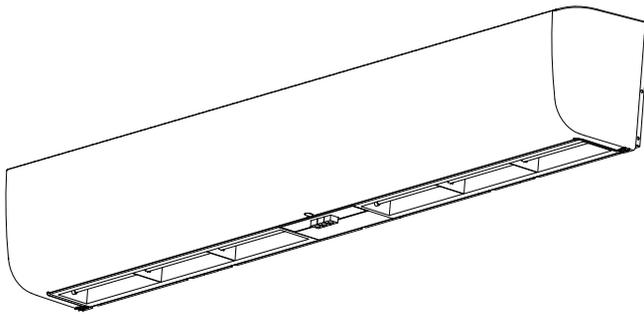


# Panasonic®

## INSTALLATION AND OPERATING INSTRUCTIONS Air Curtain

Model No.	FY-3009U1	FY-3012U1	FY-3015U1
	FY-4009U1	FY-4012U1	FY-4015U1



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Thank you for purchasing this Panasonic product.

Please read these installation and operating instructions carefully before attempting to install, operate or service the Panasonic product. Please carefully read the "Installation cautions" (P.2~3) of this installation and operating instructions before installation.

Failure to comply with installation and operating instructions could result in personal injury or property damage. Please explain to users how to operation and maintain the product after installation, and this booklet should be presented to users.

Please retain this booklet for future reference.

# Safety instructions

Please observe strictly



- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the product.
- Make sure to disconnect the power supply before cleaning the product.

The following explanations must always be observed in order to prevent harm to users or other people and prevent damage to property.

- The following displays are classified and explained to what extent harm or damage occurs when the display details are ignored and the unit in question is wrongly used.



## WARNING

This indication means: Must be treated seriously that this may result in death or serious injury.



## CAUTION

This indication means: Must be treated seriously that this may result in injury or physical damage.

- The type of details to be observed are classified and explained in the following illustrated displays. (below are the series of illustrated displays)



This symbol indicates the "COMPULSORY" item that must be followed without failure.



This symbol indicates the item "PROHIBITED" to do.

# Installation cautions



## WARNING

- Please install an all-pole switch which the contact separation is more than 3mm (Double pole switch).



Otherwise, it may cause a short circuit, thus resulting a fire.



- Do not operate the product other than the rated voltage.



Otherwise, it may damage the product or cause fire.

- The product must be grounded.



Otherwise, it may cause electric shock when there is any trouble or electric leakage.

- Wiring should be firmly connected without any loose.



Otherwise, it may cause a short circuit, thus resulting a fire.

- Installation should be done by authorized person. The product should be installed firmly.



Otherwise, the product may fall down and it may cause injury.

- Do not reconstruct this product.



Otherwise, it may cause damage to the product or injury.

# Installation cautions

## ⚠ WARNING

■ The product must be installed tightly. Components must be installed tightly.



Otherwise, it may injure person caused by product's falling off.

■ Do not install the product as the method which is not approved in the installation and operating instructions.



Otherwise, the product may fall down and it may cause injury.

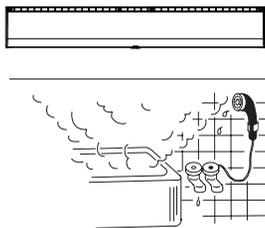
■ It's prohibited to install the product in locations such as machinery, chemical plants or research facilities where it will be exposed to noxious gases containing acids, alkali, organic solvents, paint fumes, etc., to gases containing corrosive ingredients.



It could cause gas poisoning, corrosion and degradation of product that results in a fire.

■ It's prohibited to install in the following locations.

Do not install the product where there is steam.



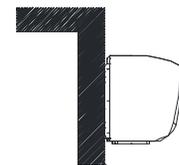
Otherwise, it may cause a short circuit, thus resulting in a fire.

Location with combustible gas or emission of exhaust gas.



Otherwise, it may cause a short circuit, thus resulting in a fire.

Do not install the product out of the window and wall.



Indoor Outdoor

Otherwise, the product may get wet in the rain and cause short circuit.

## ⚠ CAUTION

■ Product must be installed by 2 persons.



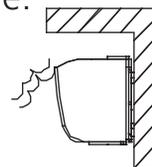
Otherwise, the product may fall down and it may cause injury.

■ The special-purpose or dedicated parts, such as mounting fixtures, must be used if such parts are provided.



Otherwise, the product may fall down and it may cause injury.

■ The product must be mounted on a building which is strong enough. To ensure it can bear over 5 times of product weight. The building must be reinforced if its strength can not be ensure.



Otherwise, the product may fall down and it may cause injury.

■ Please wear the gloves when installing the product.



Otherwise, it may cause damage.

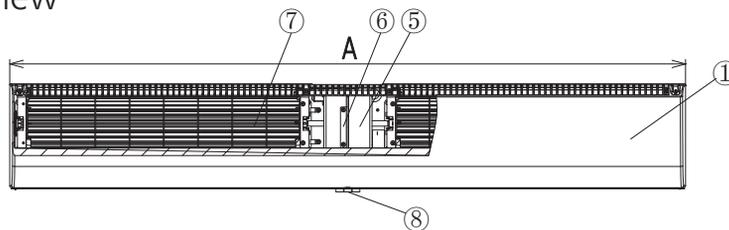
# Supplied accessories

The following attachments are enclosed in the packing box of product. Be sure to check if they are complete after unpacking, and if anything is missed, contact our After-Sales Service Center or the dealer.

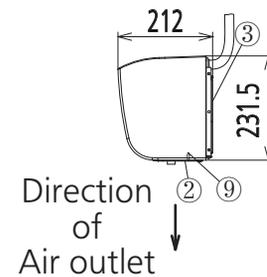
No.	Drawing	Name	Quantity	No.	Drawing	Name	Quantity
①		Washer	6	④		Bolt M8×60L	6
②		Spring washer	6	⑤		Installation and operating instructions	1
③		Nut (M8)	6				

# Parts name and dimensions

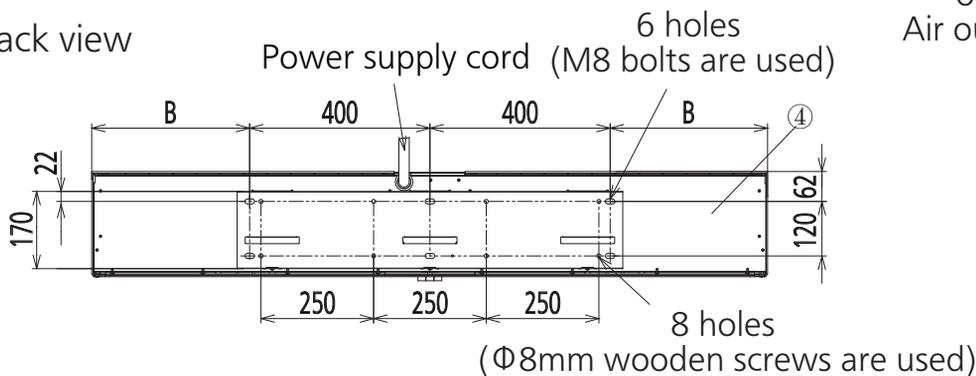
■ Front view



■ Right view



■ Back view



Model No.	A	B
FY-3009U1, FY-4009U1	900	50
FY-3012U1, FY-4012U1	1200	200
FY-3015U1, FY-4015U1	1500	350

No.	Part name	Classification	No.	Part name	Classification
①	Front panel	Resin ABS	⑥	Motor support	Steel SGCC
②	Air outlet	Resin ABS	⑦	Cross-flow impeller	Steel plate + Resin AS + Glass fiber
③	Mounting plate	Steel SGCC			
④	Back panel	Steel SGCC	⑧	Push-button switch	Assembly part
⑤	Motor	Assembly part	⑨	Guide plate	Resin ABS

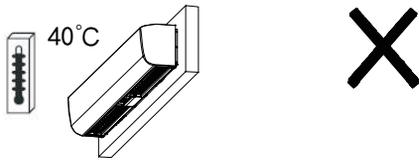
**Notice**

Please refer to the table above to recycle the materials as much as possible when discarding this product.

# Requirement of installation

■ Please observe the following requirement. Otherwise, it may cause the product aging and breakdown.

The applicable ambient temperature of this product is in the range of  $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$ .

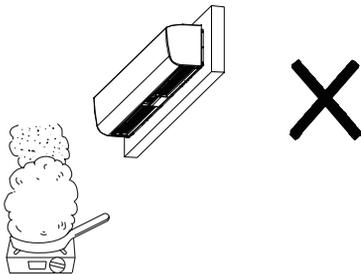


It's prohibited to install in the uneven surface. (Flatness shall be 3mm below.)

Distortion results in reducing the separation performance.

Locations where freezing could happen.

Do not install the product where it is exposed to oil fumes.

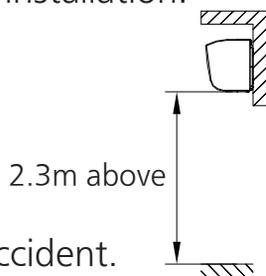


Otherwise, it may damage the product or cause fire.

Do not install the product in the place with many dust.

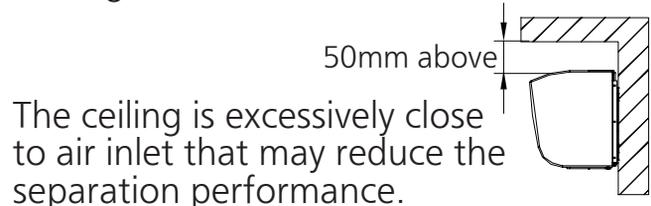
Impeller deformation may be caused by sand and dust piling up, which may affect the performance.

■ The lowest surface of this product should be installed above 2.3m from the floor after installation.



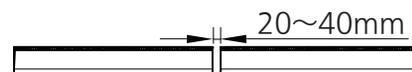
Avoiding any accident.

■ The distance between product and ceiling must be 50mm above.



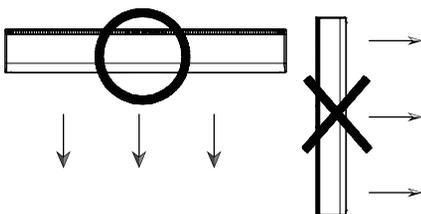
The ceiling is excessively close to air inlet that may reduce the separation performance.

■ Ensure the space among products is 20~40mm when multiple products operate in row.



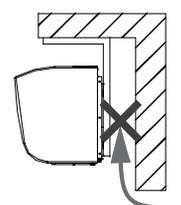
Easy for installation.

■ Please install the product horizontally, don't vertically install the product.



It could affect the performance of bearing.

■ Please block the clearance between wall and product.



Prevent product from sucking in outdoor air from clearances.

# How to install

## 1. Fix the mounting plate

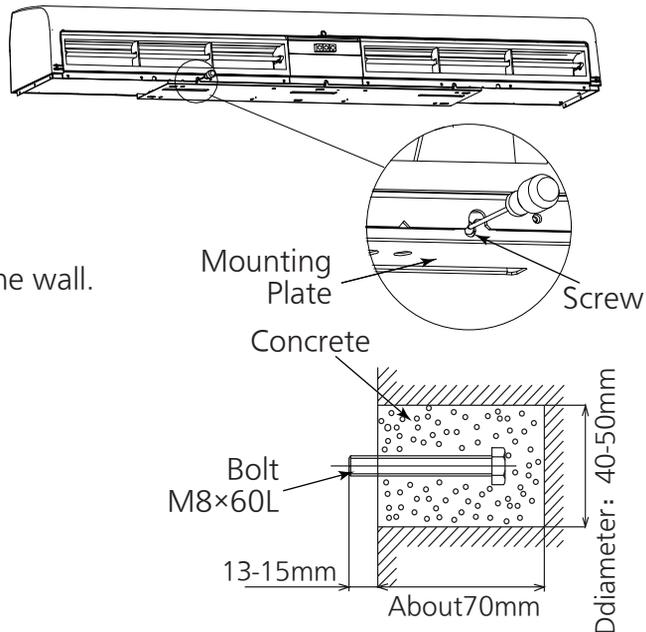
### ■ Mounting on concrete wall.

1. Remove mounting plate from product.  
Taking the mounting plate by removing the 3 screws.
2. Firmly fix the bolts in the proper position.
  - Determine the position on the wall and drill into the wall.
  - Fit the bolts into the holes.
  - Fill the holes with concrete.
  - Install the mounting plate and check if it's secured when the concrete solidifies.

#### Notice

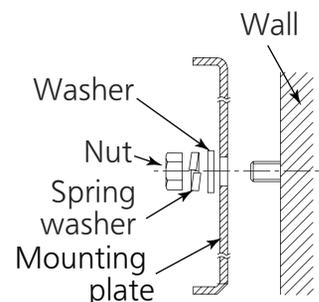
Distance of bolt head away from wall should be 13~15mm.

3. Fix the mounting plate with washers, spring washers and nuts.



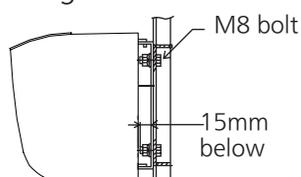
## CAUTION

- Please use the mounting plate provided with product to avoid the dropping caused by insufficient strength.

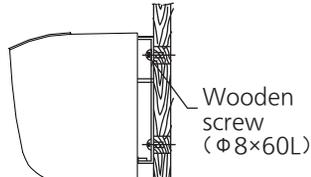


### ■ Other installation methods

#### Mounting on steel hanger



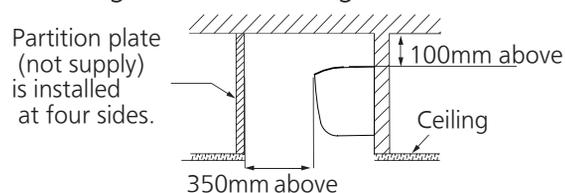
#### Mounting on wooden frame



#### Notice

1. It's prohibited to install the product on hollow wall, otherwise it may produce noises.
2. Conduct the necessary reinforcement, depending on the particular condition to avoid noise resonance and vibration.

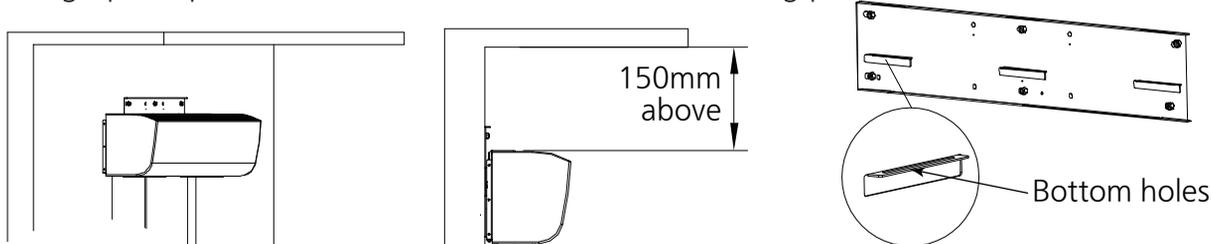
#### Mounting inside the ceiling



1. The inside space of ceiling should exceed the dimensions as indicated above to ensure the space of air inlet, please select the larger model if space of air inlet can't be reserved.
2. Don't place the substances near the air inlet or outlet grille (include the grille). It could affect the performance.

## 2. Preparation before wiring ( Carry out this step if the distance between top face of product and ceiling is less than 150mm. )

Pre-hang up the product into the bottom holes of mounting plate.

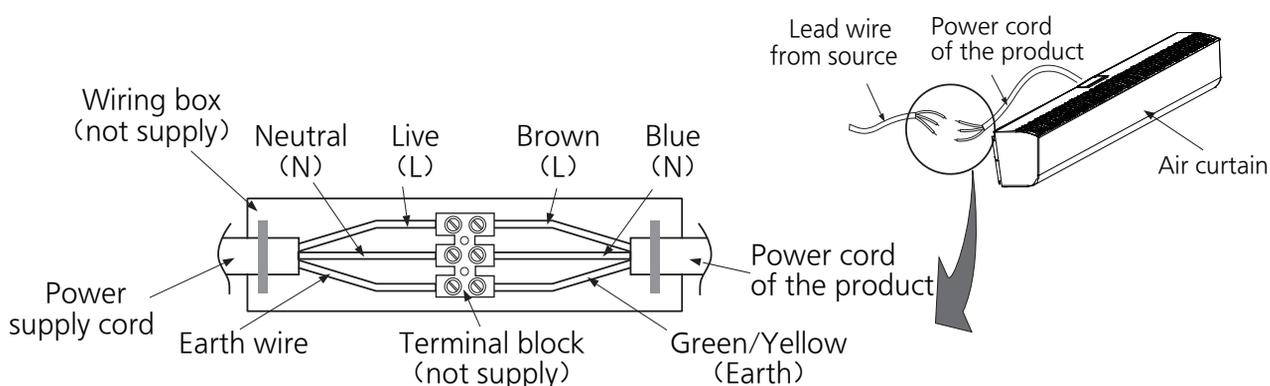


# How to install

## 3. Wiring

### **⚠ WARNING**

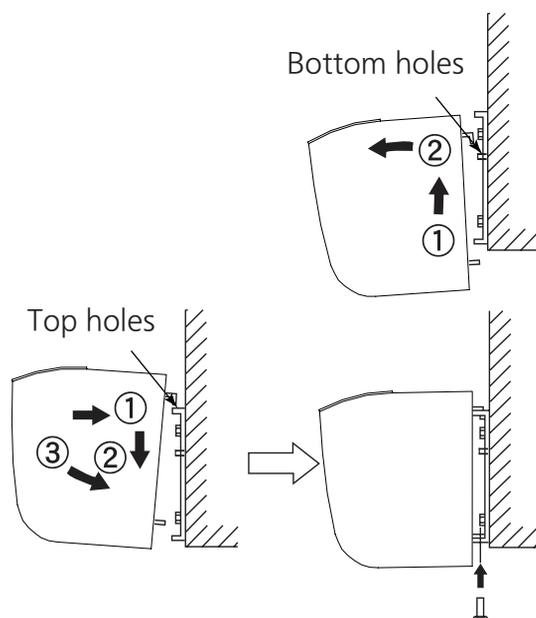
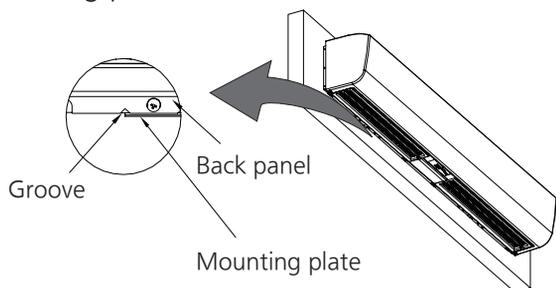
- Wiring is required to follow the local wiring regulations. Otherwise, it may cause fire.
- Please select 60227 IEC 53 ordinary polyvinyl chloride sheathed cord. Nominal cross-sectional area of conductors is  $3 \times 1.0\text{mm}^2$ . Otherwise, it may cause fire.
- The product is not provided with Double pole switch and leakage protection switch. Please purchase them in market.
- It is required to use terminal (not supply) that complies IEC 60998 and wiring box (not supply) that complies local regulation.
- Wiring should be firmly connected without any loose.



- Connect the power cord (included earth) of product to lead wire in accordance with the wiring diagram.
- Make sure all connections are fastened firmly after finishing wiring.

## 4. Installation of product

1. Remove the product from the bottom holes.
2. Fixing the product.  
Align the groove of back panel with both sides of mounting plate. Fit the hooks into the top holes of mounting plate.



3. Fasten the screws. (3 places)

#### Notice

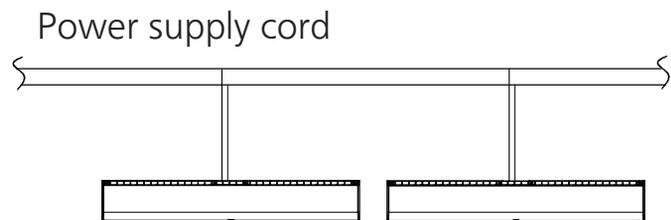
The torque is suggested to be  $1.2\text{N}\cdot\text{m}$ .

# Multiple products operate in group

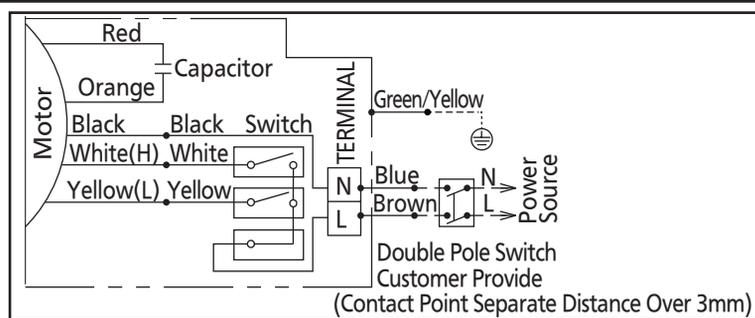
## ⚠ WARNING

- Please select the switch of whose capacity has 1.2 ~ 1.5 times total current, when multiple products operate.
- Earth leakage breaker protector should be equipped, otherwise it may cause an electrical shock.
- The number of interlocking operation is not more than 6.

- Please purchase necessary parts following with local electrical requirements. Except the power supply cord.

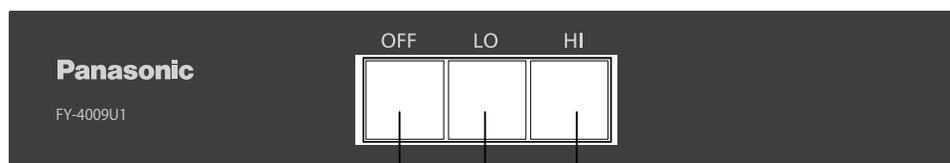


## Wiring diagram



## Operation methods

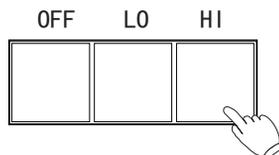
### Operation of Control panel



※Representative model

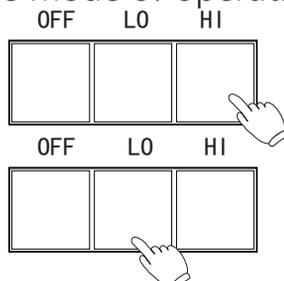
OFF LOW HIGH

### 1 Start to operate



Press "HI" or "LO" button to start the product as shown in left figure.

### 2 Select the mode of operation

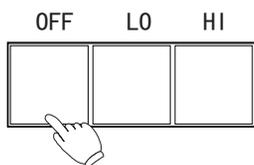


Press "HI" button if high air velocity is required.

Press "LO" button if quiet and low velocity is required.

# Operation methods

## 3 Stop operating



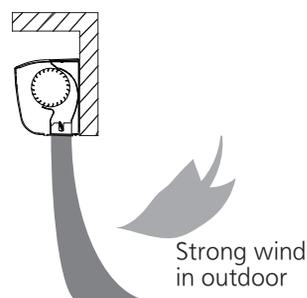
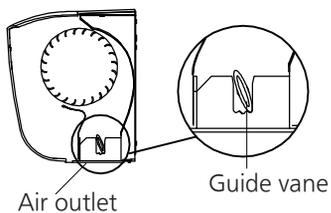
Press "OFF" button to stop the product.

### Notice

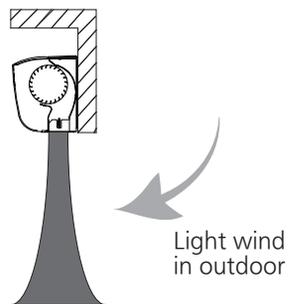
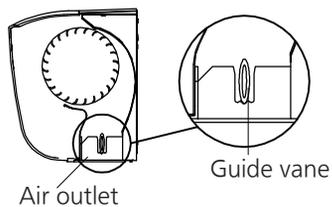
The product is in stand-by mode after pressing the "OFF", it's still connected to the power.

■ Guide vane in air outlet can be adjusted according to service environment to reach the ideal separation performance.

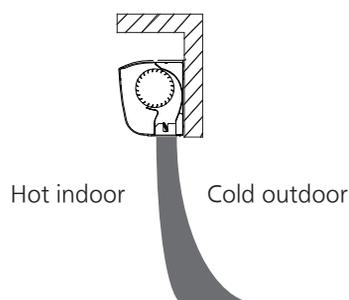
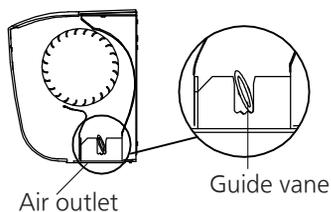
### 1 While strong wind in outdoor



### 2 While light wind in outdoor

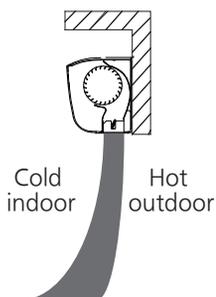
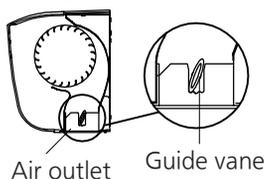


### 3 Heating

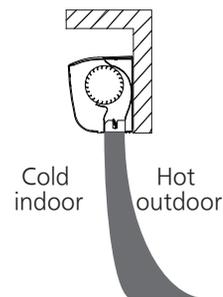
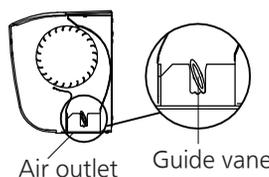


### 4 Cooling

1. Room has opening (window, grille, etc.)



2. Room is air tight (no opening)



# Routine maintenance

## ⚠ WARNING

■ Make sure to disconnect power supply before cleaning product.

⚠ Otherwise, the product might operate with the possibility of electric shock or injury.



■ If you will not use this product any more, remove the product.

⚠ Otherwise, the product may fall down and it may cause injury.

■ Please contact entrusted distributor where you purchased or qualified persons to service the product.

⚠ Otherwise, it may damage the product or cause fire.

■ Once flammable gas leaks, do not start any function of this product.

⊘ Otherwise, it may generate sparkle and this leads to explosion.

■ It's prohibited to insert fingers or sticks into the product, air inlet or outlet.

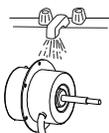
⊘ Impeller at high speed rotation may cause injuries.

■ Don't turn on or off the power with wet hands.

⊘ It may cause a electrical shock.

■ Do not let water flow into the motor.

⊘ Otherwise, it may damage the product or cause fire.

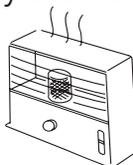


■ Immediately stop to wait for repair if abnormalities happen (noise, vibration, smell ).

⚠ It may cause the unexpeted accidents.

■ It's prohibited to place the burning appliances in a position where product directly blows.

⚠ It may result in carbon monoxide poisoning caused by incomplete combustion.



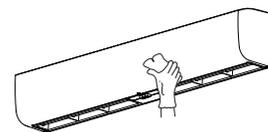
## ⚠ CAUTION

■ 2 persons are required to conduct the maintenance.

⊘ Otherwise, the product may fall down and it may cause injury.

■ Please wear the gloves when cleaning the product.

⚠ Otherwise, it may cause damage.



■ It's forbidden to hang anything on the product.

⊘ Product may drop due to the increased weight.

■ Do not directly spray this product with water and other liquids.

⊘ Otherwise, it may cause short circuit or electric shock.

# Routine maintenance



## CAUTION

- Eyes should not be faced to the air outlet (specially when the product starts up).



The blowing substance could damage your eyes.

- Please don't place the substances near to the air outlet or inlet grille.



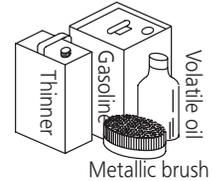
It may result in personal injuries due to blowing out or sucking in.

- The strong air from air curtain may cause the sand and dust.



It may result in personal injuries.

- Never use petrol, benzene thinner or any other such chemicals for cleaning the product.

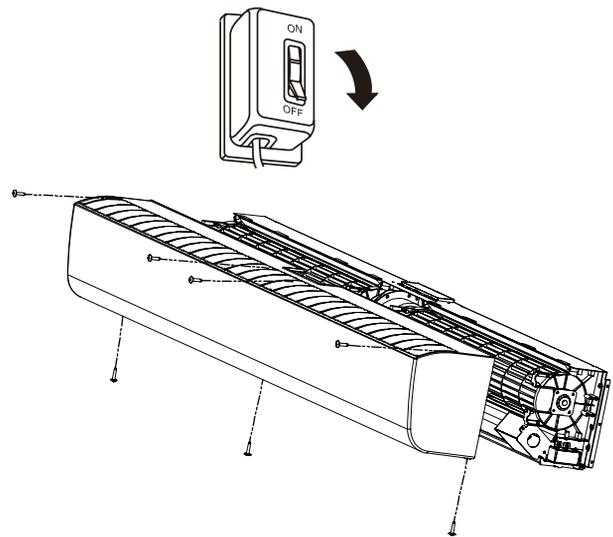


Otherwise, dropping caused by corrosion of product, which may result in personal injuries.

### Notice

- Make sure to disconnect power supply before cleaning product.

- Disassembly of part  
This part can be easily taken out by removal of 7 screws as indicated in the right figure.



# Trouble shooting

Check according to the following table and take measures. If the product still does not work normally, disconnect the power and contact After-Sale Service Center or the dealer.

	Condition	1st Possible reason	2nd Possible reason	3rd Possible reason
Primary Period	Can't operate.	Check the voltage.	Wiring is not correct. (☞ P7)	
	With large noise or significant vibration.	Installed not properly. (☞ P6~P7 )		
	Poor separation performance.	Not suitable model.	Guide vane is not in proper position. (☞ P9)	Product is installed vertically.
During operation	Can't operate.	Wiring is not fixed.	Double pole switch became off.	
	Poor separation performance.	Air inlet grille is blocked.		
	With large noise or significant vibration.	Dust piles up in impeller.	Any other substances fell into the product.	Motor runs abnormally.

# Specifications

Voltage: 1 phase 220V      Frequency: 50Hz

Model	Outlet Velocity m/s		Power Consumption W		Current A		Noise dB(A)		Air Volume m <sup>3</sup> /h		Insulation Class	Length mm	Weight kg	Installation height (m)
	High	Low	High	Low	High	Low	High	Low	High	Low				
FY-3009U1	10.5	8.5	76	70	0.35	0.32	48.5	45	1100	920	B	900	12	3.0
FY-3012U1	9.5	8	94	85	0.43	0.4	48.5	44.5	1400	1270	B	1200	14.5	3.0
FY-3015U1	10.5	9.5	131	110	0.59	0.5	51.5	48	2000	1800	B	1500	18	3.0
FY-4009U1	12	10	110	94	0.5	0.43	54.5	51	1340	1190	B	900	12.5	4.0
FY-4012U1	12	10	126	105	0.59	0.49	52.5	48.5	1700	1530	B	1200	15.5	4.0
FY-4015U1	13	10	177	147	0.81	0.68	56	52	2450	2080	F	1500	18	4.0

Voltage: 1 phase 240V      Frequency: 50Hz

Model	Outlet Velocity m/s		Power Consumption W		Current A		Noise dB(A)		Air Volume m <sup>3</sup> /h		Insulation Class	Length mm	Weight kg	Installation height (m)
	High	Low	High	Low	High	Low	High	Low	High	Low				
FY-3009U1	10.5	9	86	80	0.37	0.35	50.5	47.5	1150	960	B	900	12	3.0
FY-3012U1	10	8.5	107	95	0.46	0.43	50.5	47	1500	1320	B	1200	14.5	3.0
FY-3015U1	11	10	145	115	0.6	0.5	53.5	50.5	2100	1850	B	1500	18	3.0
FY-4009U1	12.5	10.5	122	100	0.51	0.43	56.5	53.5	1360	1200	B	900	12.5	4.0
FY-4012U1	12.5	10.5	139	110	0.6	0.49	54.5	51	1800	1580	B	1200	15.5	4.0
FY-4015U1	13.5	10.5	190	160	0.86	0.68	58	54.5	2500	2050	F	1500	18	4.0

## Notice

- 1.The parameters as shown in above table are measured at ambient temperature of 20°C.
- 2.The noise value is measured 1.5m away from the product at angle of 45° below the air outlet.
- 3.Because the above-mentioned velocity is measured in test laboratory where it's empty, without air flow and obstacle, after actual installation the velocity may vary depends on different service environment.
- 4.Outlet velocity is the maximum value.

