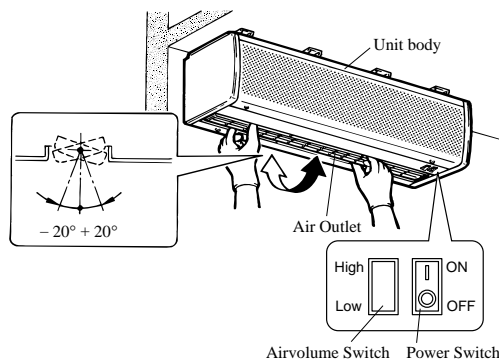


## Trial Operation

When the installation work is complete, it is advised to re-check both the wiring and the fixing of the unit so that this product operates correctly with no vibration or noise.

## Operation



1. Turn the power switch ON. (Press the I side.)
2. Set the air volume switch on High or Low, whichever you prefer.
3. Move the outlet louver and adjust the air direction. (When adjusting the louver, do not use a tool or other implement.) The outlet louver can be adjusted by approximately 20° on the inside and the outside units.
4. To stop the air curtain, turn the power switch OFF. (Press the O side.)

### • When cooling the inside.

1. If there is outside wind, blow air so that it is directed straight downward.
2. If there is no outside wind, and if there is an opening on the inside, blow air slightly toward the inside.
3. If there is no outside wind, and the inside is closed, blow air slightly toward the outside.

### • When heating the inside.

1. If there is outside wind, blow air slightly toward the outside.
2. If there is no outside wind, blow air either straight downward or slightly toward the inside.

### • If the temperature difference is great between the inside and outside of the refrigerator, etc.

1. Blow air slightly toward the outside.

## Maintenance

The Air Curtain should be cleaned when it gets dirty – roughly once every three months as a general rule. Also, be sure to clean and test run the Air Curtain before starting operation for the summer and winter seasons.

- Always switch power off before cleaning the unit.

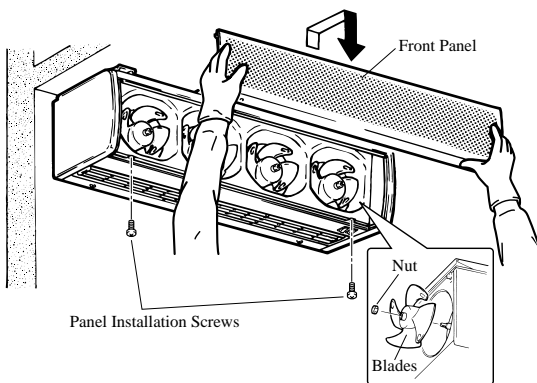
If there is dirt on the front panel, remove it with a vacuum cleaner. Also, if the inside of this product is extremely dirty, clean it off with a feather duster, etc.

### <NOTE>

- Do not use solvents such as the following to clean the unit:

Paint thinner, alcohol, benzene, gasoline, kerosene, aerosol sprays, alkaline solvents, or chemicals in chemically treated cleaning cloths. (Surface deterioration or discoloration could result.)

## Removing each Part



1. Take out the two screws used to install the front panel.
2. Pull the front part of the front panel, then lift it up and off the hooks on the unit's body and remove it. Take off the nuts, then pull the blades off the fan motor shafts.

## Reassembly and Inspection after Cleaning

When cleaning is finished, reverse the disassembly steps to reassemble the unit.

Inspect the following items as you reassemble the unit.

1. The fan fits onto the shaft in a specific orientation. Be sure not to install it upside-down.
2. There are no scratches on the wiring inside the unit body!
3. The unit body, fans, nuts, and front panel all have been mounted securely.
4. Switch power on and confirm that the Air Curtain operates correctly.

## Specifications

TYPE	Power Source		Speed control	Input (W)	Maximum load current(A)	Air velocity Max(m/s)	Air volume		Noise (dB)	Starting current (A)	Weight (kg)
	Frequency	Voltage					(m³/h)	(L/s)			
GK-3506SA	50Hz	single phase 220-240V	High	165-175	0.75-0.75	16-17.5	1440-1560	400-433	64.5-66.5	1.4	13
			Low	165-180	0.75-0.75	12.0-14.0	1190-1350	331-376	61.0-64.0	1.3	
GK-3509SA	50Hz	single phase 220-240V	High	250-265	1.1-1.1	16.0-17.5	2160-2340	600-650	66.0-68.5	2.1	20
			Low	250-270	1.1-1.1	12.0-14.0	1790-2030	497-564	63.0-66.0	1.9	
GK-3512SA	50Hz	single phase 220-240V	High	335-355	1.5-1.5	16-17.5	2880-3120	800-867	67.5-70.0	2.8	25
			Low	335-360	1.5-1.5	12.0-14.0	2380-2700	663-752	64.5-67.5	2.6	

## After-Sales Service

Please contact the dealer from whom the unit was purchased concerning after-sales service.

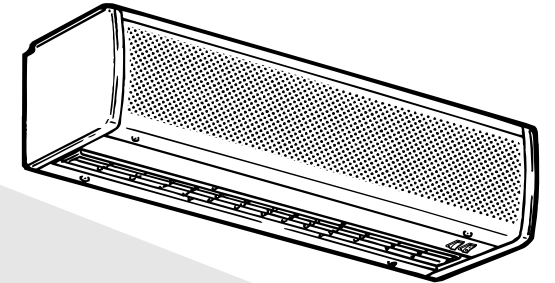


# MITSUBISHI ELECTRIC

## AIR CURTAIN

Models:  
GK-3506SA  
GK-3509SA  
GK-3512SA

0104872HB9204



## OPERATING AND INSTALLATION INSTRUCTIONS

Be sure to read this instruction manual before starting installation work.

Installation work must be carried out by a dealer or a specialist installation contractor.

- This is a single-phase product. Check the power supply before proceeding with the installation work.

Be sure to hand over these Operating and Installation Instructions to the user when the installation work has been completed.

- After reading this information, keep it in a place where any person using the product can refer to it at any time.

## Essential Safety Precautions

Please be absolutely sure to read through the following information: it will help you to install the Air Curtain correctly and safely and to operate it properly.

The precautions presented here contain important safety information: be sure to follow the applicable instructions given.

- The graphic symbols have the following significance.

	Prohibited		Do not use where water is present.		You must follow the instructions given.		Beware of rotating objects.
	Do NOT disassemble.		Do NOT touch.		Grounding is required.		

WARNINGS		This applies to mishandling or misoperation of the product which may lead to a fatal or serious injury.
	• Do not touch the moving parts. (You may injure yourself.)	
	• Do not poke your fingers or any objects into the air outlet ports or moving parts during operation since this is dangerous. (You may injure yourself.) • If operation stops while the power is still switched on, do not touch the product under any circumstances. (There is a danger that the unit could suddenly start operating again and cause injury. There is also a danger of electrical shock.)	
	• Do not attempt remodelling under any circumstances. Disassembly and repair are permitted only by qualified repair engineers. (The product may cause fire, electrical shock and/or injury)	
	• Do not apply water to the product or splash water onto it. (Short-circuiting or electrical shock may be caused.)	
	• Do not use the product where the combustion area of its combustion device will be directly exposed to wind or air movement. (This may cause incomplete combustion or result in the flames being extinguished, leading to carbon monoxide poisoning.)	
	• When passing the product and metal ducts connected to the product through wooden buildings lined or covered with metal or wire laths or with metal sheets, install the product and ducts in such a way that they will not make electrical contact with the metal or wire laths or metal sheets. (Ignition may occur if there are power leaks.) • Before proceeding with maintenance work, be absolutely sure to set the circuit-breaker on the power board to the OFF position. In addition, do not perform the work with wet hands. (Electrical shock or injury may result.)	
	• Ground the product properly. (Electrical shock may be caused in case of malfunctioning or power leaks.)	



## CAUTIONS

This applies to mishandling or misoperation of the product which will lead to injury or damage to your home, household effects, etc.



- Do not hang on the product or swing from it. (It may fall, resulting in injury.)



- Never use the product in a bathroom or other location with excessive moisture (more than 90% RH). (Electrical shock or fire may be caused.)



- Use Single-phase 220~240 V, 50 Hz power supply. (If the wrong power supply is used, it could cause a fire or electric shock.)
- When installing the main unit, select a location which is sufficiently strong, and install the unit securely. (Failure to do so may result in the unit falling, resulting in injury.)
- Install the parts properly and securely. (Failure to do so may result in the parts falling, resulting in injury.)
- Wiring work should be performed safely and reliably. (Poor connections or errors in the wiring work could result in electrical shock or fire.)
- During installation and maintenance, always wear gloves. (If gloves are not worn, your hands could be injured.)
- If the product is not going to be used for a prolonged period of time, be absolutely sure to set the circuit-breaker on the power board to the OFF position. (Deterioration in the insulation may cause electrical shock, power leaks or fire.)

## Notes

- The digits in the model number indicate the standard barrier distance and installation width. (In the case of the GK-3509SA, the standard barrier distance is 3.5 m and the installation width is 90 cm.) The Air Curtain will not be effective if the air flow is too weak or if it is too strong. Make sure to confirm the installation height and the model.
- When installing the Air Curtain at the entrance to a store or office, the air outflow opening should be oriented toward the inside. However, it may be oriented toward the outside provided that the unit is installed under eaves or an awning that prevents rain from falling on it and there is no danger of rain being sucked into the intake opening. Also, the unit must be installed outside if it is to be mounted on a freezer room.
- Should a power failure occur, be sure to turn the unit's power switch off. (Otherwise, there is a danger that a malfunction could occur if the unit's fan suddenly starts to turn when power is restored.)
- Use a motor circuit breaker or the like with the wiring system.
- The appliance is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the appliance.

## Description of Functions

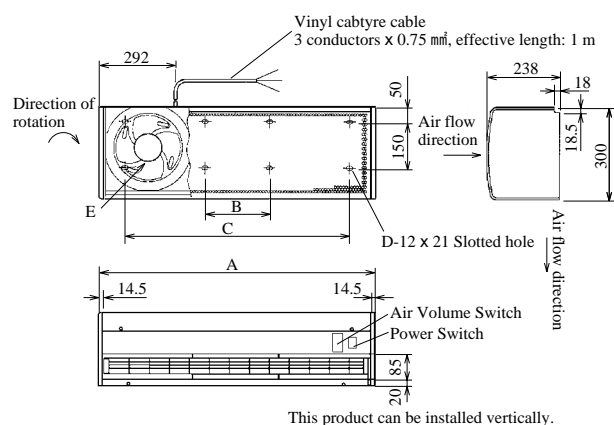
- The unit is equipped with an overheating prevention device (thermal fuse) to prevent overheating of the motors and resistors. During abnormal conditions, such as if the ambient temperature is unusually high, if an overload occurs, if a phase interruption occurs during operation, or if operation is restricted in some way, the fuse will burn out, preventing power from being supplied to the unit. Should this occur, the unit cannot be restarted. Should the power be cut off while the unit is operating, perform the steps below before restarting the unit.

### Treatment:

It is necessary to switch off the power supply, remedy the cause of the problem, and replace the motors and capacitors.

Also, if the portion of the unit where the motors are mounted has become malformed or is otherwise abnormal, the mounting should be replaced as well. Contact a specialist installation contractor to perform the replacement.

## External Dimensional Diagram



## Accessories

Parts	GK-3506SA	GK-3509SA GK-3512SA
Wall mounting plate	1	1
Washers	4	8
Spring washers	4	8
Nuts (M10)	4	8

Table of dimension changes

Unit (mm)

TYPE	A	B	C	D	E (Number of fans)
GK-3506SA	600	287.5	—	4	2
GK-3509SA	900	76	588	8	3
GK-3512SA	1180	355.5	867.5	8	4

## Mounting Method

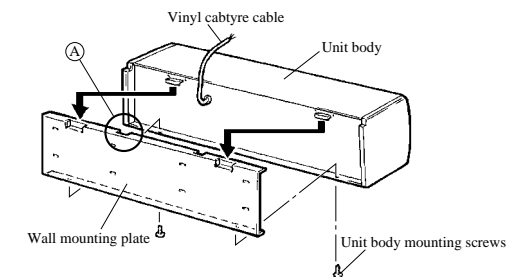
Mounting locations and surfaces differ, but in any case make sure that the unit is mounted sufficiently securely and that it is level.

### <NOTE>

- In the case of a standard installation (with the unit mounted horizontally), install it so that the air outlet is facing downward.
- If there is a wall on the side of the air curtain, install the wall mounting plate 40 mm or more from the wall. Otherwise, the air curtain's body will hit the side wall and you will not be able to install it.
- If multiple units are being installed continuously, install the mounting plates at an interval of 80~95 mm from each other.
- If you are mounting the air curtain on a wall, leave a gap of 55 mm or more from the ceiling to the mounting plate. If it is closer than that, the unit will hit against the ceiling and you will not be able to install it.

## Installing the Wall mounting plate

1

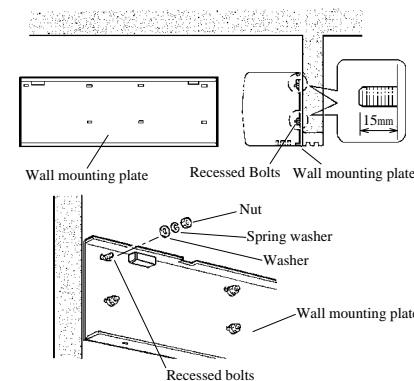


Remove the two mounting screws from the unit body, then remove the wall mounting plate from the unit body.

Run the vinyl cabtyre cable through the U groove (A).

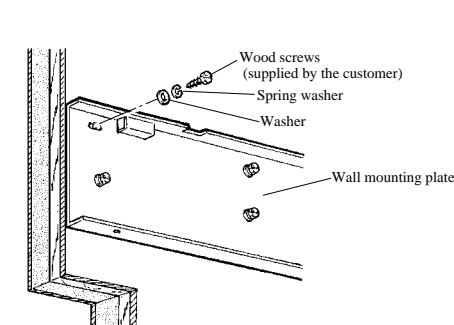
2

### Mounting on a concrete wall



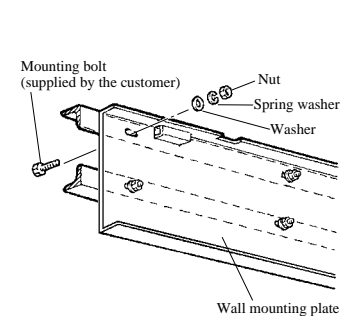
- Embed recessed bolts so that they protrude about 15 mm from the wall surface. The number of recessed bolts is 4 in the case of the GK3506SA and 8 for the other models.
- Fasten the wall mounting plate to the recessed bolts using the washers, spring washers and nuts supplied with the air curtain, and tighten them securely.

### Mounting on a board wall



If the panel thickness is 20 mm or greater, mount the wall mounting plate directly on the wall with the washers and spring washers supplied with the air curtain, and wood screws (supplied by the customer). If the panel thickness is less than 20 mm, install a reinforcing board (supplied by the customer) so that the total thickness becomes 20 mm or greater.

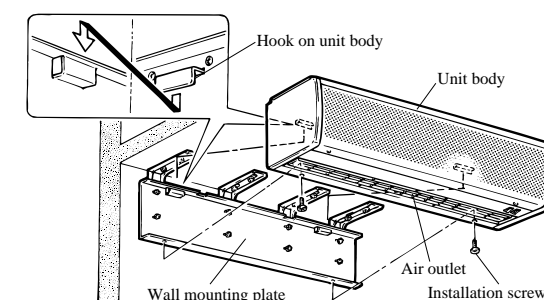
### Mounting on steel beams or steel pillars



- Installation holes have already been made in the wall mounting plate's mounting hole positions.
  - Install the wall mounting plate on the wall using the washers, spring washers and nuts supplied with the air curtain and bolts (supplied by the customer), fastening it securely.
- Install the mounting bolts so that they protrude from the wall mounting plate about 15 mm.

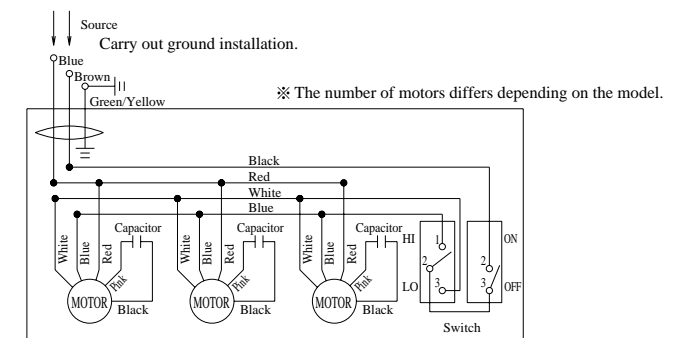
## Installing the Unit

- Insert the hook fitting on the back of the unit in the holder on the wall mounting plate, lowering it until it stops.
- Fasten the unit to the wall mounting plate securely using the 2 screws provided.



## Wiring

- Make wiring connections for the parts indicated by bold lines in the connection diagram.



- When selecting a motor circuit breaker, use a value of 1.2 to 1.5 times that of the load current listed in the specifications.

Use 0.75 mm<sup>2</sup> wire, and use a 1.25 mm<sup>2</sup> or larger ground wire. If multiple units are operated, connect them to electric wiring which has a capacity that can handle the total current value.