:Fit the round boss into the positioning hole in steel-plate.

4 Paste label ⑧

5 Use lead wire-A ⑨ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.
※Caution
Wire Marking:R410A, Connector color:Red
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

6 Use lead wire-C ⑪ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

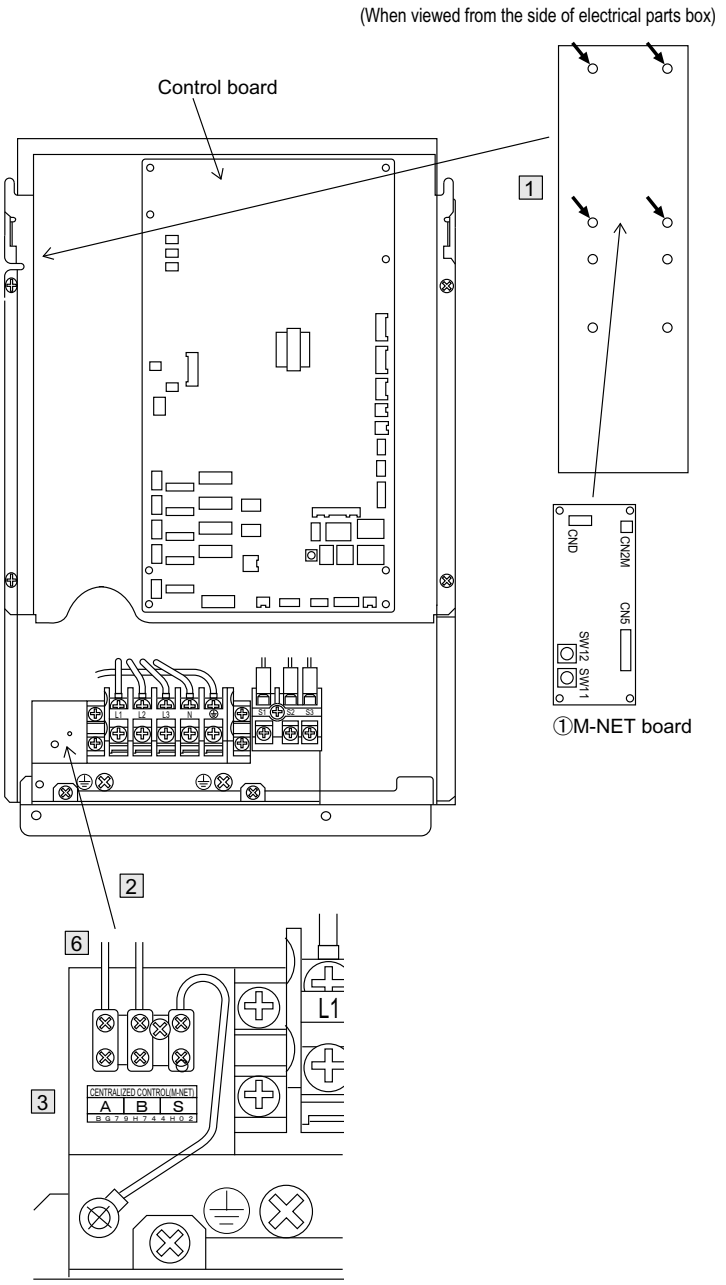
7 Use lead wire-D ⑫ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑥ Polarity is not a concern.
※Connect the wire firmly making sure that the screws on terminal block are not loose.

8 The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.
Wiring length is adjusted according to apparatus.

It progresses to the page
“3.Wiring method for M-NET”

Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.
Note2:Take great care that no lead wire is caught on anything when instaling panels.

2. Installation procedures【PUHZ-RP8/10YHA(－A), RP200/250YHA】



1 Install M-NET board ① (with insulation sheets and supports) on the side of electric box . At the four point indicated by arrows.
※Push it firmly until you hear it ″click″.

2 Use terminal screw ⑦ to secure terminal block⑥
※Terminal block⑥ has a round boss for positioning:Fit the round boss into the positioning hole in steel-plate.

3 Paste label ⑧ under terminal block ⑥

4 Use lead wire-A ⑨ to connect CN5 of M-NET board ① connection and CNMNT of outdoor control board.
※Caution
Wire Marking:R410A, Connector color:Red
Always make sure that the markings and the applicable model match. If used incorrectly, parts could be damaged.

5 Use lead wire-C ⑪ to connect CND of M-NET board ① connection and CNVMNT of outdoor control board.

6 Use lead wire-D ⑫ to connect CN2M of M-NET board ① connection and terminals A and B of terminal block ⑥ Polarity is not a concern.
※Connect the wire firmly making sure that the screws on terminal block are not loose.

7 The lead wires should be tied together with the other lead wires with the pull tight ⑭ not to loose.
Wiring length is adjusted according to apparatus.

It progresses to the page
“3.Wiring method for M-NET”

Note1:Use ground wire and screw ⑬ as required to connect the shield of M-NET transmission line to the unit.
Note2:Take great care that no lead wire is caught on anything when instaling panels.

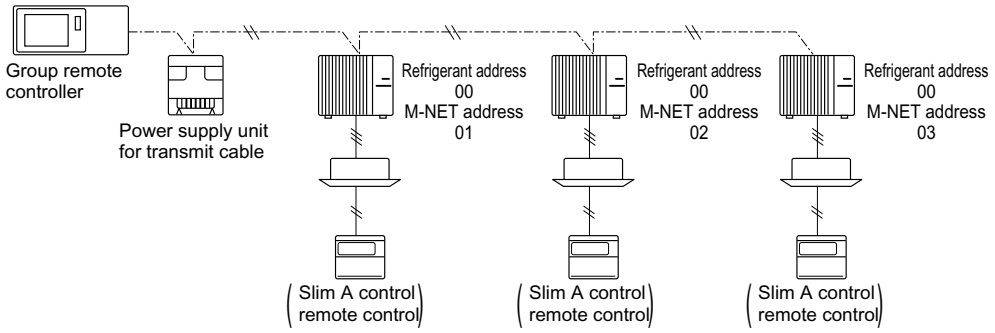
3. Wiring method for M-NET

(1) Attention

① Outside of the unit, the wires for transmission (called for transmit wires later) should keep away (5 cm or more) from power cable not to receive electric noise. (Never put the transmit wires and power cable in the same cable pipe.)

② Never supply voltage 220V-240V to the terminals (TB7) for transmission. If the voltage is supplied, it can break the electronic parts on the A-M CONVERTER board.

③ Use the shielded cable (CVVS, CPEVS) of 1.25mm square thickness with 2 wires for the transmission cable. Never use transmit wires of different system with a cable which contains multi wires. The communication of transmit signals will not work properly and it can cause wrong operation.



Between the outdoor units, it is OK that only M-NET wiring (2 wires, no polarity) is done.

(2) M-NET address setting

Make M-NET setting and refrigerant address setting on only outdoor unit.
There is no address settings for outdoor unit and remote controller like City Multi system.

The M-NET address setting for taking into centralized control system should be done only to the outdoor unit. The address set number should be 1-50 same as for City Multi indoor unit and make set in order of number for the same group.

	A control slim	City Multi (M-NET)
Indoor unit	————	1～50
Outdoor unit	1～50	51～100
Remote controller	————	101～150
System controller	201～250	
Group remote controller	201～250	

The setting should be done by rotary switches SW11 for one figure and SW12 for double figures on A-M CONVERTER of the outdoor unit. (Factory settings are all zero.)

〈 Example 〉

M-NET address No.		1	2		50
Switch setting	SW11 (1st digit)			～	
	SW12 (2nd digit)				

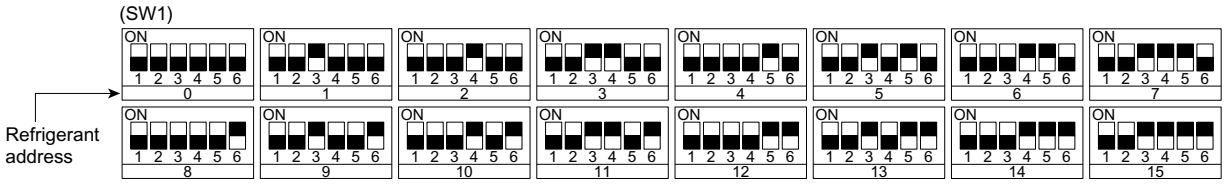
(3) Refrigerant address setting

In case that the A control Slim is set for group between different refrigerant (when multiple refrigerant system is set in one group), it is necessary to make refrigerant address setting besides the wiring for remote controller (TB5) between the indoor untis.

In case that the group setting is not done, be sure to leave the refrigerant address set for 00.

The refrigerant address is set by dip switch SW1 (3-6) on the outdoor controller of the outdoor unit.

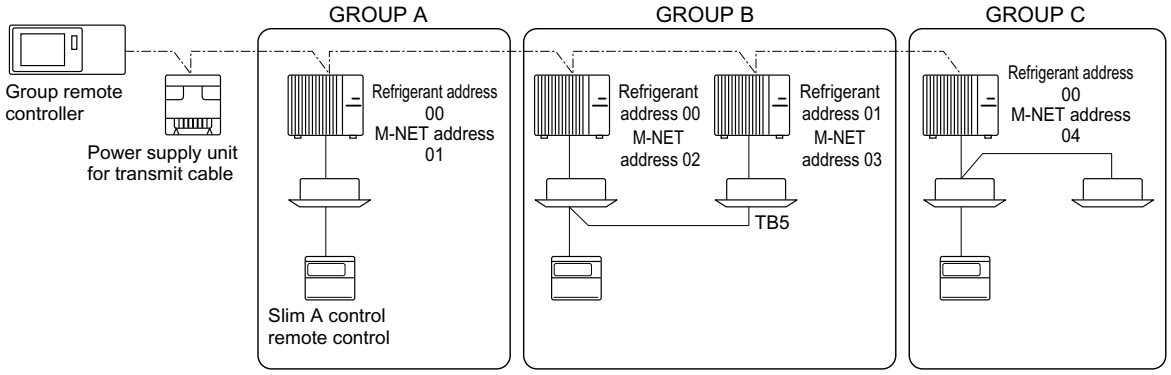
(Factory settings are all OFF ・・・・・Refrigerant address 00).



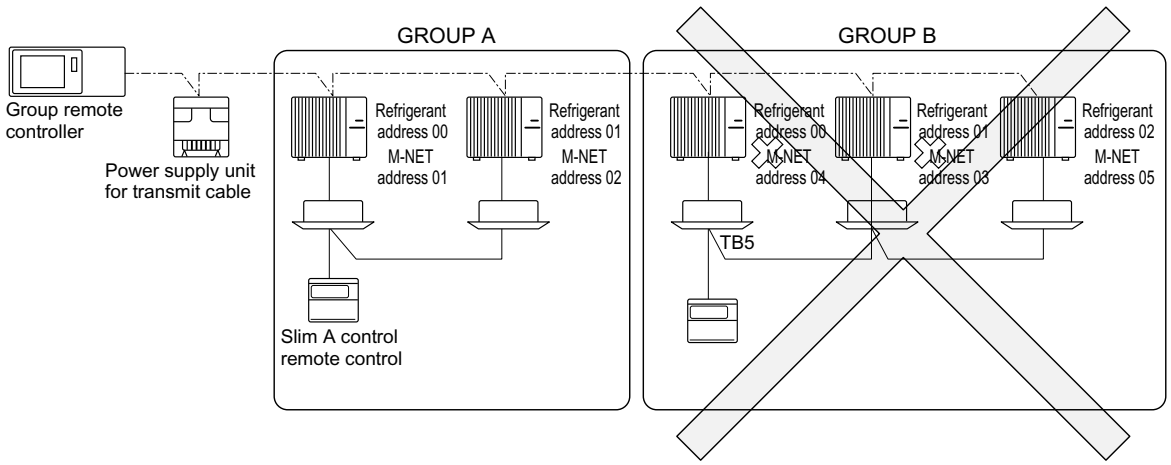
(4) Limitation for address settings

In case of group operation, the M-NET address settings and the refrigerant address settings should be done with the procedure above.

However, make the minimum M-NET address settings in the group for the outdoor unit which has the refrigerant address 00.



※It does not matter if the refrigerant address settings are same with the different group.



※It is not good with the above setting in the group B because the outdoor unit which has the refrigerant address 00 does not have the minimum M-NET address 3 in the group. Make the outdoor unit of the refrigerant address set with the minimum address in the group like the group A.

Attention for A control Slim M-NET connection

Pay attention to the next points for wiring of shielded wires.

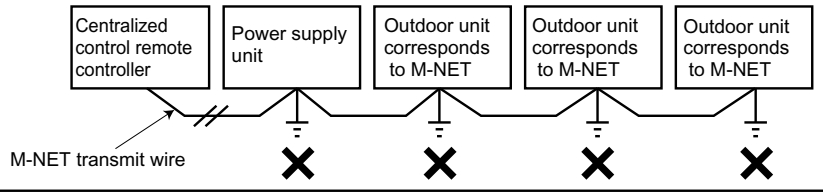
⚠CAUTION

The shielded wires of M-NET transmission should be connected with the ground wire at any only one place of the unit to be connected.

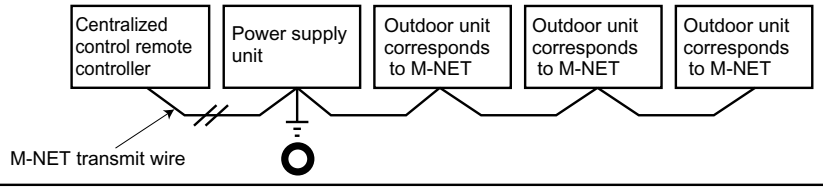
- It can cause the transmission error due to noise.

  Outdoor unit digital LED display reads "Ed" error.
  Centralized control remote controller reads "0403" error.

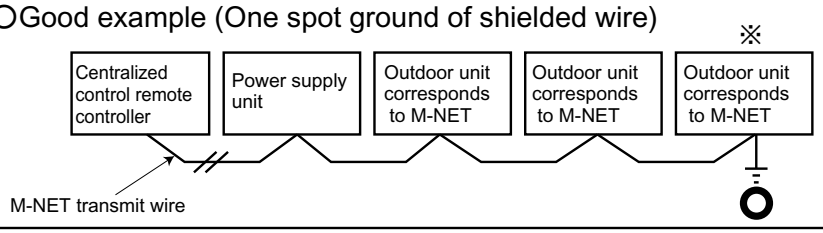
×Bad example (Multiple ground of shielded wire)



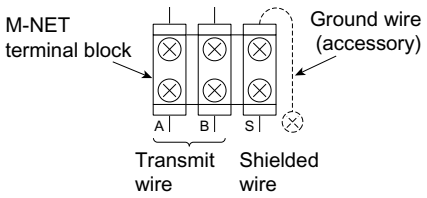
○Good example (One spot ground of shielded wire)



○Good example (One spot ground of shielded wire)



※In case that the outdoor unit is grounded, connect the ground wire supplied as accessory to the S terminal (secondary) of M-NET terminal block and M-NET Ground terminal inside of electric box with using screws supplied.



Photo

Descriptions

This item is used to display operation and self-diagnosis state.

Applicable Models

- All PU(H)-RP GA
- All PUHZ-RP outdoor Units (A-control)

Specifications

Power	5V DC (supplied from outdoor unit control
Temperature	-20 to 60℃ , Humidity: 90%RH or less (no condensation)
External dimensions	69 (W) x 91 (H) x 27 (D) (mm), excluding lead wires
Weight	0.05kg

How to Use / How to Install

● Notes on Use
- Before installing / removing a control / service tool, nake sure that the main power to this unit is turned OFF.
- The connector for control / service tool has a lock. Connection / removal of the connector must be dine with the locking lever pressed.

● How to Use
1. Connect the control / servide tool connector to the [CNM] connector on the outdoor unit control board.
2. Operating the control / service tool's DIP switch "SW2" causes "LED1" to display the operation state and inspection code description using 2-digit value and symbols. "SW2" setting varies with the unit to be connected. For details of the display content, refer to the appropriate service handbook.
3. After the control / service tool has been used, remove it from the outdoor unit control board.

L-shape Connection Pipe

PAC-SC84PI-E

Photo

Descriptions

This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

Applicable Models

- PKA-RP60FAL
- PKA-RP71FAL

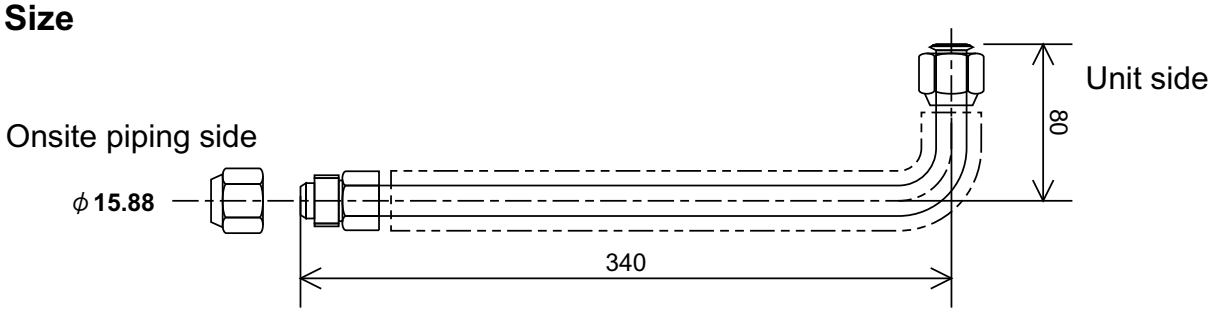
Specifications

Pipe diameter (mm)	Φ15.88
Number of pipes	1 (for gas)
Pipe material	Phosphate deocidized copper C1220T-OL (JIS H3300)
Heat insulator	EPT sponge rubber

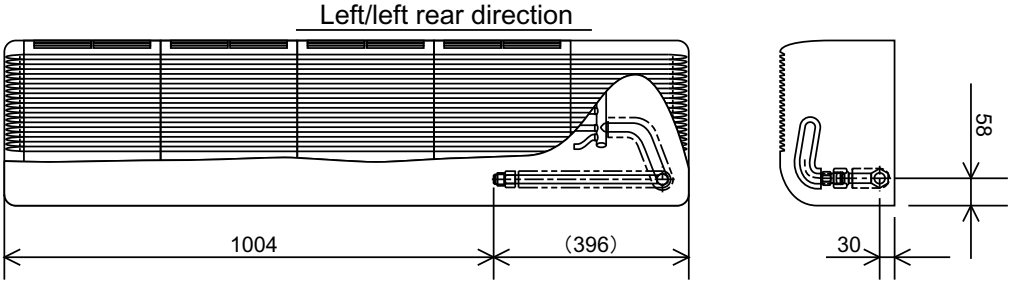
Dimensions

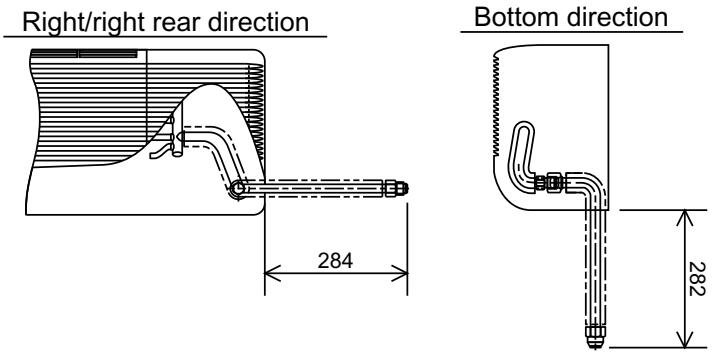
Unit : mm

◆ Size



◆ Refrigerant pipe (gas pipe) position

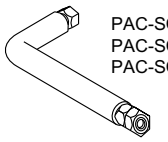




How to Use / How to Install

● This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

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

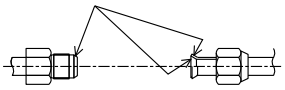
① Connection pipe (gas pipe)	② Pipe cover	③ Band
 PAC-SC84PI-E··· ϕ 15.88 PAC-SC86PI-E··· ϕ 15.88 PAC-SC85PI-E··· ϕ 19.05 × 1	 × 1	 × 2

2. Installation method

◆ **Connection side to onsite pipe**

1. Remove flare nut and cap of connection pipe ①.
2. Apply fare processing to onsite pipe and apply refrigerant oil (locally supplied) to flare sheet surface.
3. Connect flare connection part of connection pipe to onsite pipe. ※ Be sure to use double spanner to tighten flare nut.
4. Wrap pipe cover (2) around flare connection part so that it is not exposed.
5. Tighten both ends (15～20mm) of pipe cover using provided band ③.

Apply refrigerant oil to entire circumference of flare sheet surface.

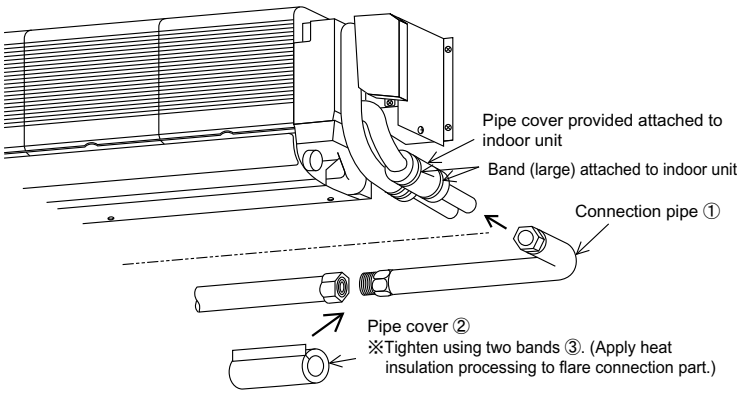


◆ **Connection to the indoor unit (refer to installation manual of indoor unit.)**

1. Remove flare nut and cap of indoor unit.
2. Apply refrigerant oil (locally supplied) to flare sheet surface.
3. Quickly connection pipe to flare connection part of indoor unit. ※ Be sure to use double spanner to tighten flare nut.
4. Wrap pipe cover around flare connection part of indoor unit so that it is not exposed.
5. Tighten both ends (15～20mm) of pipe cover using provided band (large).

When pipe is housed in piping space of the unit (drawn out to the left/left rear):

※ To prevent drip of dewdrops, wrap felt tape around the pipe in the area where it is housed inside the piping space of the unit.
※ Overlap of felt tape must be within 1/2 of tape width.
※ Secure the end of wrapped tape using bandage clip, etc.



L-shape Connection Pipe

PAC-SC85PI-E

Photo

Descriptions

This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

Applicable Models

■ PKA-RP100FAL-

for R407C Fixed-Speed use

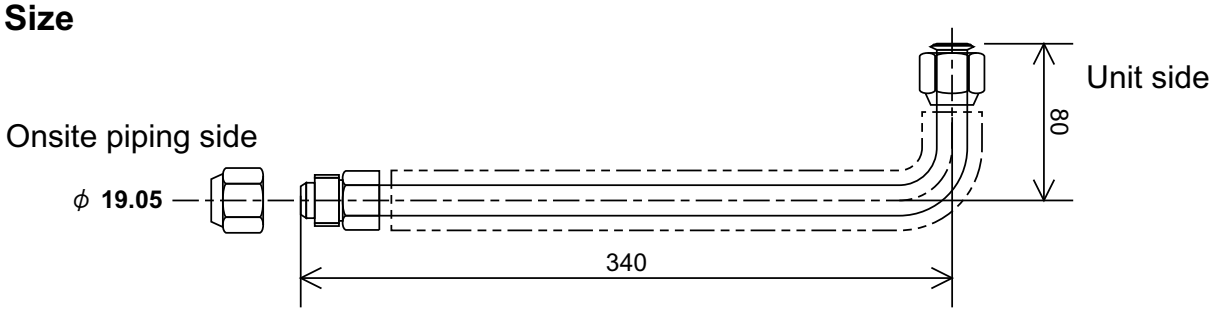
Specifications

Pipe diameter (mm)	Φ19.05
Number of pipes	1 (for gas)
Pipe material	Phosphate deocidized copper C1220T-OL (JIS H3300)
Heat insulator	EPT sponge rubber

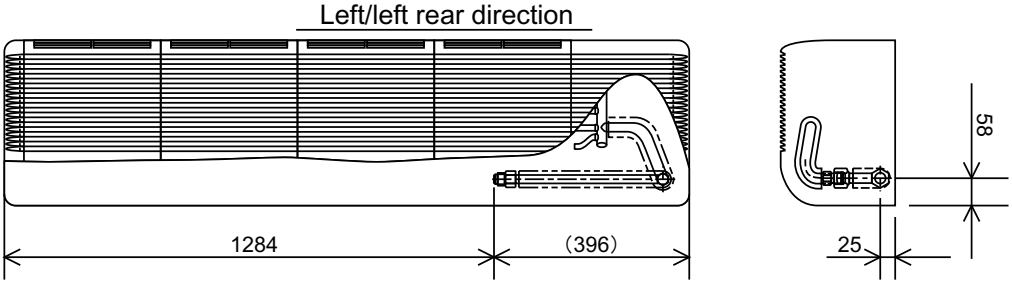
Dimensions

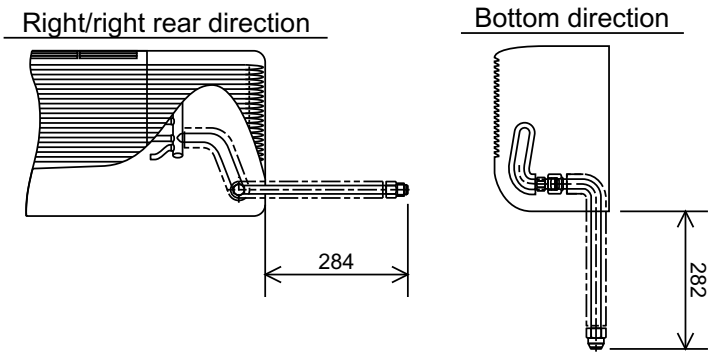
Unit : mm

◆ Size



◆ Refrigerant pipe (gas pipe) position

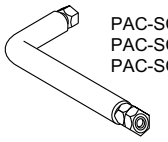




How to Use / How to Install

● This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

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

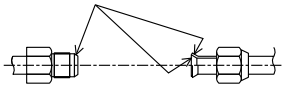
① Connection pipe (gas pipe)	② Pipe cover	③ Band
 PAC-SC84PI-E··· ϕ 15.88 PAC-SC86PI-E··· ϕ 15.88 PAC-SC85PI-E··· ϕ 19.05 × 1	 × 1	 × 2

2. Installation method

◆ **Connection side to onsite pipe**

1. Remove flare nut and cap of connection pipe ①.
2. Apply fare processing to onsite pipe and apply refrigerant oil (locally supplied) to flare sheet surface.
3. Connect flare connection part of connection pipe to onsite pipe. ※ Be sure to use double spanner to tighten flare nut.
4. Wrap pipe cover (2) around flare connection part so that it is not exposed.
5. Tighten both ends (15～20mm) of pipe cover using provided band ③.

Apply refrigerant oil to entire circumference of flare sheet surface.

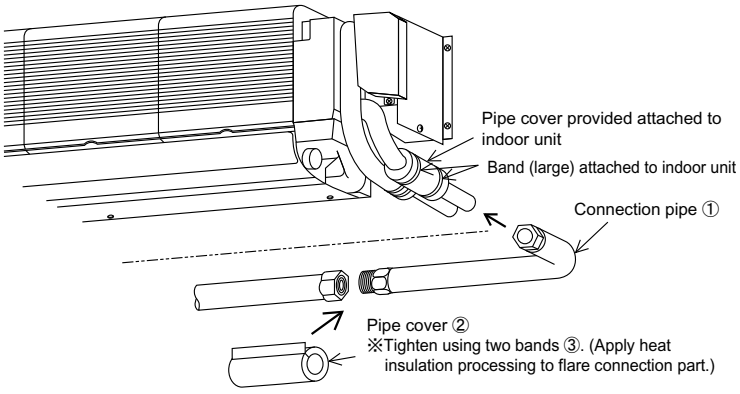


◆ **Connection to the indoor unit (refer to installation manual of indoor unit.)**

1. Remove flare nut and cap of indoor unit.
2. Apply refrigerant oil (locally supplied) to flare sheet surface.
3. Quickly connection pipe to flare connection part of indoor unit. ※ Be sure to use double spanner to tighten flare nut.
4. Wrap pipe cover around flare connection part of indoor unit so that it is not exposed.
5. Tighten both ends (15～20mm) of pipe cover using provided band (large).

When pipe is housed in piping space of the unit (drawn out to the left/left rear):

※ To prevent drip of dewdrops, wrap felt tape around the pipe in the area where it is housed inside the piping space of the unit.
※ Overlap of felt tape must be within 1/2 of tape width.
※ Secure the end of wrapped tape using bandage clip, etc.



L-shape Connection Pipe

PAC-SC86PI-E

Photo

Descriptions

This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

Applicable Models

■ PKA-RP100FAL

for R410A Inverter use

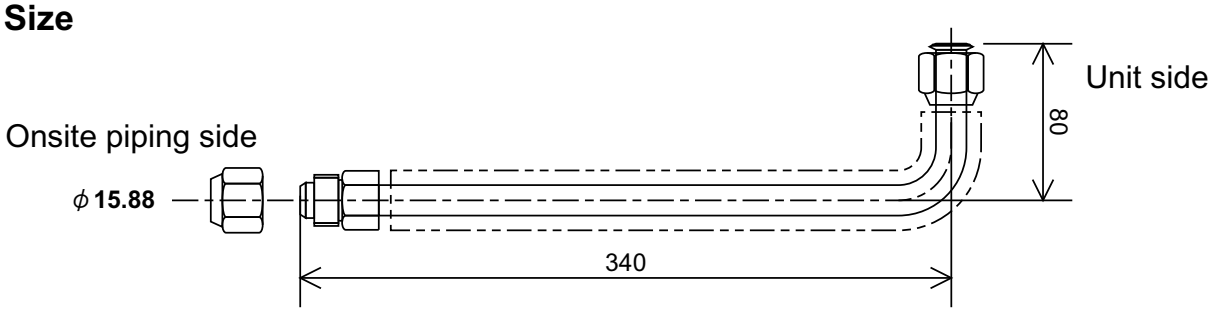
Specifications

Pipe diameter (mm)	Φ15.88
Number of pipes	1 (for gas)
Pipe material	Phosphate deocidized copper C1220T-OL (JIS H3300)
Heat insulator	EPT sponge rubber

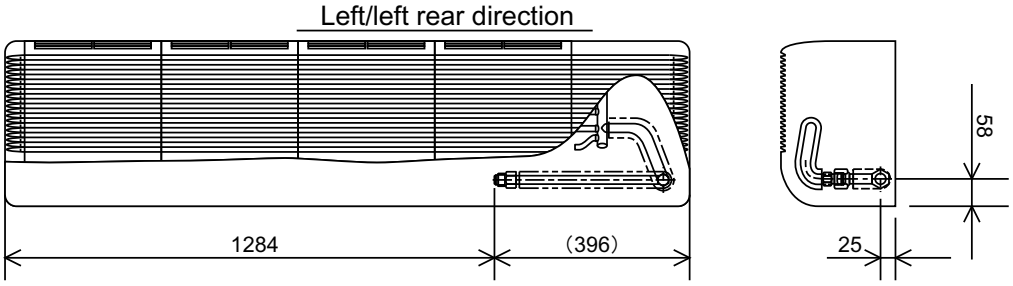
Dimensions

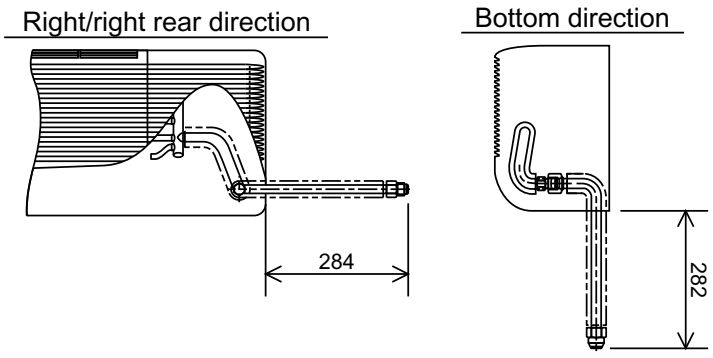
Unit : mm

◆ Size



◆ Refrigerant pipe (gas pipe) position

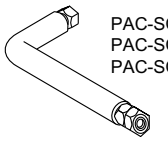
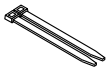




How to Use / How to Install

● This connection pipe is used when refrigerant pipe (gas pipe) is to be drawn out to the left, the left rear, the right, or the right rear on the wall type indoor unit.

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

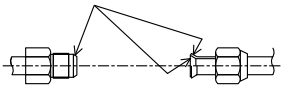
① Connection pipe (gas pipe)	② Pipe cover	③ Band
 PAC-SC84PI-E··· ϕ 15.88 PAC-SC86PI-E··· ϕ 15.88 PAC-SC85PI-E··· ϕ 19.05 × 1	 × 1	 × 2

2. Installation method

◆ **Connection side to onsite pipe**

1. Remove flare nut and cap of connection pipe ①.
2. Apply fare processing to onsite pipe and apply refrigerant oil (locally supplied) to flare sheet surface.
3. Connect flare connection part of connection pipe to onsite pipe. ※ Be sure to use double spanner to tighten flare nut.
4. Wrap pipe cover (2) around flare connection part so that it is not exposed.
5. Tighten both ends (15～20mm) of pipe cover using provided band ③.

Apply refrigerant oil to entire circumference of flare sheet surface.

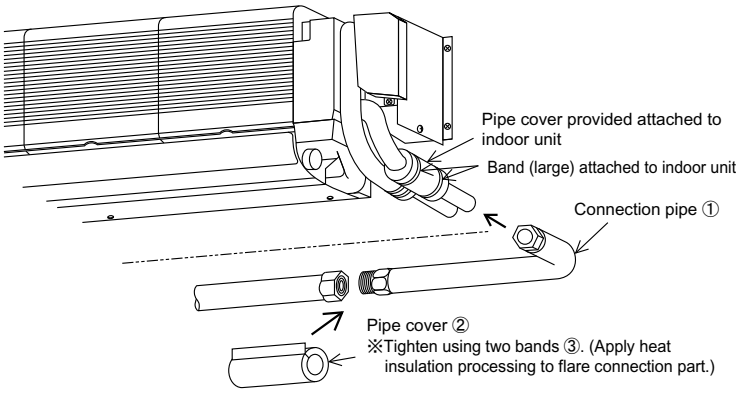


◆ **Connection to the indoor unit (refer to installation manual of indoor unit.)**

1. Remove flare nut and cap of indoor unit.
2. Apply refrigerant oil (locally supplied) to flare sheet surface.
3. Quickly connection pipe to flare connection part of indoor unit. ※ Be sure to use double spanner to tighten flare nut.
4. Wrap pipe cover around flare connection part of indoor unit so that it is not exposed.
5. Tighten both ends (15～20mm) of pipe cover using provided band (large).

When pipe is housed in piping space of the unit (drawn out to the left/left rear):

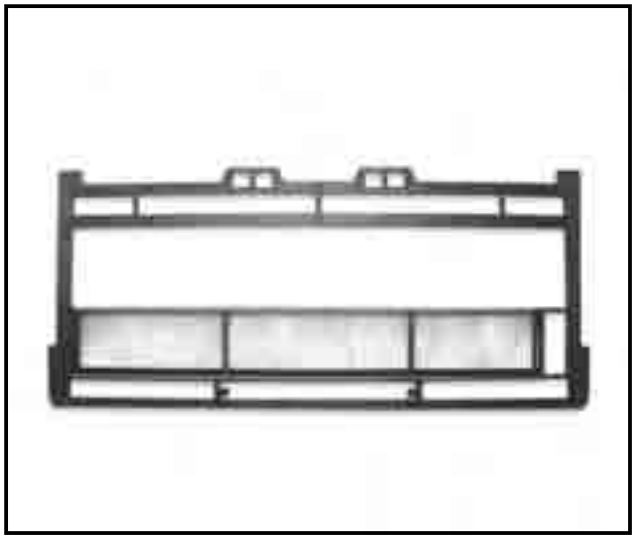
※ To prevent drip of dewdrops, wrap felt tape around the pipe in the area where it is housed inside the piping space of the unit.
※ Overlap of felt tape must be within 1/2 of tape width.
※ Secure the end of wrapped tape using bandage clip, etc.



Air Cleaning Filter

MAC-1200FT-E

Photo



Descriptions

TO BE CONFIRMED

Applicable Models

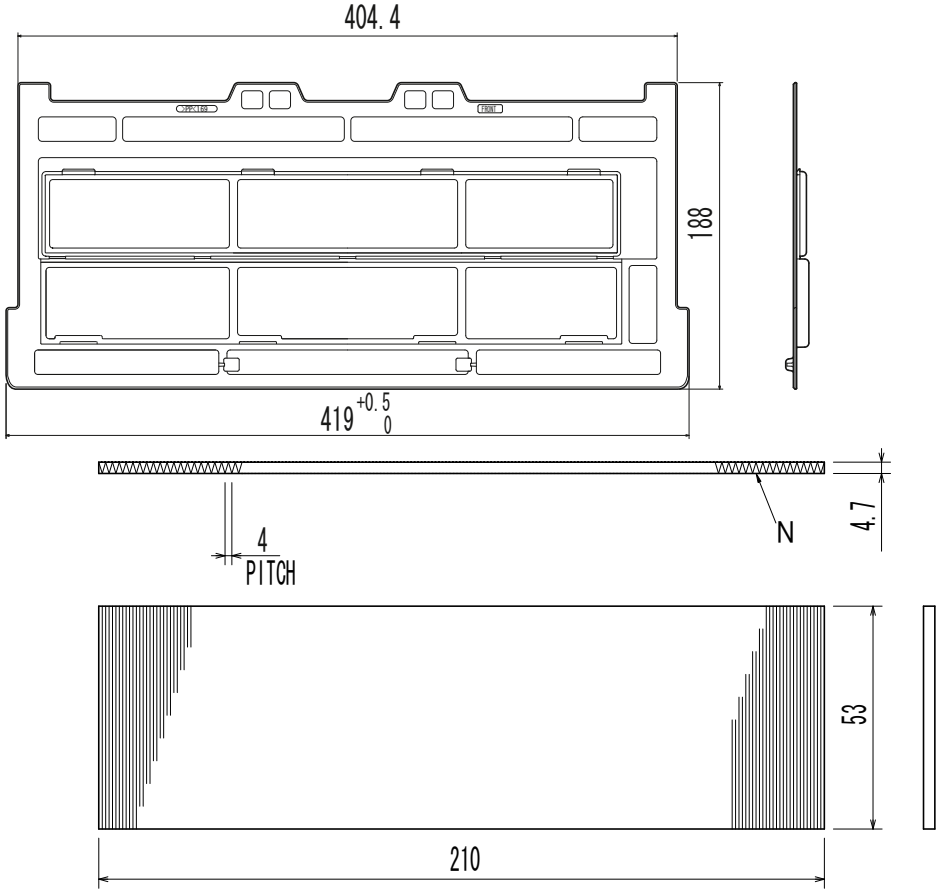
- MCF-GA35VB
- MCF-GA50VB
- MCF-GA60VB
- MCFH-GA35VB
- MCFH-GA50VB
- MCFH-GA60VB
- MCFZ-A12WV
- MCFZ-A18WV
- MCFZ-A24WV

Specifications

TO BE CONFIRMED

Dimensions

Unit : mm



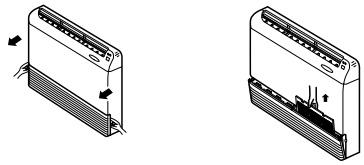
How to Use / How to Install

CLEANING THE AIR FILTER/THE DEODORIZING FILTER (OPTION)

Cleaning the air filter (about once every 2 weeks)

1 Remove the air filter .

- Pull the air inlet knob forward.



(If there is deodorizing or air cleaning filter (OPTION), please remove it before cleaning the air filter.)

2 Remove dirt from the air filter using a vacuum cleaner or by washing the filter with water.

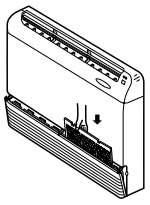
- If the dirt is noticeable, wash the filter with a solution of mild detergent diluted in lukewarm water.
- If hot water (50°C or more) is used, the filter may be deformed.

3 After washing with water/lukewarm water , dry the air filter well in the shade.

- Do not expose the air filter to direct sunlight or heat from a fire when drying it.

4 Install the air filter.

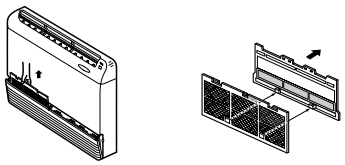
- Set the air inlet knob.



Cleaning the deodorizing filter (about once every 2 weeks)

1 Remove the air filter and the deodorizing filter together. Then separate the deodorizing filter (Gray sponge type) from the air filter.

- The deodorizing filter is harmless to people. However, to keep its effectiveness, be sure to hold the frame and not to touch the surface of the filter with your hand.



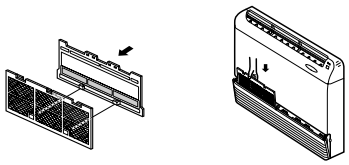
2 Soak the filter together with its frame in lukewarm water for about 15 minutes.

- If the dirt is noticeable, use a solution of mild detergent diluted in lukewarm water.
- If hot water (50°C or more) is used, the filter may be deformed.
- Do not use a scrubbing brush or sponge. This may damage the surface of the filter.
- Do not use a chlorine detergent.

3 After washing with water/lukewarm water, dry the deodorizing filter well in the shade.

- Do not expose the deodorizing filter to direct sunlight or heat from a fire when drying it.

4 Attach the deodorizing filter to the air filter. (Place the catch into the hole of the air filter for the security.) Then install both of them to the body.



Air Cleaning Filter

MAC-1300FT-E

Photo

Descriptions

TO BE CONFIRMED

Applicable Models

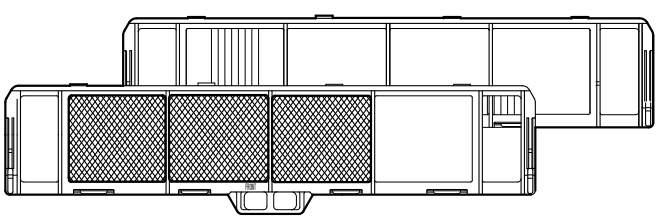
- MSC-GA20VB
- MSC-GA25VB
- MSC-GA35VB
- MSZ-CA25VB
- MSZ-CA35VB

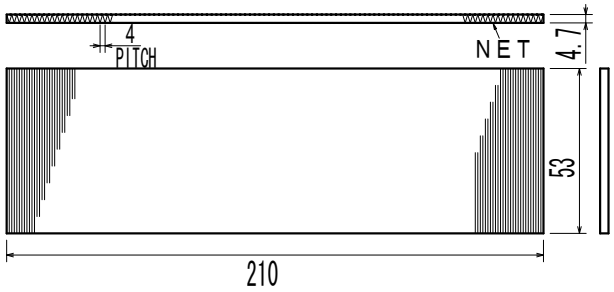
Specifications

TO BE CONFIRMED

Dimensions

Unit : mm





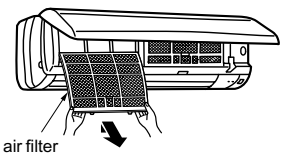
How to Use / How to Install

REPLACEMENT OF THE AIR CLEANING FILTER

When the capacity is lowered because of dirt, etc., it is necessary to replace the air cleaning filter.

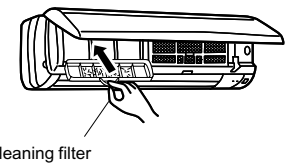
Air cleaning filter replacement (about once every 4 months)

1 **Remove the catechin air filter.**



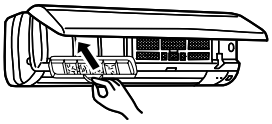
Catechin air filter

2 **Remove the air cleaning filter (White bellows type).**

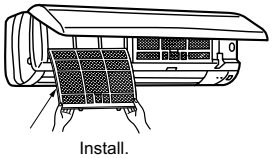


Air cleaning filter

3 **Install a new air cleaning filter.**



4 **Install the catechin air filter and securely**



Install.

Air cleaning filter

- If the air cleaning filter is clogged, it may lower the unit's capacity or cause condensation at the air outlet.
- The air cleaning filter is disposable. The standard usable term is about 4 months. However, if the colour of the filter turns to dark brown, replace the filter at once.

Air Cleaning Filter

MAC-1700FT-E

Photo

Descriptions

TO BE CONFIRMED

Applicable Models

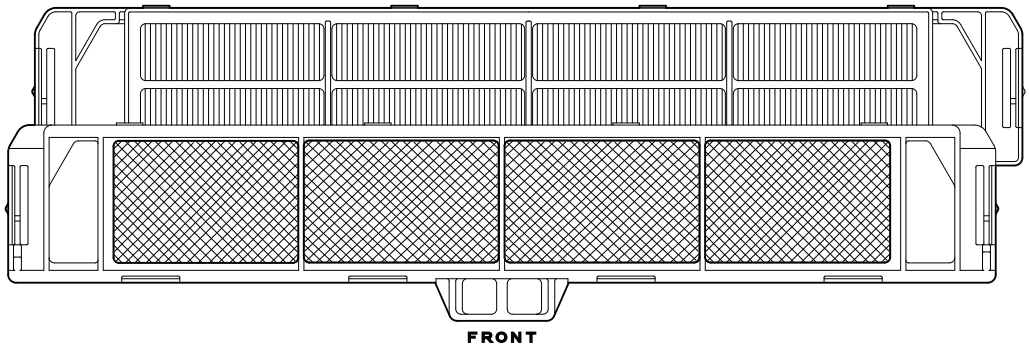
- MS-GA50VB
- MS-GA60VB
- MS-GA80VB
- MSH-GA50VB
- MSH-GA60VB
- MSH-GA80VB
- MSH-CA50VB

Specifications

TO BE CONFIRMED

Dimensions

Unit : mm



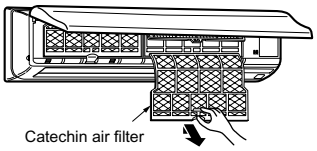
How to Use / How to Install

REPLACEMENT OF THE AIR CLEANING FILTER (OPTION)

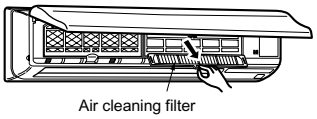
When the capacity is lowered because of dirt, etc., it is necessary to replace the air cleaning filter.

Air cleaning filter replacement

1 **Remove the catechin air filter.**

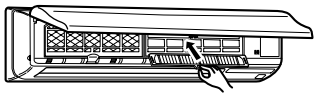


2 **Remove the air cleaning filter (White bellows type).**

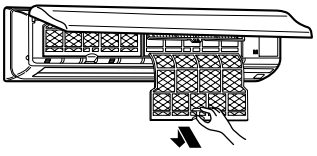


About once every 4 months

1 **Install a new air cleaning filter.**



2 **Install the catechin air filter and securely close the front panel.**



Air cleaning filter

- If the air cleaning filter is clogged, it may lower the unit's capacity or cause condensation at the air outlet.
- The air cleaning filter is disposable. The standard usable term is about 4 months. However, if the colour of the filter turns to dark brown, replace the filter at once.

Deodorizing Filter

MAC-1700DF-E

Photo

Descriptions

TO BE CONFIRMED

Applicable Models

- MCF-GA35VB
- MCF-GA50VB
- MCF-GA60VB
- MCFH-GA35VB
- MCFH-GA50VB
- MCFH-GA60VB
- MCFZ-A12WV
- MCFZ-A18WV
- MCFZ-A24WV

Specifications

TO BE CONFIRMED

Dimensions

Unit : mm

TO BE CONFIRMED

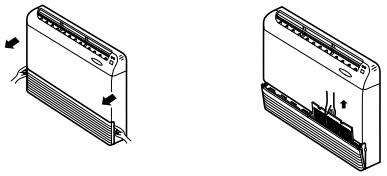
How to Use / How to Install

CLEANING THE AIR FILTER/THE DEODORIZING FILTER (OPTION)

Cleaning the air filter (every 2 weeks)

1 Remove the air filter.

- Pull the air inlet knob forward.



(If there is deodorizing or air cleaning filter (OPTION), please remove it before cleaning the air filter.)

2 Remove dirt from the air filter using a vacuum cleaner or by washing the filter with water.

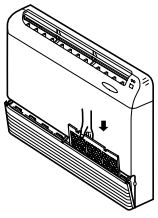
- If the dirt is noticeable, wash the filter with a solution of mild detergent diluted in lukewarm water.
- If hot water (50˚C or more) is used, the filter may be deformed.

3 After washing with water/lukewarm water, dry the air filter well in the shade.

- Do not expose the air filter to direct sunlight or heat from a fire when drying it.

4 Install the air filter.

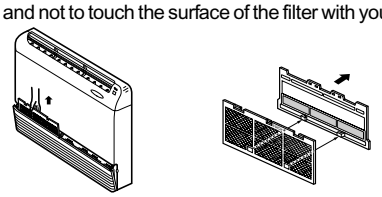
- Set the air inlet knob.



Cleaning the deodorizing filter (every 2 weeks)

1 Remove the air filter and the deodorizing filter together. Then separate the deodorizing filter (Gray sponge type) from the air filter.

- The deodorizing filter is harmless to people. However, to keep its effectiveness, be sure to hold the frame and not to touch the surface of the filter with your hand.



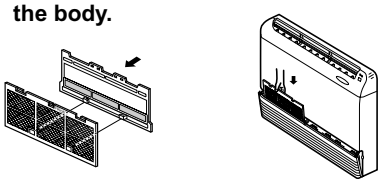
2 Soak the filter together with its frame in lukewarm water for about 15 minutes.

- If the dirt is noticeable, use a solution of mild detergent diluted in lukewarm water.
- If hot water (50˚C or more) is used, the filter may be deformed.
- Do not use a scrubbing brush or sponge. This may damage the surface of the filter.
- Do not use a chlorine detergent.

3 After washing with water/lukewarm water, dry the deodorizing filter well in the shade.

- Do not expose the deodorizing filter to direct sunlight or heat from a fire when drying it.

4 Attach the deodorizing filter to the air filter. (Place the catch into the hole of the air filter for the security.) Then install both of them to the body.



Deodorizing filter

- Cleaning is necessary about once every 2 weeks. How ever, if the dirt is noticeable, clean more often.
- When the colour of the filter is not restored even if the filter is washed as the procedure shown on the left (Cleaning the deodorizing filter) or when the filter becomes black, replace the filter with a new one.
- Standard interval for filter replacement is about 1 year.

Anti-Allergy Enzyme Filter

MAC-2300FT-E

Photo

Descriptions

This filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes.
(Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with Oxygen and severs the S-S* bonds. *S=Sulfur atoms)

Applicable Models

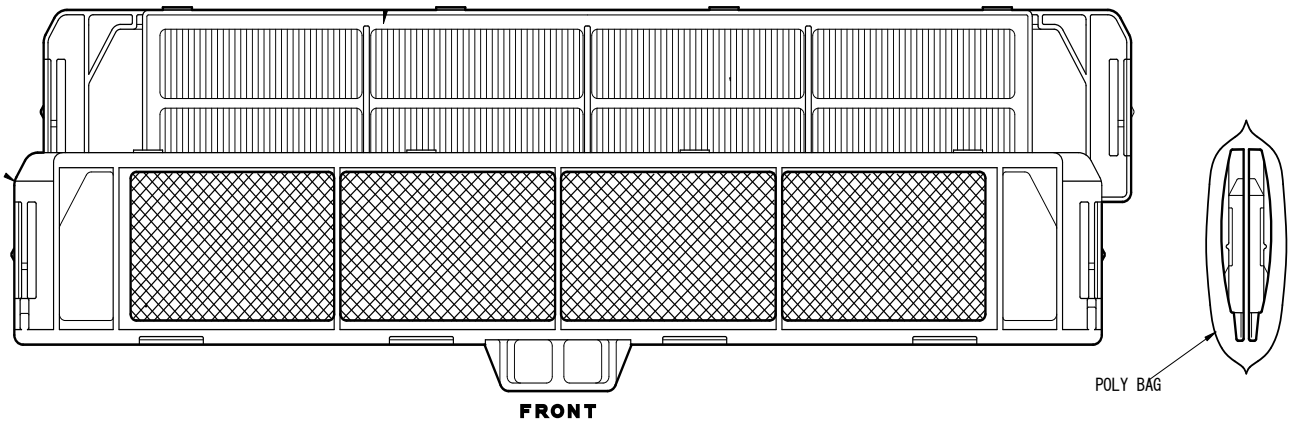
- MSZ-GA50VA
- MSZ-GA60VA
- MSZ-GA71VA

Specifications

TO BE CONFIRMED

Dimensions

Unit : mm



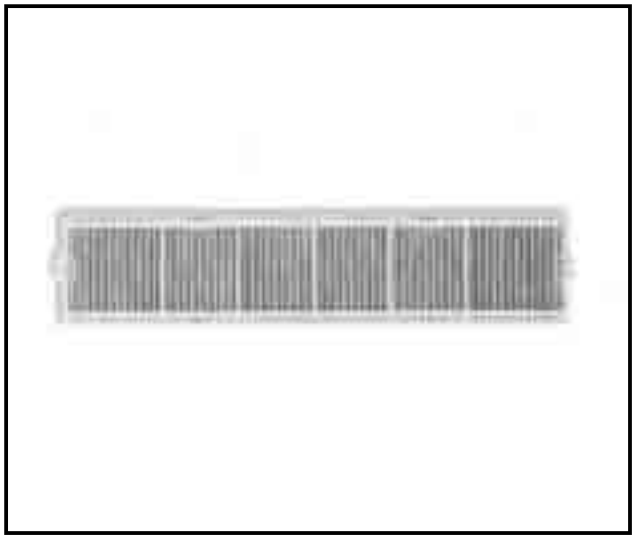
How to Use / How to Install

TO BE CONFIRMED

Anti-Allergy Enzyme Filter

MAC-415FT-E

Photo



Descriptions

This filter catches dead mites and their droppings, pollen and other allergens on the filter filament, then decomposes them with artificial enzymes.
(Artificial enzyme catalyst on the filament catches the allergens and helps the chemical reaction with Oxygen and severs the S-S* bonds. *S=Sulfur atoms)

Applicable Models

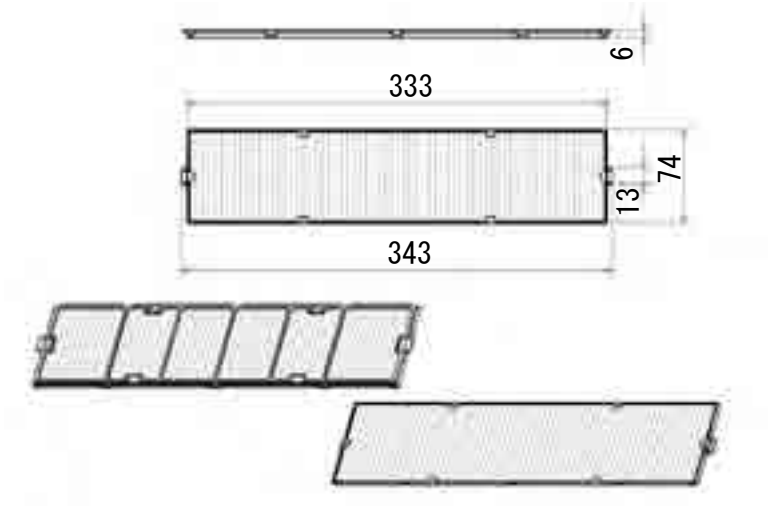
- MSZ-GA22VA
- MSZ-GA25VA
- MSZ-GA35VA
- MFZ-KA25VA
- MFZ-KA35VA
- MFZ-KA50VA

Specifications

Color	Frame: White, Filter: Light blue
Material	Frame: PP, Filter: Polyester, rayon
Weight	16g

Dimensions

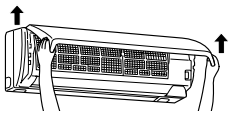
Unit : mm



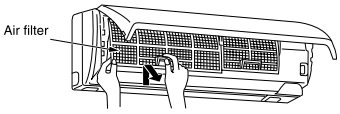
How to Use / How to Install

Replacement of the Anti-Alergy Enzyme

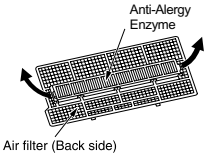
① Unlock the knobs on both sides of the front panel and lift the panel up until a "click" is heard.



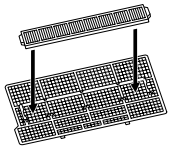
② Holding the tab on the air filter, pull up the filter slightly to remove. (Only remove the left one.)



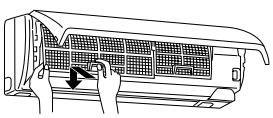
③ Remove the Anti-Alergy Enzyme from the back side of the air filter by pulling up the tabs on both sides of the Anti-Alergy Enzyme with your fingers.



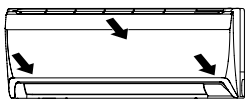
④ Attach a new Anti-Allergy Enzyme filter to the back side of the air filter by pulling up the tabs on both sides of the Anti-Allergy Enzyme filter with your fingers.



⑤ Install the air filter to the unit. Be sure to install its tab securely.



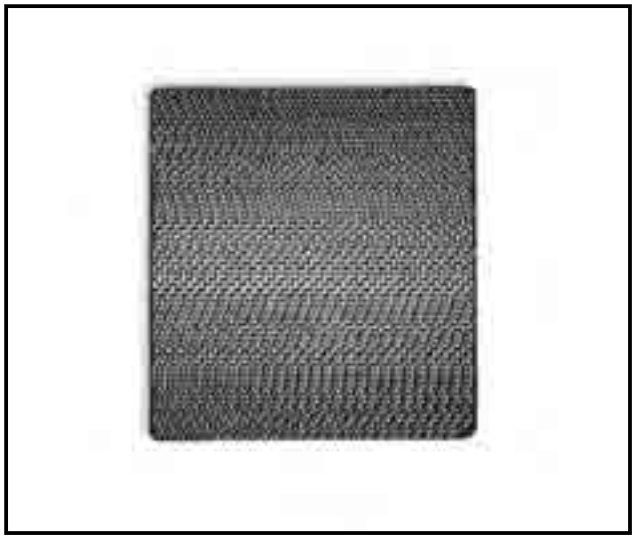
⑥ Close the front panel securely by pressing the positions indicatednby arrows until a "click" is heard.



Deodorizing Ceramic Filter

MAC-305FT-E

Photo



Descriptions

A ceramic filter equipped with newly developped nano-hole manganese catalyst.
Engineered for streamlined catching and crushing of odor-causing elements over an impressive surface area of 1750m^2 (approx. 7 tennis courts).

Applicable Models

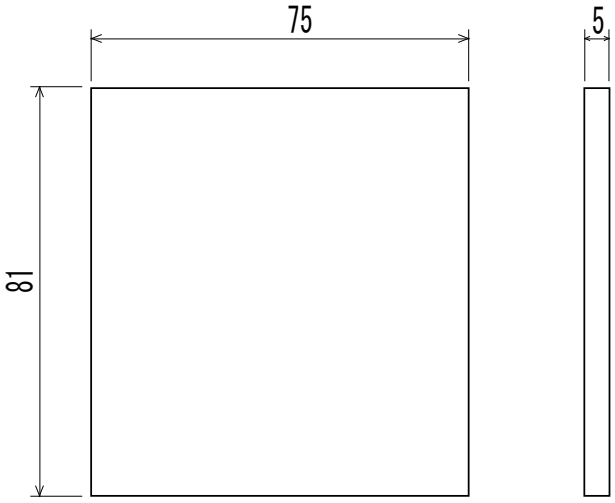
- MSZ-FA25VA
- MSZ-FA35VA

Specifications

Material	Aluminum oxide, Silicon dioxide, Manganese dioxide, Cupric dioxide
Color	Black

Dimensions

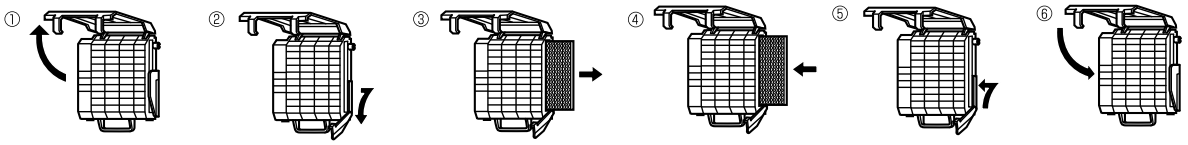
Unit : mm



How to Use / How to Install

CAUTION
• Carefully handle the deodorizing ceramic filter as the filter is fragile.

REPLACEMENT OF THE DEODORIZING CERAMIC FILTER



① Release the two knobs to open the PLASMA DEODORIZING filter unit.

② Pull the side knobs outward and then forward to remove, as illustrated above.

③ Pull out the deodorizing ceramic filter from the side of the unit.

④ Insert the new deodorizing ceramic filter from the side of the unit.

⑤ Put back the side knobs to the original position.

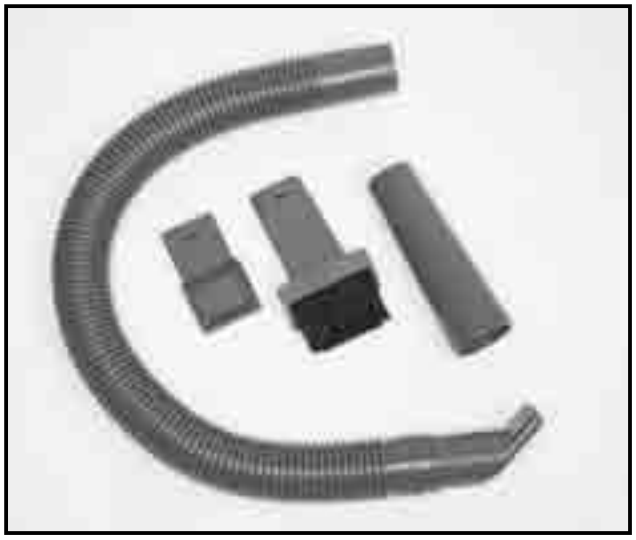
⑥ Put back the two knobs to the original position.

CAUTION:
• Install the deodorizing ceramic filter correctly.
• Touching the filter directly can cause the stain on your hands.
• The PLASMA DEODORIZING filter unit may not operate properly if the deodorizing ceramic filter is not installed. Be sure to install the deodorizing ceramic filter.

Quick Clean Kit

MAC-093SS-E

Photo



Descriptions

Quick Clean Kit can be easily connected to a household vacuum cleaner for quick, convenient cleaning of the units* .

** It is highly recommended to wear rubber gloves when cleaning the heat exchanger. Touching the heat exchanger with the bare hands can cause injury.*

Applicable Models

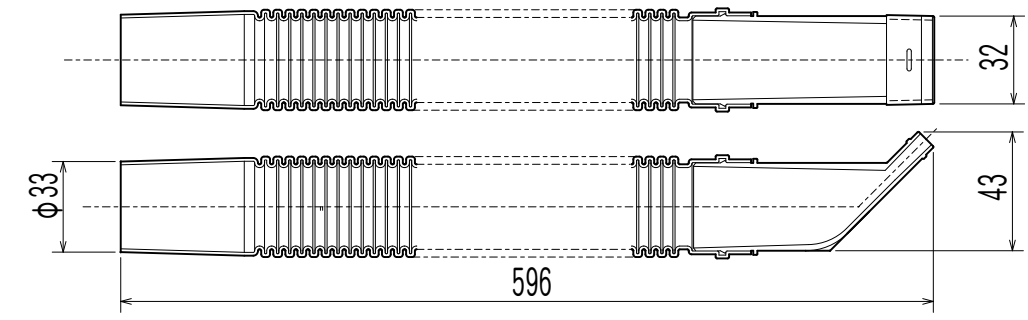
- MSZ-FA25VA
- MSZ-FA35VA
- MSZ-GA22VA
- MSZ-GA25VA
- MSZ-GA35VA
- MSZ-CA25VB
- MSZ-CA35VB

Specifications

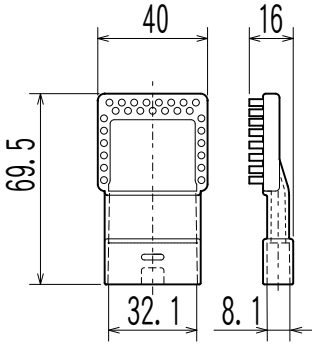
Material	HEAD ASSY : ABS + nylon HOSE ASSY : ABS + PE	HEAD-2 ASSY : ABS + Plasticized PVC + nylon HOSE ASSY : ABS
Color	HEAD ASSY : gray + black HOSE ASSY : gray	HEAD-2 ASSY : gray + black HOSE ASSY : gray

Dimensions

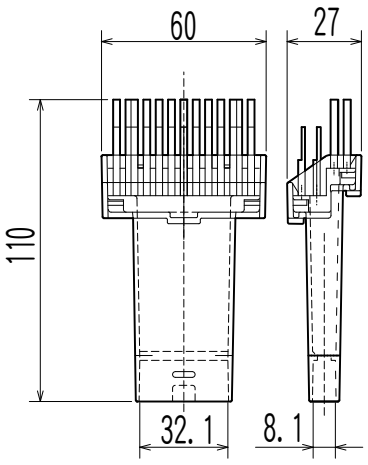
Unit : mm



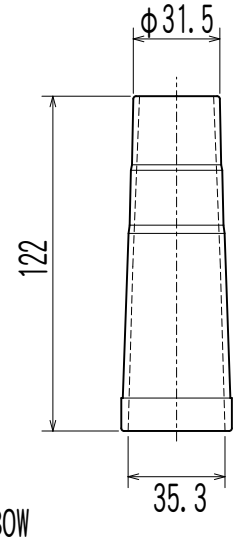
HOSE ASSY



HEAD ASSY



HEAD-2 ASSY

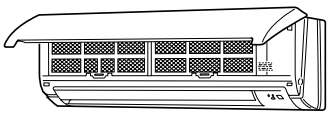


ELBOW

How to Use / How to Install

CLEANING USES

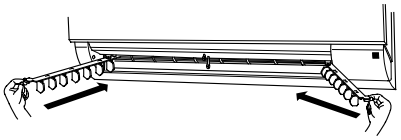
■ Front panel access models



The heat exchanger can be cleaned.

■ Quick-clean models

Example: Access to the fan is possible.



The fan can be cleaned.

CLEANING METHODS

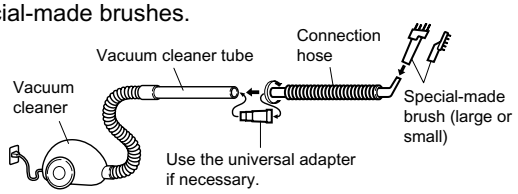
Only available for the hose diameter of vacuum cleaner : 32 - 39 mm (inside diameter).

1.Before cleaning

Before cleaning the air conditioner, switch it off and turn off the breaker and/or remove the power supply plug to ensure safety.

2.Conection with a vacuum cleaner

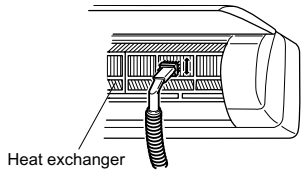
- Insert the end of the connection hose into one of the special-made brushes.
  Use the special-made brush (large) for overall cleaning and use the special-made brush (small) to access narrow spaces.
- While twisting the connection hose, insert it securely into the vacuum cleaner tube.
  Use the universal adapter if necessary.



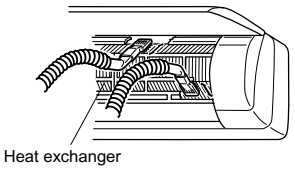
2.Cleaning of the heat exchanger

- Let the heat exchanger dry completely before cleaning it.
  (If the heat exchanger is wet, you may not be able to vacuum up the dust.)
- Open the front panel and remove the air filter to expose the heat exchanger.
  Do not touch the heat exchanger directly with your bare hands; injury may result. Wear a pair of gloves to protect your hands.
- Clean the heat exchanger vertically, moving the brush along the fins of the heat exchanger. (The heat exchanger may be damaged if it is cleaned horizontally.)
  Use the special-made brush (small) to clean the hard to reach, narrow spaces such as the top and bottom of the heat exchanger.

With the special-made brush (large)

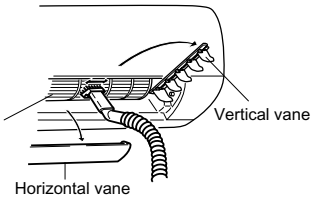


With the special-made brush (small)



3.Cleaning of the fan

- Remove the horizontal vane and swing out the vertical vane. Clean the fan horizontally, moving the brush along the blades of the fan.
  (Please refer to the operating instructions about the way to remove the horizontal vane and swing out the vertical vane.)



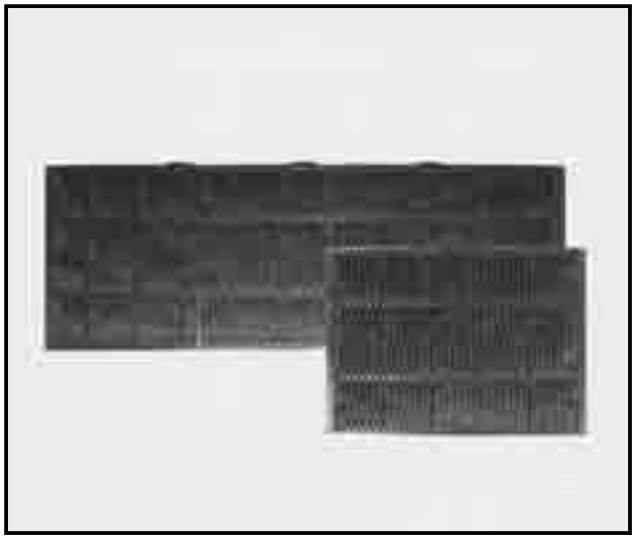
CAUTION:

- Some vacuume cleaners are equipped for overload protection devices, which might work if the airflow thought the vaccume cleaner hose is restricted. In that case, use them at the low power setting.
- If the special-made brushes become dirty, wash them with water and let them dry completely out of direct sunlight.
- When cleaning the air conditioner, do not stand on an unstable bench or chair. This may cause an injury, etc., if you fall down.
- Please refer to the operating instructions of the airconditioner for more details.

High Efficiency Filter

PAC-SE80KF-E

Photo



Descriptions

TO BE CONFIRMED

Applicable Models

- PCA-RP50GA
- PCH-P50GAH

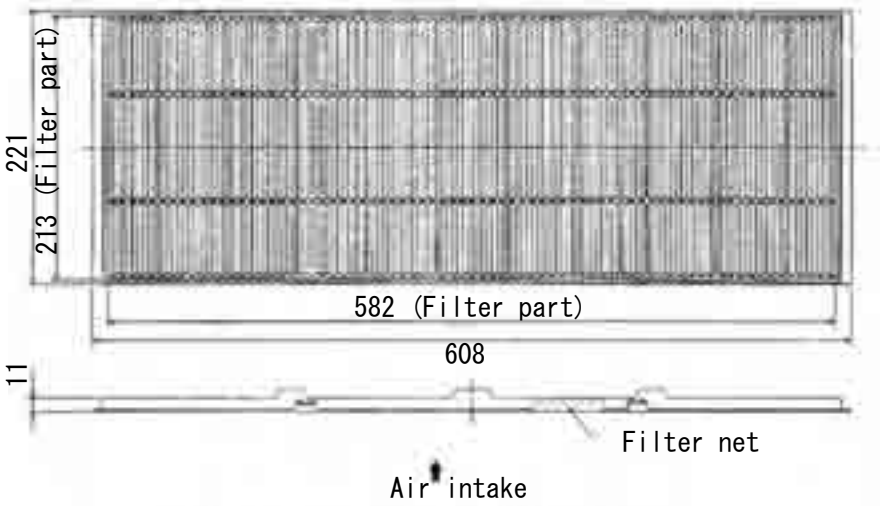
Specifications

Dust collection efficiency		70% (weighing method)
Filter material		PP fiber (antibacterial + mildew-proof), honeycomb weave (Identification: gray yarn woven)
Maintenance		Approx. 2,500 hours (varies with operating conditions)
Parts composition	Filter (large)	1
	Filter (small)	1

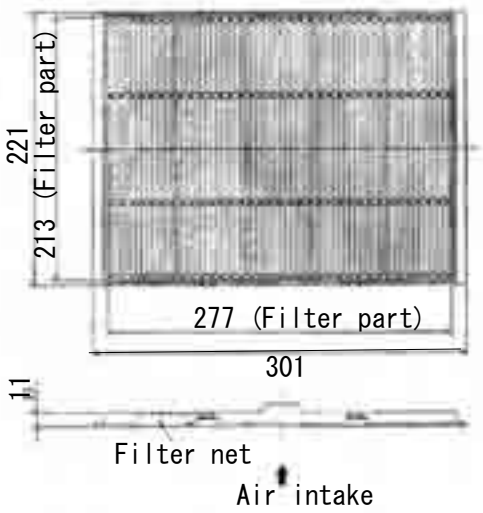
Dimensions

Unit : mm

Filter(large)



Filter(small)



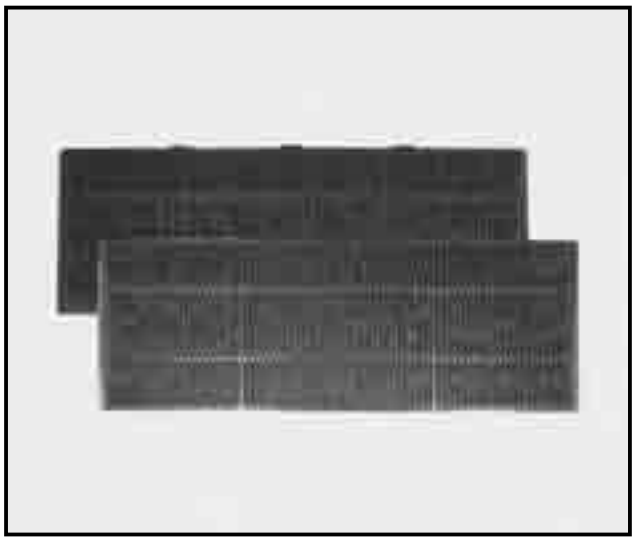
How to Use / How to Install

TO BE CONFIRMED

High Efficiency Filter

PAC-SE81KF-E

Photo



Descriptions

TO BE CONFIRMED

Applicable Models

- PCA-RP60GA
- PCA-RP71GA
- PCA-RP100GA
- PCH-P60GAH
- PCH-P71GAH
- PCHRP100GAH

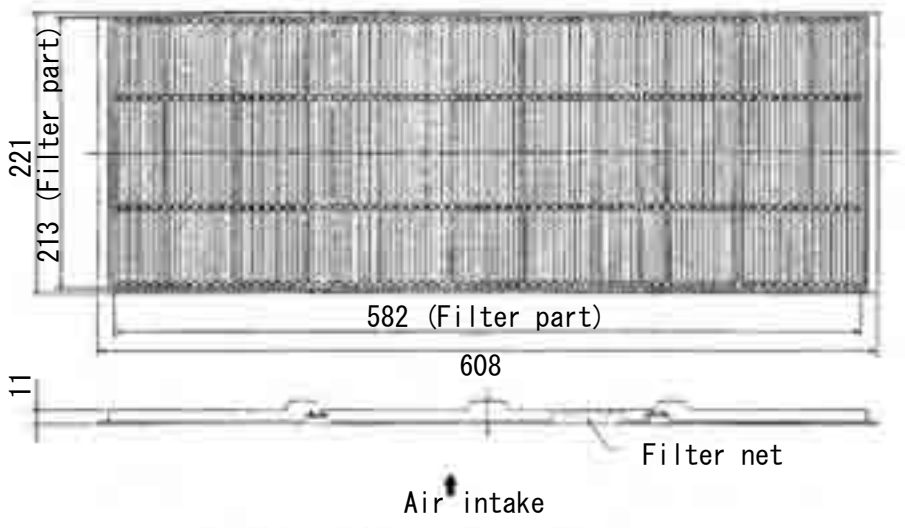
Specifications

Dust collection efficiency		70% (weighing method)
Filter material		PP fiber (antibacterial + mildew-proof), honeycomb weave (Identification: gray yarn woven)
Maintenance		Approx. 2,500 hours (varies with operating conditions)
Parts composition	Filter (large)	2
	Filter (small)	-

Dimensions

Unit : mm

Filter(large)



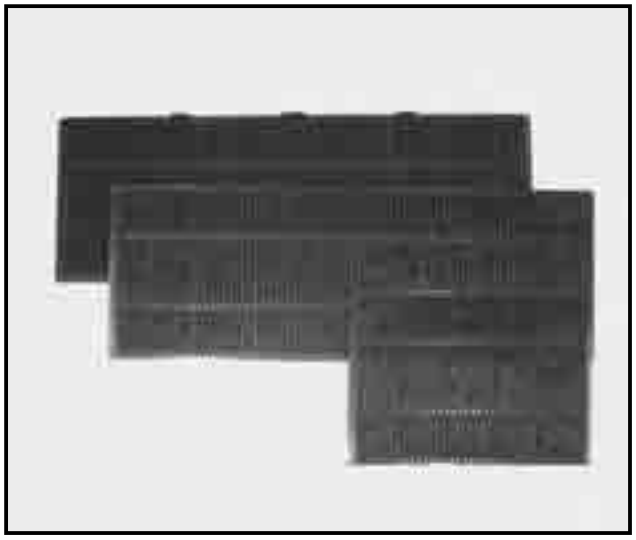
How to Use / How to Install

TO BE CONFIRMED

High Efficiency Filter

PAC-SE82KF-E

Photo



Descriptions

TO BE CONFIRMED

Applicable Models

- PCA-RP125GA
- PCA-RP140GA
- PCH-P125GAH
- PCH-P140GAH

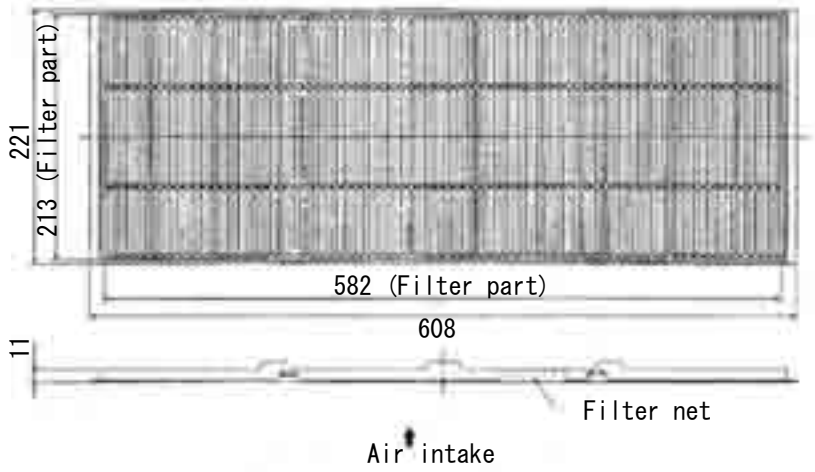
Specifications

Dust collection efficiency		70% (weighing method)
Filter material		PP fiber (antibacterial + mildew-proof), honeycomb weave (Identification: gray yarn woven)
Maintenance		Approx. 2,500 hours (varies with operating conditions)
Parts composition	Filter (large)	2
	Filter (small)	1

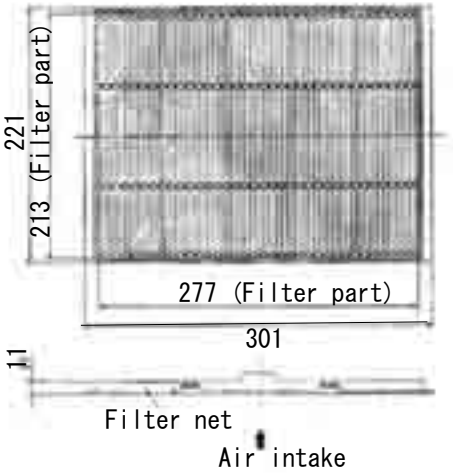
Dimensions

Unit : mm

Filter(large)



Filter(small)

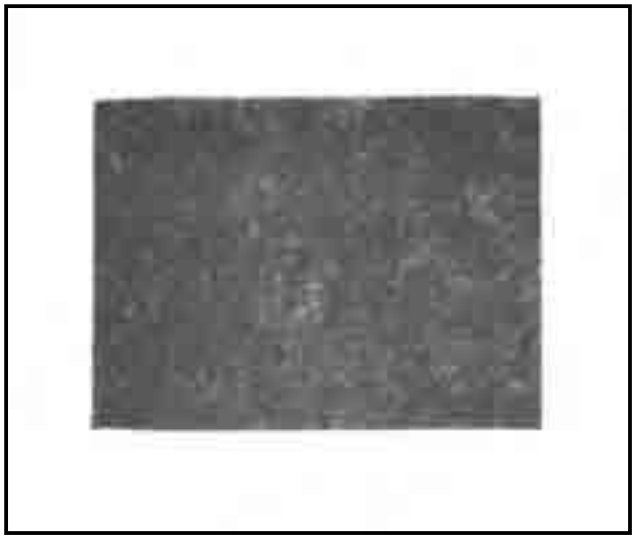


How to Use / How to Install

TO BE CONFIRMED

Oil Mist Filter Element (12 pieces) PAC-SG38KF-E

Photo



Descriptions

Filter Element (12 Pieces) for ceiling suspended models for professional kitchen use.

Applicable Models

■ PCA-RP HA

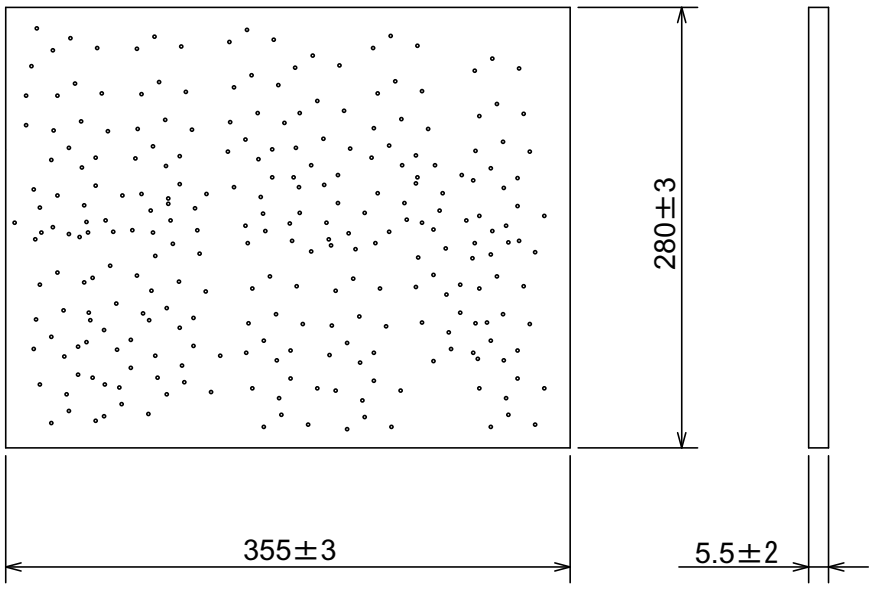
Specifications

Material	Modacrylic fiber / Polyester
Color	Black
Temperature	60℃ or less
Reproduction	Disposable (Reproduction not possible)
Packing	12 elements per bag

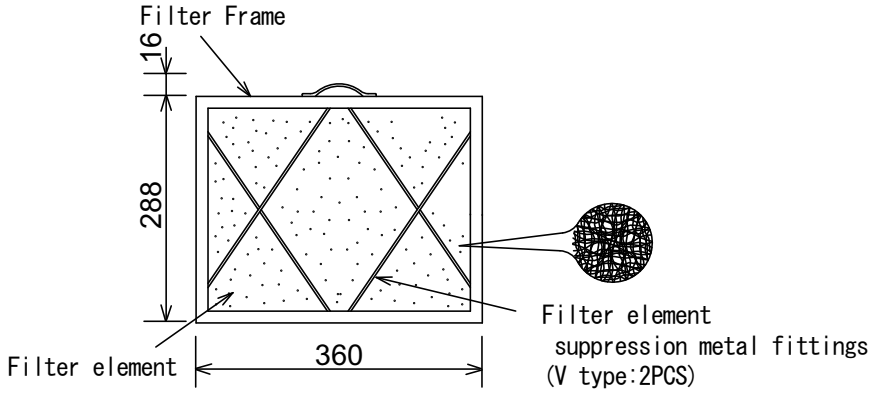
Note: Only the filter element must be replaced
(the filter frame provided on the main body must be used)

Dimensions

Unit : mm



State of installation to filter frame



How to Use / How to Install

Cleaning the oil filter

1) Removing the oil filter

①Remove the filter by sliding it in the direction of an arrow.

2) Replacing the filter element

①Remove the oil filter by sliding it in the direction of an arrow.

②Remove the two metal fittings for filter element according to the following procedure. Bend the metal fittings towards ① side(inside)and then slide them in the direction of ② to remove.

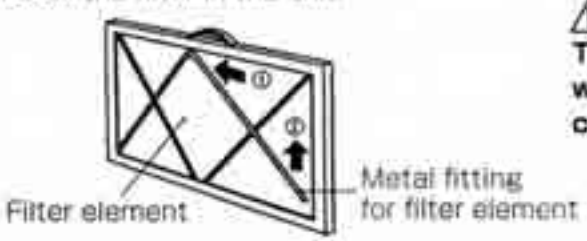
③Replace the filter element (disposable).

Note:

Install the filter element within the frame securely.

④Install the metal fittings for filter element in their original positions.

⑤Turn the side of oil filter that the metal fittings are installed downward and install the filter in the unit.



3) Cleaning the frame of the oil filter

Tools to be prepared

- Protective goods such as a rubber glove
- Scrubbing brush or brush

Note:

Avoid using a metal scrubbing brush or brush since the aluminum materials could be damaged.

- Household neutral detergent or alkalescent detergent(for washing dishes or clothes)

Note:

If alkaline detergent is used for cleaning, the part made of aluminum could discolor.

Make sure the filter element is removed when cleaning the oil filter.

①If the filter is not so dirty (If the filter is cleaned once a week(once per 100 operating hours).)

Wash the filter with water and above-mentioned detergent using a scrubbing brush or brush,etc. (It is more effective to wash the filter with lukewarm water.)

②If the filter is extremely dirty

Put the previously-mentioned detergent (its strength should be about 1/10 of undiluted solution)into hot water whose temperature is 50℃ or less, and soak the filter for 1 hour or more before washing.

⚠Warning:

To prevent your hand from burning, start washing the filter after the hot water gets cold.

High Efficiency Filter Element PAC-SG01KF-E

Photo

TO BE CONFIRMED

Descriptions

A high-performance filter. PAC-SG03TM-E (multi-function casement) is required for installation.

Applicable Models

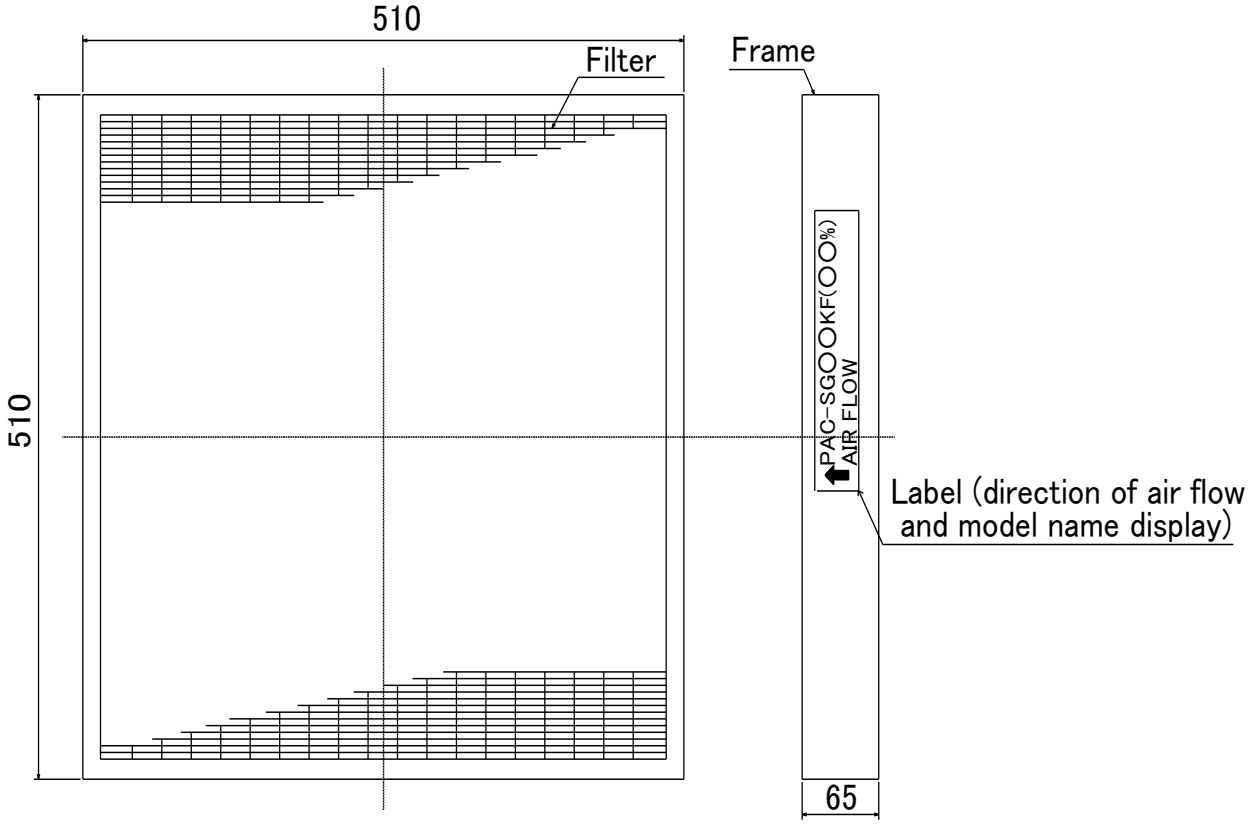
- PLA-RP AA
- PLH-P AAH

Specifications

Dust collection efficiency	Colorimetric method 65% (JIS 11 class)
Filter element ,aterial	Electrrostatic polyolefin fiber
Life	Approx 2,500 hours (at dust density 0.15 mg/m3) *Reproduction not possible
Parts composition	This element x 1

Dimensions

Unit : mm

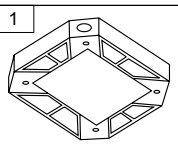
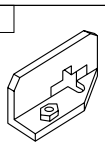
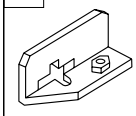
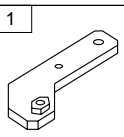
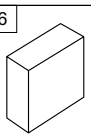


How to Use / How to Install

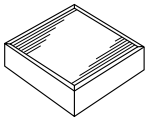
1 Parts check.

(The unit is provided with this manual and following parts in the box.)

MULTI-FUNCTIONAL CASEMENT

Part #, Name	① Multi-functional casement	② Screw with washer (black)	③ Flat head screw (gold)	④ Bracket A	⑤ Bracket B	⑥ Bracket C	⑦ Air outlet block
Q'ty	1	5	2	2	1	1	16
Figure		M5×0.8×15 	M5x0.8 with stepped body 				

HIGH-EFFICIENCY FILTER ELEMENT

Part #, Name	⑧ High-efficiency filter element
Q'ty	1
Figure	

NOTICE

(1) In case that the High-efficiency filter element ⑧ is installed, it should be installed on the Multi-functional casement ① which is option.
Be sure to purchase the Multi-functional casement.

(2) If it is necessary of fresh-air intake, the Duct flange and the Duct are necessary as well as the Multi-functional casement ① . Be sure to prepare these items locally.
The recommended shape for the Duct flange is described in the page 3.
※It is available of fresh-air intake even when the High-efficiency filter element ⑧ is installed.

(3) Follow the procedure in this manual for installation of the Multi-functional casement ① .
Otherwise, it is possible that installation of refrigerant tubes, drain tubes, and electrical wiring will not be available.

2 Installation of Indoor unit.

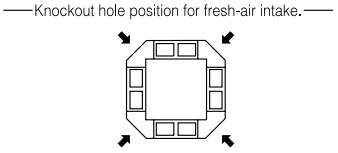
●Follow the description in the installation manual which is attached to the indoor unit.

3 Installation of Multi-functional casement.

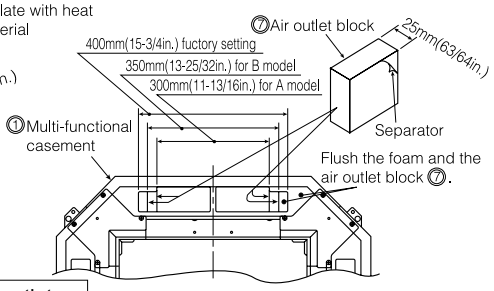
Preparation before installation

●If it is necessary to change the number of air outlet, the optional parts Air Outlet Shutter Plate should be installed on the indoor unit.
Therefore, the installation should be done before the Multi-functional casement ① is installed on the indoor unit.

●The Multi-functional casement ① has four knockout on each side so that the air can be taken from any of four sides.
Select any one or two sides in advance and make knockout holes on the Multi-functional casement ① .



●In case that the type of indoor unit is "3type/80type/12,18type", attach the outlet block ⑦ to the outlet of the Multi-functional casement ① as shown in the right drawing.
Be sure to attach it to right and left equally.

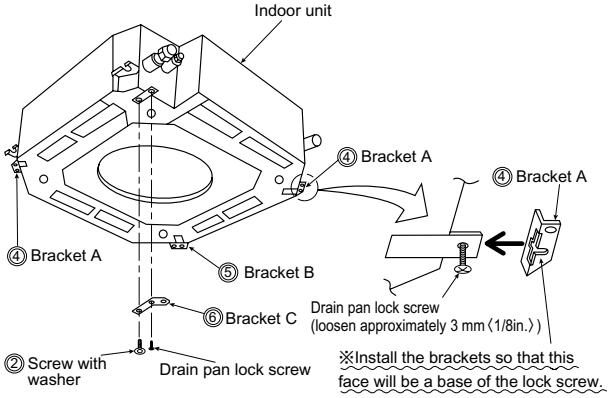


Model	Indoor unit type	No. of air outlet block ⑦ per air outlet
A	12type	4 pcs (total 16)
B	3type / 80type / 18type	2 pcs (total 8)

Caution	Air outlet block should be attached securely.
	●If the air outlet block is not attached securely, it can cause the problem that air flow will not be sufficient, or the unit will not operate properly by means of dew which can be caused.

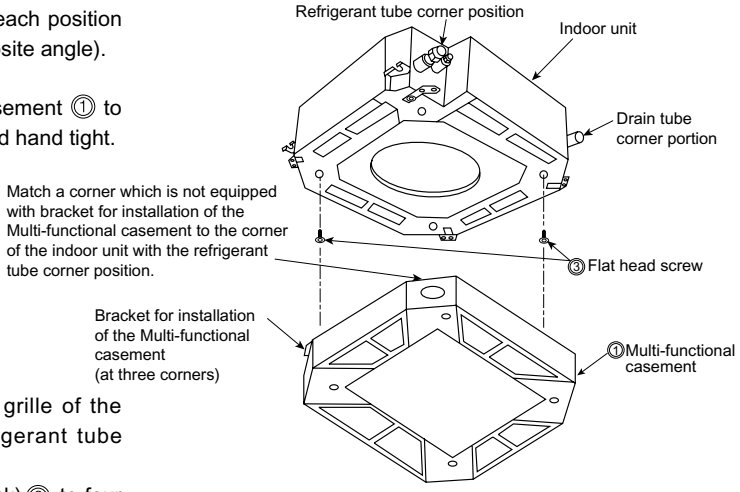
3 Installation of Multi-functional casement. Continued

●Loosen the three lock screws which fix drain pan on the indoor unit.
Put the Bracket A ④ and the Bracket B ⑤ to the lock screw and tighten the lock screw together with these brackets at the location as shown in the right drawing.
Then remove one drain pan lock screw of the refrigerant tube corner position and fix the Bracket C ⑥ with the drain pan lock screw and the Screw with washer (black) ② .



Hand tightening

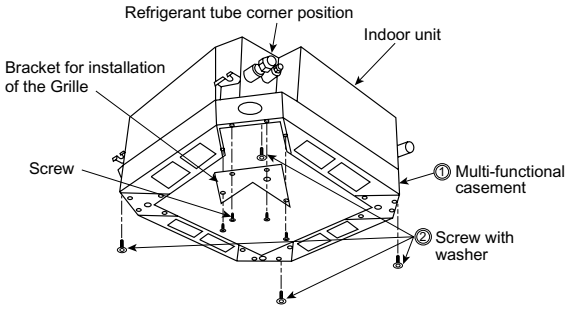
●Fix the two flat head screw (gold) ③ to each position (drain tube corner position and to its opposite angle).
See right figure.
●Hook the hole of the Multi-functional casement ① to the flat head screw (gold)the screw ③ and hand tight.



Fixing

●Remove the bracket for installation of grille of the Multi-functional casement ① for refrigerant tube corner position. (four screws)
●Hand tighten the Screw with washer (black) ② to four holes of the Multi-functional casement ① .
Confirm the position of the Multi-functional casement ① ,then tighten the Screw with washer (black) ② securely.

Caution	Screw with washer at four position.
	●If the unit is fixed without hand tightening, the screws can be broken and it can cause air leakage.

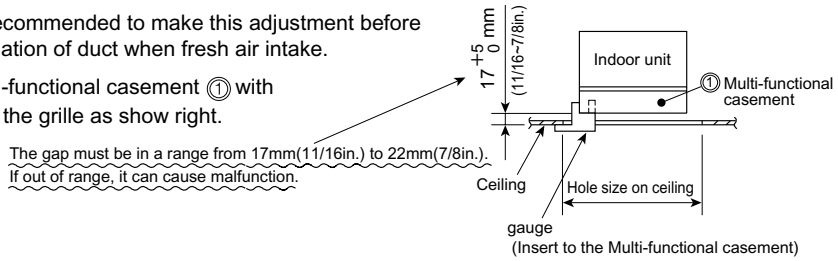


●Install the bracket for installation of grille which was removed at. (four screws)

Height adjustment

※It is recommended to make this adjustment before installation of duct when fresh air intake.

●Readjust the height of the Multi-functional casement ① with the gauge which is attached to the grille as show right.



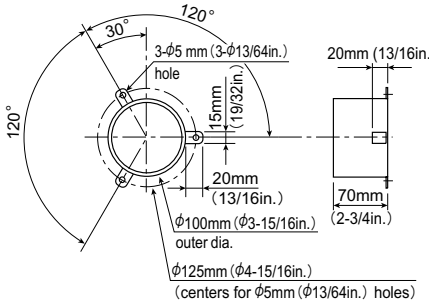
4 Installation of duct (in case of fresh air intake)

Caution	Linkage of duct fan and air conditioner
	●In case that a duct fan is used, be sure to make it linked with the air conditioner when outside air is taken. Do not run the duct fan only. It can cause dew drop.

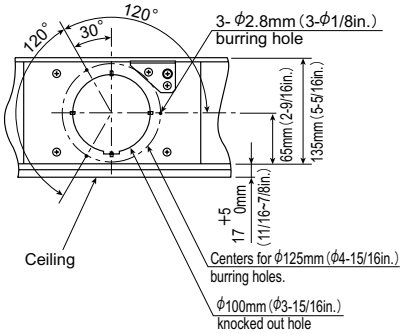
Making a duct flange (prepared locally)

●The shape of duct flange shown right is recommended.

Duct flange recommended shape
(Thickness: 0.8mm (1/32in.) or more)

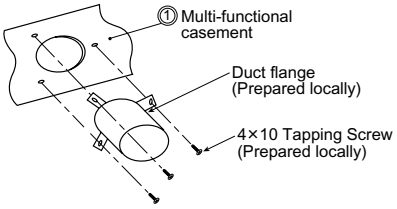


Details of air inlet (Example)



Installation of duct flange

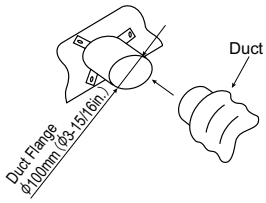
●Install a duct flange to each knock out hole of the Multi-functional casement ① with three 4x10 tapping screws which should be prepared locally.



Installation of duct (should be prepared locally)

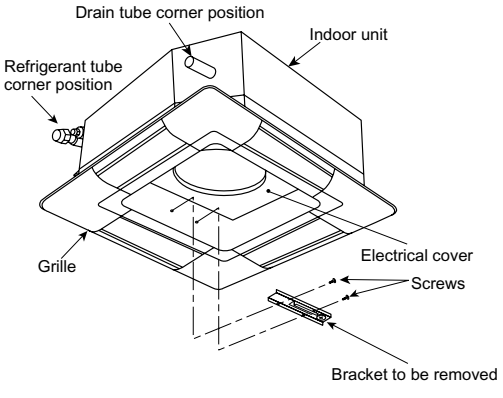
●Prepare a duct of which inner diameter fits into the outer diameter of the duct flange.

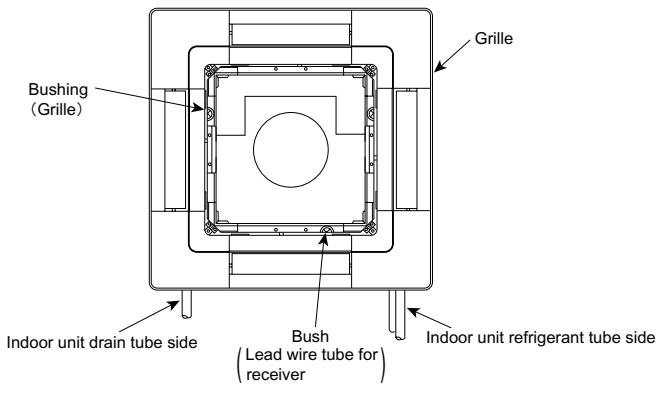
●In case that the environment above the ceiling is high temperature and high humidity, wrap the duct in a heat insulator to avoid causing dew drop on the wall.



5 Installation of grille

●Installation should be done in accordance with the manual which is attached to the grille.
When the electrical cover of the indoor unit is removed, be sure to remove one of the brackets (two screws) of the Multi-functional casement ① first as shown right.
Each lead wire for the grille should be run through the bushing of the Multi-functional casement as shown below, and be connected to the indoor unit.





6 Installation of High-efficiency filter element (same procedure for replacement)

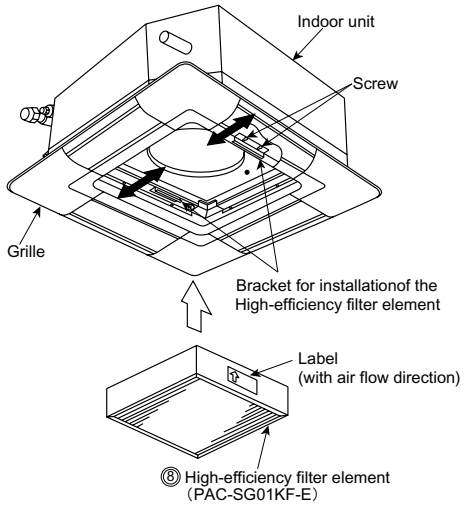
●Remove the intake grille of the grille in advance.

●Loosen the four screws of bracket for installation of the High-efficiency filter element of the Multi-functional casement ① as shown right. Then, slide them outside.

●Make sure of the air flow direction with the label put on the side of the High-efficiency filter element.
Set it to the Multi-functional casement ①, and slide back the bracket for installation of the High-efficiency filter element to the original position, then fix it with screws.

※When the indoor unit is used with "2 ways" air outlet, the High-efficiency filter element is not available.

※When the High-efficiency filter element is installed, the operation noise can be larger.



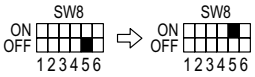
7 Air flow volume setting when High-efficiency filter element is installed

※In case that High-efficiency filter element is installed, it is necessary to set up the air flow volume.

Caution	Set up for increasing air flow volume
	●If the set up is not done correctly, the air flow volume will decrease and it can lower the performance and cause dew drop.

1）In case that the combination indoor unit is AK type:

●Set the DIP switch "SW8" on the Indoor controller board of the indoor unit to ON.

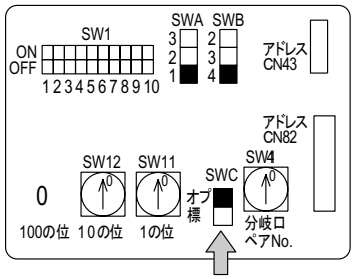


2）In case that the combination indoor unit is VAM type:

●Set the switch SWC on the address board in the indoor unit to 『オプ』.
（The factory default setting is 『標』）

〔『オプ』＝ OPTION　『標』＝ STANDARD〕

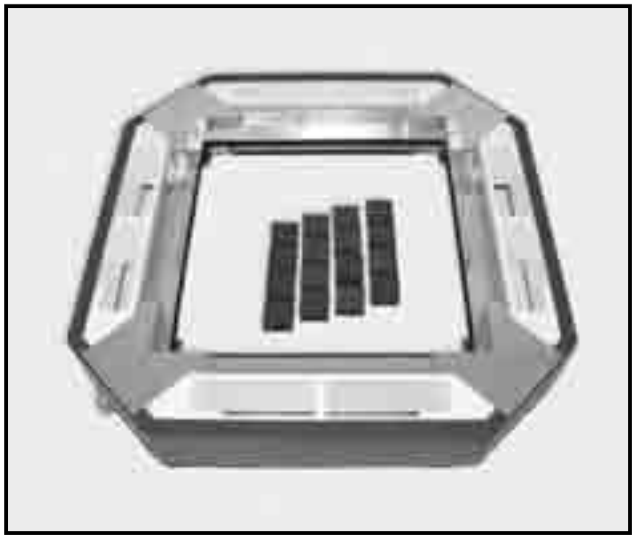
〈Address board〉



3）In case that the combination indoor unit is AA type:

●Set up the remote controller. Refer to the chapter "Electrical work" in the installation manual for the indoor unit.

Photo



Descriptions

A part required for installation of a high-efficiency filter element.
Can also be used for introducing fresh air from outdoor.

Applicable Models

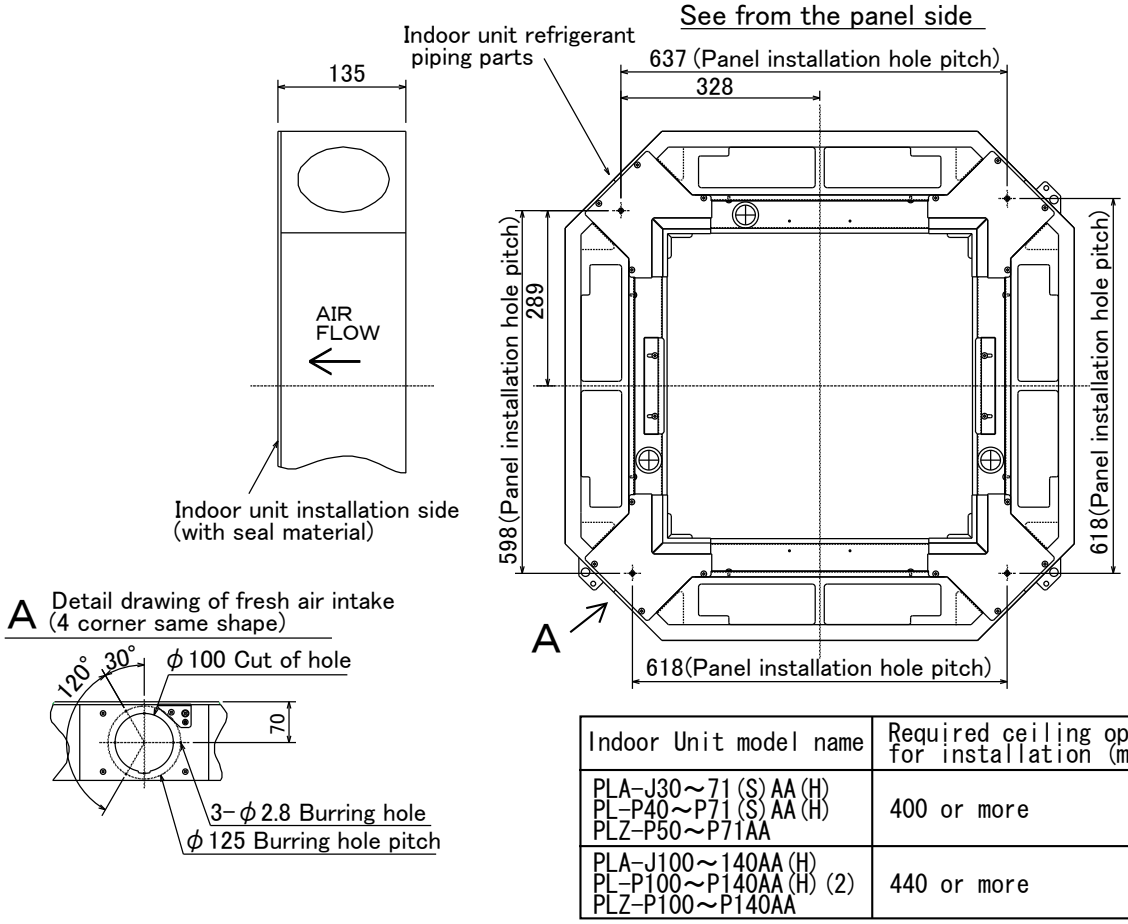
- PLA-RP AA
- PLH-P AAH

Specifications

Pipe diameter (mm)		Φ100
External air inlet	Number of inlets	Any 2 corners or less (among four corners)
	Input volume	30% or less of indoor unit's air volume
High-performance filter element		(Colorimetric method 65%)
		(Colorimetric method 65%)

Dimensions

Unit : mm



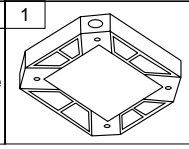
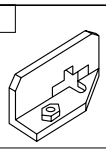
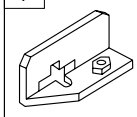
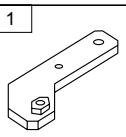
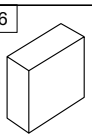
Indoor Unit model name	Required ceiling opening for installation (mm)
PLA-J30～71(S)AA(H) PL-P40～P71(S)AA(H) PLZ-P50～P71AA	400 or more
PLA-J100～140AA(H) PL-P100～P140AA(H)(2) PLZ-P100～P140AA	440 or more

How to Use / How to Install

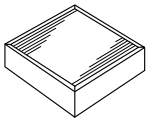
1 Parts check.

(The unit is provided with this manual and following parts in the box.)

MULTI-FUNCTIONAL CASEMENT

Part #, Name	① Multi-functional casement	② Screw with washer (black)	③ Flat head screw (gold)	④ Bracket A	⑤ Bracket B	⑥ Bracket C	⑦ Air outlet block
Q'ty	1	5	2	2	1	1	16
		M5×0.8×15	M5x0.8 with stepped body				
Figure							

HIGH-EFFICIENCY FILTER ELEMENT

Part #, Name	⑧ High-efficiency filter element
Q'ty	1
Figure	

NOTICE

(1) In case that the High-efficiency filter element ⑧ is installed, it should be installed on the Multi-functional casement ① which is option.
Be sure to purchase the Multi-functional casement.

(2) If it is necessary of fresh-air intake, the Duct flange and the Duct are necessary as well as the Multi-functional casement ① . Be sure to prepare these items locally.
The recommended shape for the Duct flange is described in the page 3.
※It is available of fresh-air intake even when the High-efficiency filter element ⑧ is installed.

(3) Follow the procedure in this manual for installation of the Multi-functional casement ① . Otherwise, it is possible that installation of refrigerant tubes, drain tubes, and electrical wiring will not be available.

2 Installation of Indoor unit.

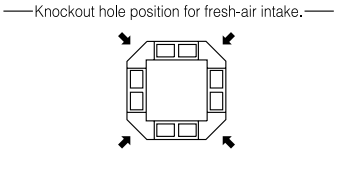
●Follow the description in the installation manual which is attached to the indoor unit.

3 Installation of Multi-functional casement.

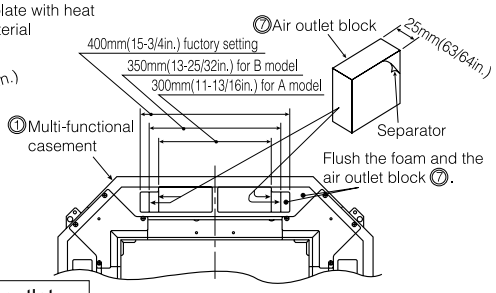
Preparation before installation

●If it is necessary to change the number of air outlet, the optional parts Air Outlet Shutter Plate should be installed on the indoor unit.
Therefore, the installation should be done before the Multi-functional casement ① is installed on the indoor unit.

●The Multi-functional casement ① has four knockout on each side so that the air can be taken from any of four sides.
Select any one or two sides in advance and make knockout holes on the Multi-functional casement ① .



●In case that the type of indoor unit is "3type/80type/12,18type", attach the outlet block ⑦ to the outlet of the Multi-functional casement ① as shown in the right drawing.
Be sure to attach it to right and left equally.

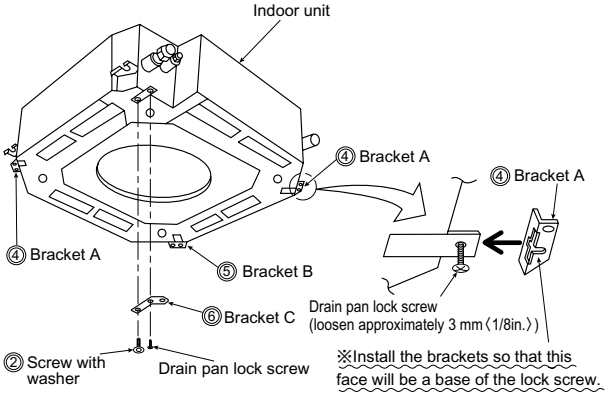


Model	Indoor unit type	No. of air outlet block ⑦ per air outlet
A	12type	4 pcs (total 16)
B	3type / 80type / 18type	2 pcs (total 8)

Caution	Air outlet block should be attached securely.
	●If the air outlet block is not attached securely, it can cause the problem that air flow will not be sufficient, or the unit will not operate properly by means of dew which can be caused.

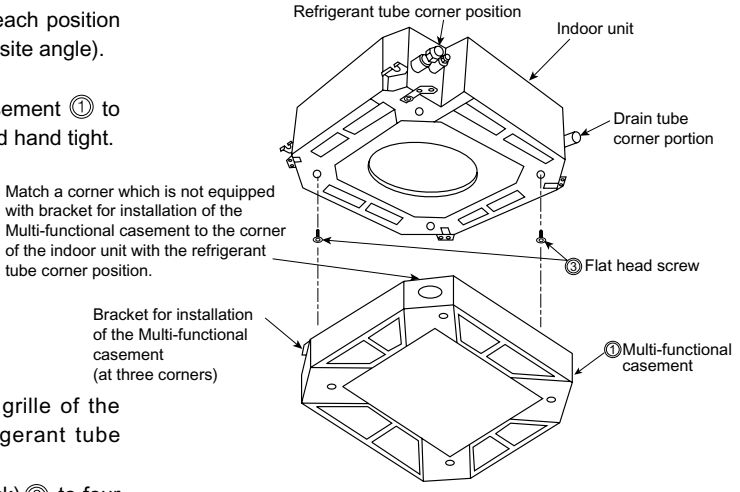
3 Installation of Multi-functional casement. Continued

●Loosen the three lock screws which fix drain pan on the indoor unit.
Put the Bracket A ④ and the Bracket B ⑤ to the lock screw and tighten the lock screw together with these brackets at the location as shown in the right drawing. Then remove one drain pan lock screw of the refrigerant tube corner position and fix the Bracket C ⑥ with the drain pan lock screw and the Screw with washer (black) ② .



Hand tightening

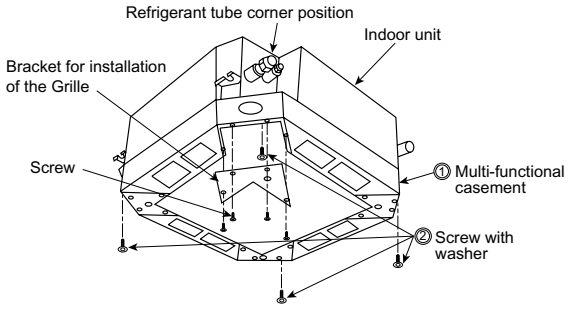
●Fix the two flat head screw (gold) ③ to each position (drain tube corner position and to its opposite angle). See right figure.
●Hook the hole of the Multi-functional casement ① to the flat head screw (gold)the screw ③ and hand tight.



Fixing

●Remove the bracket for installation of grille of the Multi-functional casement ① for refrigerant tube corner position. (four screws)
●Hand tighten the Screw with washer (black) ② to four holes of the Multi-functional casement ① .
Confirm the position of the Multi-functional casement ① ,then tighten the Screw with washer (black) ② securely.

Caution	Screw with washer at four position.
	●If the unit is fixed without hand tightening, the screws can be broken and it can cause air leakage.

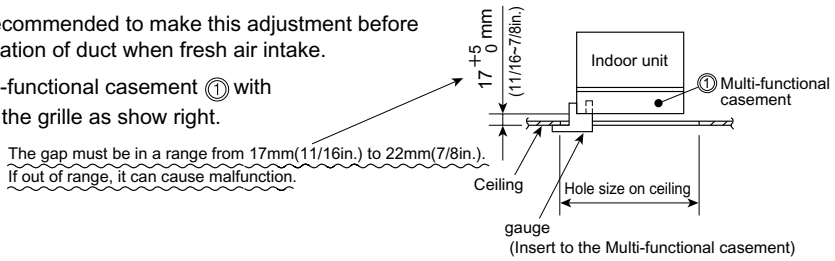


●Install the bracket for installation of grille which was removed at. (four screws)

Height adjustment

※It is recommended to make this adjustment before installation of duct when fresh air intake.

●Readjust the height of the Multi-functional casement ① with the gauge which is attached to the grille as show right.



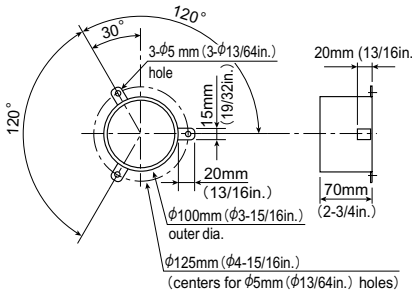
4 Installation of duct (in case of fresh air intake)

Caution	Linkage of duct fan and air conditioner
	●In case that a duct fan is used, be sure to make it linked with the air conditioner when outside air is taken. Do not run the duct fan only. It can cause dew drop.

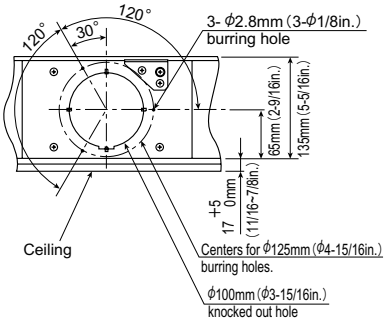
Making a duct flange (prepared locally)

●The shape of duct flange shown right is recommended.

Duct flange recommended shape (Thickness: 0.8mm (1/32in.) or more)

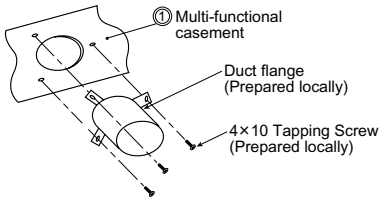


Details of air inlet (Example)



Installation of duct flange

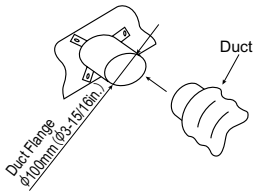
●Install a duct flange to each knock out hole of the Multi-functional casement ① with three 4x10 tapping screws which should be prepared locally.



Installation of duct (should be prepared locally)

●Prepare a duct of which inner diameter fits into the outer diameter of the duct flange.

●In case that the environment above the ceiling is high temperature and high humidity, wrap the duct in a heat insulator to avoid causing dew drop on the wall.

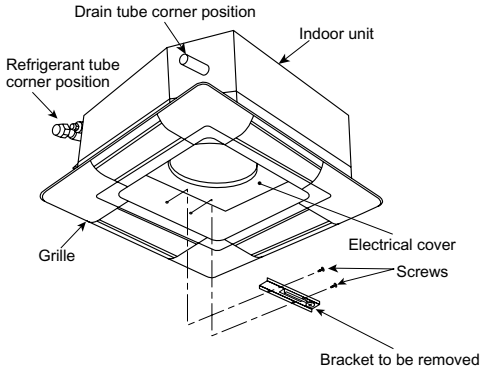


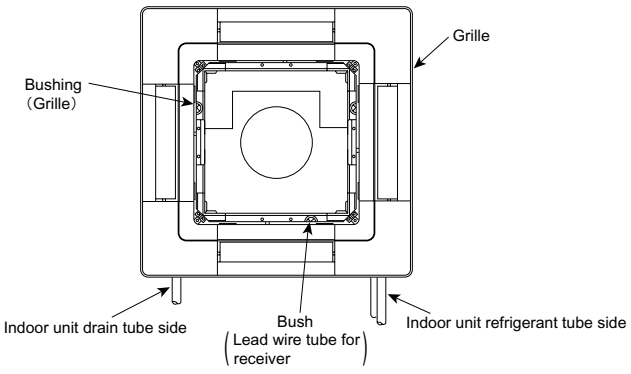
5 Installation of grille

●Installation should be done in accordance with the manual which is attached to the grille.

When the electrical cover of the indoor unit is removed, be sure to remove one of the brackets (two screws) of the Multi-functional casement ① first as shown right.

Each lead wire for the grille should be run through the bushing of the Multi-functional casement as shown below, and be connected to the indoor unit.





6 Installation of High-efficiency filter element (same procedure for replacement)

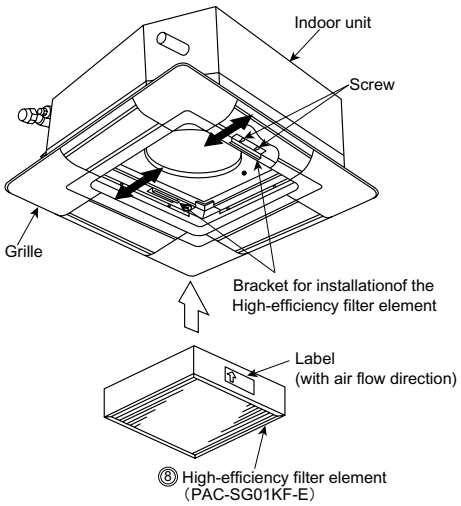
●Remove the intake grille of the grille in advance.

●Loosen the four screws of bracket for installation of the High-efficiency filter element of the Multi-functional casement ① as shown right. Then, slide them outside.

●Make sure of the air flow direction with the label put on the side of the High-efficiency filter element.
Set it to the Multi-functional casement ① , and slide back the bracket for installation of the High-efficiency filter element to the original position, then fix it with screws.

※When the indoor unit is used with "2 ways" air outlet, the High-efficiency filter element is not available.

※When the High-efficiency filter element is installed, the operation noise can be larger.



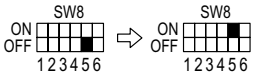
7 Air flow volume setting when High-efficiency filter element is installed

※In case that High-efficiency filter element is installed, it is necessary to set up the air flow volume.

Caution	Set up for increasing air flow volume
	●If the set up is not done correctly, the air flow volume will decrease and it can lower the performance and cause dew drop.

1）In case that the combination indoor unit is AK type:

●Set the DIP switch "SW8" on the Indoor controller board of the indoor unit to ON.

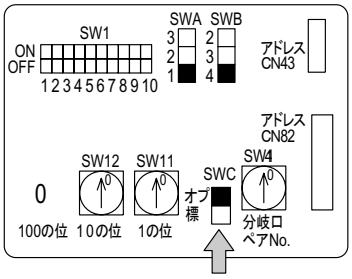


2）In case that the combination indoor unit is VAM type:

●Set the switch SWC on the address board in the indoor unit to 『オプ』.
（The factory default setting is 『標』）

〔『オプ』＝ OPTION　『標』＝ STANDARD 〕

〈Address board〉



3）In case that the combination indoor unit is AA type:

●Set up the remote controller. Refer to the chapter "Electrical work" in the installation manual for the indoor unit.

Space Panel

PAC-SG04AS-E

Photo

TO BE CONFIRMED

Descriptions

Enables to install cassette-type indoor units even if the ceiling height is low. A part to install the panel 40 millimeters lower than the ceiling surface.

Applicable Models

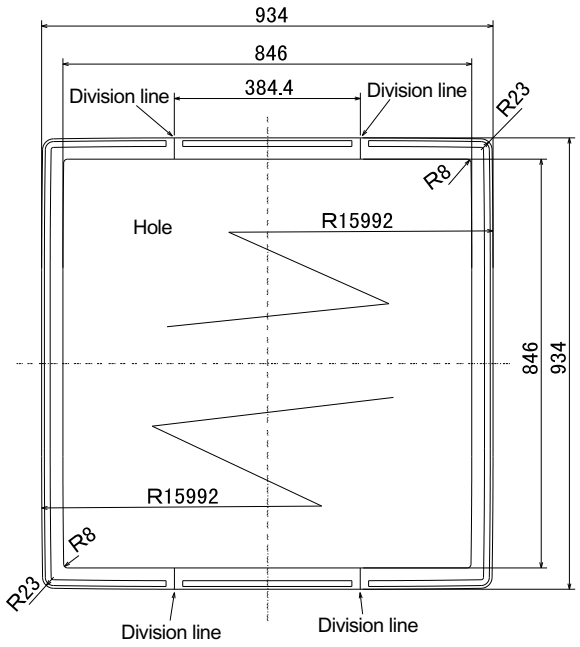
- PLA-RP AA
- PLH-P AAH

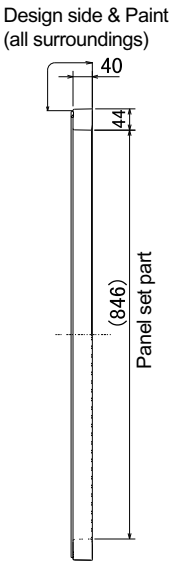
Specifications

Exterior	Color (Munsell No.)	White (0.70Y 8.59/0.97)
	Surface treatment	Coating
	Material	Styrofoam

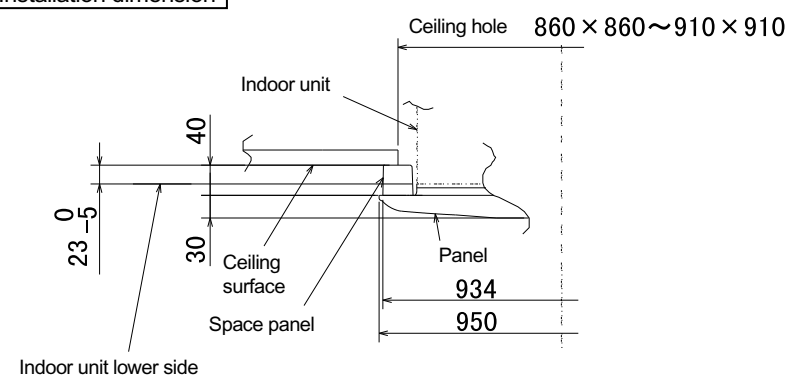
Dimensions

Unit : mm





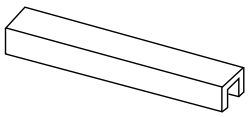
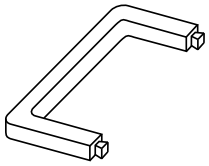
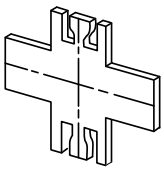
Installation dimension



How to Use / How to Install

1. Checking packed parts

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

Part No. /Part name	① Space panel (M)	② Space panel (S)	③ Gauge for installation
Quantity	2	2	1
Shape			

2. Installing space panel

- ●Install before installing decorative panel.
- ●This space panel is to be installed on decorative panel before installing on unit body.
  (If decorative panel has already been installed, remove it.)

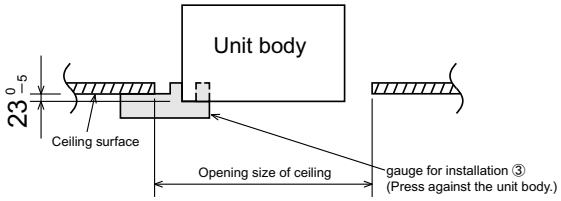
Preparation for installation

（1）Checking size of opening in ceiling

- ●Make sure that opening in ceiling is within the range shown below:
  860×860～910×910

（2）Positioning of ceiling surface and unit body

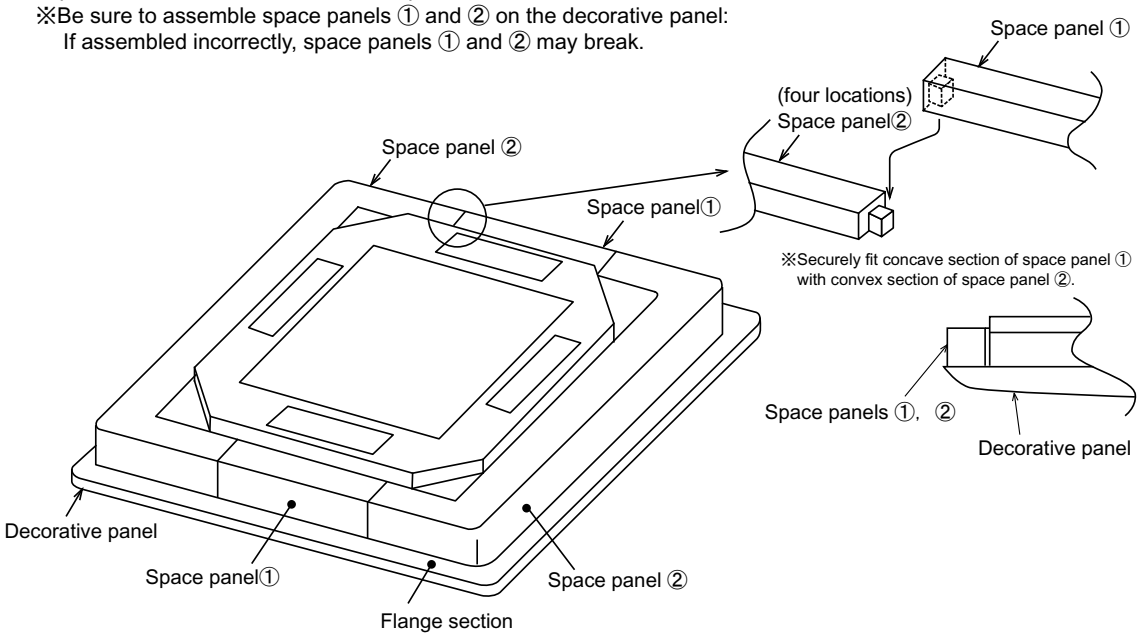
- ●Using provided gauge for installation ③, position the ceiling surface and unit body.
  If position of ceiling surface and unit body does not match, it may result in leak of draft, drip of dewdrops and incorrect operation of horizontal vane of decorative panel, etc.



Setting the decorative panel and space panel

- ●Place the space panels ① and ② (two locations), matching the flange section of decorative panel, and assemble space panels ① and ② on the decorative panel and then set them.

※Be sure to assemble space panels ① and ② on the decorative panel:
If assembled incorrectly, space panels ① and ② may break.

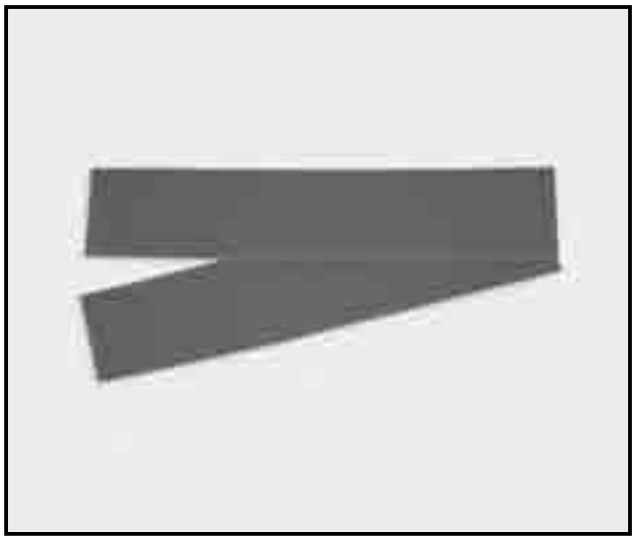


Installing on the unit body

- ●The procedures are the same as those for decorative panel.
  Install the assembled set, referring to the installation manual for decorative panel.

Shutter Plate (2 peices) PAC-SG06SP-E

Photo



Descriptions

Part to block the air outlet of a cassette-type indoor unit.

Applicable Models

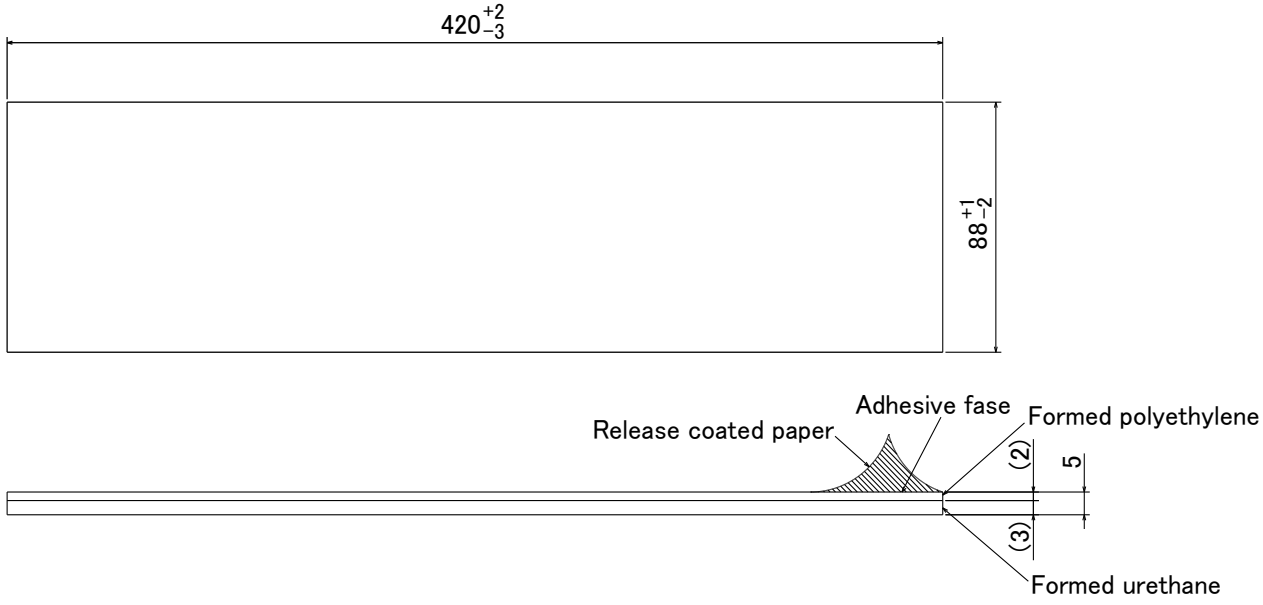
- PLA-RP AA
- PLH-P AAH

Specifications

Air outlet pattern	Number of shutter plates 4 directions → 3 directions: 1 4 directions → 2 directions: 2 (Change to 1 direction is not possible.) Note 1: Selecting "2 directions" requires cleaning of the filter approximately once. (Filter clogging may cause cooling/heating performance to drop.) Note 2: Selecting "3 directions" or "2 directions" may increase operating sound. Note 3: "2 directions" should not be selected when operating in high-temperature/high-humidity environment. (Dew formation or dewdrop may result.)
Material	Foamed polyethylene + Foamed urethane
Color	Black
Installation method	Glued to the air outlet of the indoor unit.

Dimensions

Unit : mm



How to Use / How to Install

1. Locate the Shutter Plate installation position

● This is a part which is used to convert the number of air-outlet from "4 ways" to "3 ways" or "2 ways". (Convert to "1 way" is not available.)

● Select the outlet direction and the outlet to be closed (Indoor unit).

※ When the number of outlet is selected to "2 ways", be sure to ex-plain to the customer that the filter should be cleaned once a month. (Otherwise the filter will be clogged, and the performance of the cooling and heating can be lower.)

※ When the number of outlet is selected to "3 ways" or "2 ways", the operation noise can be lowder.

※ Never to select "2 ways" in the environment of high tempreture and high humidity. (It can cause dew.)

2. Installation of shutter plate (fig.1)

● Install the shutter plate to the indoor unit so that it can fit the air-outlet concave porthion.

※ Install one piece of shutter plate per one air-outlet.

※ The installation should be done before the grille is installed.

※ The shutter plate must be installed not to cause wrinkl eor gap. (It can cause dew drops.)

3. Function selection

● When the number of air-outlet is changed, it is necessar you to make function selection. For the selection method, refer to the manual for installation of the indoor unit.

4. Setting of the auto vane (fig.2)

● It is possible to fix the auto vane of the grille to the totally closed portion, which is applied to the air-outlet installed on the shutter plate.
In accordance with the request from customers, make setting after the installation manual of the grille.
Once the auto vane is fixed, the operation of a remote control and all of automatic control will not be available.
Also, the LCD of the remote control will not work.

fig.1

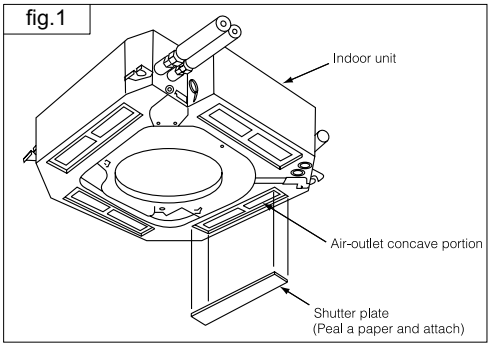
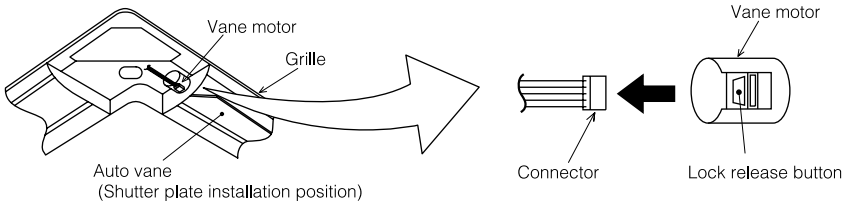


fig.2

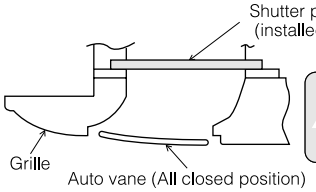
1) Shut the main power (circuit breaker) off.

⚠ Warning	Shut the main power off.
	●The fan of the unit will run, which can cause accident or electric shock.

2) Disconnect a connector of the vane motor of the grille which is applied the air-outlet installed on the shutter plate.
(Disconnect the connector to arrow direction with keep depressing the lock release button as shown below.)
Insulate the connector which was disconnected with an electric tape.



3) Move the auto vane of the air-outlet which is equipped with the shutter plate slowly by manual and bring it to totally closed position.



⚠ Caution	Do not totally close the vertical air flow control vane of the air-outlet which is not equipped with the shutter plate.
	●The dew or dew drop can be caused, and the unit cannot work correctly.

Photo

TO BE CONFIRMED

Descriptions

Raises drain generated during unit's operation to seure the appropriate angle of the drain pipe.

Applicable Models

- PEAD-RP EA
- PEAD-RP GA
- PEHD-P EA

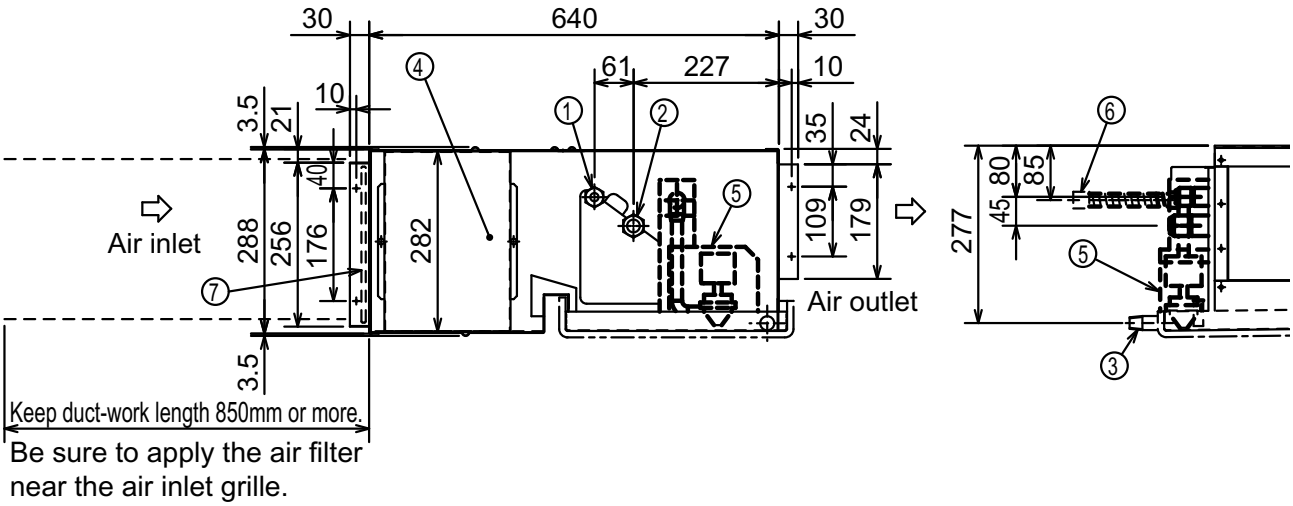
Specifications

TO BE CONFIRMED

Dimensions

Unit : mm

In case of rear inlet



① Refrigerant piping flare connection (liquid Φ F copper tube):HP
② Refrigerant piping flare connection (gas ΦG copper tube):LP
③ Drain R1(External thread)
④ Electrical parts box
⑤ Drain Pump (Option)
⑥ Drain Pipe (Option) ... Flexible joint VP-25(I.D. Φ32)) Set
⑦ Filter

How to Use / How to Install

TO BE CONFIRMED

Photo

Descriptions

Raises drain generated during unit's operation to seure the appropriate angle of the drain pipe.

Applicable Models

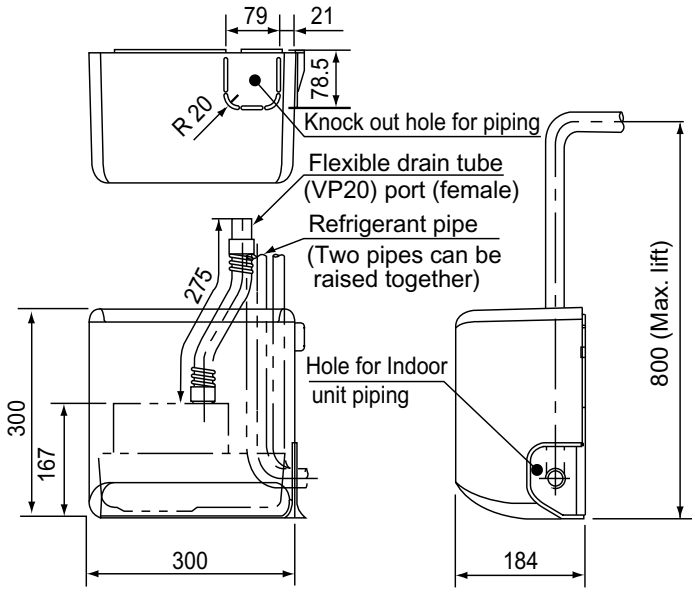
- PKA-RP60FAL
- PKA-RP71FAL
- PKA-RP100FAL
- PKH-P60FALH
- PKH-P71FALH
- PKH-P100FALH

Specifications

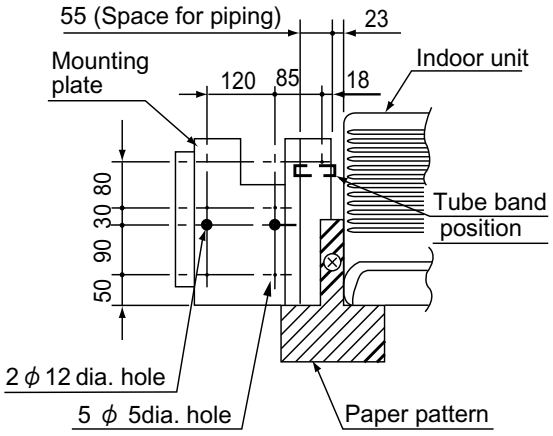
Rated voltage		200-240V 50Hz / 220V 60Hz
Power cunsumption		17 / 15W
Open current		0.17 / 0.15A
Discharge lift		Max. 460mm from indoor unit's top surface
Discharge rate		24/h or higher (when operated with lift 800mm and water level 13mm)
External dimensions (mm)		300 (H) x 300 (W) x 184 (D)
Exterior		Cover : ABS resin (Munsell 3.2Y 8.3/1.0)
Operating conditions	Drain water tempreture	0 to 50℃ (no freezing)
	Ambient tempreture	-10 to 50℃
	Ambient humidity	95%RH or less
Driving motor		Single, shading type (Class E insulation)
Drain piping		Connected to drain outlet. PVC pipe VP-20 (ED:Φ 26) can be used

Dimensions

Unit : mm



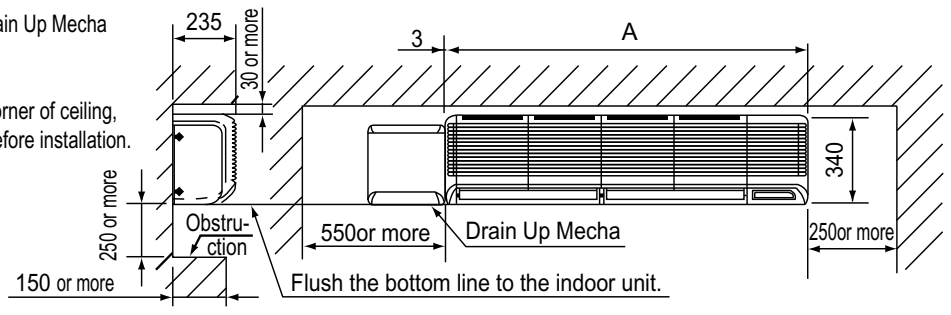
Dimension of Mounting plate



Required space for installation of Drain Up Mecha (Maintenance space)

※In case that there is a rim at the corner of ceiling, consider the dimension of the rim before installation.

Models	A
2.5, 3 / 60, 71	1400
4 / 100	1680

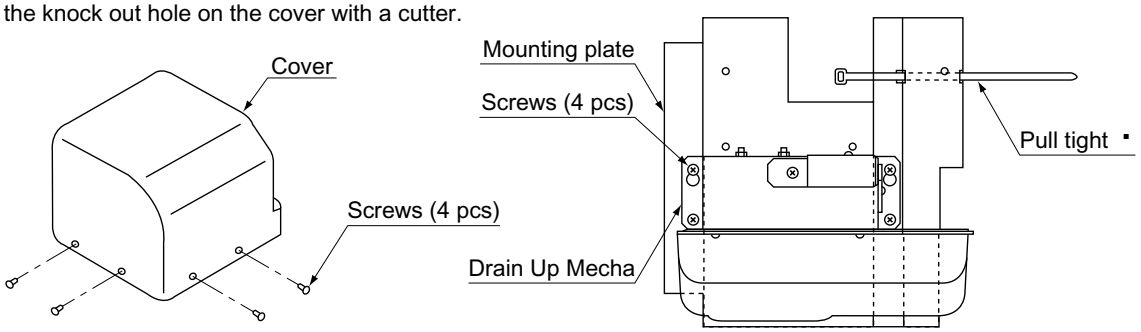


How to Use / How to Install

1. Before installation of the Drain Pump (※Position the indoor unit first.)

1-1 Set up of the Drain Up Mecha

●Remove the cover and the mounting plate which is fixed on the back of the Drain Up Mecha each.
※The packaging material which is put between the cover and the Drain Up Mecha is only for cushion for transportation. Take it out as it is unnecessary.
※ Take out the accessories.
●Run the pull tight ▪ attached through the square hole on the mounting plate.
●Cut the knock out hole on the cover with a cutter.

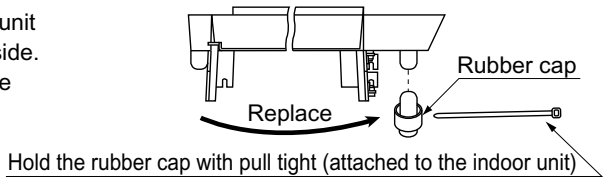


※The screws removed will be used later. Keep them not to lose.

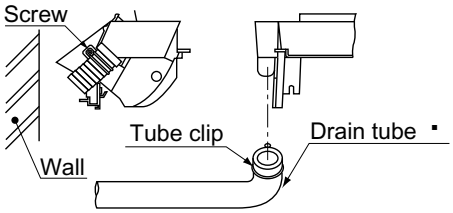
1-2 Set up and installation of the indoor unit (※See the item of piping connection set up in the installation manual of the indoor unit.)

(1) Make the knock out hole for left side piping on the left side panel.

(2) Remove the drain hose (will not be used) of the indoor unit and replace the drain rubber cap from left side to right side.
●Loosen the tube clip which holds the drain tube before removing the drain tube.
●The tube clip removed will be used when the Drain Up Mecha will be installed. Keep the tube clip.



(3) Connect the drain tube ▪ attached to the left side drain port, and fix it with the tube clip which was removed from right side.
※Tighten the tube so that the screw will face to the wall. (Otherwise, it will be difficult to put the side panel.)

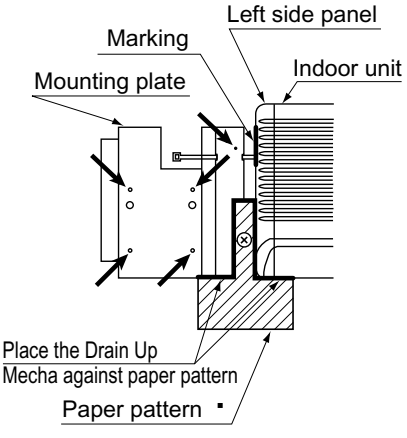


(4) Install the indoor unit.
※The indoor unit must be installed horizontally. Otherwise, the water can leak and it will make the wall dirty.
●After the indoor unit has been installed, install the left side panel.

2. Installation of the Drain Up Mecha

2-1 Fixing of the mounting plate

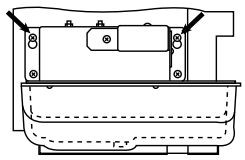
●The installation place should be carefully considered if it is proper for installation. If it is not strong enough to hold the unit, make it stronger by using board or beam before installation.
(1) Decide the installation position of the mounting plate by using the paper pattern ▪ attached.
(※The left end of the indoor unit should be marked in advance.)
▪ Fix the paper pattern on the wall with the screw ▪ (M4x16) attached with putting it to the left side panel of the indoor unit for positioning of the Drain Up Mecha as shown in the drawing.
▪ Position the mounting plate with pushing it against the paper pattern.
(2) Fix the mounting plate with the screws ▪ (M4x35) attached.
(5 locations pointed by arrows in the drawing.)
In case that the mounting plate is fixed by fixing bolts (through bolts, bolt anchors, or nut anchors), get M10 or W3/8 screws locally and put them into 2 x 12 dia. holes of the mounting plate to fix it.
(3) When the mounting plates is installed, remove the paper pattern.



2-2 Installation of the Drain Pump

●Fix the Drain Up Mecha on the mounting plate
- Install the screws to the 2 upper holes (pointed by arrows in the drawing) of the mounting plate by hand tight and hook the Drain Up Mecha on the screws.
- Level the Drain Up Mecha by using a spirit level. Then tighten the 4 screws securely to fix the Drain Up Mecha.

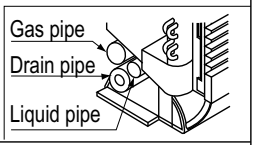
※The Drain Up Mecha must be leveled. Otherwise, the water leaks and it makes wall dirty.



3.Installation of refrigerant piping (※See the item of refrigerant piping connection in the installation manual of the indoor unit.)

(1) Remove the right and left side panels of the indoor unit.
(2) Remove the bottom panel of the indoor unit.
(3) Install the tube by the way of left piping.
(4) In case that the refrigerant tube is raised together with the drain tube, run the both pipes in the space for tube.
- ●Be sure that the indoor unit must be positioned at the place where was marked at 4-1.
- ●The bending radius of the refrigerant pipe must be R80 or less.
- ●The tube raised should be fixed with the pull tight which was put through the square hole of the mounting plate.

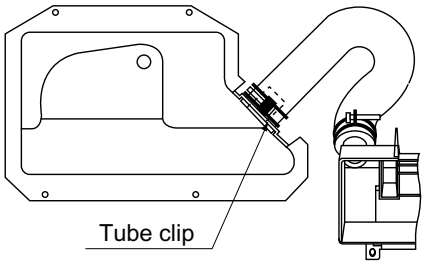
(5) The refrigerant pipe should be arranged in the left piping space of the indoor unit like the right drawing.



4. Installation of drain piping

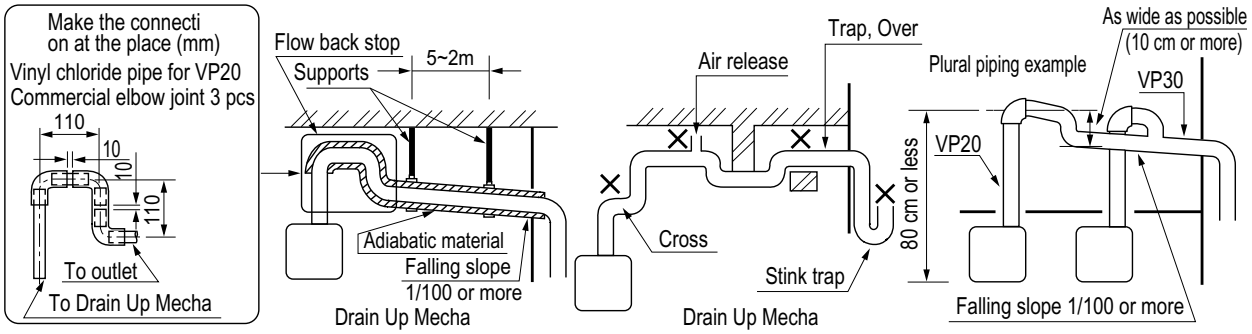
4-1 Connection of drain tube

(1) Connect the drain tube ▪ which is installed to the left side drain port of the indoor unit to the drain port of the Drain Up Mecha.
(2) Fix the connection port securely with the tube clip ▪ attached.
(3) Connect the flexible drain tube which is run from top panel of the Drain Up Mecha with the drain tube at the place. The part connected must be closed by vinyl chloride type glue.
(4) Insulate the flexible drain tube runs from Drain Up Mecha with the drain tube cover ▪ attached.



4-2 Installation of drain piping

(1) The drain pipe should be installed in accordance with the following procedure.
- ●The drain pipe should be installed so that the outdoor side (drain side) becomes falling slope (1/100 or more) and do not make trap or go up.
- ●The horizontal run of the drain pipe should be 20 m or less. In case that the tube is horizontally run for long distance, some support brackets should be installed to prevent the pipe from being wavy. Never install the air drain pipe. The drain will blow out.
- ●The hard vinyl chloride pipe VP20 (outer dia. 26mm) should be used for the drain pipe. And the part connected must be closed by vinyl chloride type glue to prevent water leak.
- ●Be sure to wrap the drain pipe with adiabatic material (foam polyethylene : specific gravity 0.03, thickness 9 mm or more).available on the market.
- ●Do not install stink trap to the outlet of the drain pipe.
- ●The outlet of the drain pipe should be installed the place where it is not possible to cause stink.
- ●In case that plural drain pipes are installed, install the main pipe so that it comes approximately 10 cm lower than the drain outlet and the pipes must be made of material of VP30 or similar and they should be falling slope (1/100 or more).
- ●It is possible to raise the outlet of the drain pipe (pop lift) to 80 cm from bottom face of the indoor unit. However, if there is horizontal part the water will over flows from drain pan, because the too much water flow back when the operation stops. Therefore, the drain pipe must be raised vertically. Also, install the flow back stop at the heights point to prevent the water from flow back from the horizontal part of the pipe. See the drawing below.



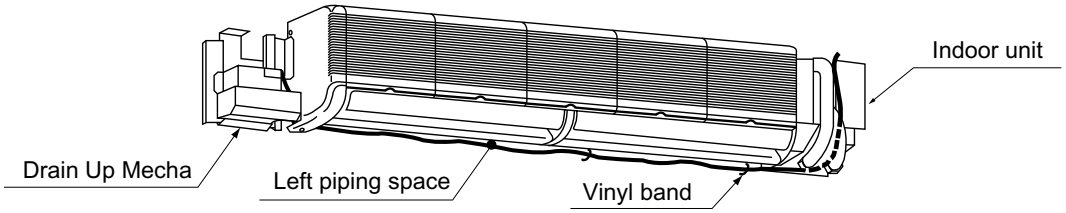
5. Electric wiring

5-1 Set up of the indoor unit (※See the item of electric wiring in the installation manual of the indoor unit.)

(1) Remove the board cover and terminal cover from the electric box.

5-2 Electric wiring

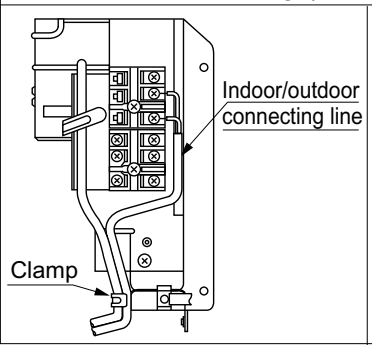
- The electric wires should be run to the electric box together with the lead wires for bane motor through the left tubing space of the indoor unit as the drawing below.
- The electric wires should be tightened together with refrigerant tube by vinyl band which is attached to the left tubing space of the indoor unit.

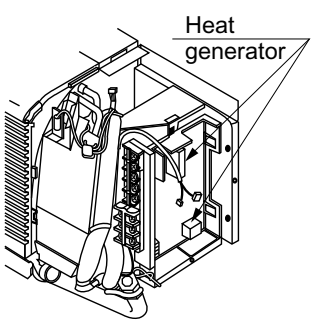


5-3 Electric wiring operation

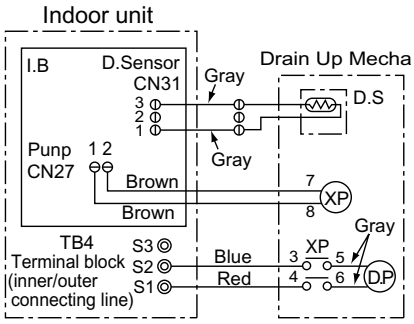
- The power wires (lead wires with round terminal) should be connected to the terminals S1 and S2 of the terminal block for inner/outer connecting line.
- The lead wire with connector should be connected to the connectors "CN27" and "CN31" each. At this time, remove the bypass connector (will be unused) from the terminal CN31 of the control board.
- Be sure not to have the lead wires touch the heat generator (heat sink) on the control board.

Electric wiring (around electric box)





Electric circuit diagram

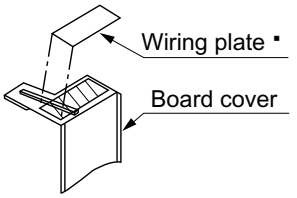


Symbol	Name	Symbol	Name
TB4	Terminal block (inner/outer connecting line)	DP	Drain pump
I.B	Indoor control board	DS	Drain sensor
CN27	Connector (Pump)	XP	Relay (Drain pump)
CN31	Connector (D.Sensor)		

Note: ◎ stands for terminal connection.
⊖ stands for connector joint.

Wiring plate

- Put the Wiring plate ▪ on the top face of the board cover.



- When the wiring has been completed, put the each cover of the indoor unit and right side panel back in place.

6. Test run

★After the installation of the Drain Up Mecha has been completed, make sure that the drain works correctly and the water does not leak from any part of connection.

(1) Pour water
Remove the left side panel of the indoor unit and pour water approximately 800cc to the drain pan. (※If the water is poured too much, it is possible that the drainage does not work due to alarm stop by activation of drain over flow protection device.

(2) Test run
In accordance with the procedure for test run in the installation manual for the indoor unit, operate the air cooling and make sure that the drainage works and the water does not leak.
※When the Drain Up Mecha is installed in winter season, the water must be drained.
To drain water, remove the drain plug under the Drain Up Mecha. Use the drai pan.
When the drainage has been completed, put the drain plug back in place.

(3) After checking, put the side panel and cover back in place in order.
※Install the indoor unit left side panel first and make sure that the left end of the indoor unit perfectly comes on the point marked at 4-1. (If they do not match, it causes problem that it will not be able to the cover or there will be gap between the cover and the indoor unit.)

Drain Pump for Ceiling Suspended models PAC-SH20DM-E

Photo

Descriptions

Raises drain generated during unit's operation to seure the appropriate angle of the drain pipe.

Applicable Models

- PCA-RP50GA
- PCH-P50GAH
- PCA-RP60GA
- PCH-P60GAH

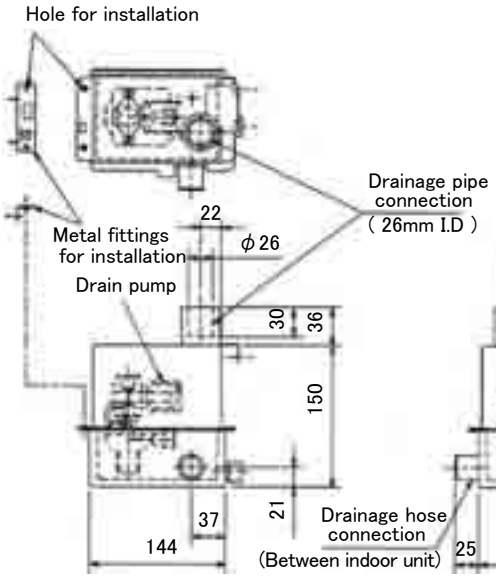
Specifications

Rated power		200V AC, single-phase, 50/60Hz
Power consumption		10.9/9W
Operating current		0.12/0.10A
Drain lift		Max. 400mm from indoor unit's top surface
Discharge rate		36l/h or higher (when operated with lift 600mm and water level 13mm)
Operating conditions	Liquid temperature	0 to 50℃ (no freezing)
	Ambient temperature	-10℃ to 50℃
	Ambient humidity	RH95% or less
Driving motor		Shading type (Class E insulation)
Drain piping		Connected to drain outlet. PVC pipe VP-20 (ED: Φ26) can be used.
Accessory		Piping hole cover, Drain hose (between this device and indoor unit), VP-20 pipe (300mm), L-shape connection pipe (liquid, gas), Metal fittings for installation, Fixing screw (ST4x10), Heat insulator (for drain hose, VP-20 pipe, L-shape connection pipe)VP-20 (ED: Φ26) can be used.

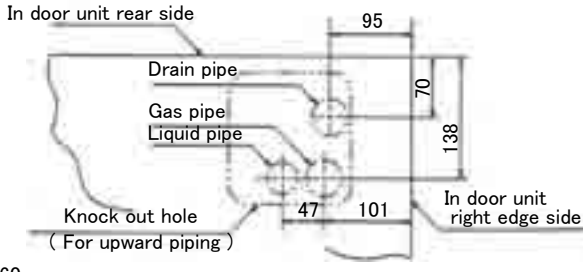
Dimensions

Unit : mm

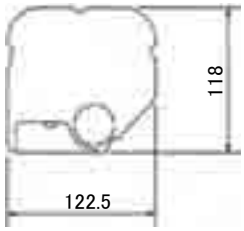
Drain pump



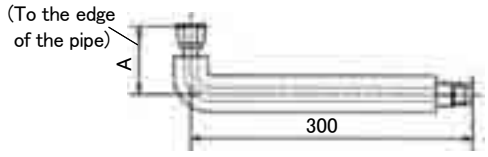
Piping position



Pipeing hole cover



L shape connection pipe



Item	Liquid	Gas
Piping diameter (Flare size)	ϕ6.35 (1/4 F)	ϕ12.7 (1/2 F)
A	55	68

How to Use / How to Install

1 Confirming Supplied Accessories

* Before starting installation, make sure that the following accessories are present.

①Drain lift up mechanis	②Attachment	③Screws (4 × 10)	④VP-20 pipe	⑤Pipe cover	⑥Flexible hose	⑦Fastener
× 1	①Drain-up machine fixture × 1	For the insulation of drain-up machine① × 6	× 1	For insulation of VP20pipe④ × 1	× 1	× 2

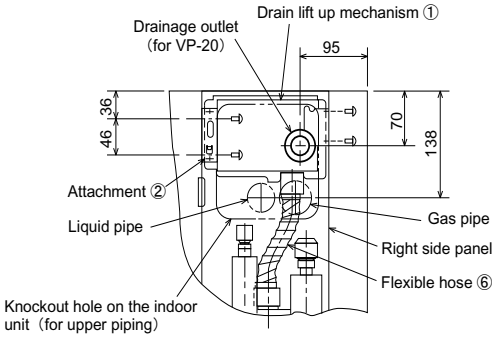
⑧L-shaped pipe (gas pipe)	⑨L-shaped pipe (liquid pipe)	⑩Insulator A	⑪Insulator B	⑫Rear side hole cover	⑬Screw cap
× 1	× 1	6t × 220 × 80 (For internal insulation) For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes. × 2	3t × 250 × 120 (For external insulation) For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes. × 2	× 1	× 2

2 Installation Diagram of the Drain Pump

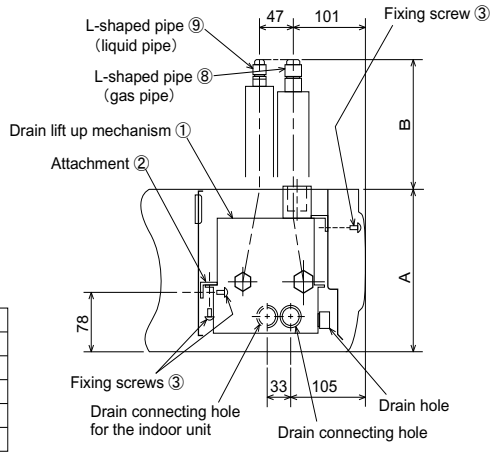
* This drain lift up mechanism must be installed inside an indoor unit.
* Installing this drain lift up mechanism enables upward discharge of drainage and refrigerant.
* To facilitate installation of the drain lift up mechanism, it should be installed before indoor unit.
* The size of the plumbling that must connect, by the refrigerant kind of the indoor unit that corresponds in the case of PAC-SH16,17, 20, 22DM-E, changes.
* Please refer to the installation manual of an indoor unit for details.
* The L-shaped pipes there are bringing are corresponding to either refrigerant

Unit:mm

Viewed from the Top



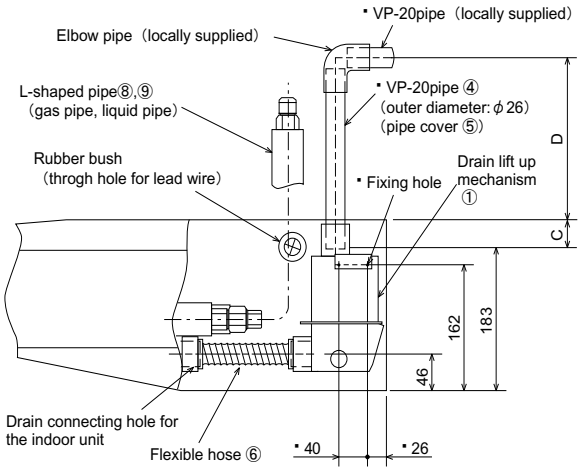
Viewed from the Front



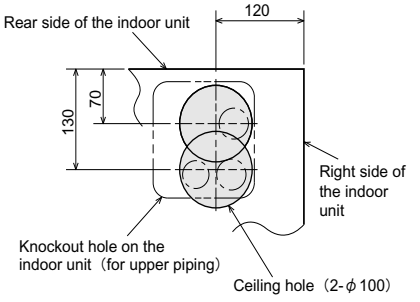
〈Table 1〉

Gas pipe	Liquid Pipe	A	B	C	D	Drain lift up mechanism Model
φ12.7	φ6.35	210	210	38	Max.400	PAC-SE84
φ15.88	φ9.52	210	210	38	Max.400	PAC-SE85 / SH21
φ19.05	φ9.52	270	150	98	Max.350	PAC-SE86
φ12.7/φ15.88	φ6.35/φ9.52	210	210	38	Max.400	PAC-SH16 / 20
φ15.88/φ19.05	φ9.52	270	150	98	Max.350	PAC-SH17 / 22

Viewed from the Right

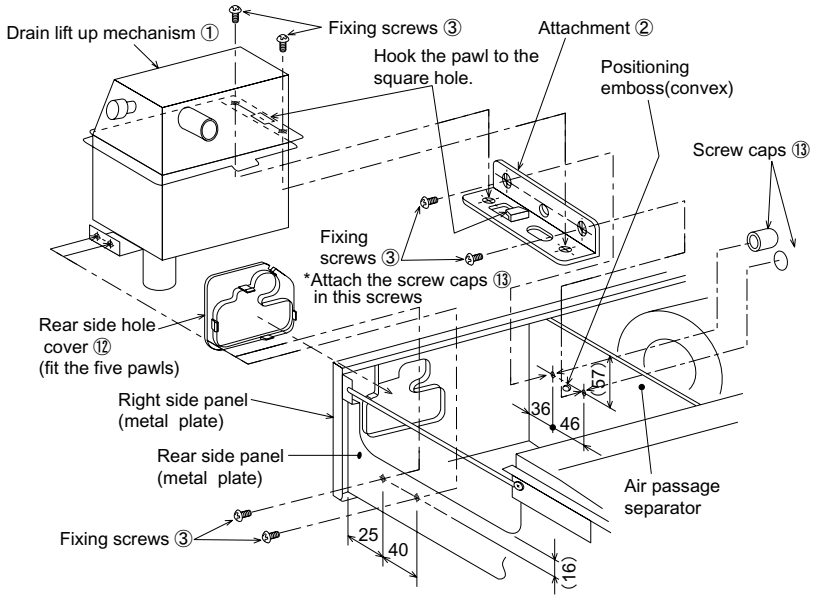


Positions of Holes on the Ceiling



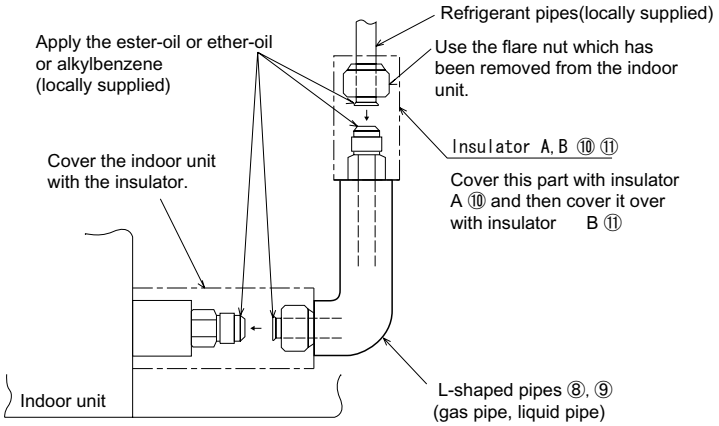
3 Installing the Drain Pump

1.Remove the intake grille and side panel. (Refer to the indoor unit installation manual.)
2.Prepare the knockout hole to be used for the upper piping of the indoor unit.
3.Fix the attachment ② with the fixing screws ③(×2).
Attach the screw caps ⑬(×2) in the screws that is exposing it in the reverse side of the Air passage separator, after the Attachment fixed it.
4.Fix the drain lift up mechanism ① with the fixing screws ③(×4)
5.Fit the rear side hole cover ⑫ into the piping hole on the rear side panel.



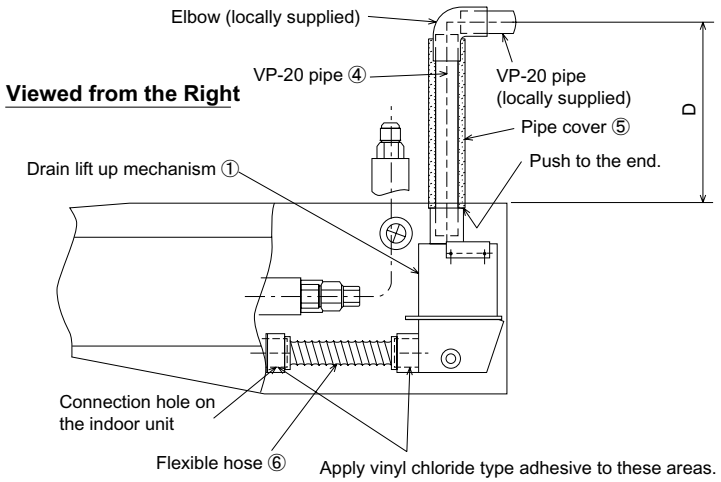
4 Refrigerant Piping

*For details on piping, refer to the installation manual of the indoor unit.
[With the stop valve of the outdoor unit fully closed]
1.Apply lubricant to the flare sheet of the L-shaped pipes (gas pipe, liquid pipe) ⑧⑨
2.Remove the flare nut and cap from the indoor unit.
3.Apply lubricant to the flare sheet connecting section of the indoor unit.
4.Connect the L-shaped pipes (gas pipe, liquid pipes) ⑧ and ⑨ quickly.
5.Fit the removed flare nut to the existing pipes and carry out flaring.
6.Connect the L-shaped pipes with the existing pipes in the sam e way.
7.Cover each connection with heat insulator ⑩⑪
[After the refrigerant circuit is complete]
8.Purge the air from the stop valve service port of the outdoor unit.
9.Fully open the stop valves (both liquid and gas).
* The method for handing the stop valve is described on the out door unit.



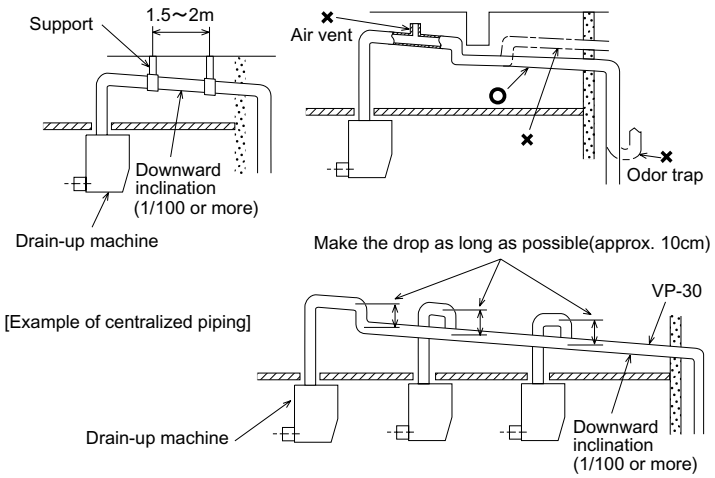
5 Drain Piping

1.Apply vinyl chloride type abhesive to the drainage outlet of the drain lift up mechanism ① , then insert the VP-20 pipe ④ into it, (30mm deep)
2.Connect the insert the VP20 pipe ④ and existing drain pipe using a 90-degree elbow etc. and adhesive.
3.Cover the VP-20 pipe ④with the pipe cover ⑤.
4.Apply vinyl chloride type adhesive to the drain lift up mechanism ① and drain connecting hole on the indoor unit, then insert the flexible hose ⑥ into them.
Take care that the hose does not twist.
*Insulate all pipes, form the drain lift up mechanism up to the outside.



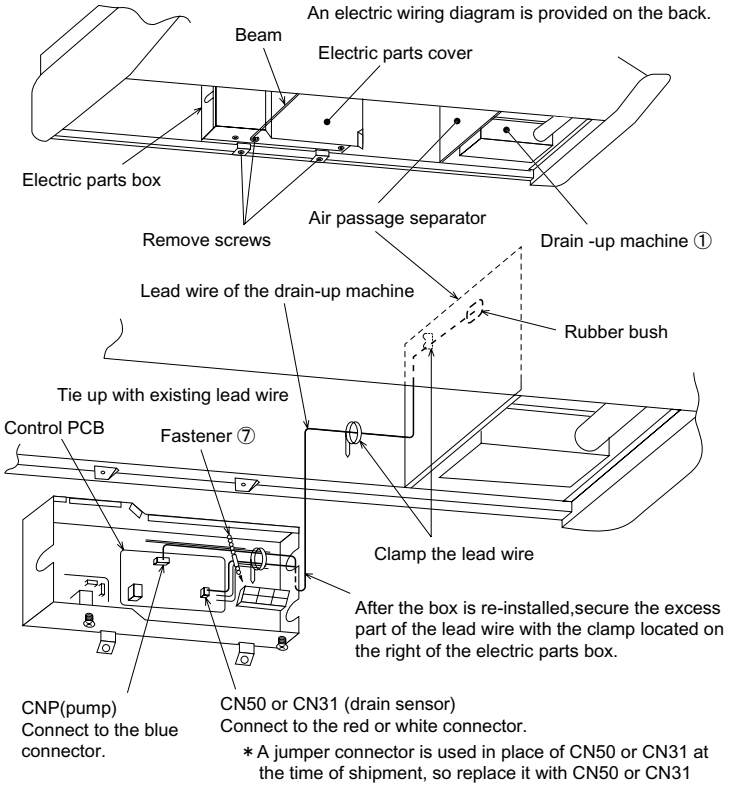
[Make sure to follow the following points during drain piping.]

*Keep the max. length of "D" within the requirement shown on table1.
*Incline the drain pipe downwards (1/100 or larger) to the drainage side (outdoor).
*Do not create traps or peaks.
*Keep the horizontal piping within 20m. Use fixtures to prevent the pipe from waving.
*Do not install air vent pipes. The drainage may spout out.
*Use general-purpose hard vinyl chloride pipes (outer diameter: ϕ26) and apply vinyl chloride type adhesive to prevent any leakage.
*Cover with insulator (made of foamed polyethylene, with specific gravity of 0.03 thickness of 9mm or more).
*Do not install odor trap at the drain outlet.
*Locate the end of pipe at a point where odor is unlikely to occur.
*Do not insert the pipe directly into a drainage ditch where sulfur gas may be produced.
*Use VP-30 pipes for centralized piping. Install the centralized drain pipe approximately 10cm below the output of pipes connected from the drain lift up mechanism.



6 Electric Wiring

*Refer to the installation manual of the indoor unit together with this manual.
*Perform the work after checking that the power supply is off.
1.Remove the beam.
2.Remove the electric parts cover.
3.Pull the electric parts box downwards.
4.Pass the lead wire of drain lift up mechanism ① through the rubber bush on the air passage separator.
5.Connect each lead wire to the CNP and CN50 or CN31 connectors provided on the control PCB of the indoor unit.
6.Tie up the lead wires with the fastener ⑦ so that the wires do not come apart inside the electric parts box.
7.When the wiring is finished, re-install the electric parts box, its cover and the beam.



*The positions of the connectors which must be connected to the control PCB in certain models differ from those specified in the above diagram. Make sure that the lead wires are connected to CNP and CN50 or CN31 connectors.

*

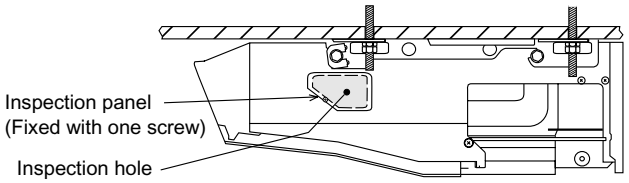
Drain sensor	Model
CN50 (red connector)	PAC-SE84～86DM-E
CN31 (white connector)	PAC-SE84～86DMA-E PAC-SH16, 17DM-E PAC-SH20～22DM-E

7 Test Run

*Through this test run, check that drainage is discharged properly and that there is no water leakage from any of the connections.
*Refer to the installation manual of the indoor unit together with this manual.

1.Supplying water

Remove the inspection panel from the right-side panel Supply approximately 1000cc of water to the inspection hole.

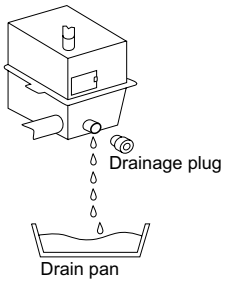


2.Carrying out a test run

Turn the power ON.
Press the TEST RUN button on the remote controller twice.
Press the MODE button to select cooling mode.
*The drain lift up mechanism will be activated to start discharging the water.
Check whether water is discharged properly.
Press the POWER ON/OFF button to cancel the test run.
Turn the power OFF.

3.Re-install each part after checking.

*If the drain lift up mechanism is installed at the time of the year when heating is used, make sure that the drainage has been removed.
After removal of the drainage, reinstall the drainage plug.



Photo

Descriptions

Raises drain generated during unit's operation to seure the appropriate angle of the drain pipe.

Applicable Models

- PCA-RP71GA
- PCH-P71GAH

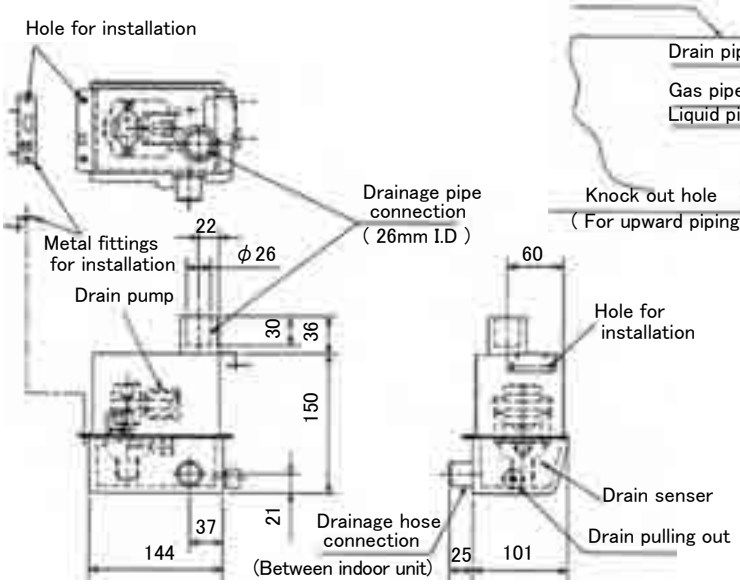
Specifications

Rated power		200V AC, single-phase, 50/60Hz
Power consumption		10.9/9W
Operating current		0.12/0.10A
Drain lift		Max. 400mm from indoor unit's top surface
Discharge rate		36l/h or higher (when operated with lift 600mm and water level 13mm)
Operating conditions	Liquid temperature	0 to 50℃ (no freezing)
	Ambient temperature	-10℃ to 50℃
	Ambient humidity	RH95% or less
Driving motor		Shading type (Class E insulation)
Drain piping		Connected to drain outlet. PVC pipe VP-20 (ED: Φ26) can be used.
Accessory		Piping hole cover, Drain hose (between this device and indoor unit), VP-20 pipe (300mm), L-shape connection pipe (liquid, gas), Metal fittings for installation, Fixing screw (ST4x10), Heat insulator (for drain hose, VP-20 pipe, L-shape connection pipe)VP-20 (ED: Φ26) can be used.

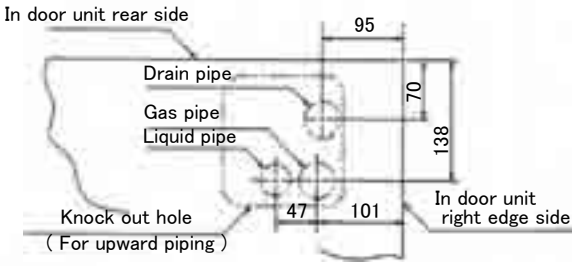
Dimensions

Unit : mm

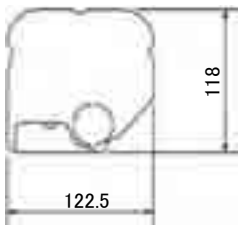
Drain pump



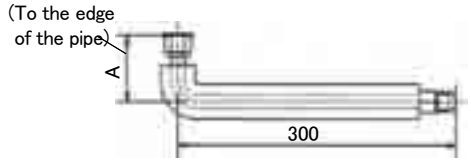
Piping position



Pipeing hole cover



L shape connection pipe

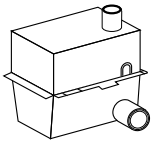
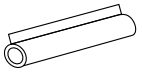
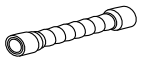
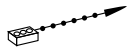


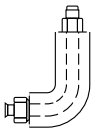
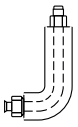
Item	Liquid	Gas
Piping diameter (Flare size)	ϕ 9.52 (3/8 F)	ϕ 15.88 (5/8 F)
A	45	65

How to Use / How to Install

1 Confirming Supplied Accessories

* Before starting installation, make sure that the following accessories are present.

①Drain lift up mechanis	m②Attachment	③Screws (4×10)	④VP-20 pipe	⑤Pipe cover	⑥Flexible hose	⑦Fastener
 ×1	 ①Drain-up machine fixture ×1	 For the insulation of drain-up machine① ×6	 ×1	 For insulation of VP20pipe④ ×1	 ×1	 ×2

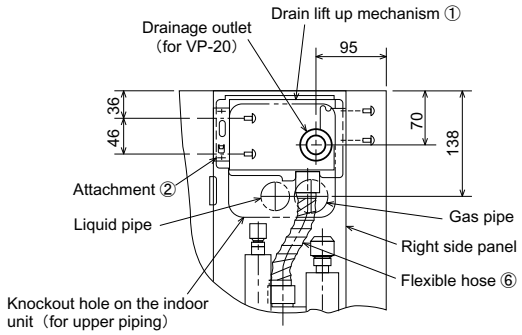
⑧L-shaped pipe (gas pipe)	⑨L-shaped pipe (liquid pipe)	⑩Insulator A	⑪Insulator B	⑫Rear side hole cover	⑬Screw cap
 ×1	 ×1	6t×220×80 (For internal insulation)  For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes. ×2	3t×250×120 (For external insulation)  For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes. ×2	 ×1	 ×2

2 Installation Diagram of the Drain Pump

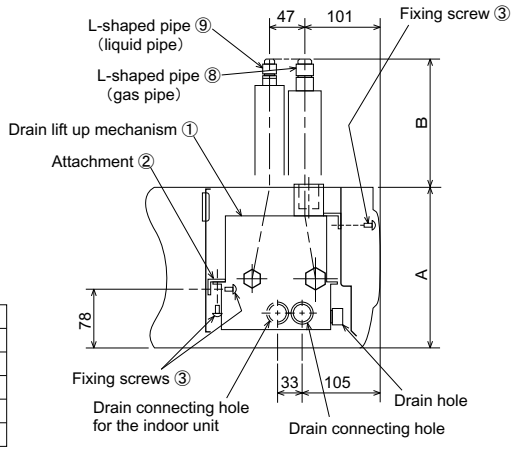
* This drain lift up mechanism must be installed inside an indoor unit.
* Installing this drain lift up mechanism enables upward discharge of drainage and refrigerant.
* To facilitate installation of the drain lift up mechanism, it should be installed before indoor unit.
* The size of the plumbling that must connect, by the refrigerant kind of the indoor unit that corresponds in the case of PAC-SH16,17, 20, 22DM-E, changes.
* Please refer to the installation manual of an indoor unit for details.
* The L-shaped pipes there are bringing are corresponding to either refrigerant

Unit:mm

Viewed from the Top



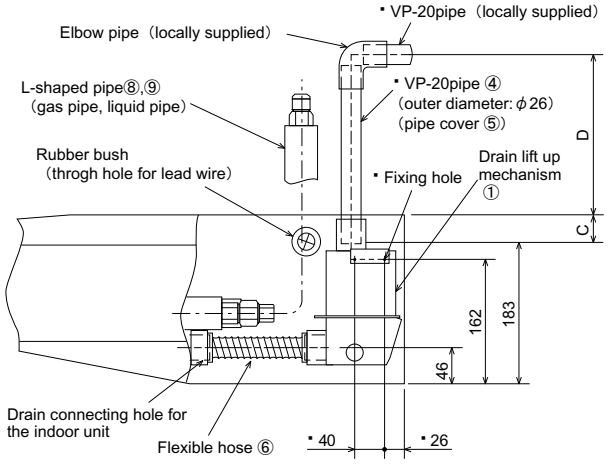
Viewed from the Front



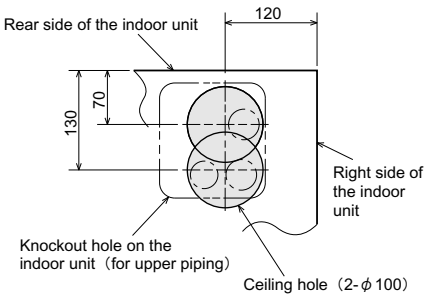
〈Table 1〉

Gas pipe	Liquid Pipe	A	B	C	D	Drain lift up mechanism Model
φ12.7	φ6.35	210	210	38	Max.400	PAC-SE84
φ15.88	φ9.52	210	210	38	Max.400	PAC-SE85 / SH21
φ19.05	φ9.52	270	150	98	Max.350	PAC-SE86
φ12.7/φ15.88	φ6.35/φ9.52	210	210	38	Max.400	PAC-SH16 / 20
φ15.88/φ19.05	φ9.52	270	150	98	Max.350	PAC-SH17 / 22

Viewed from the Right

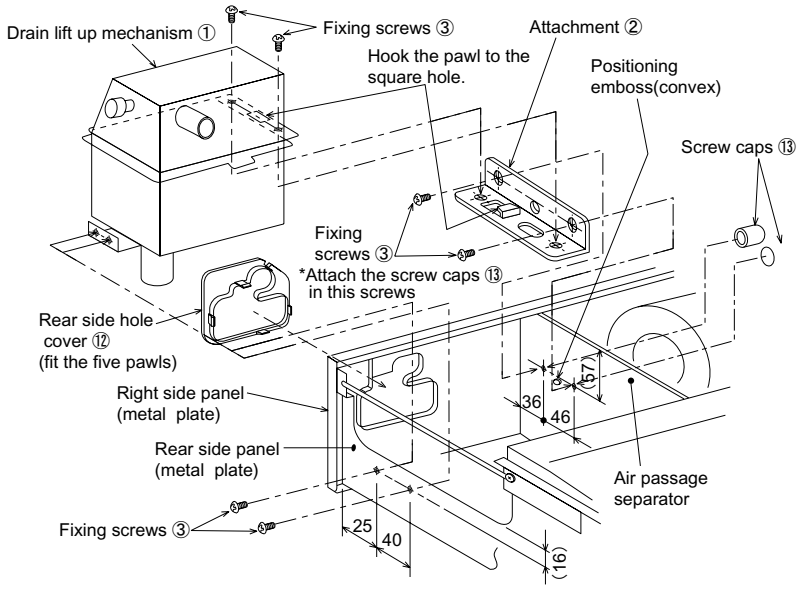


Positions of Holes on the Ceiling



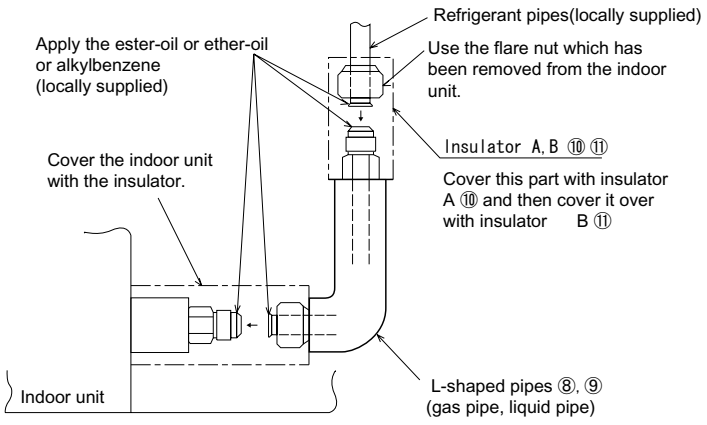
3 Installing the Drain Pump

1.Remove the intake grille and side panel. (Refer to the indoor unit installation manual.)
2.Prepare the knockout hole to be used for the upper piping of the indoor unit.
3.Fix the attachment ② with the fixing screws ③(×2).
Attach the screw caps ⑬(×2) in the screws that is exposing it in the reverse side of the Air passage separator, after the Attachment fixed it.
4.Fix the drain lift up mechanism ① with the fixing screws ③(×4)
5.Fit the rear side hole cover ⑫ into the piping hole on the rear side panel.



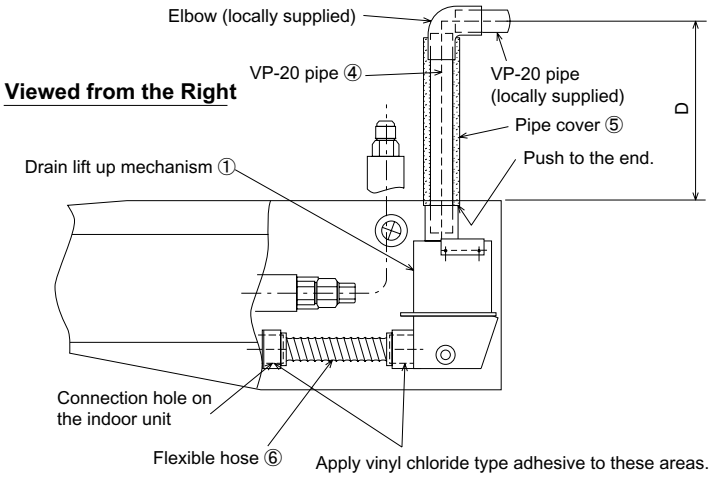
4 Refrigerant Piping

*For details on piping, refer to the installation manual of the indoor unit.
[With the stop valve of the outdoor unit fully closed]
1.Apply lubricant to the flare sheet of the L-shaped pipes (gas pipe, liquid pipe) ⑧⑨
2.Remove the flare nut and cap from the indoor unit.
3.Apply lubricant to the flare sheet connecting section of the indoor unit.
4.Connect the L-shaped pipes (gas pipe, liquid pipes) ⑧ and ⑨ quickly.
5.Fit the removed flare nut to the existing pipes and carry out flaring.
6.Connect the L-shaped pipes with the existing pipes in the sam e way.
7.Cover each connection with heat insulator ⑩⑪
[After the refrigerant circuit is complete]
8.Purge the air from the stop valve service port of the outdoor unit.
9.Fully open the stop valves (both liquid and gas).
* The method for handing the stop valve is described on the out door unit.



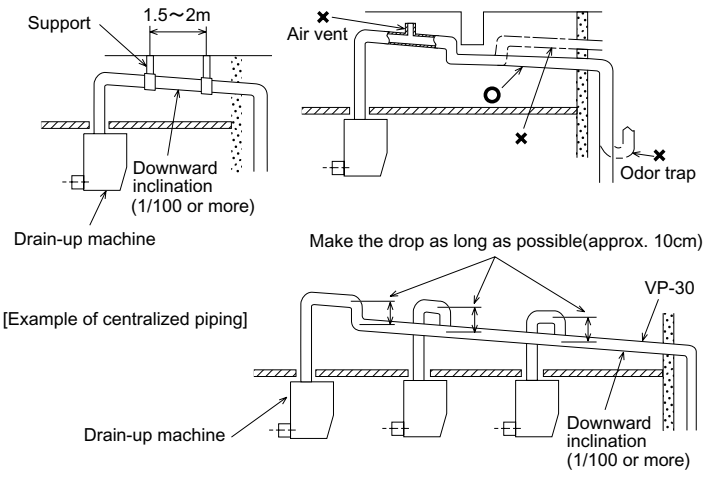
5 Drain Piping

1.Apply vinyl chloride type abhesive to the drainage outlet of the drain lift up mechanism ① , then insert the VP-20 pipe ④ into it, (30mm deep)
2.Connect the insert the VP20 pipe ④ and existing drain pipe using a 90-degree elbow etc. and adhesive.
3.Cover the VP-20 pipe ④with the pipe cover ⑤.
4.Apply vinyl chloride type adhesive to the drain lift up mechanism ① and drain connecting hole on the indoor unit, then insert the flexible hose ⑥ into them.
Take care that the hose does not twist.
*Insulate all pipes, form the drain lift up mechanism up to the outside.



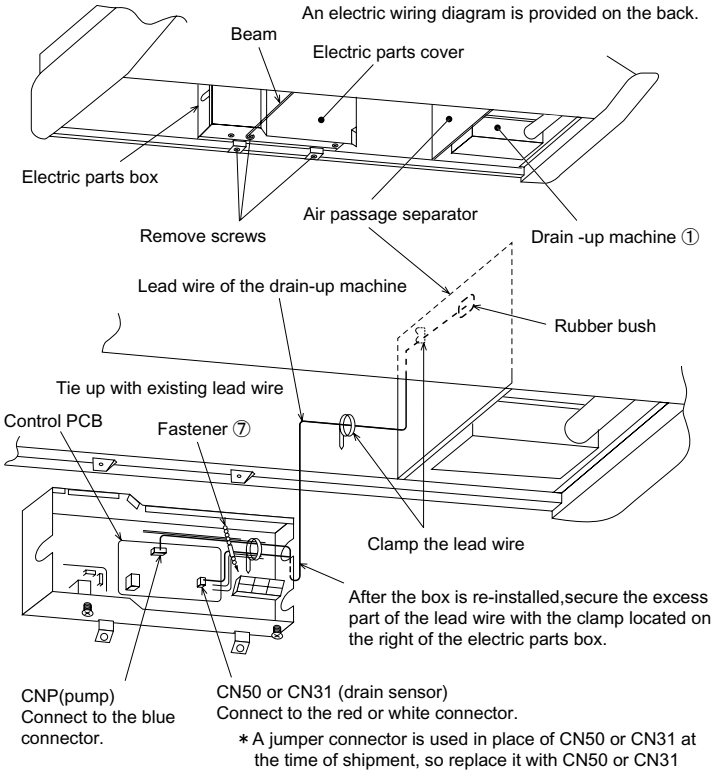
[Make sure to follow the following points during drain piping.]

*Keep the max. length of "D" within the requirement shown on table1.
*Incline the drain pipe downwards (1/100 or larger) to the drainage side (outdoor).
*Do not create traps or peaks.
*Keep the horizontal piping within 20m. Use fixtures to prevent the pipe from waving.
*Do not install air vent pipes. The drainage may spout out.
*Use general-purpose hard vinyl chloride pipes (outer diameter: ϕ26) and apply vinyl chloride type adhesive to prevent any leakage.
*Cover with insulator (made of foamed polyethylene, with specific gravity of 0.03 thickness of 9mm or more).
*Do not install odor trap at the drain outlet.
*Locate the end of pipe at a point where odor is unlikely to occur.
*Do not insert the pipe directly into a drainage ditch where sulfur gas may be produced.
*Use VP-30 pipes for centralized piping. Install the centralized drain pipe approximately 10cm below the output of pipes connected from the drain lift up mechanism.



6 Electric Wiring

*Refer to the installation manual of the indoor unit together with this manual.
*Perform the work after checking that the power supply is off.
1.Remove the beam.
2.Remove the electric parts cover.
3.Pull the electric parts box downwards.
4.Pass the lead wire of drain lift up mechanism ① through the rubber bush on the air passage separator.
5.Connect each lead wire to the CNP and CN50 or CN31 connectors provided on the control PCB of the indoor unit.
6.Tie up the lead wires with the fastener ⑦ so that the wires do not come apart inside the electric parts box.
7.When the wiring is finished, re-install the electric parts box, its cover and the beam.



*The positions of the connectors which must be connected to the control PCB in certain models differ from those specified in the above diagram. Make sure that the lead wires are connected to CNP and CN50 or CN31 connectors.

*

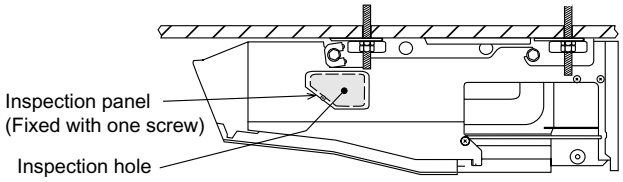
Drain sensor	Model
CN50 (red connector)	PAC-SE84～86DM-E
CN31 (white connector)	PAC-SE84～86DMA-E PAC-SH16, 17DM-E PAC-SH20～22DM-E

7 Test Run

*Through this test run, check that drainage is discharged properly and that there is no water leakage from any of the connections.
*Refer to the installation manual of the indoor unit together with this manual.

1.Supplying water

Remove the inspection panel from the right-side panel Supply approximately 1000cc of water to the inspection hole.

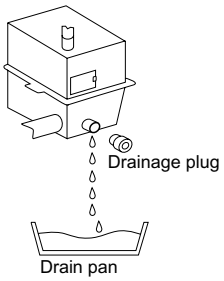


2.Carrying out a test run

Turn the power ON.
Press the TEST RUN button on the remote controller twice.
Press the MODE button to select cooling mode.
*The drain lift up mechanism will be activated to start discharging the water.
Check whether water is discharged properly.
Press the POWER ON/OFF button to cancel the test run.
Turn the power OFF.

3.Re-install each part after checking.

*If the drain lift up mechanism is installed at the time of the year when heating is used, make sure that the drainage has been removed.
After removal of the drainage, reinstall the drainage plug.



Photo

Descriptions

Raises drain generated during unit's operation to seure the appropriate angle of the drain pipe.

Applicable Models

- PCA-RP100GA
- PCA-RP125GA
- PCA-RP140GA
- PCH-P100GAH
- PCH-P125GAH
- PCH-P140GAH

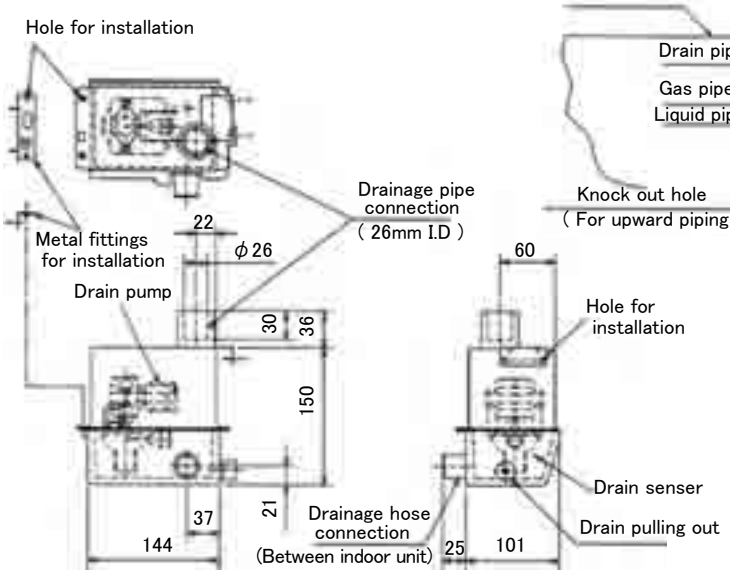
Specifications

Rated power		200V AC, single-phase, 50/60Hz
Power consumption		10.9/9W
Operating current		0.12/0.10A
Drain lift		Max. 400mm from indoor unit's top surface
Discharge rate		36l/h or higher (when operated with lift 600mm and water level 13mm)
Operating conditions	Liquid temperature	0 to 50℃ (no freezing)
	Ambient temperature	-10℃ to 50℃
	Ambient humidity	RH95% or less
Driving motor		Shading type (Class E insulation)
Drain piping		Connected to drain outlet. PVC pipe VP-20 (ED: Φ26) can be used.
Accessory		Piping hole cover, Drain hose (between this device and indoor unit), VP-20 pipe (300mm), L-shape connection pipe (liquid, gas), Metal fittings for installation, Fixing screw (ST4x10), Heat insulator (for drain hose, VP-20 pipe, L-shape connection pipe)VP-20 (ED: Φ26) can be used.

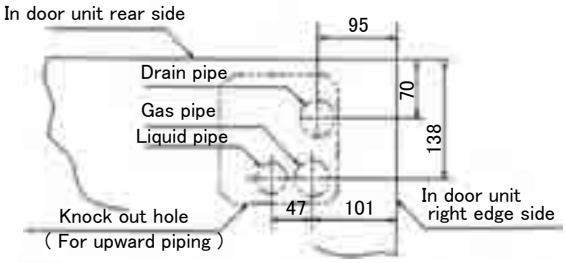
Dimensions

Unit : mm

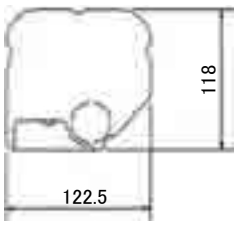
Drain pump



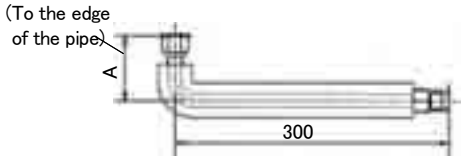
Piping position



Pipeing hole cover



L shape connection pipe

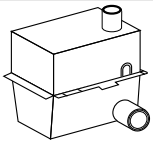
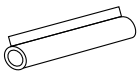
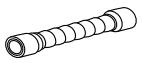
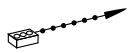


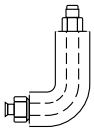
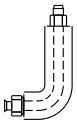
Item	Liquid	Gas
Piping diameter (Flare size)	ϕ9.52 (3/8 F)	ϕ15.88 (5/8 F)
A	45	65

How to Use / How to Install

1 Confirming Supplied Accessories

* Before starting installation, make sure that the following accessories are present.

①Drain lift up mechanis	m②Attachment	③Screws (4×10)	④VP-20 pipe	⑤Pipe cover	⑥Flexible hose	⑦Fastener
 ×1	 ①Drain-up machine fixture ×1	 For the insulation of drain-up machine① ×6	 ×1	 For insulation of VP20pipe④ ×1	 ×1	 ×2

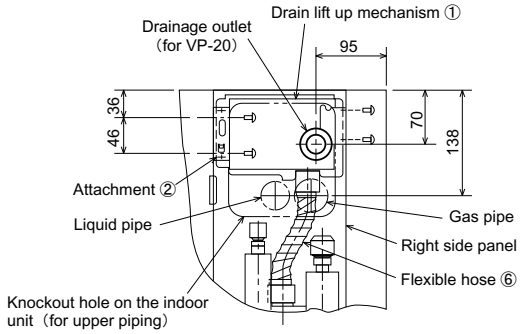
⑧L-shaped pipe (gas pipe)	⑨L-shaped pipe (liquid pipe)	⑩Insulator A	⑪Insulator B	⑫Rear side hole cover	⑬Screw cap
 ×1	 ×1	6t×220×80 (For internal insulation)  For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes. ×2	3t×250×120 (For external insulation)  For the insulation of L-shaped pipes ⑧ and ⑨ and the refrigerant pipes. ×2	 ×1	 ×2

2 Installation Diagram of the Drain Pump

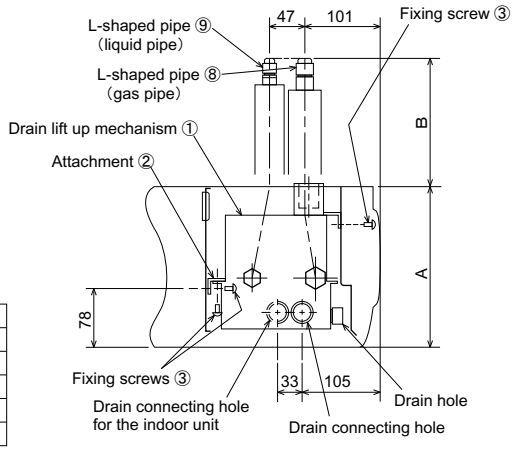
* This drain lift up mechanism must be installed inside an indoor unit.
* Installing this drain lift up mechanism enables upward discharge of drainage and refrigerant.
* To facilitate installation of the drain lift up mechanism, it should be installed before indoor unit.
* The size of the plumbling that must connect, by the refrigerant kind of the indoor unit that corresponds in the case of PAC-SH16,17, 20, 22DM-E, changes.
* Please refer to the installation manual of an indoor unit for details.
* The L-shaped pipes there are bringing are corresponding to either refrigerant

Unit:mm

Viewed from the Top



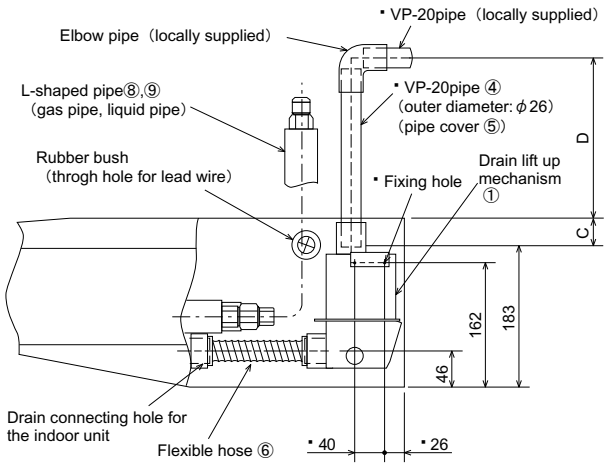
Viewed from the Front



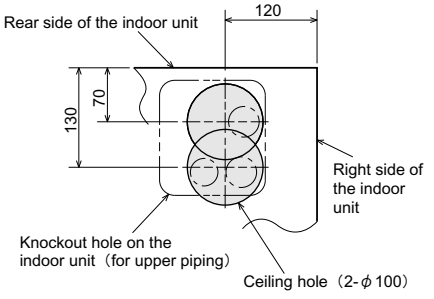
〈Table 1〉

Gas pipe	Liquid Pipe	A	B	C	D	Drain lift up mechanism Model
φ12.7	φ6.35	210	210	38	Max.400	PAC-SE84
φ15.88	φ9.52	210	210	38	Max.400	PAC-SE85 / SH21
φ19.05	φ9.52	270	150	98	Max.350	PAC-SE86
φ12.7/φ15.88	φ6.35/φ9.52	210	210	38	Max.400	PAC-SH16 / 20
φ15.88/φ19.05	φ9.52	270	150	98	Max.350	PAC-SH17 / 22

Viewed from the Right

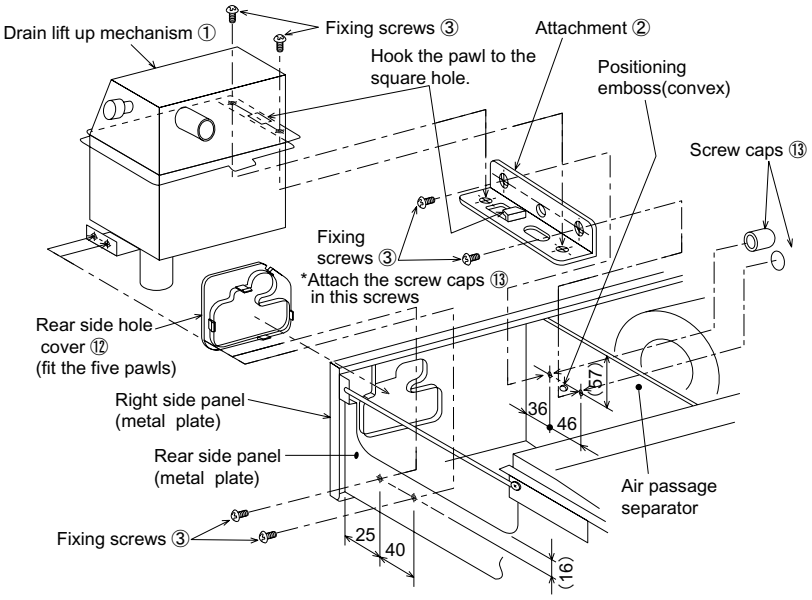


Positions of Holes on the Ceiling



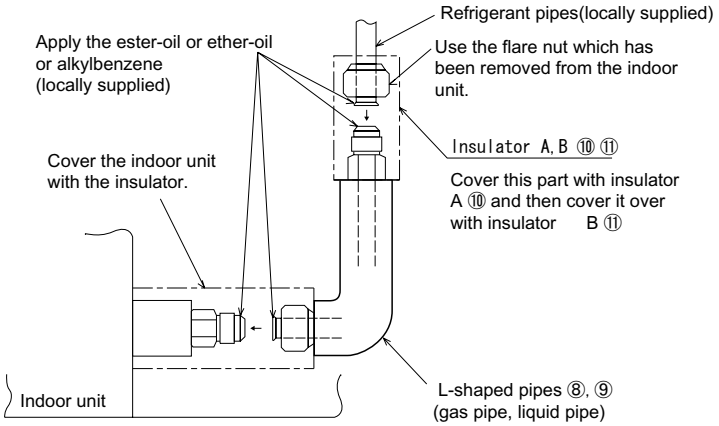
3 Installing the Drain Pump

1.Remove the intake grille and side panel. (Refer to the indoor unit installation manual.)
2.Prepare the knockout hole to be used for the upper piping of the indoor unit.
3.Fix the attachment ② with the fixing screws ③(×2).
Attach the screw caps ⑬(×2) in the screws that is exposing it in the reverse side of the Air passage separator, after the Attachment fixed it.
4.Fix the drain lift up mechanism ① with the fixing screws ③(×4)
5.Fit the rear side hole cover ⑫ into the piping hole on the rear side panel.



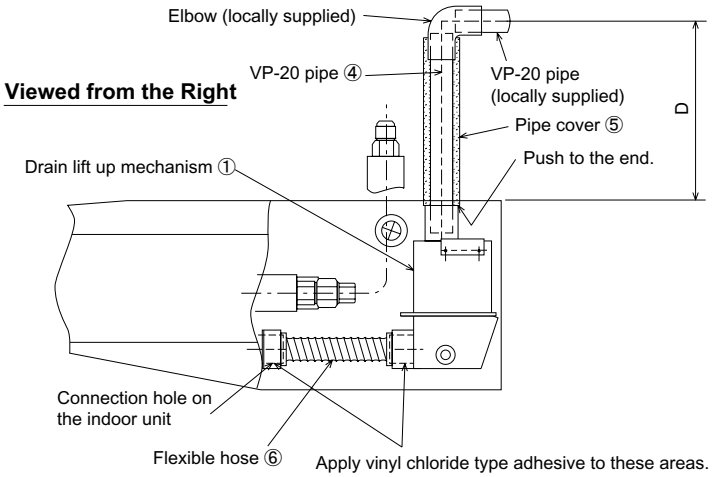
4 Refrigerant Piping

*For details on piping, refer to the installation manual of the indoor unit.
[With the stop valve of the outdoor unit fully closed]
1.Apply lubricant to the flare sheet of the L-shaped pipes (gas pipe, liquid pipe) ⑧⑨
2.Remove the flare nut and cap from the indoor unit.
3.Apply lubricant to the flare sheet connecting section of the indoor unit.
4.Connect the L-shaped pipes (gas pipe, liquid pipes) ⑧ and ⑨ quickly.
5.Fit the removed flare nut to the existing pipes and carry out flaring.
6.Connect the L-shaped pipes with the existing pipes in the sam e way.
7.Cover each connection with heat insulator ⑩⑪
[After the refrigerant circuit is complete]
8.Purge the air from the stop valve service port of the outdoor unit.
9.Fully open the stop valves (both liquid and gas).
* The method for handing the stop valve is described on the out door unit.



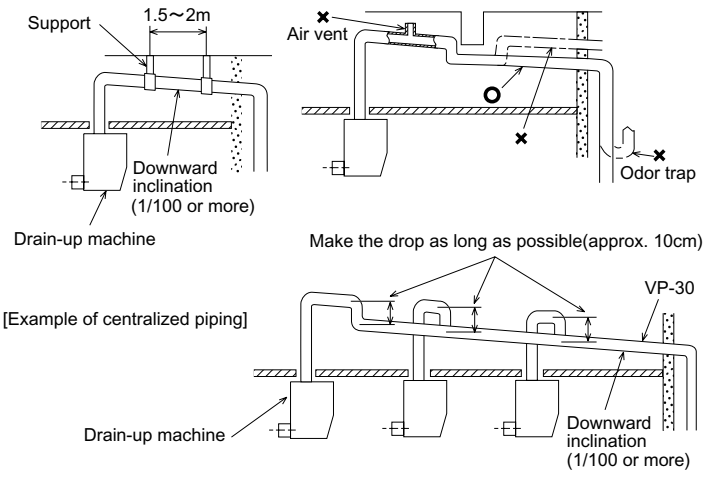
5 Drain Piping

1.Apply vinyl chloride type abhesive to the drainage outlet of the drain lift up mechanism ① , then insert the VP-20 pipe ④ into it, (30mm deep)
2.Connect the insert the VP20 pipe ④ and existing drain pipe using a 90-degree elbow etc. and adhesive.
3.Cover the VP-20 pipe ④with the pipe cover ⑤.
4.Apply vinyl chloride type adhesive to the drain lift up mechanism ① and drain connecting hole on the indoor unit, then insert the flexible hose ⑥ into them.
Take care that the hose does not twist.
*Insulate all pipes, form the drain lift up mechanism up to the outside.



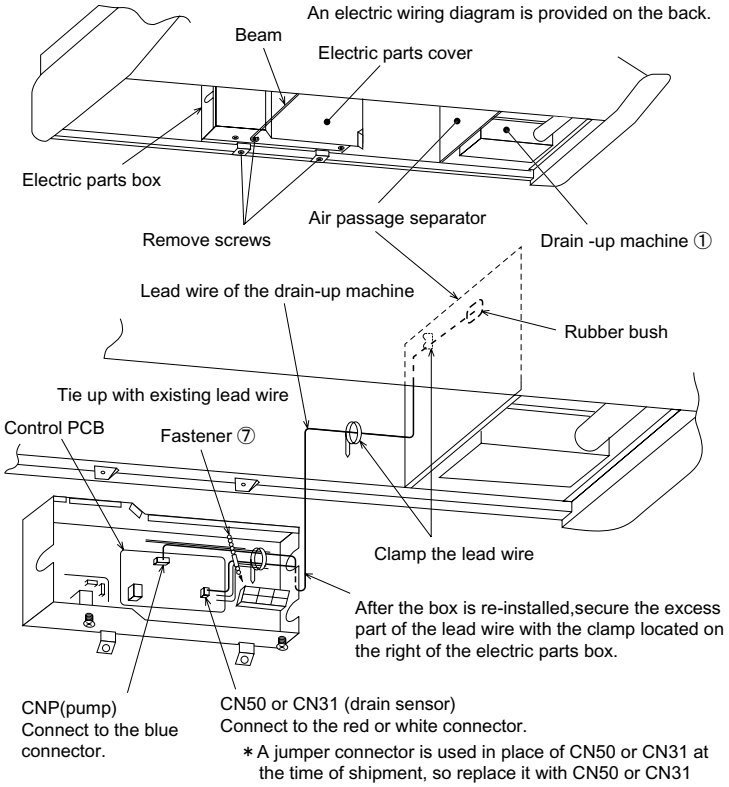
[Make sure to follow the following points during drain piping.]

*Keep the max. length of "D" within the requirement shown on table1.
*Incline the drain pipe downwards (1/100 or larger) to the drainage side (outdoor).
*Do not create traps or peaks.
*Keep the horizontal piping within 20m. Use fixtures to prevent the pipe from waving.
*Do not install air vent pipes. The drainage may spout out.
*Use general-purpose hard vinyl chloride pipes (outer diameter: ϕ26) and apply vinyl chloride type adhesive to prevent any leakage.
*Cover with insulator (made of foamed polyethylene, with specific gravity of 0.03 thickness of 9mm or more).
*Do not install odor trap at the drain outlet.
*Locate the end of pipe at a point where odor is unlikely to occur.
*Do not insert the pipe directly into a drainage ditch where sulfur gas may be produced.
*Use VP-30 pipes for centralized piping. Install the centralized drain pipe approximately 10cm below the output of pipes connected from the drain lift up mechanism.



6 Electric Wiring

*Refer to the installation manual of the indoor unit together with this manual.
*Perform the work after checking that the power supply is off.
1.Remove the beam.
2.Remove the electric parts cover.
3.Pull the electric parts box downwards.
4.Pass the lead wire of drain lift up mechanism ① through the rubber bush on the air passage separator.
5.Connect each lead wire to the CNP and CN50 or CN31 connectors provided on the control PCB of the indoor unit.
6.Tie up the lead wires with the fastener ⑦ so that the wires do not come apart inside the electric parts box.
7.When the wiring is finished, re-install the electric parts box, its cover and the beam.



*The positions of the connectors which must be connected to the control PCB in certain models differ from those specified in the above diagram. Make sure that the lead wires are connected to CNP and CN50 or CN31 connectors.

*

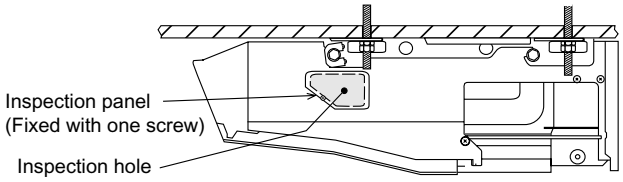
Drain sensor	Model
CN50 (red connector)	PAC-SE84～86DM-E
CN31 (white connector)	PAC-SE84～86DMA-E PAC-SH16, 17DM-E PAC-SH20～22DM-E

7 Test Run

*Through this test run, check that drainage is discharged properly and that there is no water leakage from any of the connections.
*Refer to the installation manual of the indoor unit together with this manual.

1.Supplying water

Remove the inspection panel from the right-side panel Supply approximately 1000cc of water to the inspection hole.

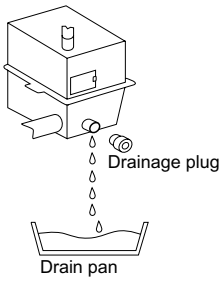


2.Carrying out a test run

Turn the power ON.
Press the TEST RUN button on the remote controller twice.
Press the MODE button to select cooling mode.
*The drain lift up mechanism will be activated to start discharging the water.
Check whether water is discharged properly.
Press the POWER ON/OFF button to cancel the test run.
Turn the power OFF.

3.Re-install each part after checking.

*If the drain lift up mechanism is installed at the time of the year when heating is used, make sure that the drainage has been removed.
After removal of the drainage, reinstall the drainage plug.



Duct Flange for Fresh Air

PAC-SF28OF-E

Photo

Descriptions

Part to attach a duct to take in fresh air from outdoors.

Applicable Models

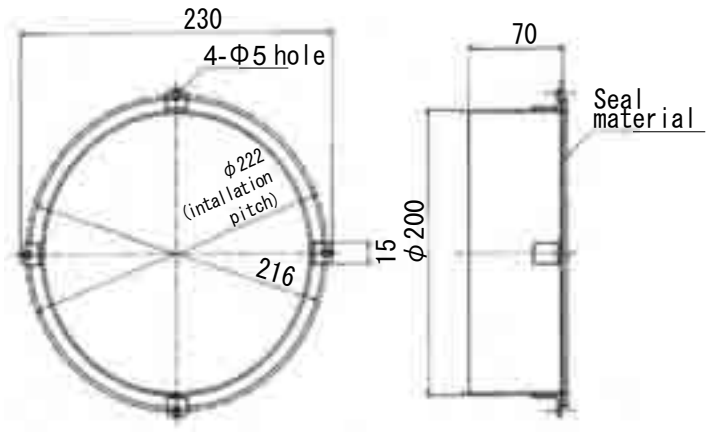
■ PCA-RP HA

Specifications

Connecting duct diameter (mm)	200
Material	Hot-dip zinc-coated carbon steel sheet (t0.8)
Accessory	Fixing screw (ST4x10) x 4

Dimensions

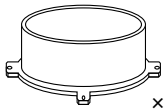
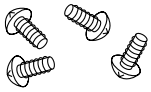
Unit : mm



How to Use / How to Install

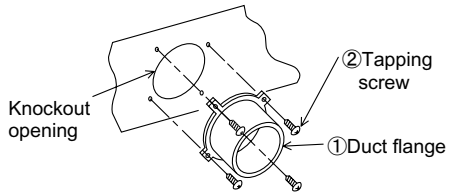
1. Checking Provided Parts

※Make sure that you have all the following parts before installation:

①Duct flange	②Tapping screws (4x10)
 ×1	 ×4

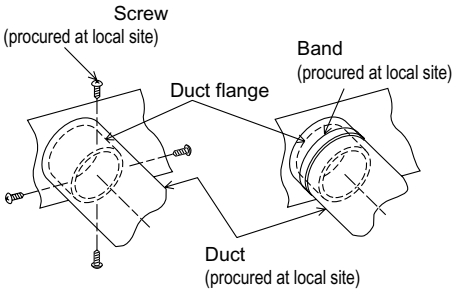
2. Duct Flange Installation Procedure

1. Punch out the knockout opening for installing duct on indoor unit.
2. Use the provided tapping screws ② to secure duct flange ①.



3. Duct Installation Procedure

1. Securely fix the duct (with inner diameter 200 mm) procured at local site to the duct flange, using screws or band.



Photo

Descriptions

A decoration cover to be attached to the upper section of ceiling suspended models. Possible to prevent dust accumulation.

Applicable Models

■ PCA-RP71HA

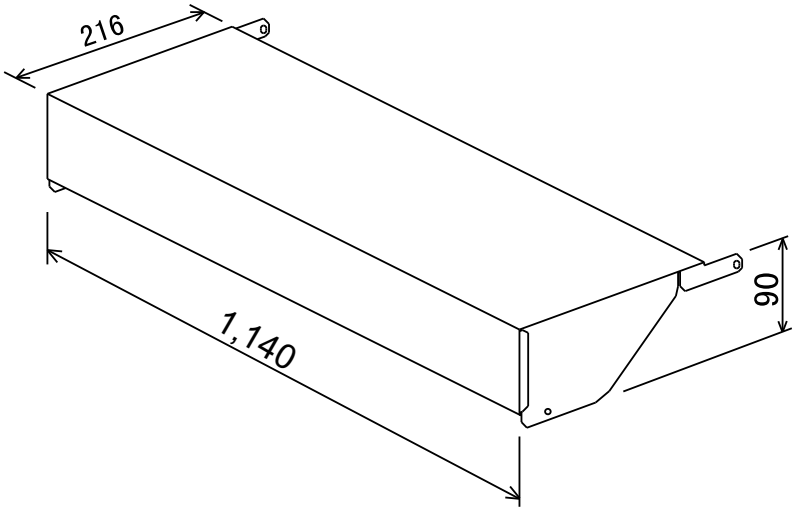
Specifications

Material	SUS304 (0.8t)
Parts composition	Front cover x 1
	Suspension bracket cover x 4
	Tapping screw (4x10, with nylon washer) x 4
	Washer x 8 (hot-dip zinc-coated carbon steel sheet (t1.2))

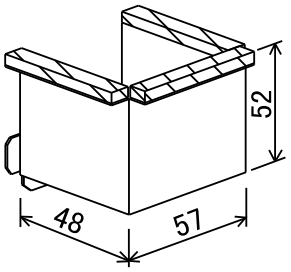
Dimensions

Unit : mm

Front cover



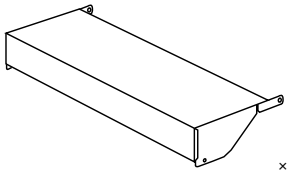
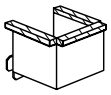
Suspention blacket cover



How to Use / How to Install

1. Checking Provided Parts

※Make sure that you have all the following parts before install ation:

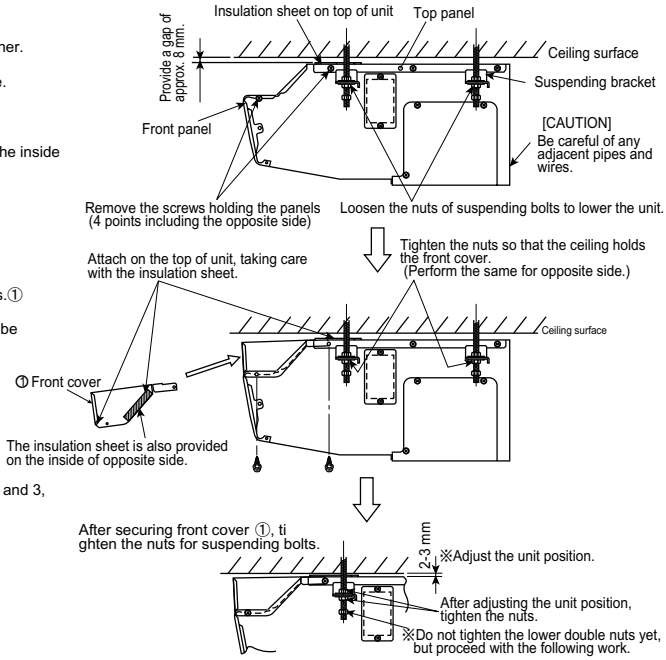
① Front cover	② Suspending bracket covers	③ Tapping screws (4x10)	④ Washers
			
× 1	× 4	(with nylon washers) × 4	× 8

2. Front Cover Installation Procedure

★The following procedure shows how to attach the front cover after installing air-conditioner.
1. Loosen the nuts of bolts suspending the unit, and lower the unit by approx. 5 mm.
   ・When lowering the unit, be careful not to damage the wires, coolant pipe or drain pipe.
2. Remove the screws that secure the front panel and top panel to the unit (at 4 points).
   (The provided tapping screws③are spares for these screws.)
3. Put front cover ① over the unit.
   ・Be careful not to damage the insulation sheets pasted on the top surface of unit and the inside of front cover ①.
4. Use the screws removed in step 2 to temporarily secure front cover ①.
   (Do not tighten the screws at this time.)
5. Tighten the nuts of bolts suspending the unit, and fit the unit onto ceiling.
   ・Tighten the nuts while carefully watching the attached status of front cover ①.
6. Tighten the screws that were temporarily secured in step 4.
   ・Make sure that front cover holds the insulation sheet on the top surface of unit, and that the cover fits securely on the top surface of unit before tightening the screws.①
7. Separate the unit from ceiling to leave a gap of 2-3 mm fromceiling.
   ・Be sure to provide this space: If the unit is in contact with ceiling, the vibrations could be transmitted to ceiling.
8. Make sure that the unit is correctly installed, and then tighten the nuts of bolts suspending the unit.

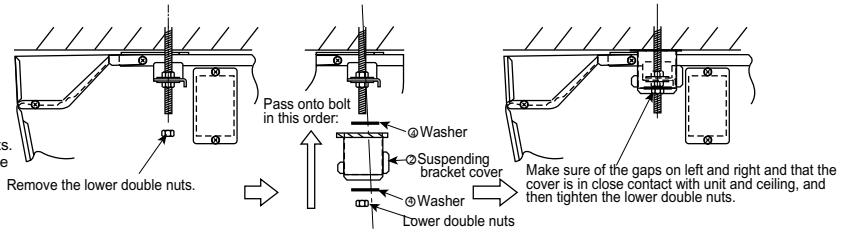
[CAUTION] Do not tighten the lower double nuts yet, because installing suspending bracket covers must now be done.

※ If you attach the front cover before installing the unit, perform the procedure in steps 2 and 3, and then fully tighten the 2 screws on each side (4 in total).



3. Suspending Bracket Installation Procedure

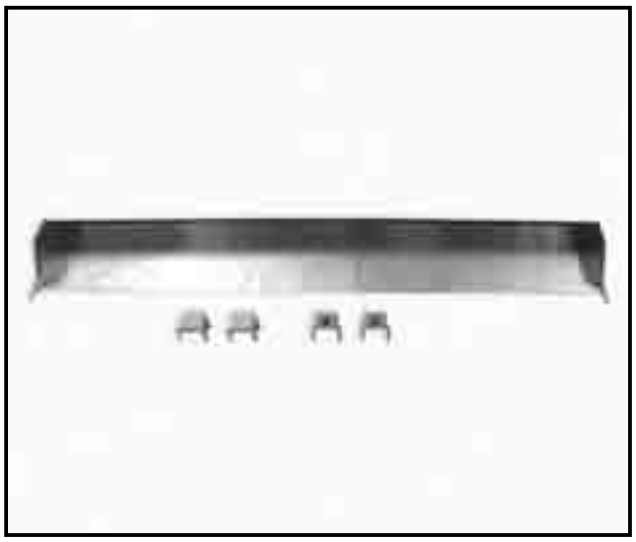
★Attach the suspending bracket covers in succession.
1. Remove the lower double nuts (from 4 points) from the suspending bolts.
2. Put the provided washers (tops and bottoms of suspending bracket covers) and suspending bracket covers through suspending bolts. ④
3. Tighten the nuts removed in step 1 for the suspending bolts.
   ・ Make sure that the suspending bracket covers are in close contact with the unit and ceiling.



4. Test Run

※ Also refer to the installation manual of indoor unit.
★ Make sure that test run is performed without any abnormal sound, such as vibrations, fluttering sound, etc.
[Test Run Procedure]
1. Turn power on.
2. Press the TEST RUN button on remote controller twice.
3. Press the MODE button on remote controller to set to the fan mode.
   * The fan will rotate to blow out air.
4. Make sure that no abnormal sound, such as vibrations, fluttering sound, etc. is heard.
5. Press the ON/OFF button on remote controller to release test run.
6. Turn power off.

Photo



Descriptions

A decoration cover to be attached to the upper section of ceiling suspended models. Possible to prevent dust accumulation.

Applicable Models

■ PCA-RP125HA

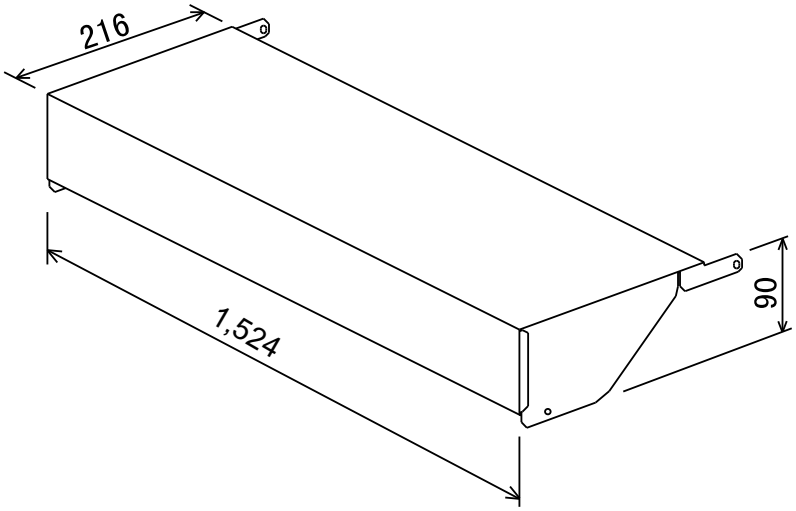
Specifications

Material	SUS304 (0.8t)
Parts composition	Front cover x 1
	Suspension bracket cover x 4
	Tapping screw (4x10, with nylon washer) x 4
	Washer x 8 (hot-dip zinc-coated carbon steel sheet (t1.2))

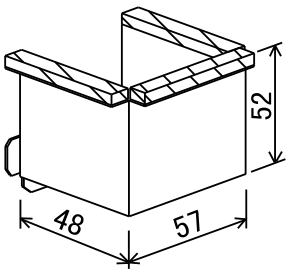
Dimensions

Unit : mm

Front cover



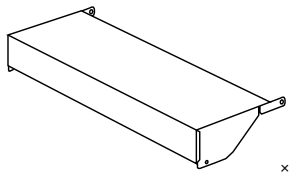
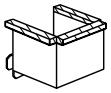
Suspention blacket cover



How to Use / How to Install

1. Checking Provided Parts

※Make sure that you have all the following parts before install ation:

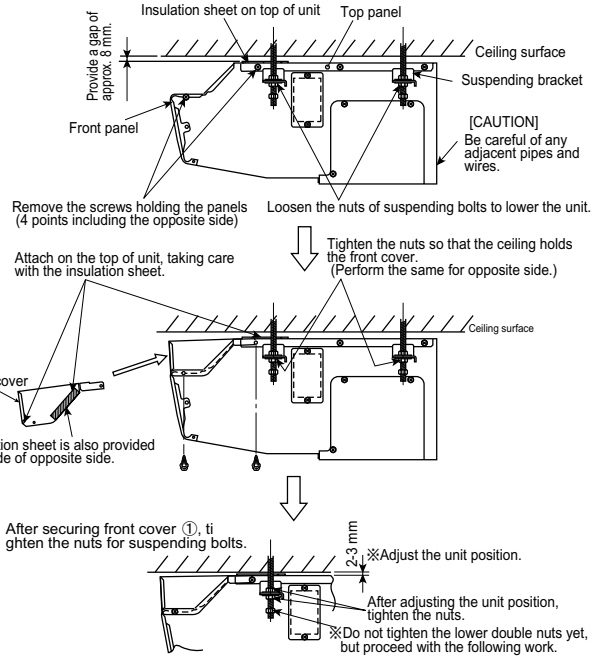
① Front cover	② Suspending bracket covers	③ Tapping screws (4x10)	④ Washers
		 (with nylon washers)	
×1	×4	×4	×8

2. Front Cover Installation Procedure

★The following procedure shows how to attach the front cover after installing air-conditioner.
1. Loosen the nuts of bolts suspending the unit, and lower the unit by approx. 5 mm.
   ・When lowering the unit, be careful not to damage the wires, coolant pipe or drain pipe.
2. Remove the screws that secure the front panel and top panel to the unit (at 4 points).
   (The provided tapping screws③are spares for these screws.)
3. Put front cover ① over the unit.
   ・Be careful not to damage the insulation sheets pasted on the top surface of unit and the inside of front cover ①.
4. Use the screws removed in step 2 to temporarily secure front cover ①.
   (Do not tighten the screws at this time.)
5. Tighten the nuts of bolts suspending the unit, and fit the unit onto ceiling.
   ・Tighten the nuts while carefully watching the attached status of front cover ①.
6. Tighten the screws that were temporarily secured in step 4.
   ・Make sure that front cover holds the insulation sheet on the top surface of unit, and that the cover fits securely on the top surface of unit before tightening the screws.①
7. Separate the unit from ceiling to leave a gap of 2-3 mm fromceiling.
   ・Be sure to provide this space: If the unit is in contact with ceiling, the vibrations could be transmitted to ceiling.
8. Make sure that the unit is correctly installed, and then tighten the nuts of bolts suspending the unit.

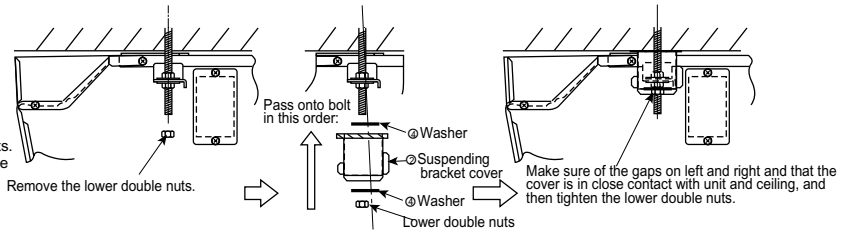
[CAUTION] Do not tighten the lower double nuts yet, because installing suspending bracket covers must now be done.

※If you attach the front cover before installing the unit, perform the procedure in steps 2 and 3, and then fully tighten the 2 screws on each side (4 in total).



3. Suspending Bracket Installation Procedure

★Attach the suspending bracket covers in succession.
1. Remove the lower double nuts (from 4 points) from the suspending bolts.
2. Put the provided washers (tops and bottoms of suspending bracket covers) and suspending bracket covers through suspending bolts. ④
3. Tighten the nuts removed in step 1 for the suspending bolts.
   ・ Make sure that the suspending bracket covers are in close contact with the unit and ceiling.



4. Test Run

※ Also refer to the installation manual of indoor unit.
★ Make sure that test run is performed without any abnormal sound, such as vibrations, fluttering sound, etc.
[Test Run Procedure]
1. Turn power on.
2. Press the TEST RUN button on remote controller twice.
3. Press the MODE button on remote controller to set to the fan mode.
   ∗ The fan will rotate to blow out air.
4. Make sure that no abnormal sound, such as vibrations, fluttering sound, etc. is heard.
5. Press the ON/OFF button on remote controller to release test run.
6. Turn power off.

Photo

Descriptions

Enables to control multiple air conditioners from a (remote) location by connecting the On/Off contact point. It can also control the operation of the relay with error signals by connecting the MA remote controller PAR-21MAA.

Applicable Models

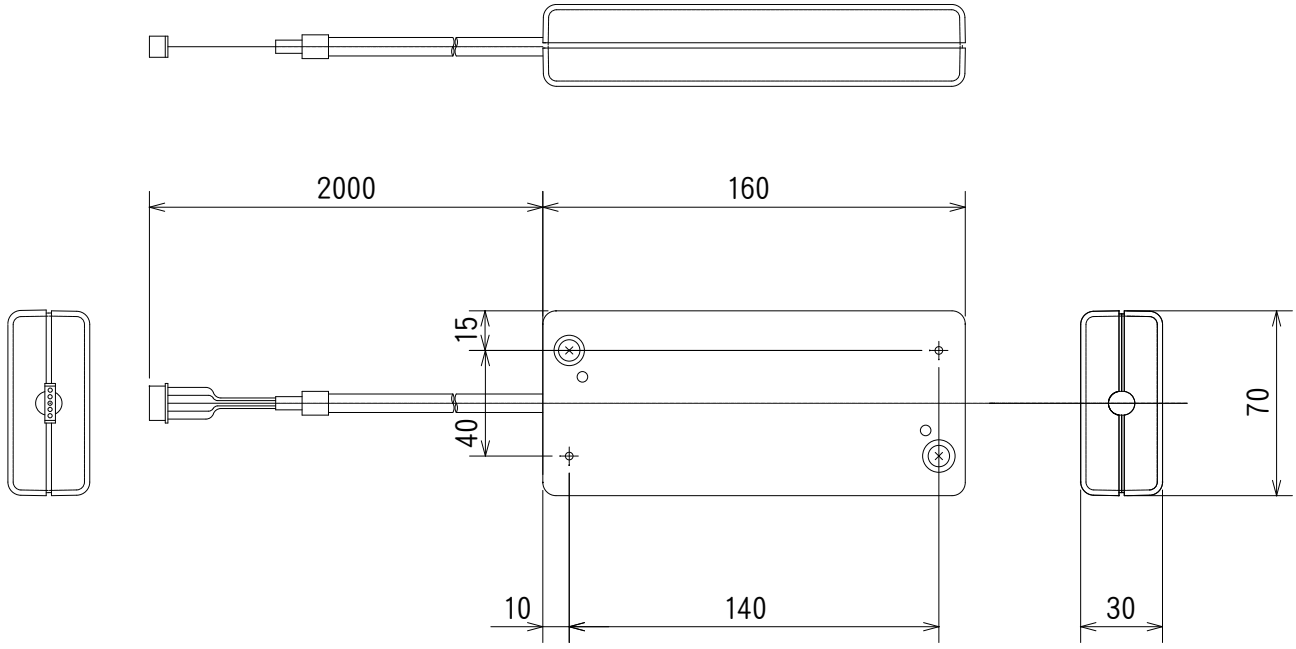
- MSZ-FA/GA
- MFZ-KA
- SEZ-KA
- SLZ-KA

Specifications

Power		12V DC (supplied from indoor unit)
Operating conditions		Indoor only (ambient temperature: 0 to 40℃ , no condensation)
Connection of centralized controller	Communication cable	3-wire (recommended: microphone cord (MVVS) 0.3mm2)
	Communication cable distance	Max. 100m
Connection of MA smooth remote controller / MA deluxe remote controller	Communication cable	2-wire (recommended: optional PAC remote controller cable PAC-YT81HC)
	Communication cable distance	Max. 10m
Indoor unit connecting cable		Dedicated 5-wire cable
Weight		300g (including indoor unit connecting cable)

Dimensions

Unit : mm



How to Use / How to Install

1. Before Installation

1.1. How to Use the MA & CONTACT TERMINAL Interface

■ Functions

Centralized control (Fig. 2-1)

You can turn multiple air conditioners on and off from one location. (MAC-821SC-E (8-Room))

Use as wired remote controller (Fig. 2-2)

You can use the MA remote controller as a wired remote controller. (PAR-21MAA)

Remote control (Fig. 2-3)

You can turn on and off an air conditioner from a remote location by connecting the ON/OFF contact point.

Status indicator output (Fig. 2-4)

You can control the operation of the relay with either of the on/off or error/ok status output signals.

■ Sample System Configuration

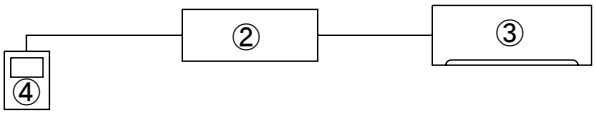


Fig. 2-1

Fig. 2-2

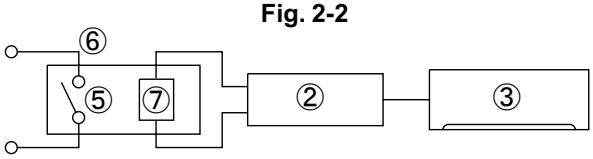


Fig. 2-3

Fig. 2-4

① Centralized controller
② MA & CONTACT TERMINAL Interface
③ RAC
④ MA remote controller
⑤ Contact point
⑥ Relay
⑦ Coil
⑧ Breaker

1.2. Parts

Before installing the unit, make sure that you have all the necessary parts.

■Accessory

(1)	Interface unit	1
(2)	Wall mounting brackets	1
(3)	Screws (black) for mounting (2)3.5 ×12	4
(4)	Cushioning material (with adhesive)	1
(5)	Mounting cord clamp (small)	2
(6)	Mounting cord clamp (medium)	2
(7)	Mounting cord clamp (large)	2
(8)	Screws (black) for mounting (5)－(7) 3.5 ×12 * Use when attaching the clamps to the interface unit	2
(9)	Screws for mounting (5)－(7) 4 × 10 * Use when mounting the clamps on or near the RAC	1
(10)	Screws for mounting (5)－(7) 4 ×16 * Use when mounting the clamps and electrical wire mounting bracket	1
(11)	Fasteners (for joining the lead wires)	5
(12)	Wiring cord clamp	5
(13)	Screws (black) for mounting (12) 3.5 × 12	5
(14)	Screws (black) for mounting the interface case 3.5 • 12	2
(15)	Lead wires (6)	1

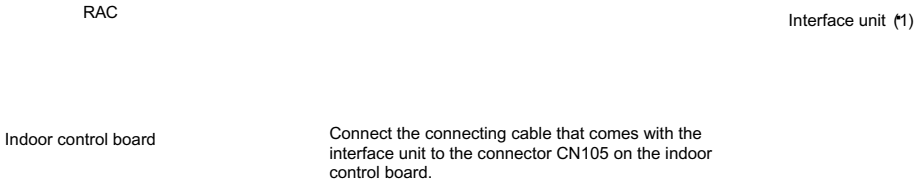
・Items to Prepare at the Installation Site

(A)	Signal wire extension cable (if necessary) Shield wiring CVVS/CPEVS
(B)	Switch, relay, coin timer, etc. (if necessary) * Please use products with supplementary insulation.
(C)	Related products sold separately * Prepare the necessary number of parts sold separately as needed for your system.

* CPEVS; PE insulated PVC jacketed shielded communication cable
* CVVS; PVC insulated PVC jacketed shielded control cable
PE: Polyethylene PVC: Polyvinyl chloride

2. Connecting the MA & CONTACT TERMINAL Interface to RAC

・Connect the interface unit and the RAC indoor control board using the connecting cable that came with the interface.
・Extending or shortening the connecting cable that comes out of the interface may cause it to malfunction. Also, keep the connecting cable as far as possible away from the electrical wires and ground wire. Do not bundle them together.

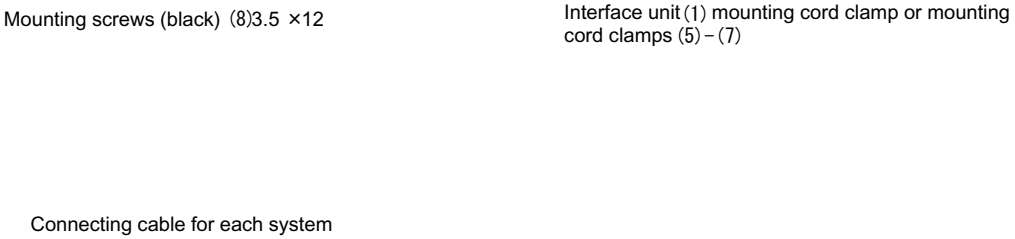


・When this interface unit is connected to a RAC, timer operation cannot be set from a wireless remote controller.
・When this interface unit is connected to a RAC, i-see sensor control cannot be used. Normal cooling or heating operation is performed. (MSZ-FA Series only)

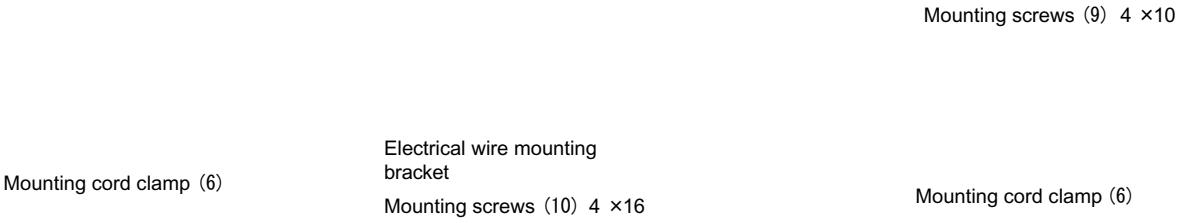
3. Connecting the MA & CONTACT TERMINAL Interface with each system

(For details on each system, see the relevant instruction manual.)

・Replace the interface unit (1) mounting cord clamp with a supplied mounting cord clamp (5)－(7) based on the thickness of the connecting cable used for each system.

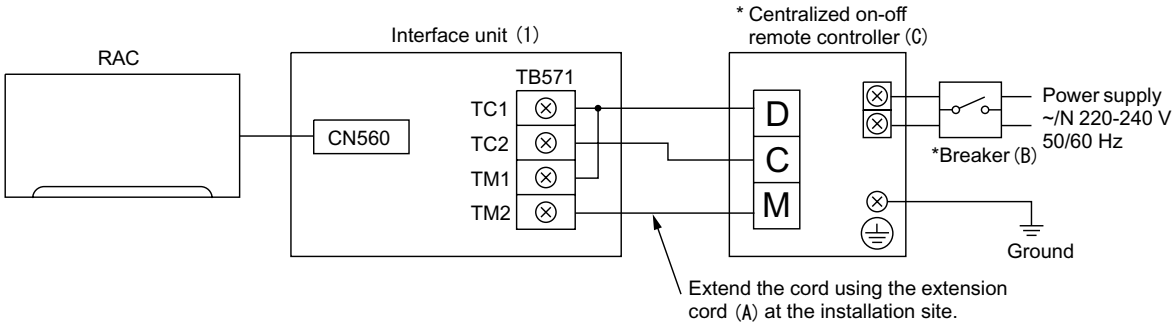


・The cables connected to the RAC should be mounted on or near the RAC.
If the connecting cable is not securely mounted, the connector may detach, break, or malfunction.



・Set the interface dip switch (SW500–502) settings before turning on the power.
・If the interface dip switch (SW500–502) settings are not set correctly, the system will not function properly.

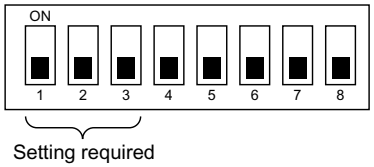
3.1. Centralized Control (When Connecting to a Centralized on-off remote Controller)



* Refer to the installation manual of centralized on-off remote controller.

Dip switch settings

■ **SW500**



■ **SW501 and SW502 do not have to be set.**

SW501

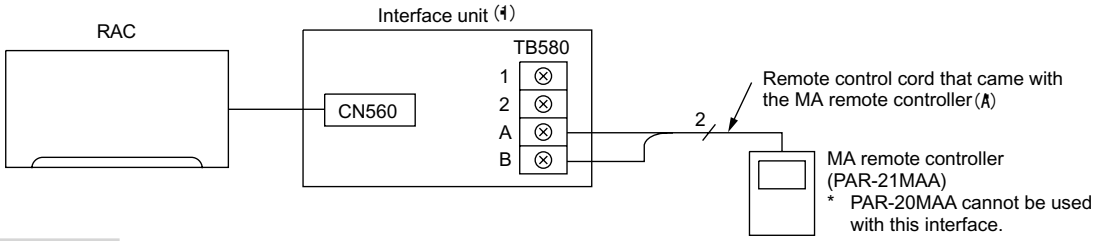
SW502

3.2. Use as a Wired Remote Controller (Using the MA Remote Controller)

Note:

1. Be sure the Auto Heating/Cooling Display Setting on the MA remote controller is set to OFF before use.
- **For information on how to set the Auto/Heating Cooling Display Setting, see the MA remote controller instruction manual.**
- **The actual operating status of the unit may differ from what is shown on the remote controller display.**

2. A test run cannot be initiated using the test run switch on the MA remote controller.
3. The horizontal vanes on the unit cannot be operated using the louver switch.
4. The range of room temperature indication is between 10℃ and 38℃.

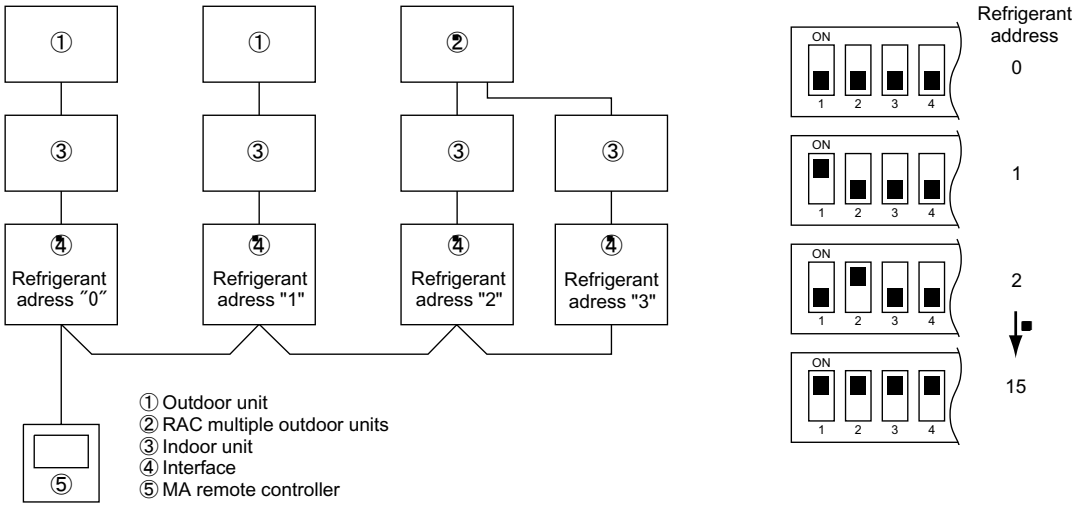


Dip switch settings

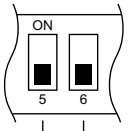
■ SW500 does not have to be set.

■ SW501:

SW501- No. 1Ð4: Refrigerant address
- Set this switch when multiple indoor units (and interfaces) are connected to a single MA remote controller.
- Always start the refrigerant address at "0".
- Even when connecting multiple outdoor RAC units, set a different refrigerant address for each indoor unit.



SW501- No. 5-6



No. 5 and 6 should normally be set to OFF.
Under the following conditions, however, they should be switched to ON.

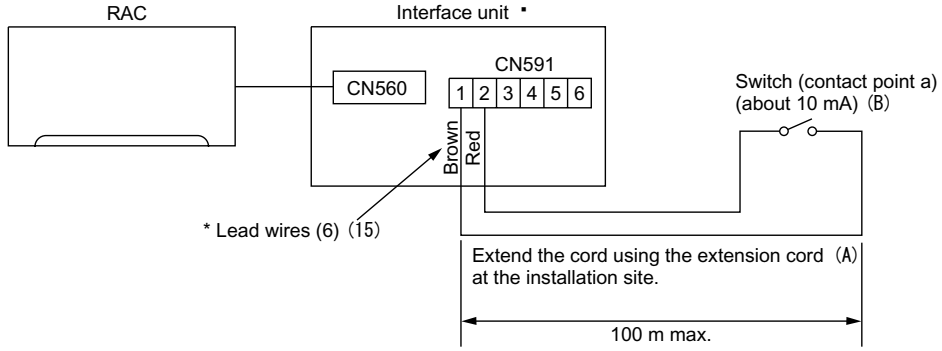
Only turn this ON when the indoor units in the same group include models where the MA remote controller and indoor unit are directly connected.

Set them to ON only when using the room temperature sensor installed in the MA remote controller.
* This can be switched when an accurate room temperature cannot be detected by the air conditioner unit. MSZ-GA and MSZ-FA Series models do not have a room temperature sensor on their MA remote controllers. (Some RAC models will not allow the use of the MA remote controller room temperature sensor.)

- **SW502:**
  - Set this switch based on the functions of the RAC connected to the interface.
  - See the Page 12 table and set the switch after checking the functions using the wireless remote control that came with the RAC.

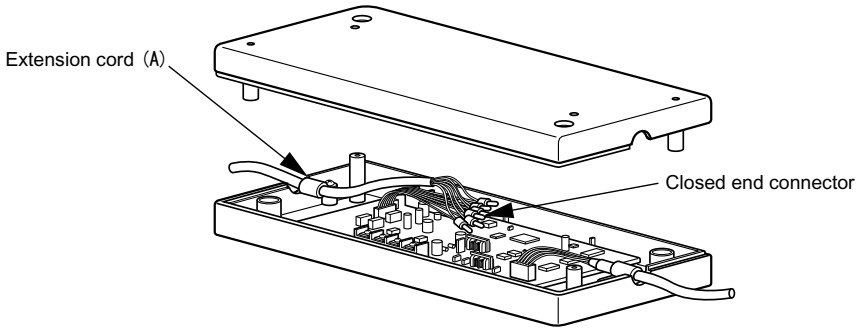
3.3. Remote Control (Turning RAC On and Off from the Contact Point)

- You can turn RAC on and off using an on/off switch like a light switch.
- Connect the supplied lead wires (6)(15)to the connector CN591 on the interface board.
- Wire the remote control components, including the switches, at the installation site.
- Please use extension cords with reinforced insulation.



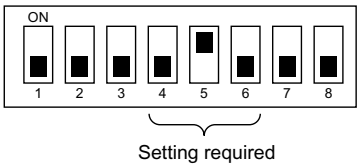
- When the switch contact point is closed (ON), the air conditioner will turn on, and when the switch contact point is open (OFF), the air conditioner will turn off.

* When connecting the connector and the lead wire, connect them using a closed end connector as shown below.



Dip switch settings

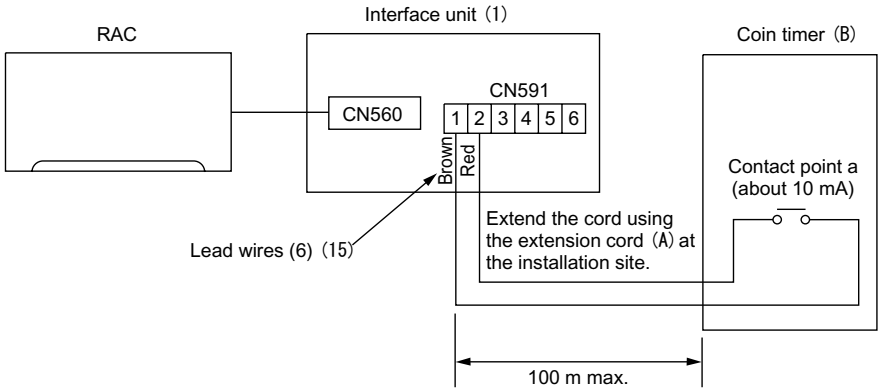
■ **SW500**



■ **SW501 and SW502 do not have to be set.**

3.4. Restricting RAC Operations from the Contact Point

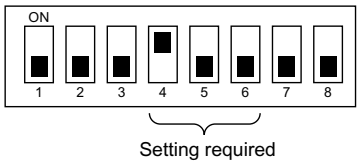
- You can use a coin timer or light switch to ensure that RAC will not operate.
- Connect the supplied lead wires (6)(15)to the connector CN591 on the interface board.
- Wire the remote control components, including the coin timers or switches, at the installation site.
- Please use extension cords with reinforced insulation.



* When the contact point is open, the unit will turn off and will not be operable from the remote control.
When the contact point is closed, the unit will turn on and will be operable from the remote control.

Dip switch settings

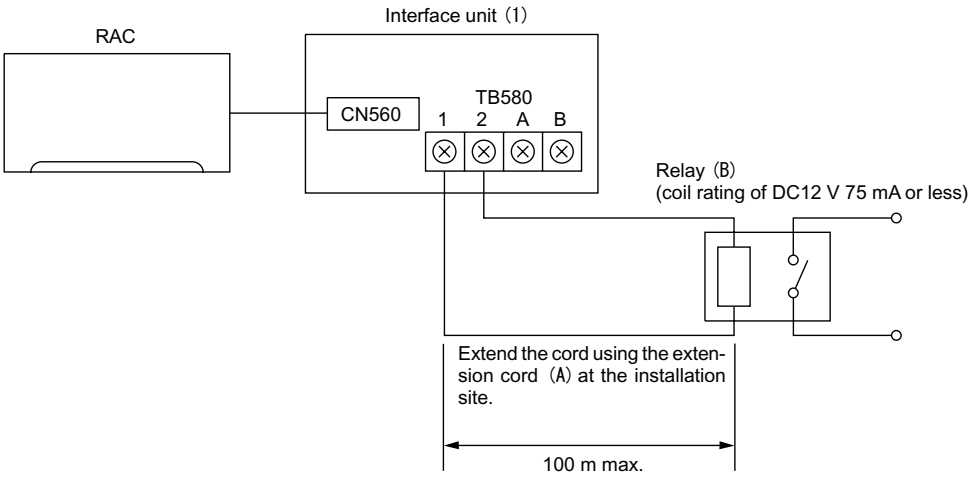
SW500



SW501 and SW502 do not have to be set.

3.5. Status Signal Output Using the Relay

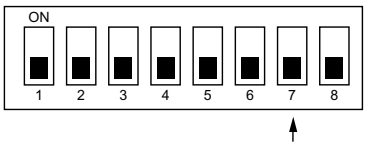
- You can set the external relay to ON/OFF based on whether the RAC is set to either on/off or error/ok.
- Set up and wire the relay and extension cables at the installation site.
- Please use relays with reinforced insulation.



Dip switch settings

■ **SW500**

1. When outputting the RAC on/off



Setting required

The relay is ON when the unit is running, and OFF when it is not.

2. When outputting the RAC error/ok

Setting required

The relay is ON when an error has occurred, and OFF when the unit is functioning properly.

■ **SW501 and SW502 do not have to be set.**

4. Dip Switch Details

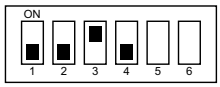
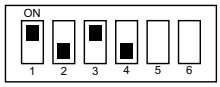
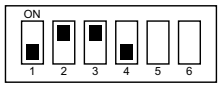
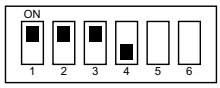
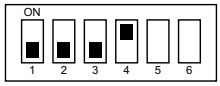
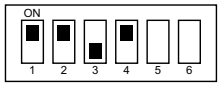
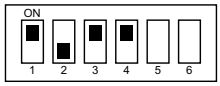
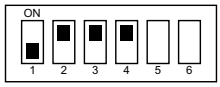
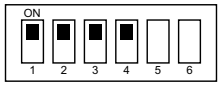
・SW500 - Input/Output Mode Settings

SW No.	Functions	OFF	ON	Comments
No. 1	Not in use	Set to OFF	-	Be sure to set these to OFF (When set to OFF, the unit cannot communicate with the air conditioner).
No. 2	HA terminal (CN504) input switch	Pulse input	Continuous input	There is a switch between TC1 and 2 input on the TB571.
No. 3	HA terminal (CN504) output switch	Static mode	Dynamic mode	
No. 4	Remote control (CN591) mode switch 1	See the next page	See the next page	
No. 5	Remote control (CN591) mode switch 2			
No. 6	Remote control (CN591) mode switch 3			
No. 7	Relay, extermination output mode switch	On/Off output	Error/Ok output	When there is a problem while the unit is running, it will output a relay ON signal.
No. 8	Turn on/off with power option	Turn on/off with power: No (unit remains off when the source power is turned ON)	Turn on/off with power: Yes (Returns the unit to the status (on/off) it was in before the power was turned off)	When the Auto Restart function on the air conditioner itself is set to ON, be sure to set these to OFF.

Remote control (CN591) mode switch

<table>
<tr><th colspan="3">SW 500</th><th rowspan="2">Functions</th><th rowspan="2">Operating Details</th></tr>
<tr><th>No. 4</th><th>No. 5</th><th>No. 6</th></tr>
<tr><td>OFF</td><td>OFF</td><td>OFF</td><td>Do not use the CN591 remote control</td><td>-</td></tr>
<tr><td>OFF</td><td>OFF</td><td>ON</td><td>On/Off Prohibited/Allowed mode 1</td><td>Manual operations prohibited when CN591 No. 1 and No. 3 are closed, permitted when open.
Only when No. 1 and No. 3 are closed and manual operations are prohibited.
On when CN591 No. 1 and No. 2 are closed, off when open.
(Cannot be operated from the remote control when manual operations are permitted. Only valid when operated from the CN591.)</td></tr>
<tr><td>OFF</td><td>ON</td><td>OFF</td><td>On/Off Prohibited/Allowed mode 2 (level input)</td><td>On when CN591 No. 1 and No. 2 are closed, off when open.
Manual operations prohibited when No. 1 and No. 3 are closed, permitted when open.
(Cannot be operated from the remote control when manual operations are permitted. Only valid when operated from the CN591.)</td></tr>
<tr><td>OFF</td><td>ON</td><td>ON</td><td>On/Off Prohibited/Allowed mode 3 (pulse input)</td><td>On when CN591 No. 1 and No. 2 are closed, off when No. 1 and No. 3 are closed.
Manual operations prohibited when No. 1 and No. 4 are closed, and permitted when No. 1 and No. 5 are closed.
(Same as when they are open.)</td></tr>
<tr><td>ON</td><td>OFF</td><td>OFF</td><td>Coin timer mode 1 (for a no-voltage contact point a)</td><td>Permitted and on when CN591 No. 1 and No. 2 are closed, manual operations prohibited and off when open.
(When permitted, the unit can be operated from the remote control.)</td></tr>
<tr><td>ON</td><td>OFF</td><td>ON</td><td>Coin timer mode 2 (for a no-voltage contact point b)</td><td>Manual operations prohibited and off when CN591 No. 1 and No. 2 are closed, permitted and on when open.
(When permitted, the unit can be operated from the remote control.)</td></tr>
<tr><td>ON</td><td>ON</td><td>OFF</td><td>Cooling-Heating/Temperature settings mode 1 (3 temperature patterns)</td><td>On when CN591 No. 1 and No. 2 are closed, off when open.
When No. 1 and No. 3 are closed 20℃
When No. 1 and No. 4 are closed 24℃
When No. 1 and No. 5 are closed 28℃
(When multiple switches No. 3, 4, and 5 are closed, the highest temperature will be selected.)
Heat when No. 1 and No. 6 are closed, cool when open.
(Remote control operations are valid as always.)</td></tr>
<tr><td>ON</td><td>ON</td><td>ON</td><td>Cooling-Heating/Temperature settings mode 2 (8 temperature patterns)</td><td>On when CN591 No. 1 and No. 2 are closed, off when open.
<table>
<tr><th>No. 1 and No. 3</th><th>No. 4</th><th>No. 5</th><th>Temperature settings</th></tr>
<tr><td>Open</td><td>Open</td><td>Open</td><td>16℃</td></tr>
<tr><td>Closed</td><td>Open</td><td>Open</td><td>18℃</td></tr>
<tr><td>Open</td><td>Closed</td><td>Open</td><td>20℃</td></tr>
<tr><td>Closed</td><td>Closed</td><td>Open</td><td>22℃</td></tr>
<tr><td>Open</td><td>Open</td><td>Closed</td><td>24℃</td></tr>
<tr><td>Closed</td><td>Open</td><td>Closed</td><td>26℃</td></tr>
<tr><td>Open</td><td>Closed</td><td>Closed</td><td>28℃</td></tr>
<tr><td>Closed</td><td>Closed</td><td>Closed</td><td>30℃</td></tr>
</table>
Heat when No. 1 and No. 6 are closed, cool when open.
(Remote control operations are valid as always.)</td></tr>
</table>

■ **SW501: Settings when connecting an MA remote controller**

SW No.	Functions	OFF	ON	Comments
No. 1 No. 2 No. 3 No. 4	 Refrigerant address 0			Only specify these settings when connecting an MA remote controller.
	 Refrigerant address 1			
	 Refrigerant address 2			
	 Refrigerant address 3			
	 Refrigerant address 4			
	 Refrigerant address 5			
	 Refrigerant address 6			
	 Refrigerant address 7			
	 Refrigerant address 8			
	 Refrigerant address 9			
	 Refrigerant address 10			
	 Refrigerant address 11			
	 Refrigerant address 12			
	 Refrigerant address 13			
	 Refrigerant address 14			
	 Refrigerant address 15			
SW No.	Functions	OFF	ON	Comments
No. 5	Room temperature detector	Indoor unit	Remote control	This should normally be set to OFF.
No. 6	MA remote controllers are directly connected to indoor units within the same group.	Not mixed	Mixed	

■ **SW502 : Air Conditioner Function Settings**

(Set this switch based on the functions of the RAC connected to this device.)

SW No.	Functions	OFF	ON	Comments
No. 1	Availability of a heating mode	Combined cooler and heater	Cooling unit only	
No. 2	Not in use	-	-	Permanently set to ON.
No. 3	Not in use	-	-	Permanently set to ON.
No. 4	Not in use	-	-	Permanently set to ON.
No. 5	Not in use	-	-	Permanently set to OFF.
No. 6	Not in use	-	-	Permanently set to OFF.
No. 7	Not in use	-	-	Permanently set to OFF.
No. 8	Availability of a fan (Cooling model only)	Has a fan or mode OFF	No fan or mode ON	

5. Test Run (Check Operations)

■ **Interface status monitor**

You can check the status of the interface by the LED lamp on the interface unit board.

LED lamp no.	Lamp off	Lamp on	Blinking
LED521	DC 12 V is not being supplied from the air conditioner.	DC 12 V is being supplied from the air conditioner.	-
LED522	Device is not communicating properly with the air conditioner.	-	Blinking at approx. 1 second intervals: Device is communicating normally with the air conditioner.
LED523	Device is not communicating properly with the MA remote controller.	-	Blinking at approx. 8 second intervals: Device is communicating normally with the MA remote controller.

* Use the table above to check the device operations.

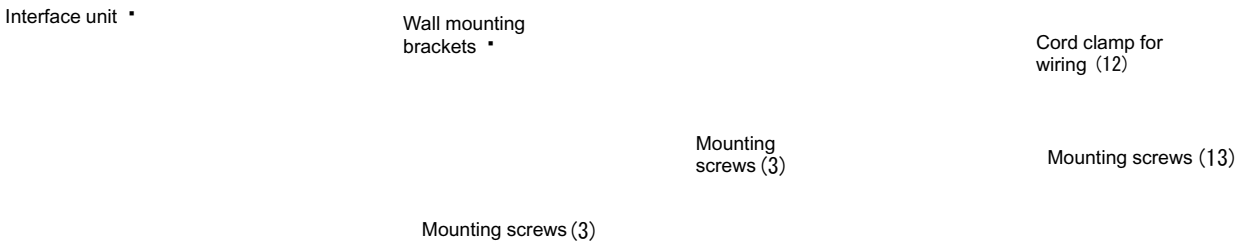
6. Mounting the MA & CONTACT TERMINAL Interface Unit

When mounting the interface to the back-side dent of MFZ-KA model, be sure to apply insulation material to prevent condensation from forming.
The Interface unit should be placed in a location where the connecting cable from the interface can reach an indoor unit.
The device will not function properly if the connecting cable is extended so the connecting cable should not be extended.
Mount the interface unit securely to a pillar or wall using 2 or more screws.

■ **When Using Wall Mounting Brackets** (2)

1 Attach the wall mounting brackets ▪ to the interface unit (1) using 2 mounting screws (3).

2 Mount the unit to a pillar or wall using 2 mounting screws (3).



■ When Mounting Directly to a Wall

Mount the interface unit (1)case to the wall using the mounting screws(3).

Interface case (14) mounting screws

Mounting screws (3)

* When mounting the interface unit (1) using a cushioning material (4), be sure to mount it in a location where it will not fall.

Interface unit (1)

Cushioning material (4)

When mounting the interface unit (1) inside a ceiling or wall, install an access door to facilitate maintenance.

When the interface unit (1) is mounted above an indoor RAC unit, it should be positioned 40 mm or more away from the unit to ensure that ceiling grills can be removed.

40 mm or more

Attach the interface unit (1) connecting cable here. Store extra connecting cable in the ductwork space behind the indoor RAC unit.

* If there is any slack in the connecting cable, use a fastener (11) to keep it in place.

Photo

Descriptions

Enables centralized and individual control of M series and S series models with new-A control using M-NET.

Applicable Models

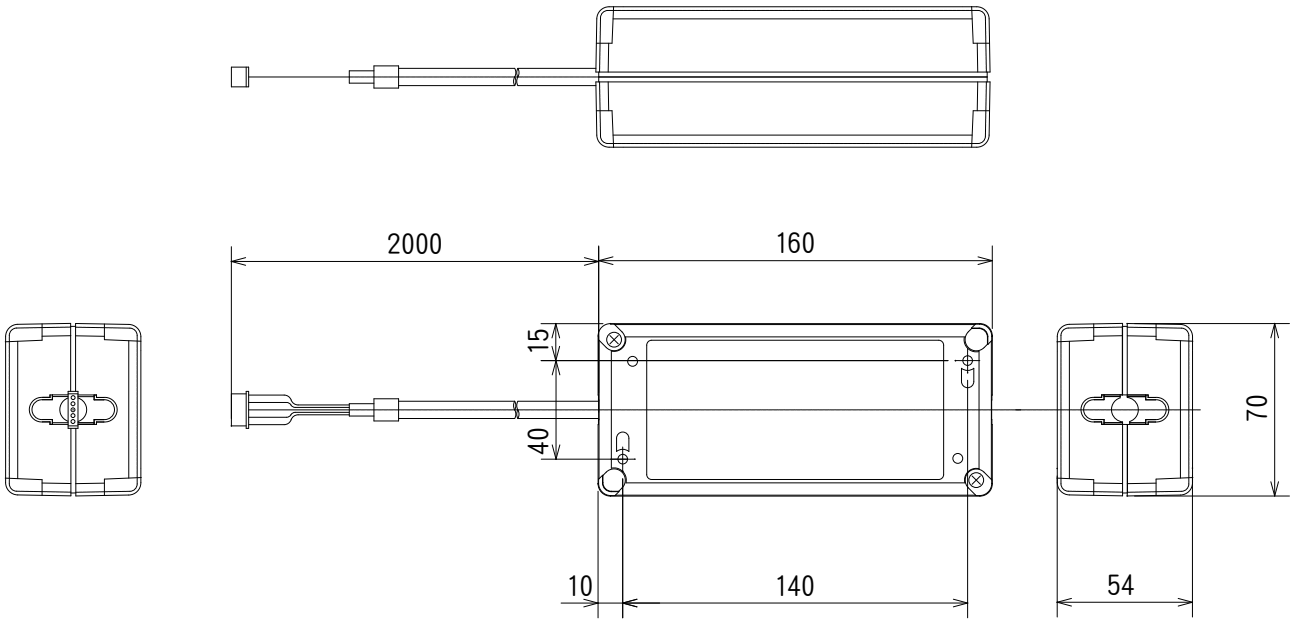
- MSZ-FA/GA
- SEZ-KA
- MFZ-KA
- SLZ-KA

Specifications

Power	12V DC (supplied from indoor unit)
Operating conditions	Indoor only (ambient temperature: 0 to 40℃ , no condensation)
Indoor unit connecting cable	Dedicated 5-wire cable
Weight	350g (including indoor unit connecting cable)

Dimensions

Unit : mm



How to Use / How to Install

1. Before Installation

1.1. How to Use the M-NET Interface

⚠ Caution

When using a packaged air conditioner (PAC, city-multi) system remote controller, you cannot register packaged air conditioners (PACs) and room air conditioners (RACs) in the same group. In this case, register the PACs and RACs in different groups.

■ Functions

Centralized and individual management of RACs (including housing air conditioners) using M-NET(*).

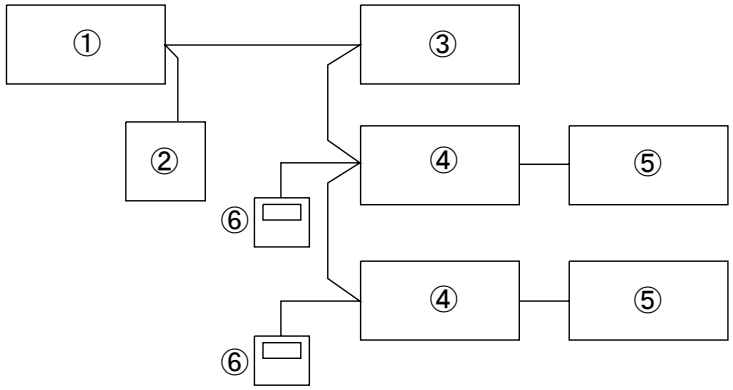
* A type of packaged air conditioner control (city-multi)

■ Related Products Sold Separately

- ME Remote Controller PAR-F27MEA
- Centralized Controller G-50A
- System Remote Controller PAC-SF44SRA
- ON/OFF Remote Controller PAC-YT40ANRA
- Schedule Timer (M-NET) PAC-YT34STA
- Power supply unit PAC-SC50KUA

■ Sample of System Configuration

Sample configuration of a system using a centralized controller



① Centralized controller
② Power supply unit
③ Packaged air conditioner system
④ M-NET Interface
⑤ RAC
⑥ ME Remote Controller

* The number of units that can be connected to the centralized controller (G-50A) is max. 50, including packaged air conditioners and RACs. The wiring from the M-NET Interface to the centralized controller can have a maximum length of 500 m. The wiring from the M-NET Interface to the ME Remote Controller can have a maximum length of 10 m.
For details, see the MELANS Catalog and the instruction manuals for the Centralized Controller and ME Remote Controller.

1.2. Accessory

Before installing the device, make sure you have all the necessary parts.

■ Accessory

(1)	Interface unit	1
(2)	Mounting brackets	1
(3)	Screws (short) for mounting (2)3.5×12	4
(4)	Cushioning material	1
(5)	Cord clamp for mounting (small)	2
(6)	Mounting cord clamp (large)	2
(7)	Screws for mounting (5)and (6)3.5×12	2
(8)	Screw for mounting (5)and (6)4 ×10 * Use this when mounting cord clamp to and around RAC.	1
(9)	Screw for mounting (5)and (6)4 ×16 * Use this when mounting cord clamp together with the parts of RAC.	1
(10)	Fasteners (for joining the lead wires)	5
(11)	Cord clamp for wiring	5
(12)	Screws (black) for mounting (11)3.5 × 16	5
(13)	Interface case mounting screws (black) 3.5 ×12	2

■ Items to Prepare at the Installation Site

(A)	Connection wiring (centralized controller) Shield wiring CVVS/CPEVS
(B)	Connection wiring (for connecting the ME Remote Controller) Remote control wires (2-core sheath wire 0.3 mm^2)
(C)	Related parts sold separately * Prepare the necessary number of parts sold separately as needed for your system.

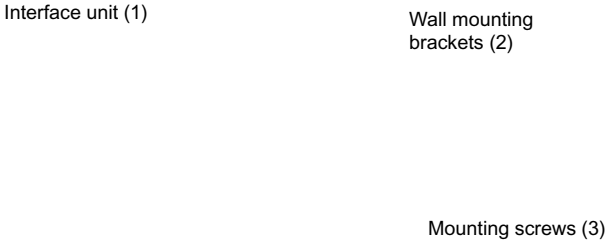
* CPEVS; PE insulated PVC jacketed shielded communication cable
* CVVS; PVC insulated PVC jacketed shielded control cable
PE: Polyethylene PVC: Polyvinyl chloride

2. Mounting the M-NET Interface Unit

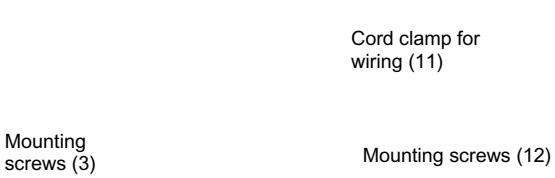
The M-NET Interface unit should be placed in a location where the connecting cable from the interface can reach an indoor unit. The device will not function properly if the connecting cable is extended so the connecting cable should not be extended. Mount the interface unit securely to a pillar or wall using 2 or more screws.

■ **When Using Wall Mounting Brackets** (2)

1 Attach the wall mounting brackets (2) to the interface unit (1) using 2 mounting screws (3).

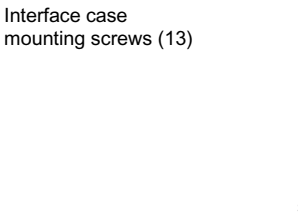


2 Mount the unit to a pillar or wall using 2 mounting screws (3).

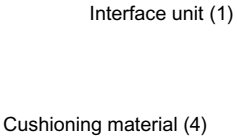


■ **When Mounting Directly to a Wall**

Mount the interface unit (1) case to the wall using the mounting screws (3).

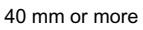


* When mounting the interface unit (1) using a cushioning material (4), be sure to mount it in a location where it will not fall.



When mounting the interface unit (1) inside a ceiling or wall, install an access door to facilitate maintenance.

When the interface unit (1) is mounted above an indoor RAC unit, it should be positioned 40 mm or more away from the unit to ensure that ceiling grills can be removed.



Attach the interface unit (1) connecting cable here. Store extra connecting cable in the ductwork space behind the indoor RAC unit.

* If there is any slack in the connecting cable, use a fastener(10) to keep it in place.

3. Setting the Switches

If the system is not configured correctly, the unit will not function properly. You may be unable to control the functions of the RAC from the System Controller/ME Remote Controller or functions not available on your RAC could appear on the System Controller/ME Remote Controller display. You should therefore ensure that the system is properly configured before connecting the power supply.

■ SW500 No. 1, No. 2 - Not in use
These should be set to OFF (if set to ON, the device will not communicate properly with the System Controller).

■ SW500 No. 3 - Power On/Off Settings
This setting indicates whether the RAC should be turned off or on when power is supplied to the RAC or M-NET Interface.

Turn on with power No
[Unit remains off when the power is supplied.]

Turn on with power Yes
[Unit turns on when the power is supplied.]

■ SW500 No. 4 - Availability of RAC purifier or fan mode
If there is no "Purifier" button on the wireless remote control, and if the word "Fan" does not appear when the "Mode" button is pressed, the purifier and fan modes are not available (set to OFF).

Does not have a purifier or fan mode

Has a purifier or fan mode

■ SW500 No. 5ÐNo. 8 - RAC Function Check

SW500	Function description	How to check a function	OFF	ON
No. 5	Availability of automatic operation mode (a mode that allows the air conditioner to determine whether to select cooling or heating).	If "Auto" is not displayed when you push the "Mode" button on the wireless remote control, the auto operation mode is not available (OFF).	Does not have an auto operation mode	Does have an auto operation mode
No. 6	Availability of a fan oscillation setting	If "Oscillate" is displayed when you push the "Fan Direction" button on the wireless remote control, the fan oscillation setting is available (OFF). (If there is no "Fan Direction" button, the setting is OFF.)	Has a fan oscillation setting	Does not have a fan oscillation setting
No. 7	Availability of a fan direction setting	If there is a Fan Direction button on the wireless remote control, the fan direction setting is available (OFF).	Has a fan direction setting	Does not have a fan direction setting
No. 8	Availability of a heating mode	If "Heat" appears when you push the "Mode" button on the wireless remote control, the unit is a model that offers both cooling and heating (OFF).	Dual cooling and heating model	Cooling unit only

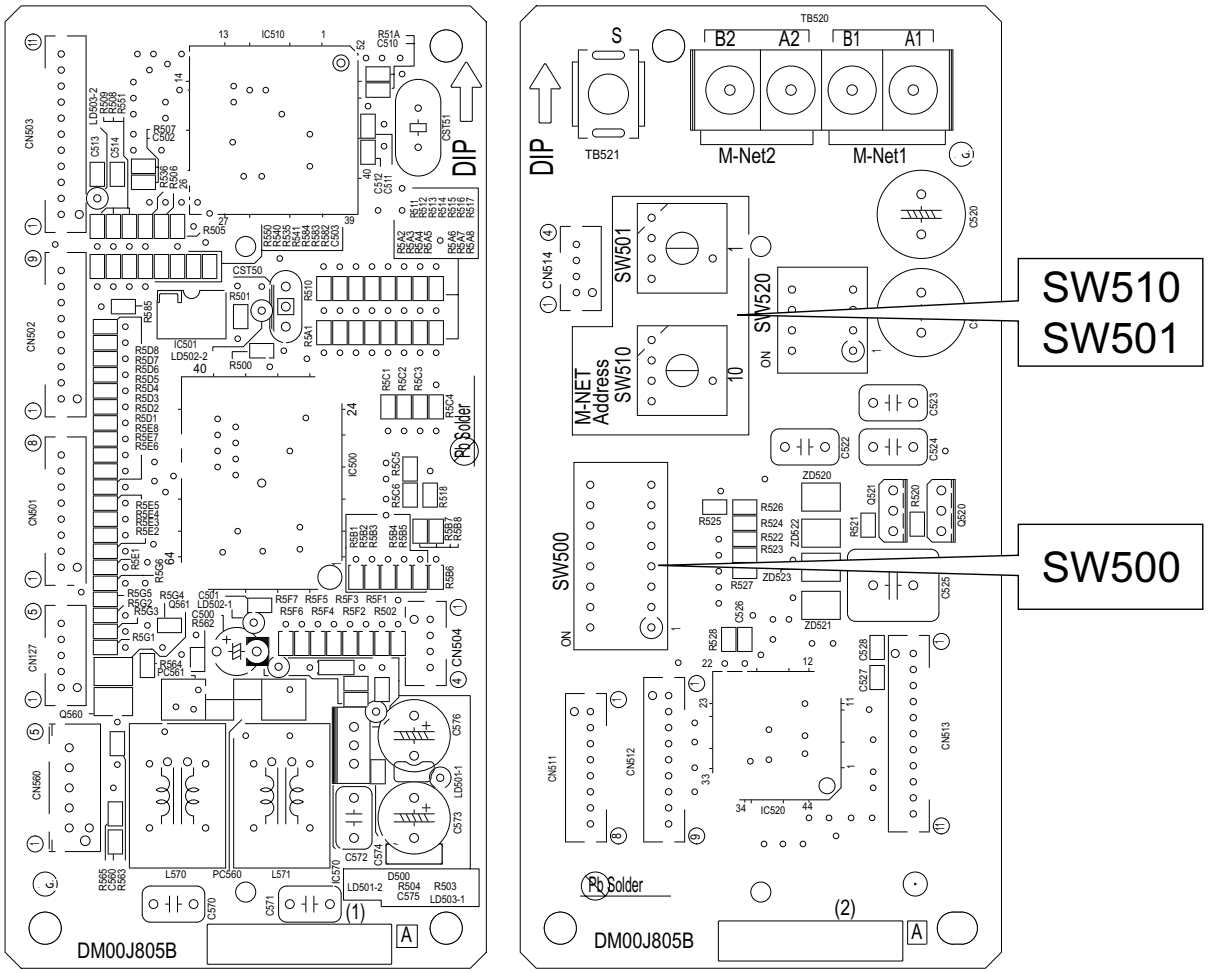
■ SW510, SW501 - Address settings
Specifies the address settings for centralized management (address settings can be set from 01-50).

Self-Address

10s position 1s position

SW510 sets the 10s position of the address and SW501 sets the 1s position of the address.
For example, to set a unit to the address 25, set SW510 to "2" and SW501 to "5".

■ **Position of SW500, SW501, SW510**



4. Connecting the M-NET Interface

Connect the M-NET Interface board to the RAC indoor control board.

RAC

Interface unit (1)

Indoor control board

Connect the connecting cable that comes with the M-NET Interface unit to the connector CN105 on the indoor control board.

・The cables connected to the RAC should be mounted on or near the RAC.
If the connecting cable is not securely mounted, the connector may detach, break, or malfunction.

Mounting screws (8)4 ×10

Mounting cord clamp (6)

Electrical wire mounting bracket

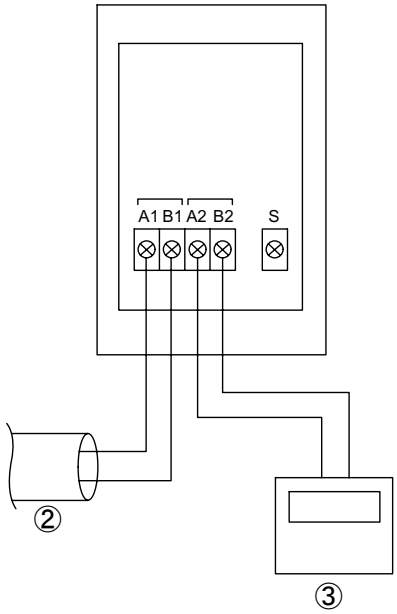
Mounting screws (9)4 ×16

Mounting cord clamp (6)

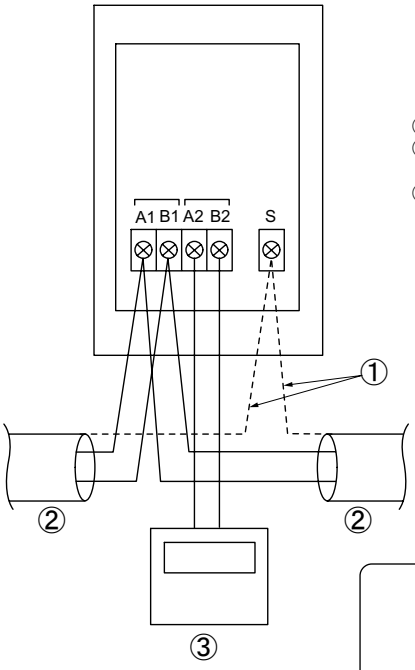
5. Connecting the M-NET Interface, the Power Supply, and the ME Remote Controller

- When connecting the unit to a system controller or ME Remote Controller, connect the transmission line of the M-NET to the control signal terminal.
  Connect the 2-core connection wrings (A) to A1/B1 or A2/B2 (they can be connected to either).
- Cross the shield portion of each connecting wire using the S terminal only when cross wiring the connection wires.
- When connecting the connection wrings (A) and the ME Remote Controller connection wrings (B) to the terminal board, there is no need to worry about polarity.

When the connection wrings (A) are not cross-wired



When the connection wrings (A) are cross-wired

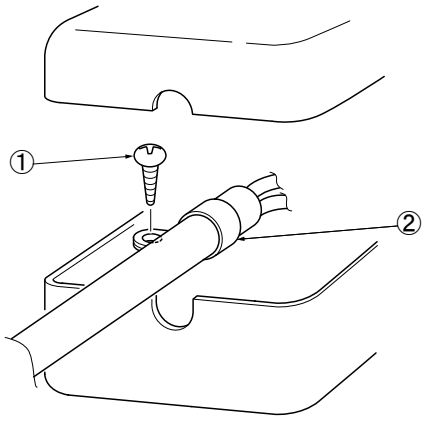


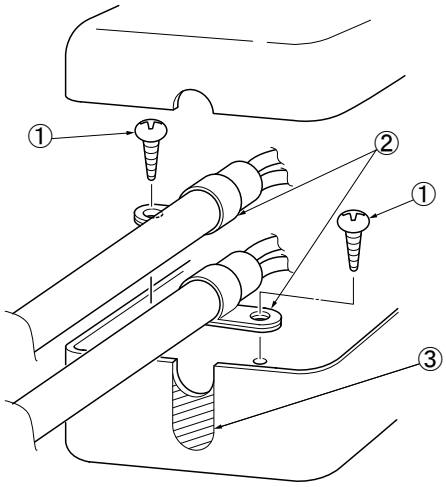
① Shield
② Connection wirings (A)
(M-NET transmission wire)
③ ME Remote Controller
(only when needed)

Bare wire size

- After completing the wiring, securely affix a cord clamp to each electrical wire.

When the connection wrings (A) are cross-wired





① Screws
② Cord clamp (large)
③ Cut with nippers at the notches.
Make sure the cut surface is free of any burr so that the connection wire dose not get damaged.

⚠ Caution

- **Electrical work should be performed in accordance with the Technical Standards Regarding Electrical Equipment and the Interior Wiring Standards.**
- **Connection wiring and remote control wiring should be located as far away from other electrical wiring as possible. Placing them too closely together could cause a malfunction.**

6. Notes Regarding Use

Please read this information carefully before attempting a test run.
The following control information should be thoroughly explained and provided to the users of this device. (Please provide these instructions to the user once the installation is complete.)

* This M-NET Interface operates RACs using the controls of a packaged air conditioner (city-multi), but there are several limitations imposed as a result of the functional differences between RACs and packaged air conditioners.

1. When operating the system using a system controller or ME Remote Controller, these operations will not appear on the display of the wireless remote controller.
2. The dehumidifying modes of individual RACs cannot be operated using the ME Remote Controller/System Controller. When an independent dehumidifying mode is set using the remote controller that came with the RAC, "Dry" will appear on the display because there is no corresponding mode on the ME Remote Controller/System Controller.
3. Functions that are available on the ME Remote Controller/System Controller but that are not available on the RAC can be operated by switching to a predetermined separate operation mode. (See the "Table of RAC Functions Activated from the ME Remote Controller/System Controller.")
4. Functions that are available on the remote controller of the RAC but are not available on the ME Remote Controller/System Controller will produce a predetermined display. In this case, the actual operation and the display may differ. (If the fan speed is automatically set using the remote controller that came with the RAC, the setting "High" will appear on the ME Remote Controller/System Controller. Likewise, if the fan direction is set to automatic, the setting "Downward Air Flow 80%" will appear on the ME Remote Controller/System Controller.)
5. Because the temperature range of the RAC is broader than the ME Remote Controller/System Controller, when the RAC is set to lower than 17°C or higher than 30°C, the temperature display on the ME Remote Controller/System Controller will show the minimum or maximum temperature that can be set. (For example, even if the room air conditioner is set to cool a room to 16°C, the display on the ME Remote Controller/System Controller may read "17°C.")
   The RAC operates according to the room temperature detected by the RAC unit.
6. Timer operations should be set using only the remote controller that came with the RAC or the ME Remote Controller/System Controller. If both are used to set the timer to the same time, the timer will not function properly.
7. When the timer is set using the remote controller that came with the RAC, the timer information will not be displayed on the ME Remote Controller/System Controller.
8. If the timer is set using the ME Remote Controller/System Controller, the timer set using that device will not be cancelled even if the unit is turned off using the remote controller that came with the RAC.
9. When manual operations using the system controller are prohibited, the remote controller that came with the RAC will not function, but the beeping sound that is emitted when it is operating normally will still sound.
10. To clear an error message from the display of the ME Remote Controller/System Controller, briefly turn off the unit using the ME Remote Controller/System Controller or the remote controller that came with the RAC. (The error display on the air conditioner unit may be cleared automatically, but it will not clear from the ME Remote Controller/System Controller until the unit is turned off.)
11. The room temperature sensor installed in the ME Remote Controller cannot be used.

7. Table of RAC Functions Activated from the ME Remote Controller/System Controller

This table shows the RAC functions that can be activated by the ME Remote Controller/System Controller.

	ME Remote Controller/System Controller operations/display	RAC response
Power	On/Off	On/Off
Mode	Fan	Fan
	Auto Cool	Cool
	Auto Heat	Heat
	Cool	Cool
	Heat	Heat
	Dry	Dry
Temperature settings	17-30 °C	17-30 °C
Fan speed settings	Low	Low
	Medium 1	Low
	Medium 2	Medium
	High	High
Air directional settings	Position 1 (Horiz.)	Position 1 (Horiz.)
	Position 2	Position 3
	Position 3	Position 4
	Position 4	Position 5
	Swing	Swing

* Some items may not be displayed, depending on the switch settings.
* When operating the unit using the remote controller that came with the RAC, the operation shown on the remote is the one that will be activated on the actual RAC unit. In this case, the information shown on the display of the ME Remote Controller/System Controller may not accurately reflect the unit's actual operations (see the "Notes Regarding Use").

Centralized On/Off Remote Controller MAC-821SC-E*

*MAC-397IF-E required

Photo

Descriptions

Enables regulate up to 8 indoor units from one single remote controller. ON/OFF selection and operation status confirmation is possible.

Applicable Models

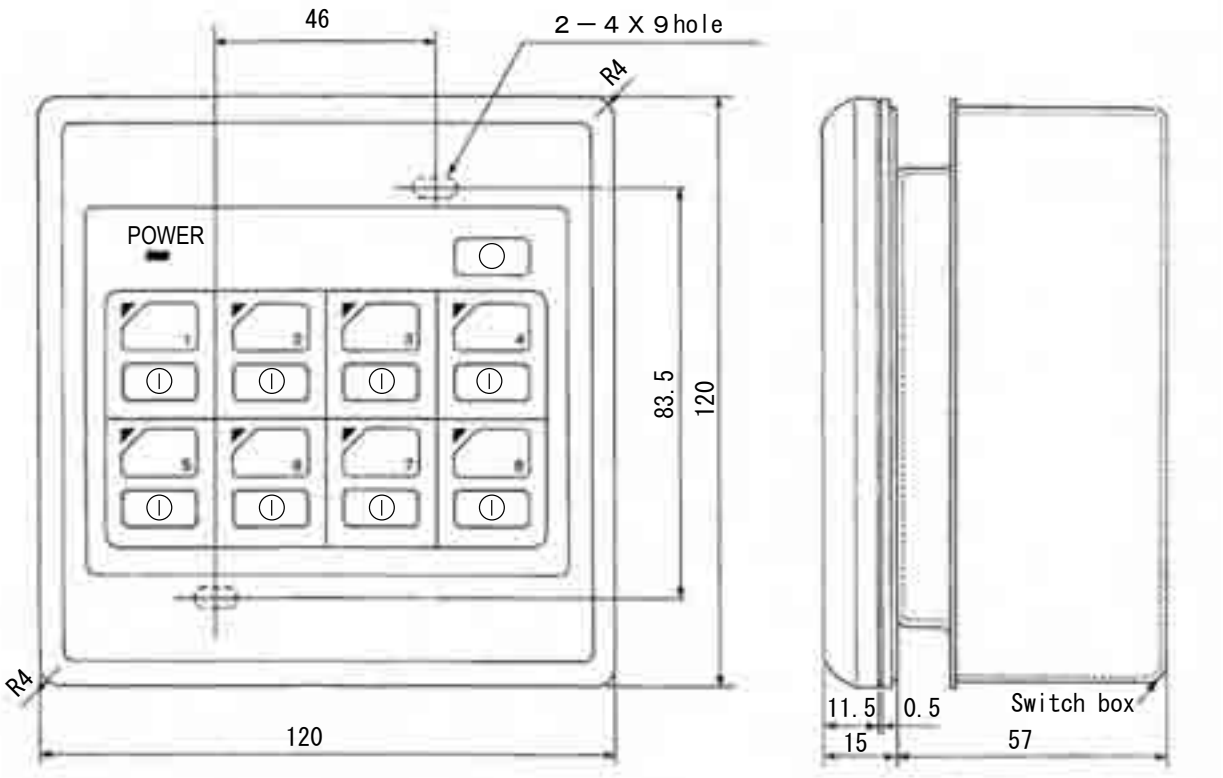
- MSZ-FA
- MSZ-GA
- MFZ-KA
- SEZ-KA
- SLZ-KA

Specifications

No. of controlled air conditioners	8 Units
Power	~/,N220-240 V 50/60 Hz
Power consumption	4 W
Current	0.02 A
Ambient Tempreture	0 - 40 C
Dementions (H x W x D mm)	120 x 120 x 15
Weight	910 g

Dimensions

Unit : mm

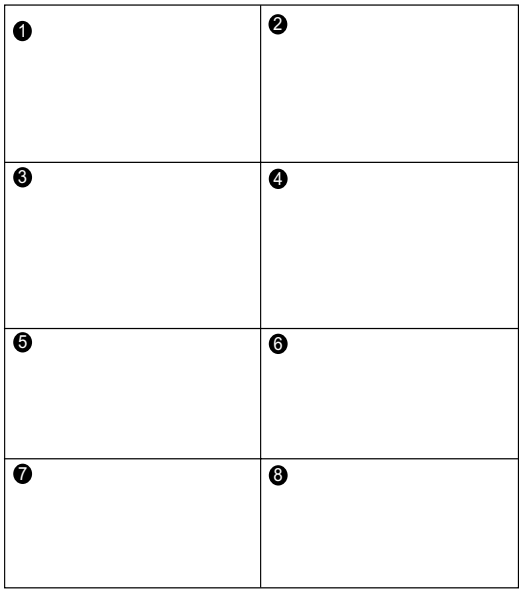


How to Use / How to Install

1. Accessory

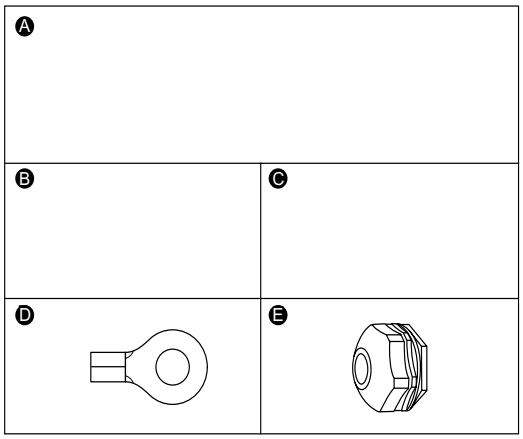
Before installing the unit, make sure that you have all the necessary parts.

❶	Centralized controller A Cover Remove the cover with a flathead screwdriver. B Screw	1
❷	Base plate	1
❸	Switch box	1
❹	Room name stickers	1
❺	Rubber seal (large)	2
❻	Rubber seal (small)	1
❼	Sealing material (adhesive)	4
❽	Mounting screw M4 × 30	2



■ Items to Prepare at the Installation Site

Ⓐ	MA & Contact terminal interface (MAC-397IF-E)	One per air conditioner
Ⓑ	Power supply wire (2-core + ground) 1.5 mm², in conformity with Design 245 IEC 57.	1
Ⓒ	Connection wire Wire specification CVV (3-core) 0.5 mm² or equivalent * CVV is a control cable which is sheathed in poly-vinyl chloride with polyvinyl insulated wires inside.	One per air conditioner
Ⓓ	Ring tongue terminal for M4	1
Ⓔ	PG connection	1

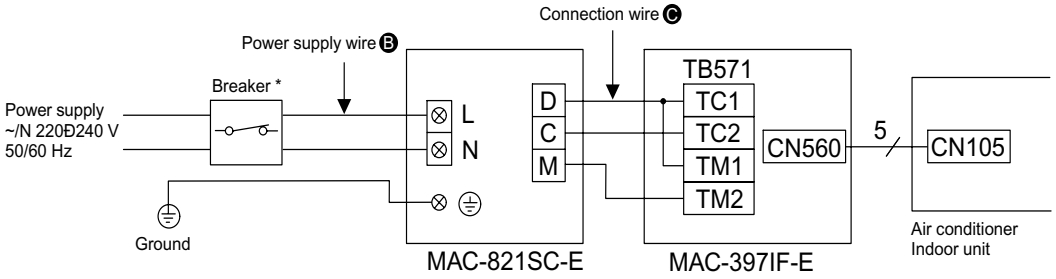


■ Mounting Wall

This centralized controller can be mounted on a wall with a thickness of 6-30 mm.
Since the maximum wall thickness for the centralized controller ❶ mounting screw M4 × 30 ❽ is 17 mm, use screws of the appropriate length for the wall thickness if the wall is between 17 mm and 30 mm thick.
(The best length for an M4 mounting screw is the wall thickness plus 13 mm.)

1-1. Connection Requirements

The MA & Contact terminal interface (MAC-397IF-E) is necessary to connect MAC-821SC-E with RAC.



Breaker capacity	Connect to the supply terminals and leave a contact separation of at least 3 mm at each pole to disconnect the source power pole. (When the power switch is shut off, it must disconnect all poles.)
10 A	

1-2. Selecting an Installation Site

- The centralized controller ❶ is an exposed, wall-mounted model.
  Install the unit in a dry location.
- For information on selecting a mounting wall, see the "Mounting Wall" in section 2 .

■ Switch Box

The centralized controller power and connection wiring is generally direct wired.
The switch box ❸ supplied (with switch box covers for 2 units) should therefore be used for installing the centralized controller.

1-3. Electrical Work

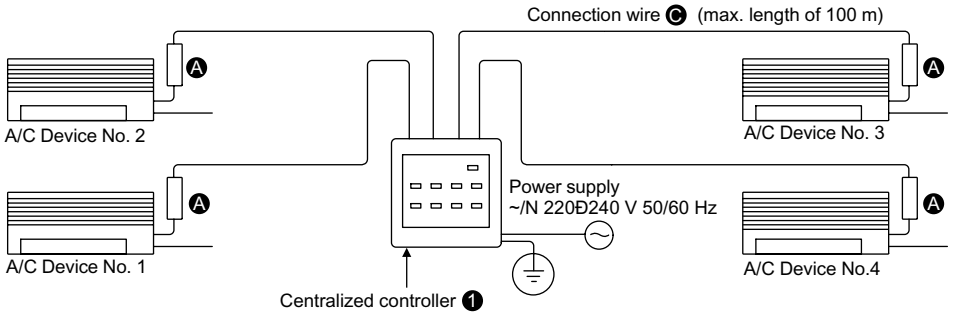
- Use 1.5 mm² power supply wire (2-core + ground).
- For the connection wire Ⓒ, use a control cable CVV (0.5 mm² 3-core) or equivalent product.
- CVV is a control cable which is sheathed in polyvinyl chloride with polyvinyl insulated wires inside.
- Complete the power supply wire and connection wire work before mounting the centralized controller.
- The electrical work should be performed in accordance with the Technical Standards Regarding Electrical Equipment and the Interior Wiring Standards.

1-4. Assigning Air Conditioner Device Numbers

- The numbers (1Ð8) displayed on the control panel of the centralized controller ❶ correspond to the numbers of each connected air conditioner (device number).
- Assign air conditioner device numbers that correspond to the numbers shown on the control panel based on the structure of the building or the layout of the rooms in which the air conditioners are installed.

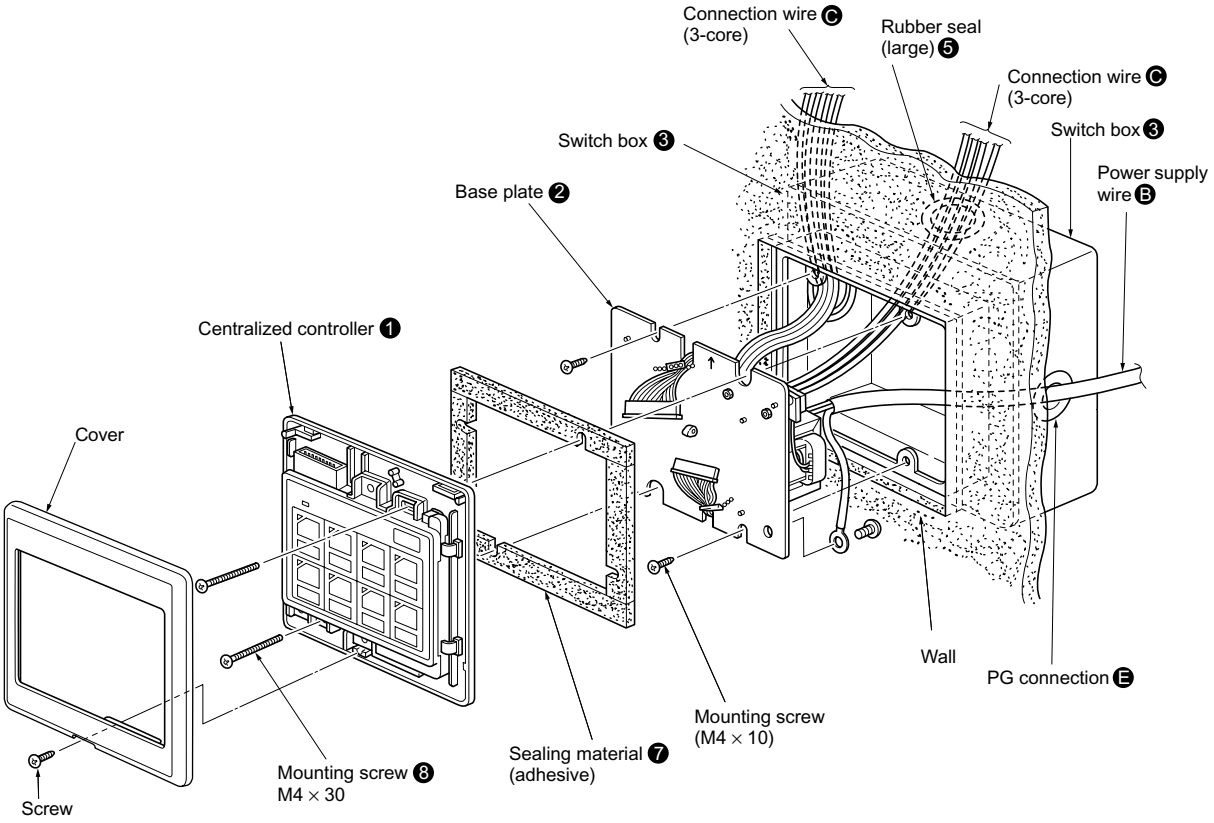
1-5. Sample of Configuration

This figure shows a sample 4-unit configuration.



Ⓐ MA & Contact terminal interface (MAC-397IF-E)

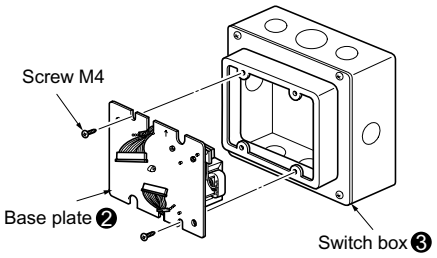
1-6. Mounting Diagram



2. Mounting the Centralized Controller/Direct Wiring

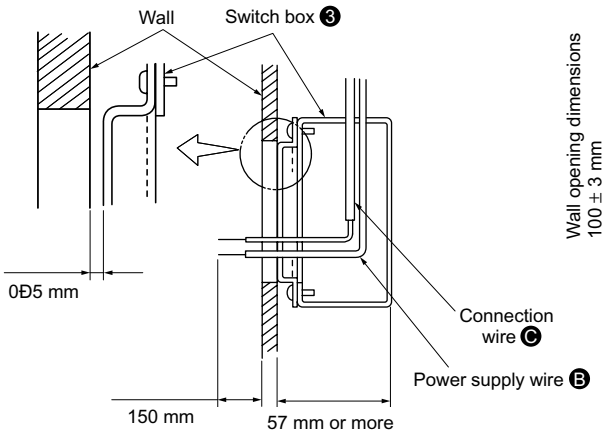
2-1. Mounting Preparations

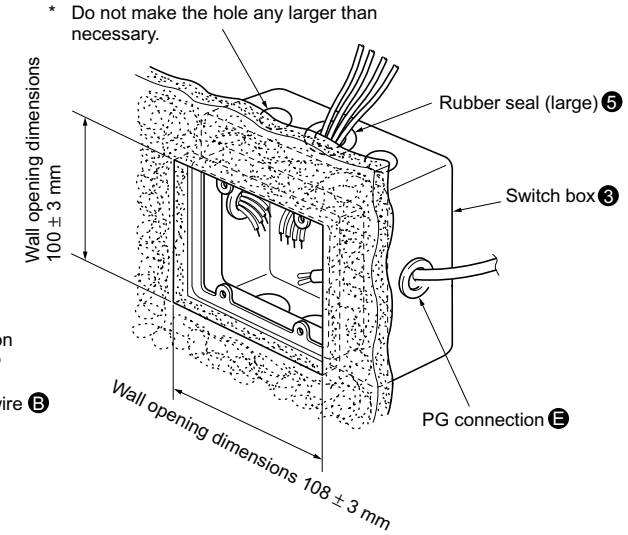
1 Remove 2 screws, and remove the base plate ❷ from the switch box ❸.
Set the 2 screws aside, as they will be used in the section on "4-1. Mounting the Base Plate" under "Mounting the Centralized Controller".



2 Insert the switch box ❸ into the wall. Size the hole in the wall to ensure that there is go gap between the switch box ❸ and the wall surface.
Use the switch box ❸ wall installation dimensions and opening dimensions shown in the figure below.

3 Feed the power supply wire Ⓑ, connection wire Ⓒ, and ground wire from inside of the wall, and pull them through the switch box ❸ into the room about 150 mm.
In addition, when not using a conduit for a connection wire Ⓒ, be sure to install a rubber seal (large) ❺ or rubber seal (small) ❻ into the hole in the switch box ❸ before feeding the connection wire Ⓒ through the hole.
Use the PG connection Ⓔ prepared at the installation site to secure the power supply wire Ⓑ in the hole in the switch box ❸.

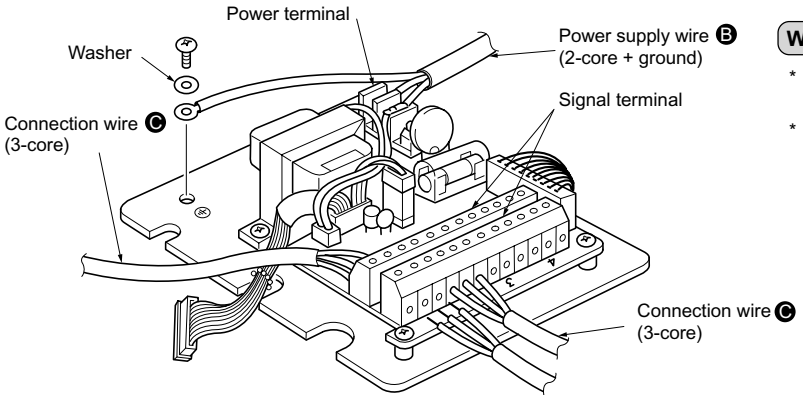




4 After the screws have been removed from the cover of the centralized controller ❶, remove the cover using a flathead screwdriver.

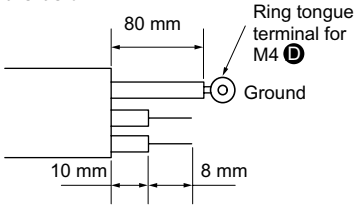
2-2. Connecting the Connection Wire

1 Connect the power supply wire (2-core + ground) Ⓑ to the power terminal.
After they are connected, check that the wires cannot be easily pulled off.



Work on Power Supply wire End

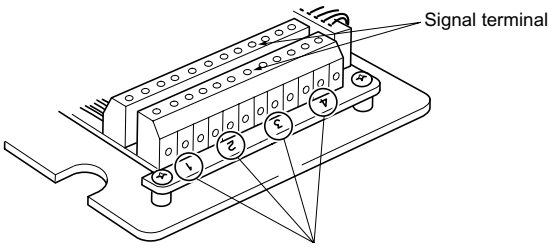
- Be sure to use 1.5 mm² power supply wire Ⓑ (2-core + ground).
- The work on power supply wire end should be performed as shown in the figure below.



2 Mount the ground wire using the ground wire mounting screws.

3 Connect the connection wire (3-core) Ⓒ to the MA & Contact terminal interface (MAC-397IF-E) Ⓐ, (sold separately) corresponding to the air conditioner device number of each unit on the signal terminal.

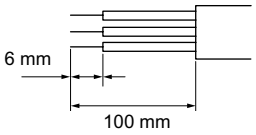
* One signal terminal can be used for connecting 4 rooms.



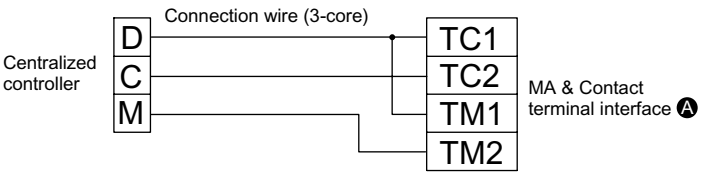
* Connect the devices corresponding to their display number on the control panel.

Work on Connection Wire End

Note: Centralized controller side



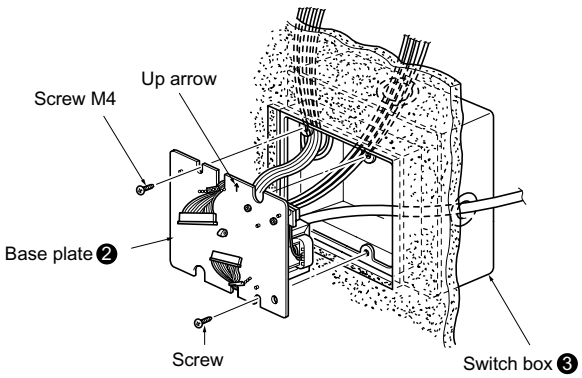
* Connect the centralized controller to the adapters as shown below .



3. Mounting the Centralized Controller

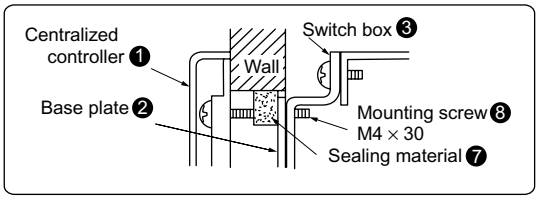
3-1. Mounting the Base Plate

Insert the base plate ❷ into the switch box ❸, and remount it using the screws removed in the "3-1 Mounting Preparations".
Be sure to mount the base plate ❷ so the up arrow is facing upward.
Also, be careful not to damage the wires by getting them caught between plate and the switch box ❸.



3-2. Mounting the Centralized controller

1 Before mounting the unit, apply the supplied sealing materials ❼ to the base plate ❷, and fill in the space between the switch box ❸ and the hole in the wall (a gap here could result in dew condensation).
Cut the sealing material ❼ to a length such that it can be wrapped around the hole in the wall based on the fixed position.



2 Connect the connection cord from the base plate ❷ through the slot in the centralized controller.

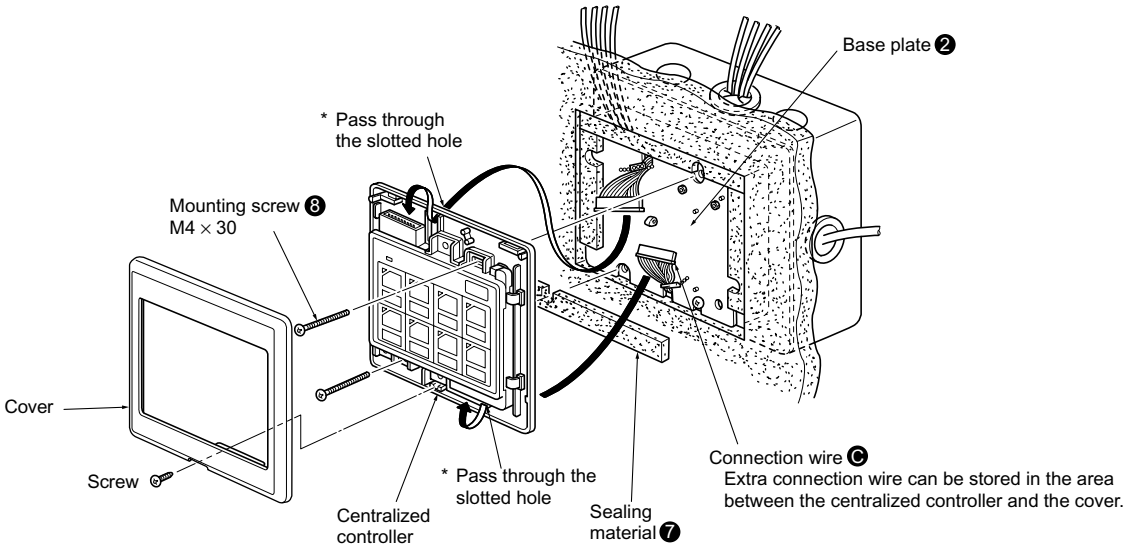
3 Mount the centralized controller to the base plate ❷ using the supplied mounting screw ❽.
Be careful not to damage the connection wires by getting them caught in the walling materials.

4 Using the supplied screw, attach the cover to the centralized controller.

5 To attach the cover to the centralized controller, fit the tabs along the top of the cover into the holes in the centralized controller and then push the lower portion of the cover into place.

⚠ Caution

Be sure not to tighten the mounting screw ❽ too tight.
Doing so may disfigure the centralized controller and prevent the cover from closing securely.



4. Test Run

A test run should be performed after the centralized controller and the MA & Contact terminal interface (MAC-397IF-E) have all been installed.

1 Turn the power switch on each air conditioner to ON.

2 Press the ON/OFF button on the wireless remote controller for each air conditioner to make sure the air conditioner turns on, and then press the button again to turn each unit off.

3 Supply power (AC 220-240 V) to the centralized controller .

4 Press the ON/OFF button on the upper part of the control panel of the centralized controller, and confirm that the (green) operation indicator lamp for that device number comes on.
Also confirm that the corresponding air conditioner has turned on (the operation indicator lamp will not come on if the air conditioner is not connected).

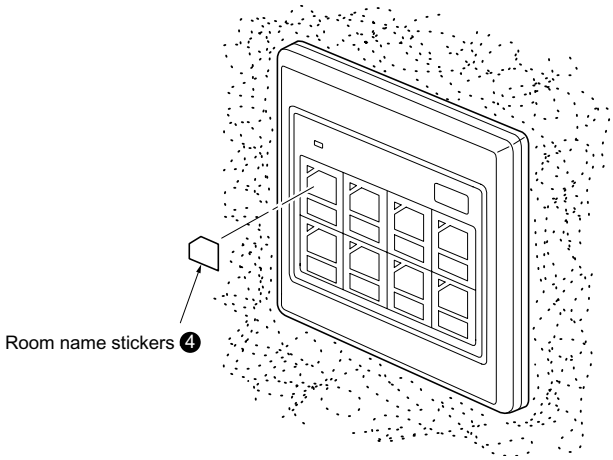
5 Press the ON/OFF button again, and confirm that the operation indicator lamp goes out and that the air conditioner unit turns off.

6 Repeat steps *4* and *5* again for each device number.

7 Press the All OFF button, and confirm that all the (green) operation indicator lamps go out and that all the air conditioners turn off.

5. Room Name Display

Select the appropriate stickers from the room name stickers ❹ supplied, and affix them to the display section of the panel.



Wired Remote Controller with Weekly Timer Function PAR-21MAA*

*MAC-397-E required

Photo

Descriptions

Advanced MA remote controller with the large size dot liquid crystal display. Multi-language display and weekly timer function are available.

Applicable Models

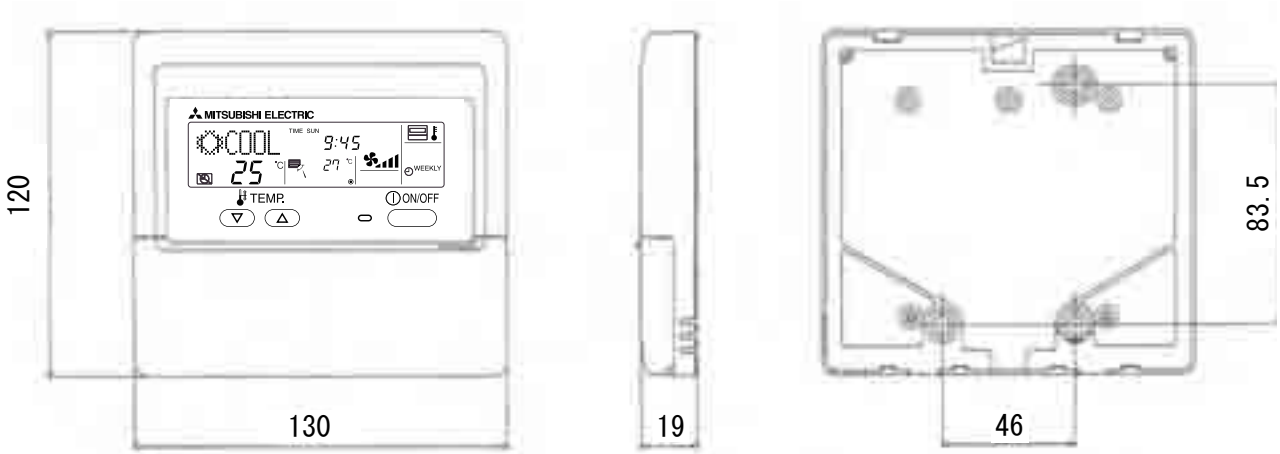
- MSZ-FA/GA
- MFZ-KA

Specifications

External colors	Cover	Pure white (Munsell 6.9Y 8.9/0.4)
	LCD peripheral area	Medium gray

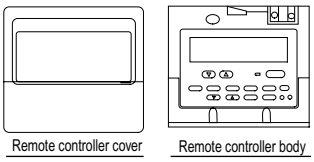
Dimensions

Unit : mm



How to Use / How to Install

1 Confirming the Supplied Parts



Confirm that the box includes the following parts, in addition to this installation manual:

1. Remote controller (cover, body) 1
2. Cross recessed pan head screw (M4 ×30) 2
3. Wood screw (4.1 ×16, used for directly hooking to the wall) 2
4. Caution label (in 12 languages) 1

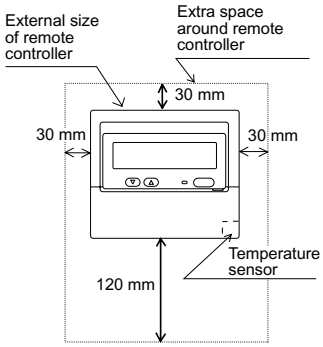
*1 For the remote control, obtain a 2-core cable between 0.3 and 1.25 mm^2 at the site.
*2 PAC-YT32PTA cannot be connected.

2 How To Install

1. Choose a place in which to install the remote controller (switch box).

Be sure to observe the following steps:

(1) Temperature sensors are provided with both the remote controller and the indoor units. When using the remote controller temperature sensor, the master remote controller detects the room temperature. Install the master remote controller in a place where the average room temperature can be detected and which is not affected by any heat source from direct sunlight or air blown from air conditioning units.



⚠ CAUTION The place where (when) the difference between the room temperature and the wall temperature is large, the wall temperature that is affected by the temperature of the wall on which the remote controller is installed is measured. Therefore, the difference between the room temperature and the measured wall temperature may be large.
When the installation site is one of the followings, use of a temperature sensor for an indoor unit is recommended.
- When the room is not well-ventilated and the air does not reach the wall on which the remote controller is installed.
- When the difference between the temperature of the wall on which the remote controller is installed and the room temperature.
- When the backside of the wall on which the remote controller is installed is exposed to the outdoor air.

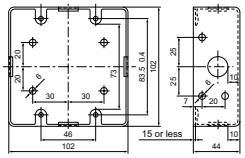
When the temperature changes drastically, the temperature may not be measured accurately.

When a remote controller temperature sensor is used in a place which is likely to be affected by the wall on which the remote controller is installed, use of an optional spacer (Model: PAC-YT83RS) for a remote controller is recommended.
(For how to set the main and sub remote controller, see step (1) "Remote controller" [4]-3. (1) in section 6 Function Selection.
For how to set the temperature sensor, see step (2) "Unit function selection" in section 6 Function Selection.)

(2) When installing on either the switch box or the wall, allow extra space around the remote controller as shown in the figure at the right.

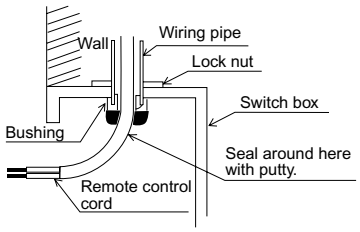
NOTE: Make sure that there is no wiring or wire near the remote controller sensor. If there is, the remote controller cannot detect the exact room temperature.

(3) Parts which must be supplied on site.
- Switch box for two units
- Thin-copper wiring pipe
- Lock nut and bushing
- Surface raceways

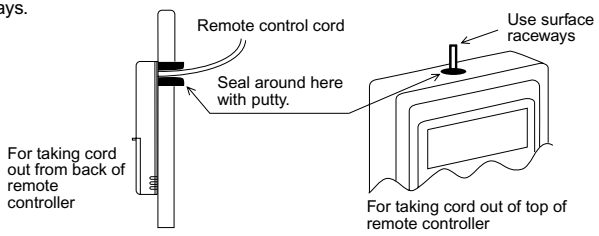


2. Seal the remote controller cord with putty in order to prevent the possible entry of dew, water droplets, cockroaches, other insects, etc.

When using the switch box
- When installing on the switch box, seal the connections between the switch box and wiring pipe with putty.

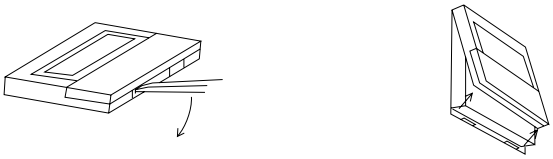


When installing directly on the wall
- When opening a hole using a drill for the remote controller cord (or when taking the cord out of the back of the remote controller), seal the hole with putty.
- When routing the cord via the portion cut off from the upper cover, similarly seal that portion with putty.
- When taking the remote controller cord from back of the controller, use surface raceways.



3. Remove the remote controller cover.

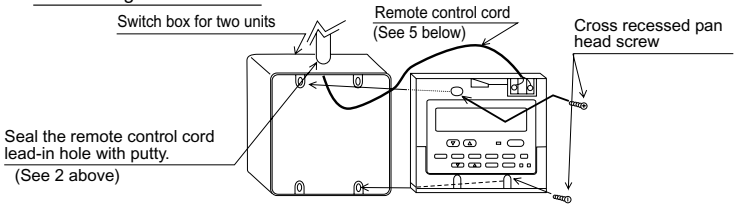
- Insert a minus screwdriver into one of the open slots and move the screwdriver in the arrow direction.



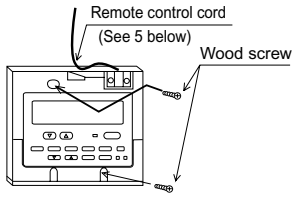
⚠ CAUTION	Do not turn the screwdriver in the slot. Doing so may damage the slot.

4. Install the lower case on the switch box or directly on the wall.

When using the switch box



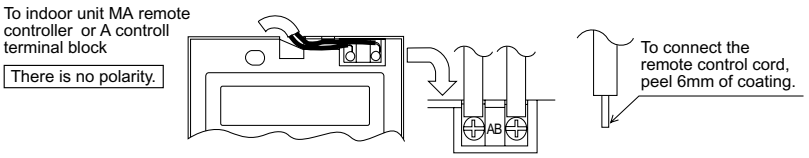
When installing directly on the wall



⚠ CAUTION	Do not tighten the screws too tight. Doing so may deform or crack the lower cover.

NOTE: - Choose a flat plane for installation.
- Fasten the switch box at more than two places when installing directly on the wall.
- When reinstalling on the wall, fasten securely using anchors.

5. Connect the remote control cord to the remote controller terminal block.

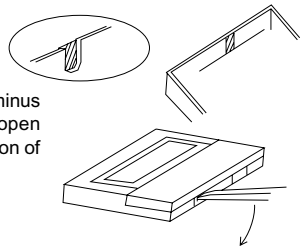


⚠ CAUTION	Do not use crimp terminals to connect to remote controller terminal blocks. The terminals may contact the board and cause trouble or contact the cover and damage the cover.

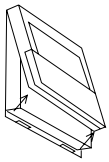
⚠ CAUTION	Prevent remote cord chips from getting into the remote controller. Electric shock or malfunction may result.

6. Wiring hole for installing directly on the wall (or open wiring)

- Cut off the shaded area from the upper cover using a knife, nippers, etc.
- Take out the remote control cord connected to the terminal block via this portion.



7. Install the cover to the remote controller.



To remove the cover, insert a minus screwdriver into one of the open slots, and move it in the direction of the arrow shown in the figure.

First, hook the cover to the two upper claws and then fit it to the remote controller.

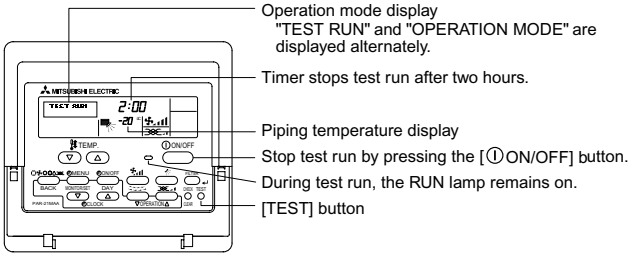
⚠ CAUTION	Press the cover until it snaps shut. If not, it may fall off.

⚠ CAUTION	Do not into turn the screwdriver in the slot. Doing so may damage the slot.

NOTE: A protection sheet is stuck to the operation section. Peel off this protection sheet before use.

3 Test Run

1. Before making a test run, refer to the "Test Run" section of the indoor unit installation manual.
2. Press the [TEST] button twice successively within three seconds. Test run starts.
3. Stop the test run by pressing the [ⓘON/OFF] button.
4. If trouble occurred during the test run, refer to the "Test Run" section of the indoor unit installation manual.



4 Ventilation Setting

Make this setting only when interlocked operation with LOSSNAY is necessary with CITY MULTI models.
(This setting cannot be made with Mr. SLIM air conditioners.)

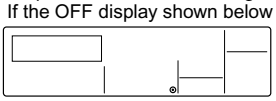
* When the upper controller is connected, make the setting using the upper controller.

NOTE: When using LOSSNAY units in conjunction, interlock the addresses of all indoor units within the group and address of LOSSNAY units.

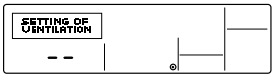
Perform this operation when you want to register the LOSSNAY, confirm the registered units, or delete the registered units controlled by the remote controller.
The following uses indoor unit address 05 and LOSSNAY address 30 as an example to describe the setting procedure.

[Setting Procedure]

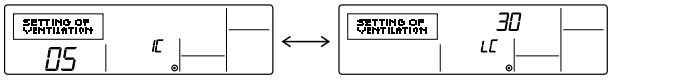
① Stop the air conditioner using the remote controller [ⓘON/OFF] button.
If the OFF display shown below does not appear at this time, step ② cannot be performed.



② Press and hold down the [FILTER] and [ ] buttons at the same time for two seconds. The display shown below appears. The remote controller confirms the registered LOSSNAY addresses of the currently connected indoor units.

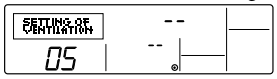


③ Registration confirmation result
- The indoor unit address and registered LOSSNAY address are displayed alternately.



<Indoor unit address and indoor unit display> <LOSSNAY address display and LOSSNAY display>

- When LOSSNAY are not registered

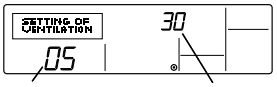


If registration is unnecessary, end registration by pressing and holding down the [FILTER] and [ ] buttons at the same time for two seconds.
If a new LOSSNAY must be registered, go to step **1. Registration procedure**. If you want to confirm another LOSSNAY, go to step **2. Confirmation procedure.** To delete a registered LOSSNAY, go to step **3. Deletion procedure**.

< 1. Registration procedure >

Set the address of the LOSSNAY and the indoor unit connected by the remote controller you want to register using the [TEMP. (▽) and (△)] buttons. (01 to 50)

Set the address of the LOSSNAY you want to register using the [CLOCK (▽) and (△)] buttons. (01 to 50)

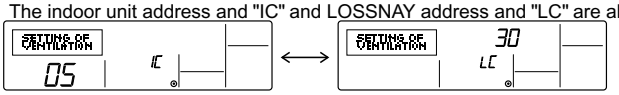


Indoor unit address LOSSNAY address

Press the [TEST] button, and register the set indoor unit address and LOSSNAY address.

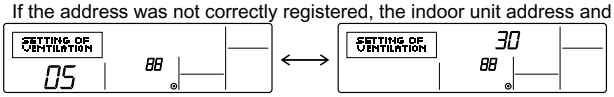
- Registration end display

The indoor unit address and "IC" and LOSSNAY address and "LC" are alternately displayed.



- Registration error display

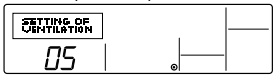
If the address was not correctly registered, the indoor unit address and registered LOSSNAY address are alternately displayed.



Cannot be registered because the registered indoor unit or LOSSNAY does not exist.
Cannot be registered because another LOSSNAY was registered at the registered indoor unit.

< 2. Confirmation procedure >

Set the address of the indoor unit connected by the remote controller whose LOSSNAY you want to confirm using the [TEMP. (▽) and (△)] buttons. (01 to 50)

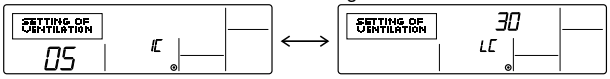


<Indoor unit address>

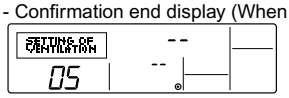
Press the [MENU] button and confirm the LOSSNAY address registered at the set indoor unit address.

- Confirmation end display (When LOSSNAY is connected.)

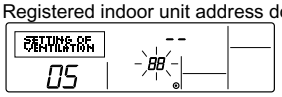
The indoor unit address and "IC" and registered LOSSNAY address and "LC" are alternately displayed.



- Confirmation end display (When LOSSNAY is not connected.)



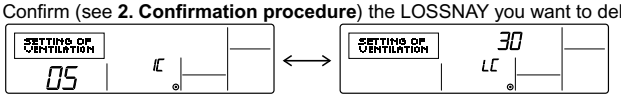
Registered indoor unit address does not exist.



< 3. Deletion procedure >

Use this procedure when you want to delete registration of indoor units connected by the remote controller and LOSSNAY.

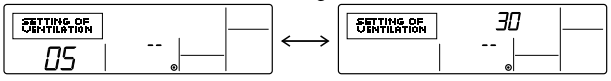
10 Confirm (see **2. Confirmation procedure**) the LOSSNAY you want to delete and display the indoor units and LOSSNAY confirmation results.



11 Press the [ON/OFF] button twice and delete registration of the LOSSNAY registered at the set indoor unit.

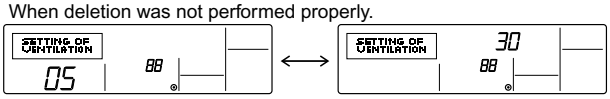
- Deletion end display

Indoor unit address and "--" and registered LOSSNAY address and "--" are alternately displayed.



- Deletion error display

When deletion was not performed properly.



5 Function Selection

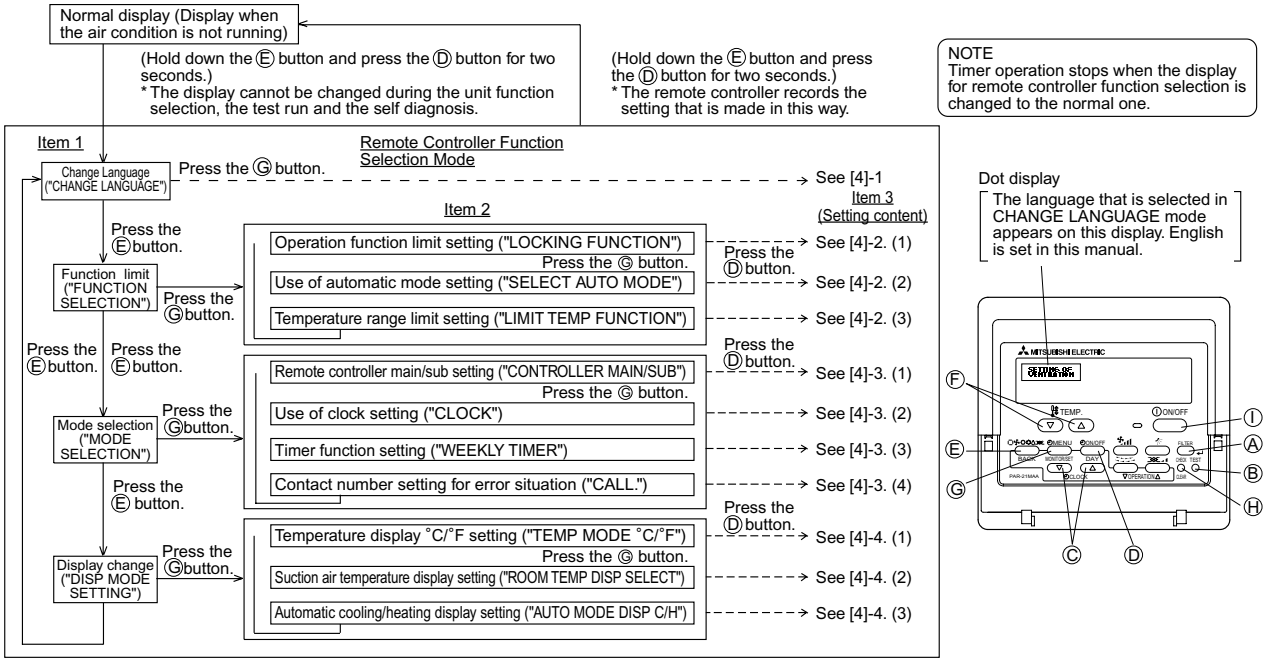
(1) Function selection of remote controller

The setting of the following remote controller functions can be changed using the remote controller function selection mode. Change the setting when needed.

Item 1	Item 2	Item 3 (Setting content)
1. Change Language ("CHANGE LANGUAGE")	Language setting to display	•Display in multiple languages is possible.
2. Function limit ("FUNCTION SELECTION")	(1) Operation function limit setting (operation lock) ("LOCKING FUNCTION")	•Setting the range of operation limit (operation lock)
	(2) Use of automatic mode setting ("SELECT AUTO MODE")	•Setting the use or non-use of "automatic" operation mode
	(3) Temperature range limit setting ("LIMIT TEMP FUNCTION")	•Setting the temperature adjustable range (maximum, minimum)
3. Mode selection ("MODE SELECTION")	(1) Remote controller main/sub setting ("CONTROLLER MAIN/SUB")	•Selecting main or sub remote controller * When two remote controllers are connected to one group, one controller must be set to sub.
	(2) Use of clock setting ("CLOCK")	•Setting the use or non-use of clock function
	(3) Timer function setting ("WEEKLY TIMER")	•Setting the timer type
	(4) Contact number setting for error situation ("CALL.")	•Contact number display in case of error •Setting the telephone number
4. Display change ("DISP MODE SETTING")	(1) Temperature display °C/°F setting ("TEMP MODE °C/°F")	•Setting the temperature unit (°C or °F) to display
	(2) Suction air temperature display setting ("ROOM TEMP DISP SELECT")	•Setting the use or non-use of the display of indoor (suction) air temperature
	(3) Automatic cooling/heating display setting ("AUTO MODE DISP C/H"	•Setting the use or non-use of the display of "Cooling" or "Heating" display during operation with automatic mode

[Function selection flowchart]

[1] Stop the air conditioner to start remote controller function selection mode. → [2] Select from item1. → [3] Select from item2. → [4] Make the setting. (Details are specified in item3) → [5] Setting completed. → [6] Change the display to the normal one. (End)



[Detailed setting]

[4] -1. CHANGE LANGUAGE setting

The language that appears on the dot display can be selected.

・ Press the [◴MENU] button to change the language.

① Japanese (JP), ② English (GB), ③ German (D), ④ Spanish (E), ⑤ Russian (RU), ⑥ Italian (I), ⑦ Chinese (CH), ⑧ French (F)

[4] -2. Function limit

(1) Operation function limit setting (operation lock)

・ To switch the setting, press the [◴ON/OFF] button.

① no1 : Operation lock setting is made on all buttons other than the [① ON/OFF] button.

② no2 : Operation lock setting is made on all buttons.

③ OFF (Initial setting value) : Operation lock setting is not made.

* To make the operation lock setting valid on the normal screen, it is necessary to press buttons (Press and hold down the [FILTER] and [① ON/OFF] buttons at the same time for two seconds.) on the normal screen after the above setting is made.

(2) Use of automatic mode setting

When the remote controller is connected to the unit that has automatic operation mode, the following settings can be made.

・ To switch the setting, press the [◴ON/OFF] button.

① ON (Initial setting value) : The automatic mode is displayed when the operation mode is selected.

② OFF : The automatic mode is not displayed when the operation mode is selected.

(3) Temperature range limit setting

After this setting is made, the temperature can be changed within the set range.

・ To switch the setting, press the [◴ON/OFF] button.

① LIMIT TEMP COOL MODE :
The temperature range can be changed on cooling/dry mode.

② LIMIT TEMP HEAT MODE :
The temperature range can be changed on heating mode.

③ LIMIT TEMP AUTO MODE :
The temperature range can be changed on automatic mode.

④ OFF (initial setting) : The temperature range limit is not active.

* When the setting, other than OFF, is made, the temperature range limit setting on cooling, heating and automatic mode is made at the same time. However, the range cannot be limited when the set temperature range has not changed.

・ To increase or decrease the temperature, press the [TEMP (▽) or (△)] button.

・ To switch the upper limit setting and the lower limit setting, press the [ ] button. The selected setting will flash and the temperature can be set.

・ Settable range
Cooling/Dry mode : Lower limit: 19°C ~ 30°C Upper limit: 30°C ~ 19°C
Heating mode : Lower limit: 17°C ~ 28°C Upper limit: 28°C ~ 17°C
Automatic mode : Lower limit: 19°C ~ 28°C Upper limit: 28°C ~ 19°C

* The settable range varies depending on the unit to connect (Mr. Slim units, Free-plan units, and intermediate temperature units)

[4] -3. Mode selection setting

(1) Remote controller main/sub setting

・ To switch the setting, press the [◴ON/OFF] button.

① Main : The controller will be the main controller.

② Sub : The controller will be the sub controller.

(2) Use of clock setting
- To switch the setting, press the [ON/OFF] button.

① ON : The clock function can be used.
② OFF : The clock function cannot be used.

(3) Timer function setting
- To switch the setting, press the [ON/OFF] button (Choose one of the followings.).

① WEEKLY TIMER (initial setting on MA deluxe):
The weekly timer can be used.
② AUTO OFF TIMER: The auto off timer can be used.
③ SIMPLE TIMER (Default setting on MA smooth):
The simple timer can be used.
④ TIMER MODE OFF: The timer mode cannot be used.

* When the use of clock setting is OFF, the "WEEKLY TIMER" cannot be used.

(4) Contact number setting for error situation
- To switch the setting, press the [ON/OFF] button.

① CALL OFF : The set contact numbers are not displayed in case of error.
② CALL **** *** **** : The set contact numbers are displayed in case of error.
CALL_ : The contact number can be set when the display is as shown on the left.
- Setting the contact numbers

To set the contact numbers, follow the following procedures.
Move the flashing cursor to set numbers. Press the [TEMP. (▽) and (△)] button to move the cursor to the right (left). Press the [CLOCK (▽) and (△)] button to set the numbers.

[4] -4. Display change setting
(1) Temperature display °C/°F setting
- To switch the setting, press the [ON/OFF] button.

① C: The temperature unit °C is used.
② F: The temperature unit °F is used.

(2) Suction air temperature display setting
- To switch the setting, press the [ON/OFF] button.

① ON : The suction air temperature is displayed.
② OFF : The suction air temperature is not displayed.

(3) Automatic cooling/heating display setting
- To switch the setting, press the [ON/OFF] button.

① ON : One of "Automatic cooling" and "Automatic heating" is displayed under the automatic mode is running.
② OFF : Only "Automatic" is displayed under the automatic mode.

(2) Unit Function Selection Perform only when change is necessary with Mr. SLIM air conditioner.
(Cannot be performed with CITY MULTI control system.)

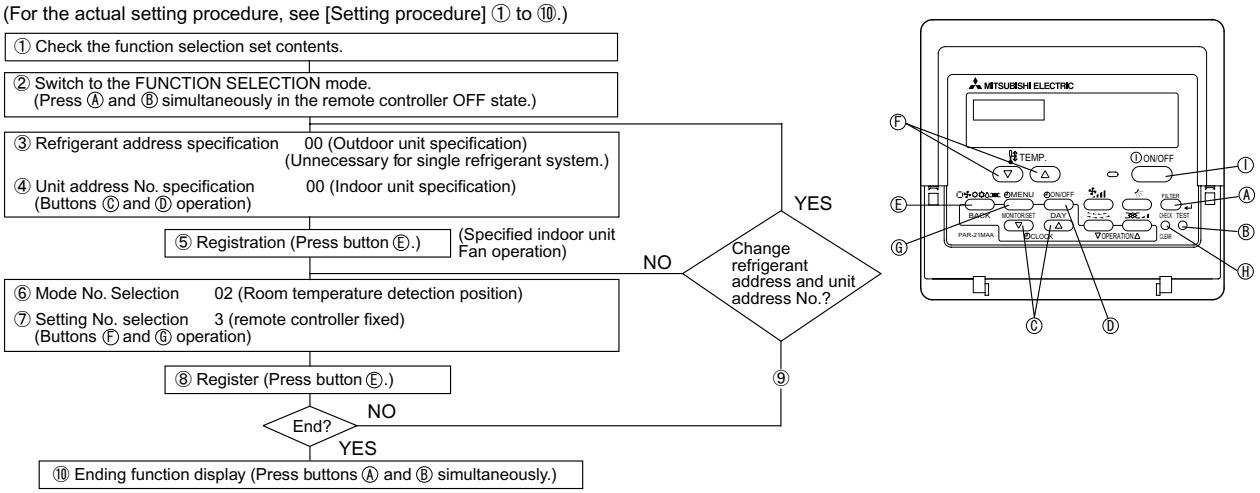
Set the functions of each indoor unit from the remote controller, as required. The functions of each indoor unit can be selected only from the remote controller. Set the functions by selecting the necessary items from Table 1.

Table 1. Function selection contents (For a detailed description of the factory settings and mode of each indoor unit, refer to the indoor unit installation manual.)

Function	Settings	Mode No.	Setting No.	Check	Object unit address No.
Power failure automatic recovery	Not available	01	1		Unit address No. 00 These items are set for all indoor units.
	Available (Approximate 4 minutes wait-period after power is restored.)	01	2		
Indoor temperature detecting	Indoor unit operating average	02	1		
	Set by indoor unit's remote controller	02	2		
	Remote controller's internal sensor	02	3		
LOSSNAY connectivity	Not Supported	03	1		
	Supported (indoor unit is not equipped with outdoor-air intake)	03	2		
	Supported (indoor unit is equipped with outdoor-air intake)	03	3		
AUTO mode	Energy saving cycle automatically enabled	05	1		
	Energy saving cycle automatically disabled	05	2		
Filter sign	100 Hr	07	1		Unit address No. 01 to 04 or AL These items are set for each indoor unit.
	2500 Hr	07	2		
	No filter sign indicator	07	3		
Fan speed	Quiet	08	1		
	Standard	08	2		
	High ceiling	08	3		
No. of air outlets	4 directions	09	1		
	3 directions	09	2		
Installed options	Not supported	10	1		
	Supported	10	2		
Up/down vane setting	No vanes	11	1		
	Equipped with vanes (No. 1 set)	11	2		
	Equipped with vanes (No. 2 set)	11	3		
Energy saving air flow	Disabled	12	1		
	Enabled	12	2		
Humidifier	Not supported	13	1		
	Supported	13	2		

NOTE: When the indoor unit functions were changed using the function selection after installation is complete, always indicate the set contents by entering ○ or other mark in the appropriate check field of Table 1.

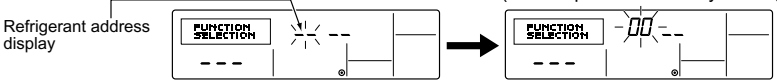
[Function selection flow]
First grasp the function selection flow. The following describes setting of "Room temperature detection position" of Table 1 as an example.
(For the actual setting procedure, see [Setting procedure] ① to ⑩.)



[Procedure] (Set only when change is necessary.)

① Check the set contents of each mode. When the set contents of a mode were changed by function selection, the functions of that mode also change.
Check the set contents as described in steps ③ to ⑦ and change the setting based on the entries in the Table 1 check field. For the factory settings, refer to the indoor unit installation manual.

② Set the remote controller to Off.
Press and hold down the Ⓐ [FILTER] and Ⓑ [TEST] buttons at the same time for two seconds or longer.
"FUNCTION SELECTION" blinks for a while, then the remote controller display changes to the display shown below.



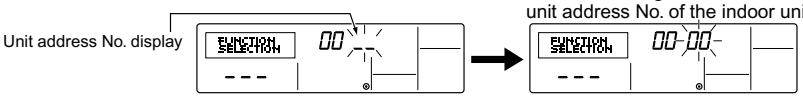
③ Set the outdoor unit refrigerant address No.
When the Ⓒ [CLOCK (▽) and (△)] buttons are pressed, the refrigerant address No. decreases and increases between 00 and 15. Set it to the refrigerant address No. whose function you want to select.
(This step is unnecessary for single refrigerant system.)

* If the remote controller enters the OFF state after the "FUNCTION SELECTION" and room temperature displays " 88 " have flashes for two seconds, communication is probably abnormal. Make sure there are no noise sources near the transmission line.

NOTE: If you make a mistake during operation, end function selection by step ⑩ and repeat selection from step ②.

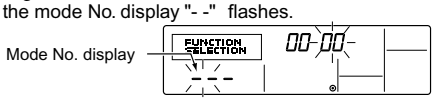
④ Set the indoor unit address No.
Press the Ⓓ [ON/OFF] button. The unit address No. display "- -" flashes.

When the Ⓒ [CLOCK (▽) and (△)] buttons are pressed, the unit address No. changes in 00 → 01 →02 → 03 → 04 → AL order. Set it to the unit address No. of the indoor unit whose functions you want to set.



* When setting mode 1 to 3, set the unit address No. to "00".
* When setting modes 7 to 11:
- When setting for each indoor unit, set the unit address No. to "01-04".
- When batch setting for all indoor units, set the unit address No. to "AL".

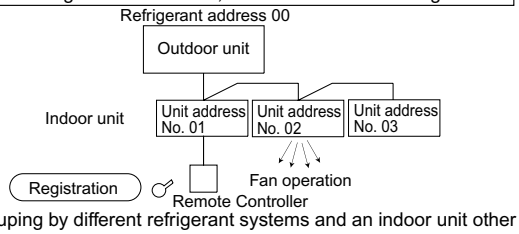
⑤ Refrigerant address and unit address No. registration
Press the Ⓔ [□✣☼☼⌂≪] button. The refrigerant address and unit address No. are registered.
After a while, the mode No. display "- -" flashes.



* When " 88 " flashes at the room temperature display, the selected refrigerant address is not in the system.
When "F" is displayed at the unit address No. display, and when it flashes together with the refrigerant address display, the selected unit address No. does not exist. Correctly set the refrigerant address and unit address No. by repeating steps ② and ③.

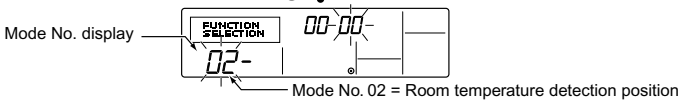
☞ When registered using the Ⓔ [□✣☼☼⌂≪] button, the registered indoor unit begins fan operation. When you want to know the location of the indoor units of the unit address No. whose functions were selected, check here. When the unit address No. is 00 or AL, all the indoor units of the selected refrigerant address perform the fan operation.

Ex) When refrigerant address 00, unit address No. = 02 registered



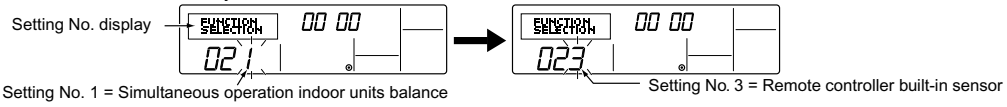
* When grouping by different refrigerant systems and an indoor unit other than the specified refrigerant address performs the fan operation, the refrigerant address set here is probably duplicated.
Recheck the refrigerant address at the outdoor unit rotary switches.

⑥ Mode No. selection
Select the mode No. you want to set with the Ⓕ [TEMP. (▽) and (△)] buttons. (Only the settable mode numbers can be selected.)

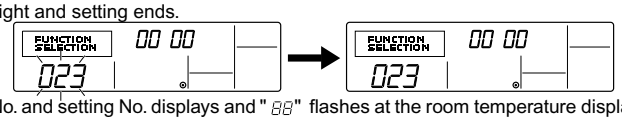


⑦ Select the setting contents of the selected mode.
When the Ⓖ [MENU] button is pressed, the current setting No. flashes. Use this to check the currently set contents.

Select the setting No. using the Ⓕ [TEMP. (▽) and (△)] buttons.



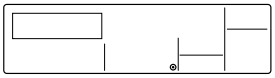
⑧ The contents set at steps ③ to ⑦ are registered.
When the Ⓔ [□✣☼☼⌂≪] button is pressed, the mode No. and setting No. flash and registration begins. The flashing mode No. and setting No. change to a steady light and setting ends.



* When "- -" appears at the mode No. and setting No. displays and " 88 " flashes at the room temperature display, communication is probably abnormal. Make sure there are no noise sources near the transmission line.

⑨ To select more functions, repeat steps ③ to ⑧.

⑩ End function selection.
Press and hold down the Ⓐ [FILTER] and Ⓑ [TEST] buttons at the same time for two seconds or longer.
After a while, the function selection display disappears and the remote controller returns to the air conditioner off display.



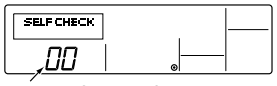
* Do not operate the air conditioner from the remote controller for 30 seconds after the end of function selection.

NOTE: When the functions of an indoor unit were changed by function selection after the end of installation, always indicate the set contents by entering a ○ or other mark in the appropriate check field of Table 1.

6 Self check

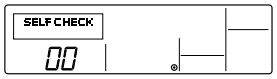
Retrieve the error history of each unit using the remote controller.

① Switch to the self check mode.
When the Ⓗ [CHECK] button is pressed twice successively within three seconds, the display shown below appears.



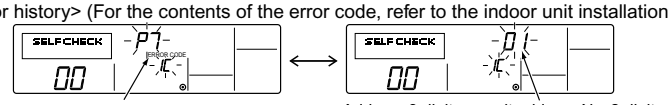
Self check address or self check refrigerant address

② Set the address or refrigerant address No. you want to self check.
When the Ⓕ [TEMP. (▽) and (△)] buttons are pressed, the address decreases and increases between 01 and 50 or 00 and 15. Set it to the address No. or refrigerant address No. you want to self check.



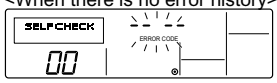
Approximately three seconds after the change operation, the self check refrigerant address changes from flashing to a steady light and self check begins.

③ Self check result display <Error history> (For the contents of the error code, refer to the indoor unit installation manual or service handbook.)

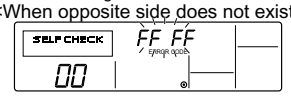


Error code 4 digits or error code 2 digits
Address 3 digits or unit address No. 2 digits

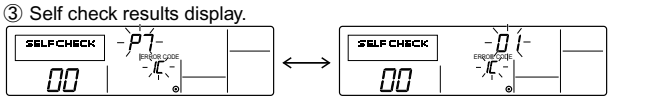
<When there is no error history>



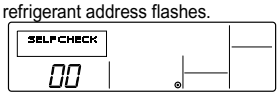
<When opposite side does not exist>



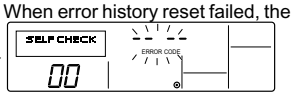
④ Error history reset
The error history is displayed in ③ Self check results display.



When the [◴MENU] button is pressed twice successively within three seconds, the self check address or refrigerant address flashes.



When the error history was reset, the display shown below appears.
When error history reset failed, the error contents are displayed again.

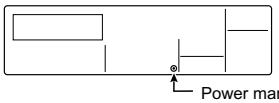


⑤ Self check reset
There are the following two ways of resetting self check.
Press the Ⓗ[CHECK] button twice successively within three seconds. Resets self check and returns to the state before self check.
Press the ⓘ[ⓘ ON/OFF] button Self check resets and indoor units stop.
(When operation is prohibited, this operation is ineffective.)

7 Remote Controller Check

When the air conditioner cannot be controlled from the remote controller, use this function to check the remote controller.

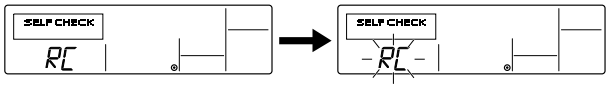
① First check the power mark.
When normal voltage (DC12V) is not applied to the remote controller, the power mark goes off.
When the power mark is off, check the remote controller wiring and the indoor unit.



Power mark

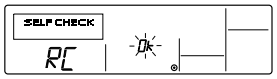
② Switch to the remote controller check mode.
When the Ⓗ [CHECK] button is held down for five seconds or longer, the display shown below appears.

When the Ⓐ [FILTER] button is pressed, remote controller check begins.



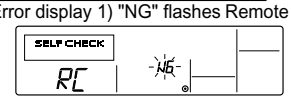
③ Remote controller check result

When remote controller is normal



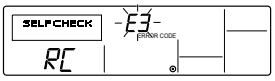
Since there is no problem at the remote controller, check for other causes.

When remote controller is faulty
(Error display 1) "NG" flashes Remote controller send/receive circuit abnormal



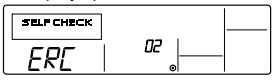
Remote controller switching is necessary.

When the problem is other than the checked remote controller
(Error code 2) "E3" "6833" "6832" flash → Cannot send



There is noise on the transmission line, or the indoor unit or another remote controller is faulty. Check the transmission line and the other remote controllers.

(Error display 3) "ERC" and data error count are displayed → Data error generation



"Data error count" is the difference between the number of bits of remote controller send data and the number of bits actually sent to the transmission line. In this case, the send data was disturbed by the noise, etc. Check the transmission line.

When data error count is 02

④ Remote controller check reset
When the Ⓗ[CHECK] button is held down for five seconds or longer, remote controller check resets and the "PLEASE WAIT" and RUN lamp flash. Approximately 30 seconds later, the remote controller returns to the state before remote controller check.

Wired Remote Controller Kit for Wall Mounted models PAR-21MAAT-E

Photo

TO BE CONFIRMED

Descriptions

Enables the use of new MA remote controller (PAR-21MAA) for wall mounted models.

Applicable Models

- PKA-RP
- PKH-P

Specifications

Terminal block capacity	10A/250V
Applicable wire	Φ1.6mm or less
Terminal block material	Phenol resin
Parts composition	Terminal block (TB5) x1, Fixing screw x 1, Lead wire A x 1, Lead wire B x 1

* Not compatible with PAC-SF18TC.

Dimensions

Unit : mm

TO BE CONFIRMED

Wireless Remote Controller Kit for Ceiling Suspended models PAR-SL99B-E

Photo

TO BE CONFIRMED

Descriptions

Enables the use of wireless remote controller for ceiling suspended models.

Applicable Models

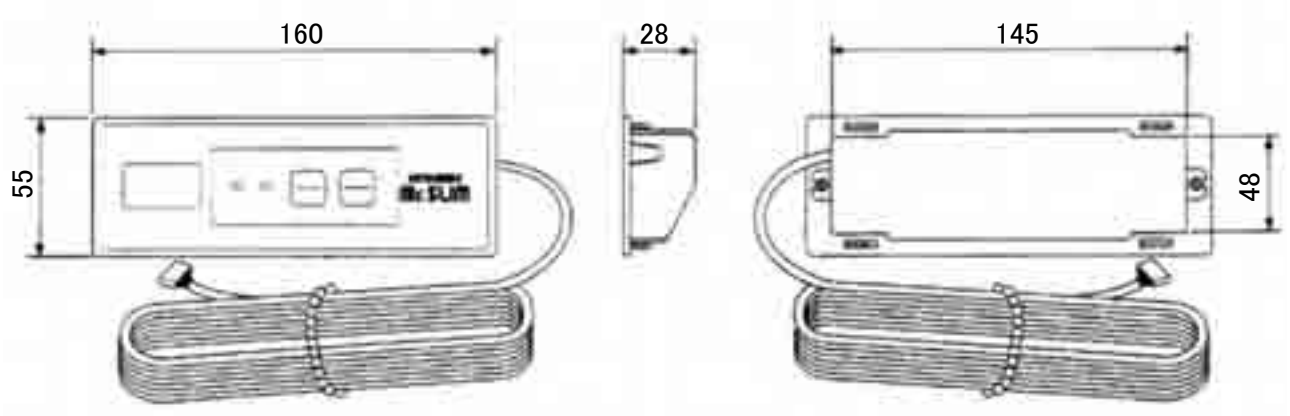
- PCA-RP
- PCH-P

Specifications

Operation indication	During operation: LED (green) is lit, Alarm: LED (green) flashes.
Emergency operation	Cooler/heater button (start/stop) is provided.
Number of units controlled	Max. 16 refrigerant systems per group (One or more wireless light receivers must be installed for each refrigerant system.)
Adapter wiring	9-wire cord (standard accessory) with connector is connected to the connector (CN90) on the indoor unit control board.
Light receiver range	7m or less, at within 45 degrees to the front of receiver (the range varies with conditions)
Operating conditions	Temperature: 0 to 40℃ , Humidity: 30 to 90% (no condensation)
Exterior	White gray (Munsell 4.48Y 7.92/0.66), ABS resin
Installation method	Attached to the brand label case of indoor unit.
Accessory	Cord clip x 2

Dimensions

Unit : mm



How to Use / How to Install

1 Making Sure of Components

Make sure that the following components, along with this manual, are packed in the box.

Component	PAR-SL99B-E
Wireless remote controller	1
Receiver board	1
Remote control holder	1
“AAA” LR03 alkaline batteries	2
4.1x16 wood screws	2
Cord retaining clips	2
Connection cord fixing seal (12x30 size)	1

NOTE : The remote signal will reach the receiver over a distance of approx. 7 m in a straight line and approx. 45° left or right. If the infrared receiver is affected by fluorescent light (especially, inverter type), it may not be able to receive the signal. Take this into consideration when installing fluorescent lights or replacing them.

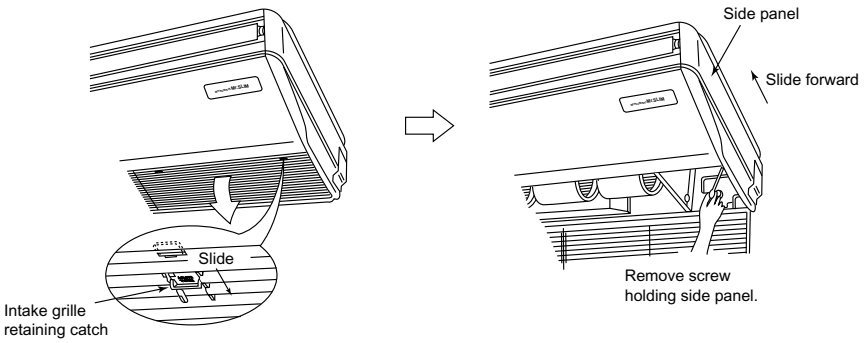
2 How to Install

※Be sure to turn power off before installing.

(1) Receiver board

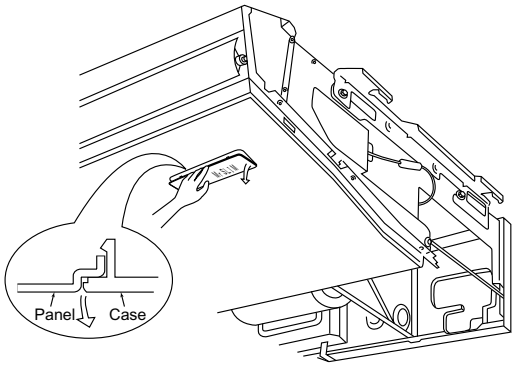
① Removing intake grille and right side panel

・Slide the catch holding the intake grille backwards to open the grille. Remove the screw holding the side panel, and then slide the side panel forward to remove it.



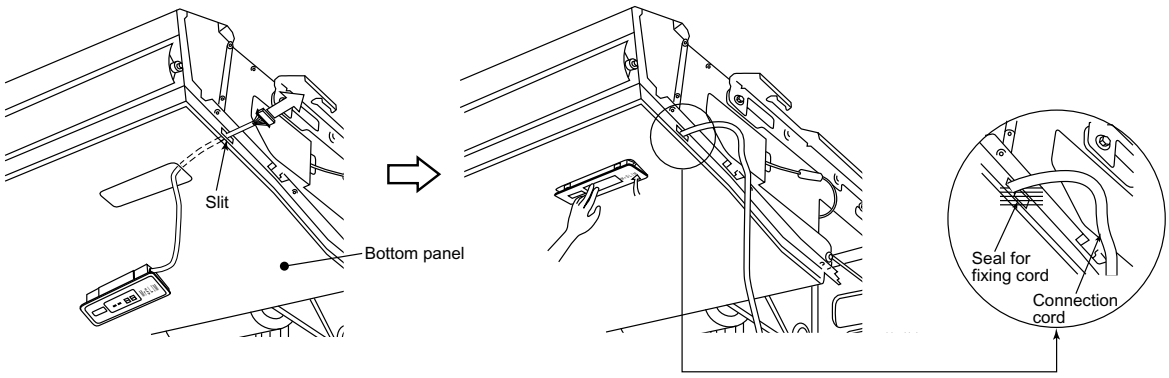
② Removing existing brand label case

・Remove the brand label case (name plate with characters Mr.SLIM) from the bottom right of unit. The brand label case is not needed. If it is difficult to remove the case, use a flat bladed screwdriver, etc., taking care that the panel is not damaged.



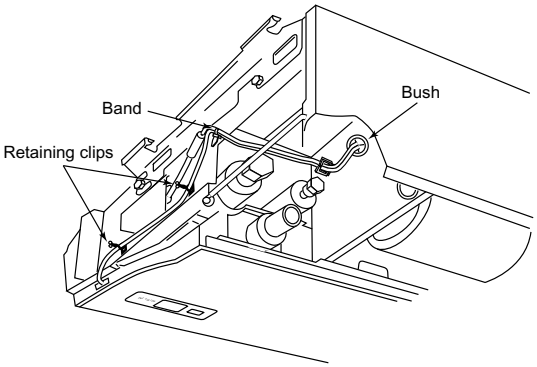
③ Installing receiver board

- Pass the receiver board connector through the right side of the square hole to which the brand label case was attached, and then pull the connector and cord through the slit in the right side of the bottom panel.
- Fit the infrared receiver into the square hole where the brand label case was attached.
- Use the connection cord fixing seal (provided) to block the slit in the right side of bottom panel so that the cord will not move



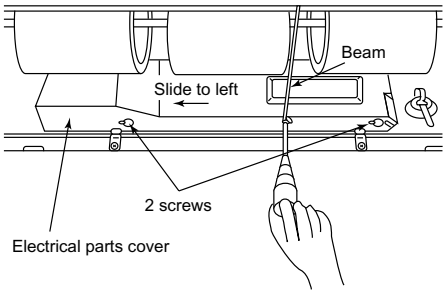
④ Attaching cord retaining clips and laying out cord

- Insert the cord retaining clips into the holes (Φ5) in the bottom middle of the metal plate on the unit right side.
- Using the clips to retain the cord, pass it through the retaining band and tighten the band.
- Lay out the cord over the refrigerant pipe and pass it through the bush attached to the inner metal plate.



⑤ Removing beam and electrical parts cover

- Remove the beam.
- Loosen the two screws at the bottom of electrical parts cover, and then slide the cover to the left to remove it.

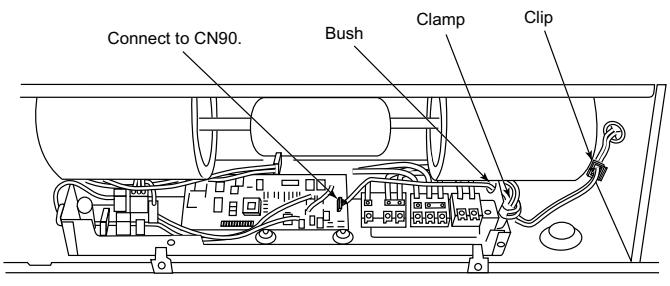


⑥ Connecting receiver board connector to control circuit board.

- Pass the cord through the bush at the top right of electrical parts case.
- Connect the connector to CN90 on the right of the control board.
- If the cord is loose, bundle it using the clamp under the above bush.

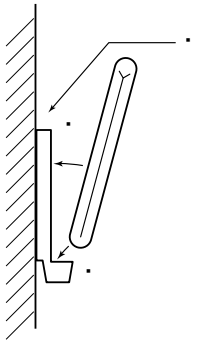
⑦ Reinstalling removed components

- Reinstall the removed components in reverse order.



(2) Remote control holder

・To install the wireless remote controller on a wall, first attach the remote control holder to a wall.



Fitting remote control into holder

① Fix the remote control holder to the wall using the two wood screws provided.
- Insert the remote control into the holder.
- Push the remote control against the wall.

Removing remote control

● Pull the top of remote control forward.

3 Model Select

This remote controller needs model number setting before use.
Set the model number in the following order.
Without setting the air conditioner will not work properly.
(The factory setting of model number is “001”.)

① Insert batteries.
② Press the SET button with something sharp at the end.
MODE SELECT blinks and Model No. is lighted.
③ Press the temp ▽△ button to set the Model No.
④ Press the SET button with something sharp at the end.
MODE SELECT and Model No.are lighted for three seconds,then turned off.

Indoor	Outdoor	・Model No.
PCH	PUH	001
PCA	PUH	001
	PUHZ	001
	SUZ	001
	PU	033

4 Test Run

Measure an impedance between the power supply terminal block on the outdoor unit and the ground with a 500 V Megger and check that it is equal to or greater than 1.0 MΩ.

① Turn on the main power to the unit.
② Press the TEST RUN button twice continuously.
(Start this operation from the status of remote controller dispiay turned off.)
- TEST RUN and current operation mode are displayed.

③ Press the MODE (☼ ♢ ✣ ☼ ⛋) button to activate COOL ☼ mode, then check whether cool air is blown out from the unit.
④ Press the MODE (☼ ♢ ✣ ☼ ⛋) button to activate HEAT ☼ mode, then check whether warm air is blown out from the unit.
⑤ Press the FAN button and check whether strong air is blown out from the unit.
⑥ Press the VANE button and check whether the auto vane operates properly.
⑦ Press the ON/OFF button to stop the test run.

NOTE : ● Point the remote controller towards the indoor unit receiver while following steps ② to ⑦.
● It is not possible to run the in FAN, DRY or AUTO mode.

5 Pair Number Setting

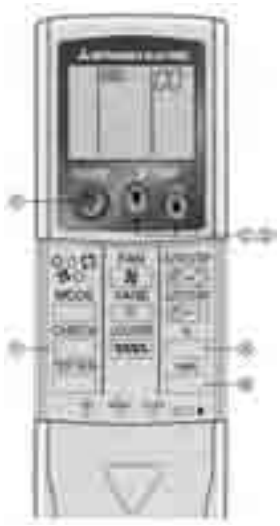
● This is the setting to specify the unit to operate with the wireless remote controller.
● Make setting for J41, J42 (Jumper wire) of indoor controller board and the pair number of wireless remote controller.
● The pair number setting is available with the 4 patterns as shown in the <Table 2> from A to D. Make setting for the pair number (J41, J42) of indoor controller board and the pair number of wireless remote controller which is used as shown in the <Table 2>. *The factory setting is pattern A.

① Press the SET button with something sharp at the end.
Start this operation from the status of remote controller display turned off.
MODEL SELECT blinks and Model No.is lighted.
② Press the min button twice continuosly.
pair No. “0” blinks.
③ Press the temp ▽△ button to set the pair number you want to set .
④ Press the SET button with something sharp at the end.
Set pair number is lighted for three seconds then turned off.

▪ Pair No. of wireless remote controller	Indoor PC board
0	Factory setting
1	Cut J41
2	Cut J42
3 ～ 9	Cut J41, J42

6 Function Selection

【Changing the setting of the supply voltage for the indoor unit for A-control series.】
The setting of the supply voltage is done by the remote controller.
Be sure to change the power voltage setting depending on the voltage used.

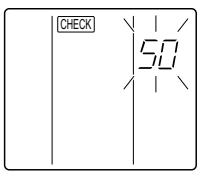


① Go to the function select mode
Press the CHECK button Ⓕ twice continuously.
(Start this operation from the status of remote controller display turned off.)
CHECK is lighted and “00” blinks.
Press the temp ▽ button ▪ once to set “50”. Direct the wireless remote controller toward the receiver of the indoor unit and press the h button Ⓐ.

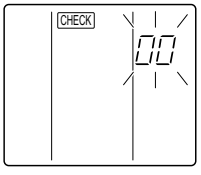
② Setting the unit number
Press the temp ▽△ button Ⓒ and Ⓓ to set the unit number “00”. Direct the wireless remote controller toward the receiver of the indoor unit and press the min button Ⓑ.

③ Selecting a mode
Enter 04 to change the power voltage setting using the ▽Ⓒ and △Ⓓ buttons. Direct the wireless remote controller toward the receiver of the indoor unit and press the h button Ⓐ.
Current setting number: 1=1 beep (one second)
2=2 beeps (one second each)
3=3 beeps (one second each)

※ If a mode number that can not be recognized by the unit is entered, three beeps (3 beeps of 0.4 seconds duration) will be heard.
Reenter the mode number selecting.
※ If the signal was not received by the sensor or an error occurred during transmission, you will not hear a beep or a “double beep” may be heard.
Press the h button again.

① 

④ Selecting the setting number
Use the ▽Ⓒ and △Ⓓ buttons to change the power voltage setting to 01 (240 V) .Direct the wireless remote controller toward the sensor of the indoor unit and press the h button Ⓐ.
→ At this time, current setting number for selected mode number will be output by the interrupted buzzer sounds and the blinks of operation indicator.
Output : setting numder = 1→ beep beep (0.4 second＋0.4 second)×1
2→ beep beep (0.4 second＋0.4 second)×2
3→ beep beep (0.4 second＋0.4 second)×3

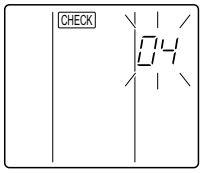
▪ ② 

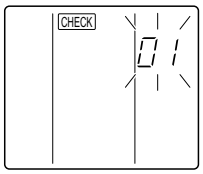
※ If a setting number that can not be recognized by the unit is entered, three beeps (3 beeps of 0.4 seconds duration) will be heard (nuit will beep only).
Reenter the setting number selecting.
※ If the signal was not received by the sensor or an error occurred during transmission, you will not hear a beep or a "double beep" may be heard.
Press the h button again.
※ If the number that can not be set is input, the former setting number will be set.

⑤ To select multiple functions continuously
Repeat steps ③ and ④ to change multiple function settings continuously.

⑥ Complete function selection
Direct the wireless remote controller toward the sensor of the indoor unit and press the ⓑ button ⓔ.

③





NOTE : Whenever changes are made to the function settings after construction or maintenance, be sure to record the added functions with an "O", in the "Check" column provided on the chart.

Other function selections

Now that you know how to change the power voltage setting, there are several other settings that can be changed as well. The following table lists the various settings that can be changed through the remote controller and the default settings.

Table 3

Function	Settings	PCA-RP·GA / PCH-P·GAH
Power failure automatic recovery	Not available	*1
	Available	*1
Indoor temperature detecting	Indoor unit operating average	O
	Set by indoor unit's remote controller	
	Remote controller's internal sensor	
LOSSNAY connectivity	Not supported	O
	Supported (indoor unit is not equipped with outdoor-air intake)	
	Not supported (indoor unit is not equipped with outdoor-air intake)	
Power voltage	240V	
	220V, 230V	O
Auto mode (only for PUHZ)	Energy saving cycle automatically enabled	O
	Energy saving cycle automatically disabled	
Filter sign	100Hr	
	2500Hr	O
	No filter sign indicator	
Fan speed	Quiet	
	Standard	O
	High ceiling	
No. of air outlets	4 directions	–
	3 directions	–
Installed options (high-performance filter)	Not supported	O
	Supported	
Up/down vane setting	No vanes	
	Equipped with vanes(No.1 set)	O
	Equipped with vanes(No.2 set)	
Energy saving air flow (Heating mode)	Disabled	O
	Enabled	
Humidifier (Direct Add-on type)	Not supported	O
	Supported	

*1 Power failure automatic recovery initial setting depends on the connecting outdoor unit.

Things to remember when entering function selections:

The basic procedure for entering function selections is the same as described for switching between power voltages. However, there are some differences at step ② for selecting the unit number, step ③ for selecting the mode number and step ④ for selecting the setting number.
The following Tables (4) and (5) list the various function settings, mode numbers and setting numbers.
Table (2) details the functions of the entire refrigerant system while Table (5) shows the functions that can be set for the indoor unit.

Table 4. Itemized functions of the entire refrigerant system (select unit number 00)

Mode	Settings	Mode no.	Setting no.	Check	Remarks
Power failure automatic recovery	Not available	01	1		
	Available (Approximately 4-minutes wait-period after power is restored.)		2		Approx. 4-minute wait-period after power is restored.
Indoor temperature detecting	Indoor unit operating average	02	1		
	Set by indoor unit's remote controller		2		
	Remote controller's internal sensor		3		
LOSSNAY connectivity	Not Supported	03	1		
	Supported (indoor unit is not equipped with outdoor-air intake)		2		
	Not supported (indoor unit is equipped with outdoor-air intake)		3		
Power voltage	240V	04	1		
	220V, 230V		2		
Auto mode (only for PUHZ)	Energy saving cycle automatically enabled	05	1		
	Energy saving cycle automatically disabled		2		

Table 5. Itemized functions of the indoor unit (select unit numbers 01 to 03 or 07)

Mode	Settings	Mode no.	Setting no.	Check	Remarks
Filter sign	100Hr	07	1		
	2500Hr		2		
	No filter sign indicator		3		
Fan speed	Quiet	08	1		
	Standard		2		
	High ceiling		3		
No. of air outlets	Standard	09	1		
	High ceiling		2		
Installed options (high-performance filter)	Not supported	10	1		
	Supported		2		
Up/down vane setting	No vanes	11	1		
	Equipped with vanes(No.1 set)		2		
	Equipped with vanes(No.2 set)		3		
Energy saving air flow (Heating mode)	Disable	12	1		
	Enable		2		
Humidifier (Direct Add-on type)	Not supported	13	1		
	Supported		2		

② Setting the unit numbers
Set "00" as the unit number when setting functions from Table 4.
When setting functions from Table 5:
- When setting functions for an indoor unit in an independent system, set the unit number to 01.
- When setting functions for a simultaneous-Twin Triple indoor unit system, assign unit numbers from 01 to 03 to each indoor unit.
- When setting the same functions for an entire simultaneous Twin Triple-indoor unit system, assign "07" as the unit number.

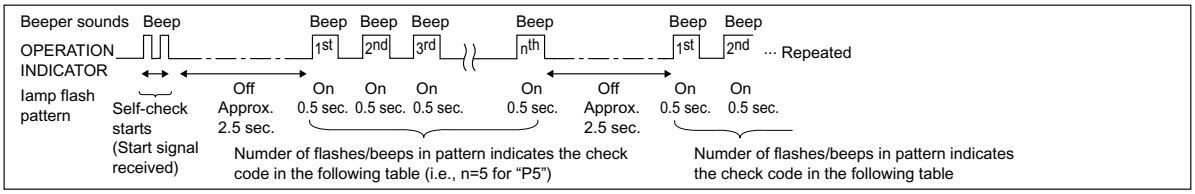
③ Selecting the mode number
Select from Table 4 and Table 5.
④ Selecting the setting number.

7 Self-Check

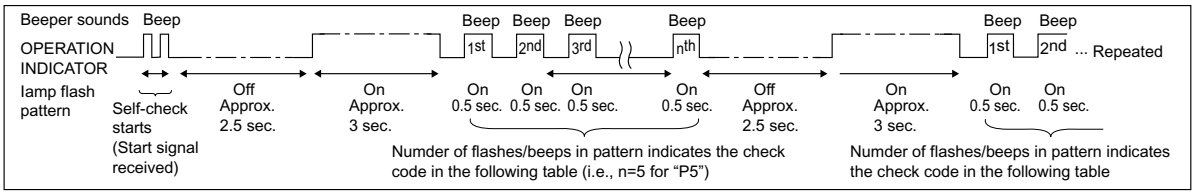
① Turn on the main power to the unit.
② Press the CHECK button twice continuously.
(Start this operation from the status of remote controller display turned off.)
Ⓐ CHECK begins to light.
Ⓑ «00» begins to blink.
③ While pointing the remote controller toward the unit's receiver, press the h button. The check code will be indicated by the number of times that the buzzer sounds from the receiver section and the number of blinks of the operation lamp.
④ Press the ON / OFF button to stop the self-check.

● Refer to the following tables for details on the check codes.

【Output pattern A】



【Output pattern B】



【Output pattern A】 Errors detected by indoor unit

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp flashes (Number of times)	Check code		
1	P1	Intake sensor error	
2	P2, P9	Pipe (Liquid or 2- phase pipe) sensor error	
3	E6, E7	Indoor / outdoor unit communication error	
4	P4	Drain sensor error	
5	P5	Drain pump error	
6	P6	Freezing / Overheating safeguard operation	
7	EE	Communication error between indoor and outdoor units	
8	P8	Pipe temperature error	
9	E4	Remote controller signal receiving error	
10	–	–	
11	–	–	
12	Fb	indoor unit control system error (memory error,etc.)	
No sound	– –	No corresponding	

【Output pattern B】 Errors detected by unit other than indoor unit (outdoor unit, etc)

Wireless remote controller	Wired remote controller	Symptom	Remark
Beeper sounds/OPERATION INDICATOR lamp flashes (Number of times)	Check code		
1	E9	Indoor/outdoor unit communication error (Transmitting error)(Outdoor unit)	For details, check the LED display of the outdoor controller board
2	UP	Compressor overcurrent interruption	
3	U3, U4	Open / short of outdoor unit thermistors	
4	UF	Compressor overcurrent interruption (When compressor locked)	
5	U2	Abnormal high discharging temperature/49C worked/insufficient refrigerant	
6	U1,Ud	Abnormal high pressure (63H worked)/Overheating safeguard operation	
7	U5	Abnormal temperature of heat sink	
8	U8	Outdoor unit fan safeguard stop	
9	U6	Compressor overcurrent interruption/Abnormal of power module	
10	U7	Abnormality of super heat dus to low discharge temperature	
11	U9,UH	Abnormality such as overvoltage or voltage shortage and abnormal synchronous signal to main circuit/Current sensor error	
12	–	–	
13	–	–	
14	Others	Other errors (Refer to the technical manual for the outdoor unit.)	

*1 If the beeper does not sound again after the initial two beeps to confirm the self-check start signal was received and the OPERATION INDICATOR lamp does not come on, there are no error records.

*2 If the beeper sounds three times continuously "beep, beep, beep (0.4+0.4+0.4 sec.)" after the initial two beeps to confirm the self-check start signal was received,the specified refrigerant address is incorrect.

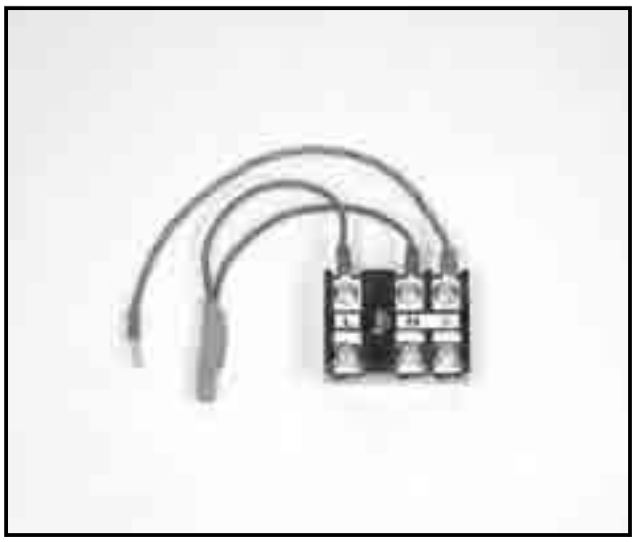
- On wireless remote controller
  The continuous buzzer sounds from receiving section of indoor unit.
  Blink of operation lamp
- On wired remote controller
  Check code displayed in the LCD.

Power Supply Terminal Kit

for new A-Control indoor units (L/N/Earth)

PAC-SG96HR-E

Photo



Descriptions

This kit (L/N/Earth) is used when the power supply of the indoor unit and the outdoor unit is separated.
(For PUHZ applications only)

Applicable Models

- PLA-RP GA
- PSA-RP GA
- PKA-RP GA
- PCA-RP GA

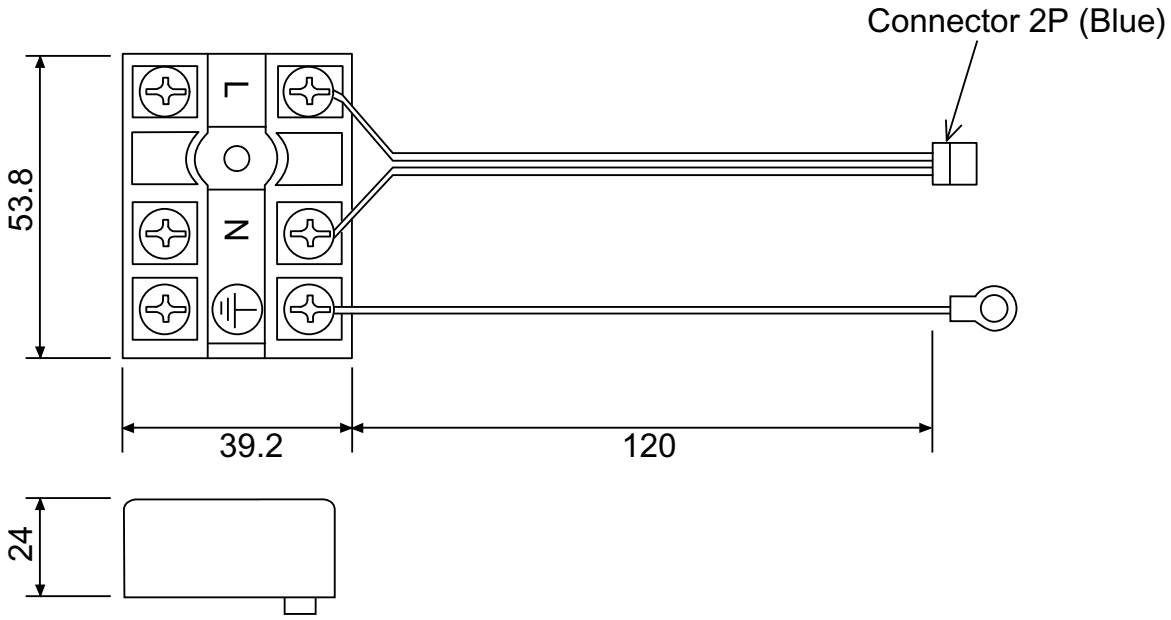
only for kW basis models

Specifications

Terminal block capacity	30A/330V
Terminal block material	Denatured melamine
Parts composition	Terminal block (with lead wires connected) x 1, Screw x 1, Fastener (for binding lead wires)

Dimensions

Unit : mm



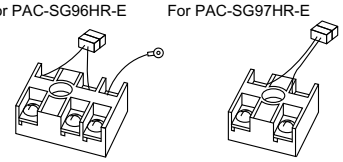
How to Use / How to Install

1. Overview

This kit is used when the power supply of the indoor unit and the outdoor unit is separated.
(for PUHZ applications only)
Refer to the installation manual of the indoor unit as well.

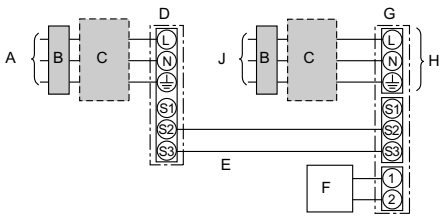
2. Provided parts

Comfirm the following parts are included.

Terminal block (lead wires already wired) x 1	Screw (to attach terminal block) x 1	Fastener (to tie lead wires) x 1	Screw (to secure ground wire) x 1
For PAC-SG96HR-E For PAC-SG97HR-E 			For PAC-SG96HR-E only 

1:1 System

〈**For models without heater**〉
・The indoor power supply terminal kit is required.

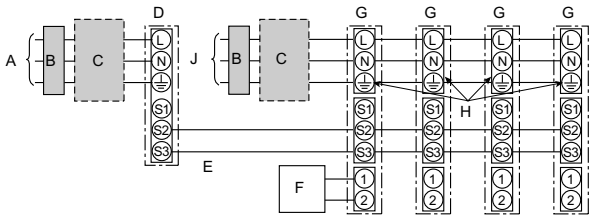


A Outdoor unit power supply
B Earth leakage breaker
C Wiring circuit breaker or isolating switch
D Outdoor unit
E Indoor unit / outdoor unit connecting cords
F Remote controller
G Indoor unit
H Option
I Indoor unit power supply

・Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

Simultaneous twin/triple/four system

〈**For models without heater**〉
・The indoor power supply terminal kits are required.



A Outdoor unit power supply
B Earth leakage breaker
C Wiring circuit breaker or isolating switch
D Outdoor unit
E Indoor unit / outdoor unit connecting cords
F Remote controller
G Indoor unit
H Option
I Indoor unit power supply

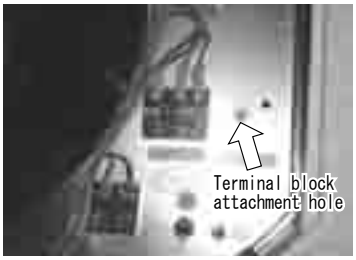
・Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

3. Attachment method

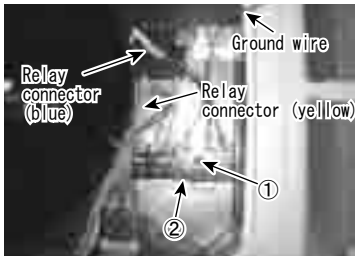
■PAC-SG96HR

4-way ceiling cassette, PLA-RP.AA type:

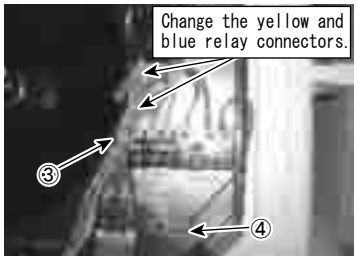
1. Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

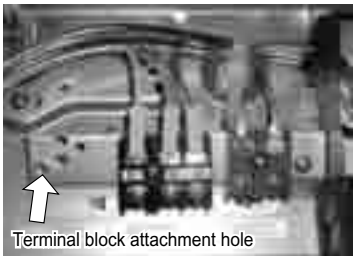


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

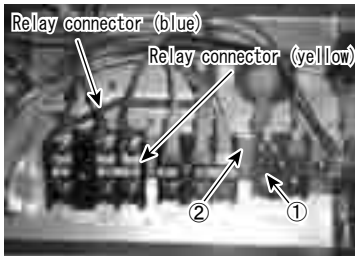


Ceiling suspended, PCA-RP.GA type:

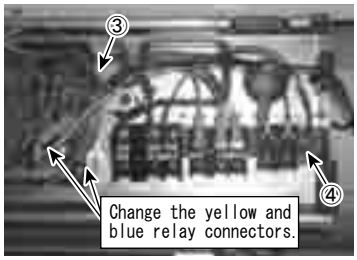
1. Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

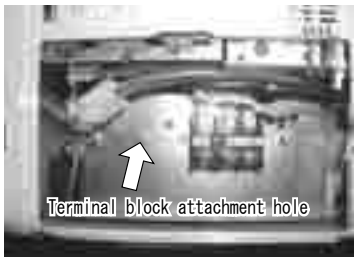


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

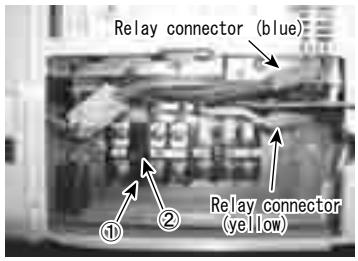


Wall mounted, PKA-RP.GAL type:

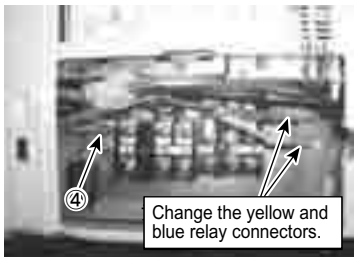
1. Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

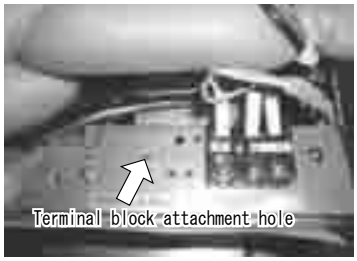


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

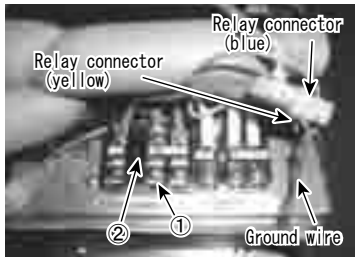


Wall mounted, PKA-RP.FAL type:

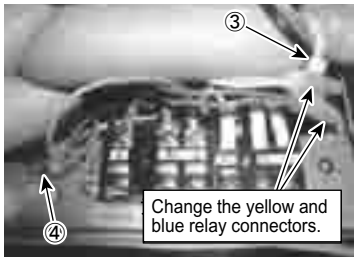
1. Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.



3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

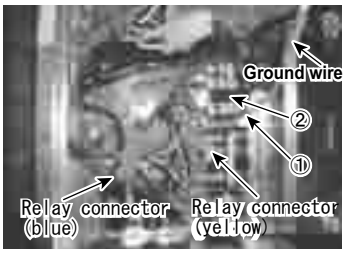


■PAC-SG96HR

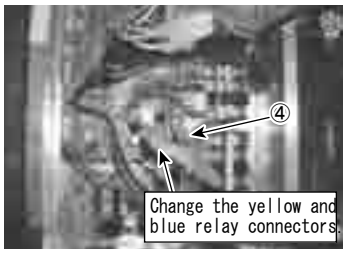
Ceiling concealed, PEAD-RP.EA type:

1. Remove the cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.



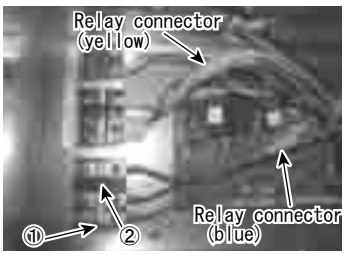
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.



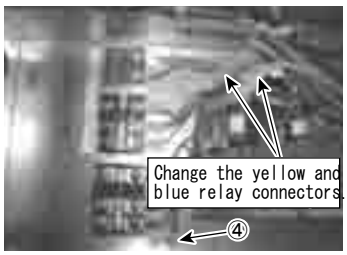
Ceiling concealed, PEA-RP.EA type:

1. Remove the cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.



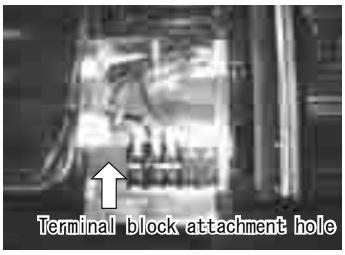
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.



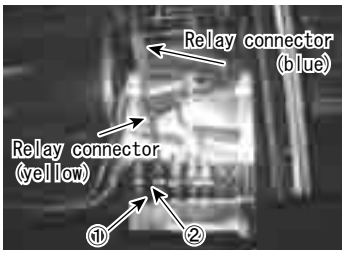
■PAC-SG97HR

Ceiling suspended for kitchens, PCA-RP.HA type:

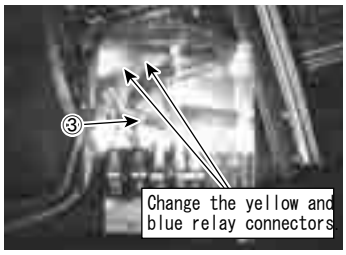
1. Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.



3. Change the relay connectors of blue and yellow lead wires, and then bundle the lead wires using fastener ③.



4. Electric wiring

Be sure to do the electric wiring following the steps in each indoor unit installation manual.

5. Paste the labels enveloped in the instruction document of indoor unit near the electric wiring diagrams of both indoor and outdoor units.

Three types of labels (labels A-C) are provided: Paste the label B.
(Separate indoor unit/outdoor unit power supplies... Label B)

6. DIP switch settings of the outdoor unit control board

It is necessary to change the settings of DIP switch on the outdoor unit control board.

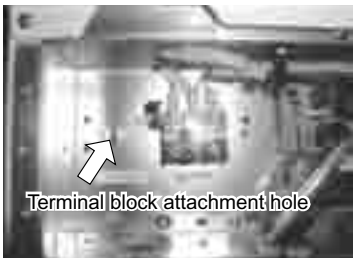
Outdoor unit DIP switch settings (when using separate indoor unit / outdoor unit power supplies only)	ON / OFF 1 2 3 〈SW8〉

7. Test run

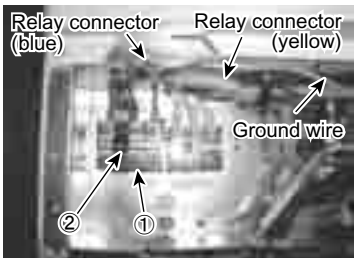
Perform a test run following the steps in the installation manual

Floor standing, PSA-RP.GA type:

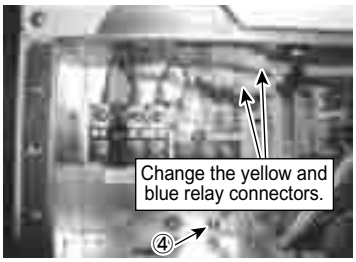
1. Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

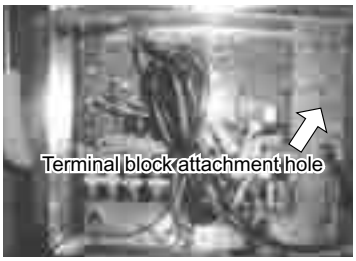


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener③.

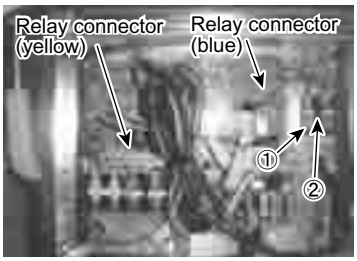


Ceiling concealed, PEAD-RP.GA type:

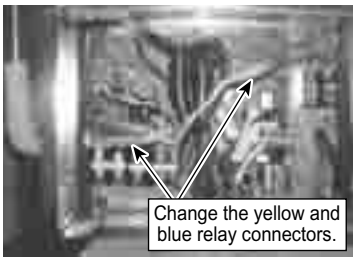
1. Remove the terminal block cover of electric parts box.



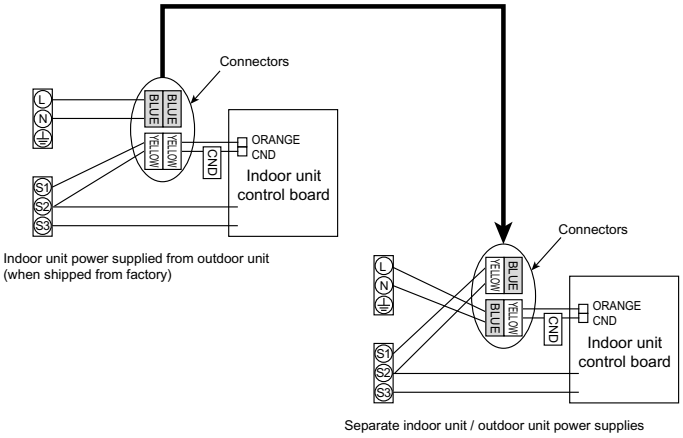
2. Attach terminal block ① using screw ② in the direction shown in the figure.



3. Change the relay connectors of blue and yellow lead wires.

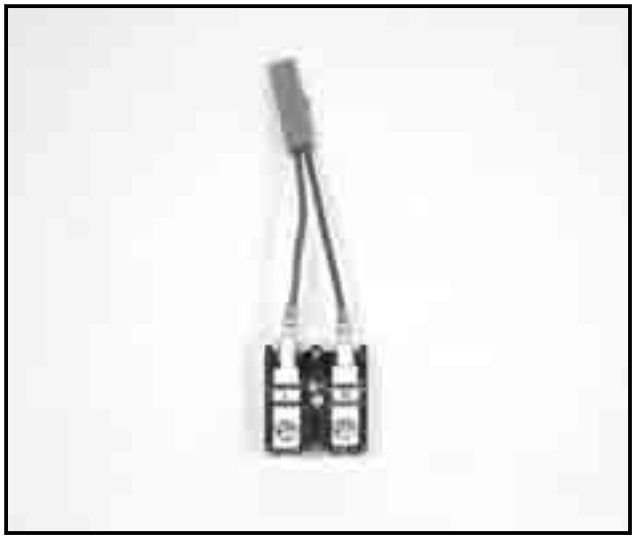


Change of connectors



Power Supply Terminal Kit for new A-Control indoor units (L/N) PAC-SG97HR-E

Photo



Descriptions

This kit (L/N) is used when the power supply of the indoor unit and the outdoor unit is separated.
(For PUHZ applications only)

Applicable Models

- PEAD-RP EA
- PEAD-RP GA
- PCA-RP HA

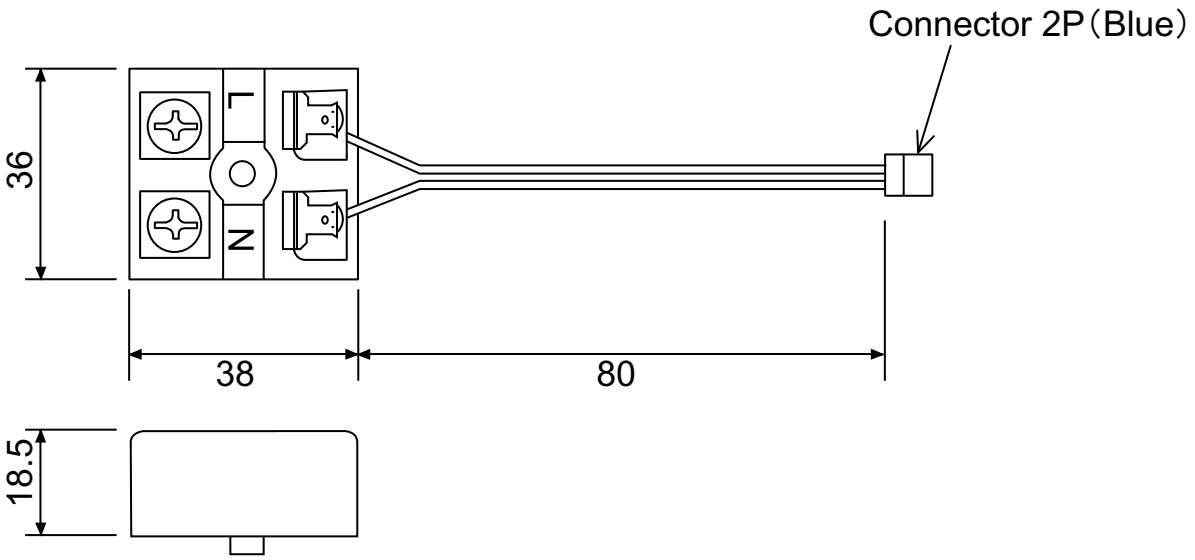
only for kW basis models

Specifications

Terminal block capacity	15A/264V
Terminal block material	Denatured melamine
Parts composition	Terminal block (with lead wires connected) x 1, Screw x 1, Fastener (for binding lead wires)

Dimensions

Unit : mm



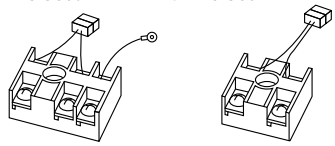
How to Use / How to Install

1. Overview

This kit is used when the power supply of the indoor unit and the outdoor unit is separated.
(for PUHZ applications only)
Refer to the installation manual of the indoor unit as well.

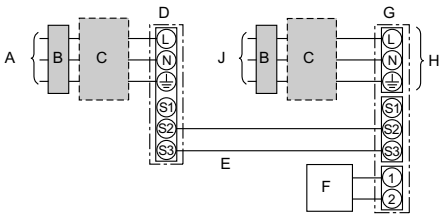
2. Provided parts

Comfirm the following parts are included.

Terminal block (lead wires already wired) x 1	Screw (to attach terminal block) x 1	Fastener (to tie lead wires) x 1	Screw (to secure ground wire) x 1
For PAC-SG96HR-E For PAC-SG97HR-E 			For PAC-SG96HR-E only 

1:1 System

〈**For models without heater**〉
・The indoor power supply terminal kit is required.

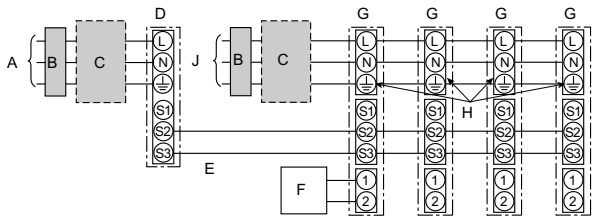


A Outdoor unit power supply
B Earth leakage breaker
C Wiring circuit breaker or isolating switch
D Outdoor unit
E Indoor unit / outdoor unit connecting cords
F Remote controller
G Indoor unit
H Option
I Indoor unit power supply

・Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

Simultaneous twin/triple/four system

〈**For models without heater**〉
・The indoor power supply terminal kits are required.



A Outdoor unit power supply
B Earth leakage breaker
C Wiring circuit breaker or isolating switch
D Outdoor unit
E Indoor unit / outdoor unit connecting cords
F Remote controller
G Indoor unit
H Option
I Indoor unit power supply

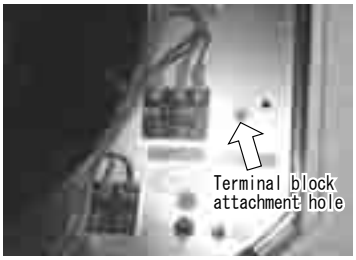
・Affix a label B that is included with the manuals near each wiring diagram for the indoor and outdoor units.

3. Attachment method

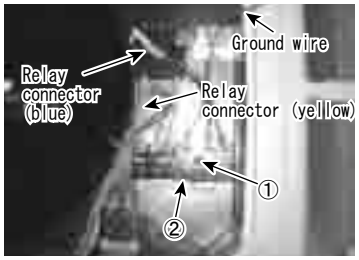
■PAC-SG96HR

4-way ceiling cassette, PLA-RP.AA type:

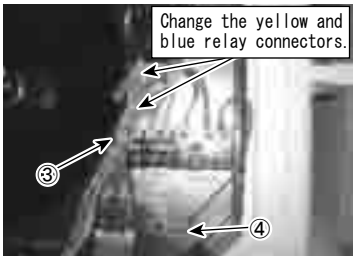
1. Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

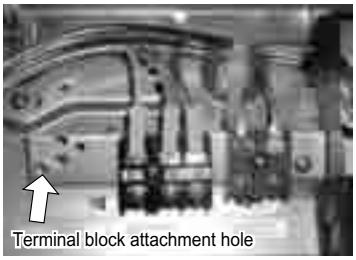


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

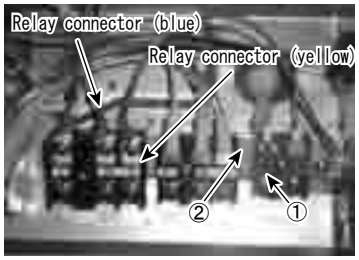


Ceiling suspended, PCA-RP.GA type:

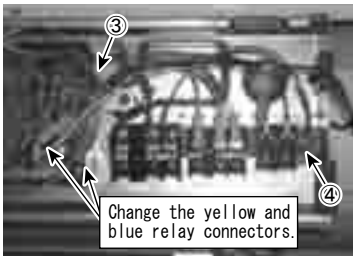
1. Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

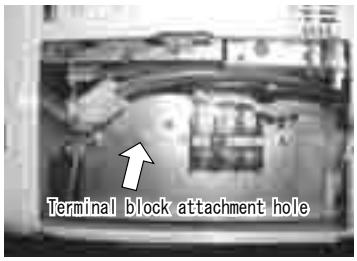


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

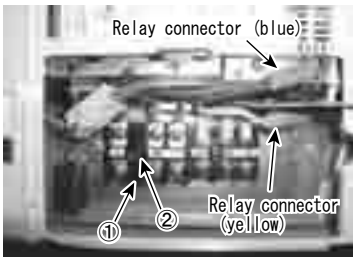


Wall mounted, PKA-RP.GAL type:

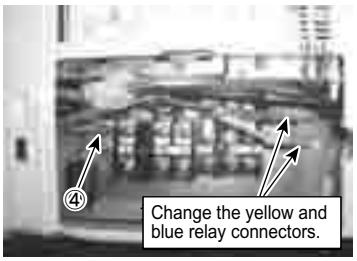
1. Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

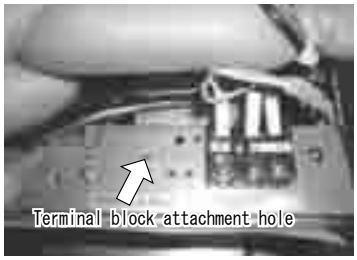


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.

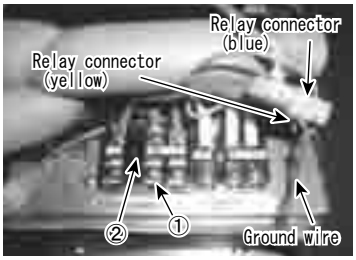


Wall mounted, PKA-RP.FAL type:

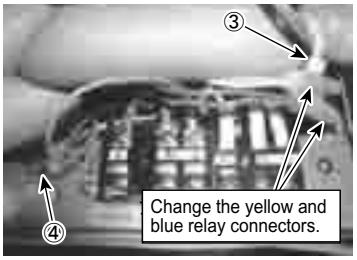
1. Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.



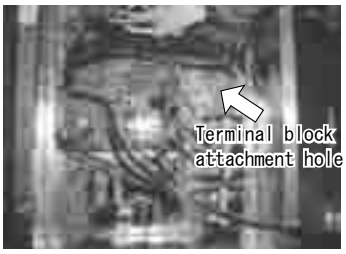
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.



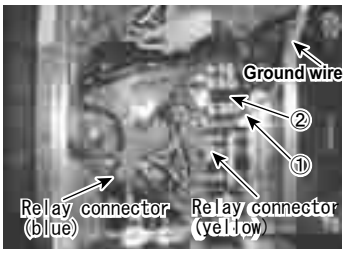
■PAC-SG96HR

Ceiling concealed, PEAD-RP.EA type:

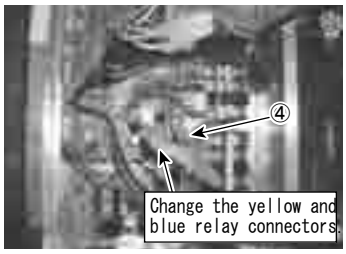
1. Remove the cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.



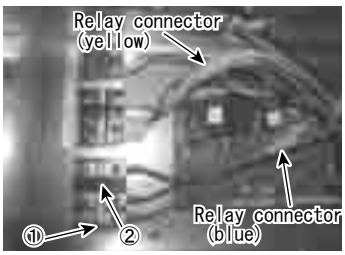
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.



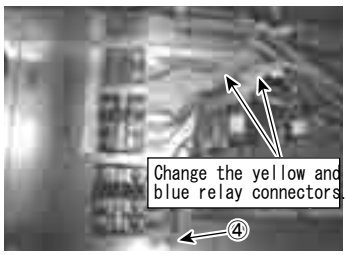
Ceiling concealed, PEA-RP.EA type:

1. Remove the cover of electric parts box.

2. Attach terminal block ① using screw ② in the direction shown in the figure.



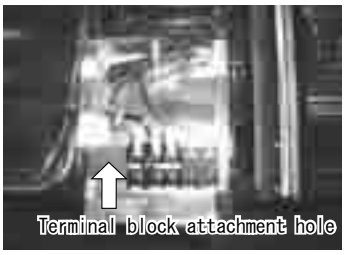
3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener ③.



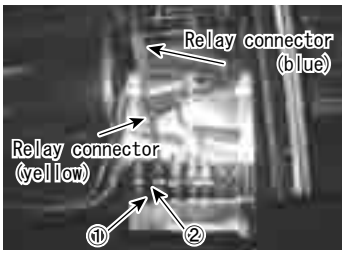
■PAC-SG97HR

Ceiling suspended for kitchens, PCA-RP.HA type:

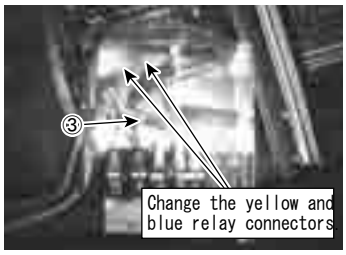
1. Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.



3. Change the relay connectors of blue and yellow lead wires, and then bundle the lead wires using fastener ③.



4. Electric wiring

Be sure to do the electric wiring following the steps in each indoor unit installation manual.

5. Paste the labels enveloped in the instruction document of indoor unit near the electric wiring diagrams of both indoor and outdoor units.

Three types of labels (labels A-C) are provided: Paste the label B.
(Separate indoor unit/outdoor unit power supplies... Label B)

6. DIP switch settings of the outdoor unit control board

It is necessary to change the settings of DIP switch on the outdoor unit control board.

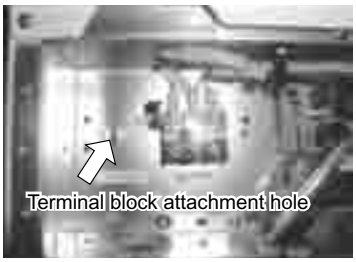
Outdoor unit DIP switch settings (when using separate indoor unit / outdoor unit power supplies only)	ON 3 OFF 1 2 〈SW8〉

7. Test run

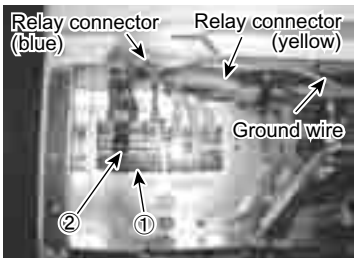
Perform a test run following the steps in the installation manual

Floor standing, PSA-RP.GA type:

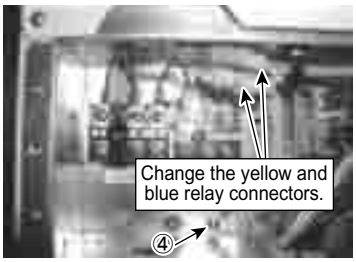
1. Remove the terminal block cover of electric parts box.



2. Attach terminal block ① using screw ② in the direction shown in the figure.

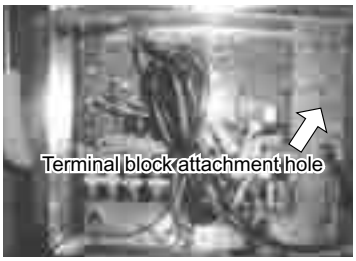


3. Change the relay connectors of blue and yellow lead wires, secure the ground wire using screw ④ at the position shown in the figure, and then bundle the lead wires using fastener③.

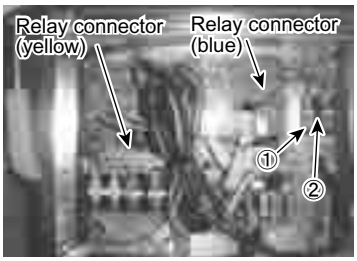


Ceiling concealed, PEAD-RP.GA type:

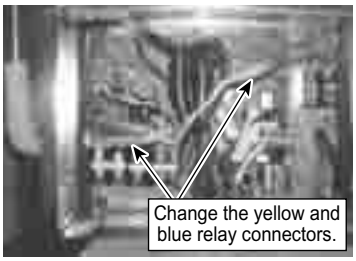
1. Remove the terminal block cover of electric parts box.



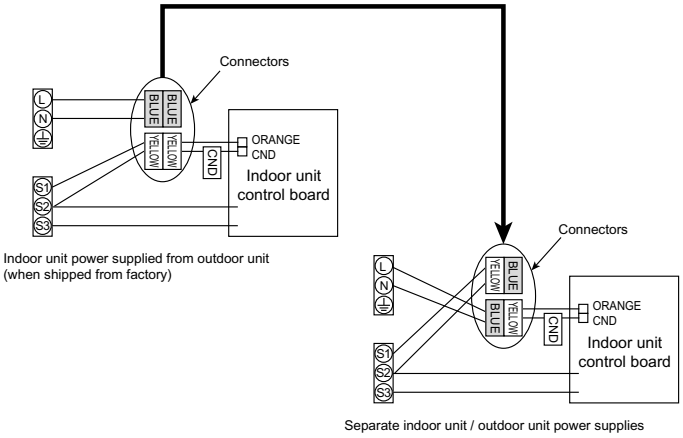
2. Attach terminal block ① using screw ② in the direction shown in the figure.



3. Change the relay connectors of blue and yellow lead wires.



Change of connectors



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