

CLIMATE 5000 VRF

VRF Indoor Units

MC4W, C4W, C1W, C2W, SLPD, MPD, HPD,
CF, HW, HWM, SHPD, FSN, FSC-F, FAD Series



BOSCH

User manual

6 720 862 452 (2018/01) EN

Before using your air conditioning unit, please read this manual carefully and keep it for future reference.

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1. IMPORTANT SAFETY INFORMATION

Failure to follow instructions set out in this manual could lead to appliance failure or serious injury.

The safety precautions listed here are divided into two categories.



WARNING

Failure to observe a warning may result in serious injury or damage.



CAUTION

Failure to observe a caution may result in injury or damage to the equipment.



WARNING

This appliance should only be used by a competent person. Failure to comply with these instructions may cause serious injury or damage.

Ensure only trained and qualified service personnel install, repair or service the equipment.

The electrical power supply must be isolated immediately should the appliance be working abnormally.

Ensure the indoor unit and the remote controller are always kept away from liquids to prevent electrical shocks or malfunction.

Never press the buttons on the remote controller with a hard, pointed object.

The remote controller may be damaged.

Never replace fuse with incorrect size. Never use copper wire to replace fuse. This may cause serious injury or damage

Ensure cleaning products do not come into contact with any of the units electrical components. Caution should also be taken when using any other flammable or corrosive products close to the unit.

Never touch the air outlet or the horizontal blades while the swing flap is in operation.

Fingers may become caught or the unit may malfunction.

Never put any objects into the air inlet or outlet.

Objects touching the fan at high speed can be dangerous.

Never inspect or service the unit by yourself.

Ask a qualified person to perform this work.

When disposing any of the products, consult with the local authorities for specialised disposal.

The refrigerant in the air conditioner is safe.

Should refrigerant come in to contact with a naked flame, the gas can be extremely harmful.



Should a refrigerant leak occur, switch off the power to the air conditioning unit. Turn off any combustible heating devices, ventilate the room and contact a competent person.

Do not use the air conditioning unit until a qualified personnel has been to correct the fault.



CAUTION

Prior to performing any maintenance work, ensure the unit is switched off and the electrical power supply has been isolated.

Do not remove the fan guard until the unit has been switched off and the electrical power supply has been safely isolated.

Ensure hands are free from contaminants and are dry prior to operating the units.

Do not touch the heat exchanger fins.

These fins are sharp and could cause injury. If the fins are damaged, this will affect the heat exchange performance.

Do not place items which might be damaged by moisture under the indoor unit.

Condensation may form if the humidity is above 80%, the drain outlet is blocked or the filter is dirty.

Never touch the internal parts of the controller.

Do not remove the front panel. Some parts inside are dangerous to touch, this could result in appliance failure or serious injury.

Do not use air conditioner where chemicals or gases can affect your health.



NOTE

All the pictures in this manual are for explanation purposes only. They may be slightly different from the air conditioning unit you have purchased (dependent on model).

2. THE RANGE OF UNITS AVAILABLE

■ Four-way cassette type

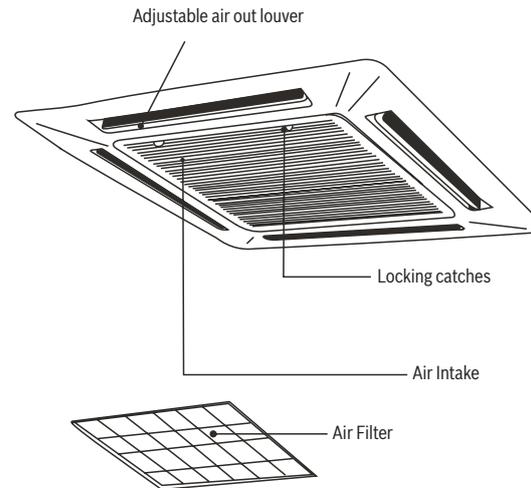


Fig. 2-1

■ Ceiling-floor type

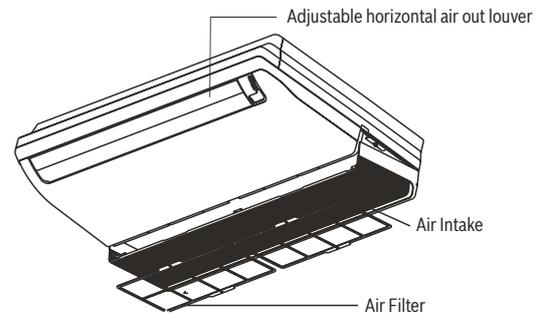


Fig. 2-2

■ One-way cassette type

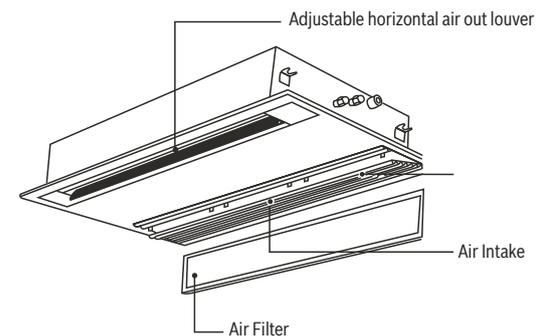


Fig. 2-3

■ **Small one-way cassette type**

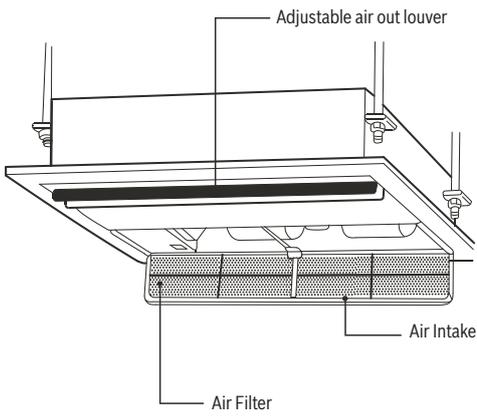


Fig. 2-4

■ **Small one-way cassette type**
(The second generation 18-36 model)

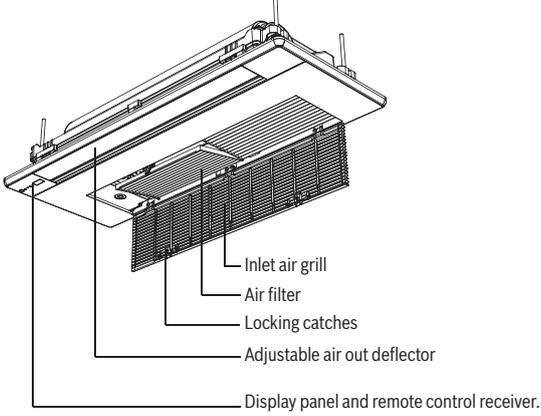


Fig. 2-5

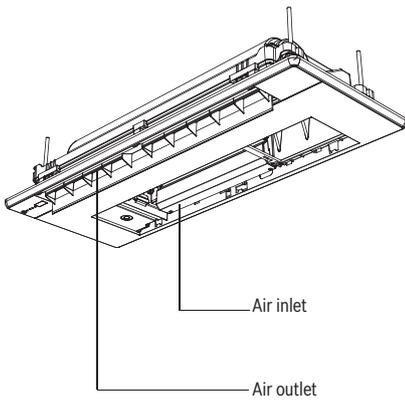


Fig. 2-6

■ **Wall-mounted type**

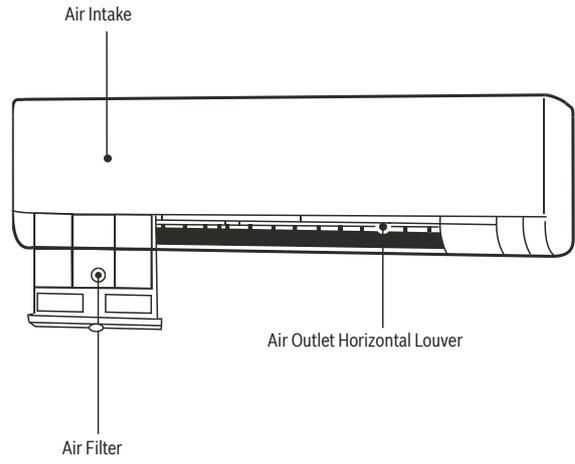


Fig. 2-7

■ **Duct/ceiling type**

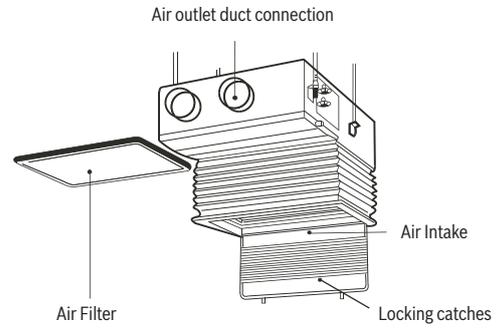
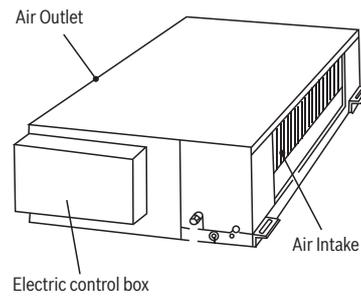


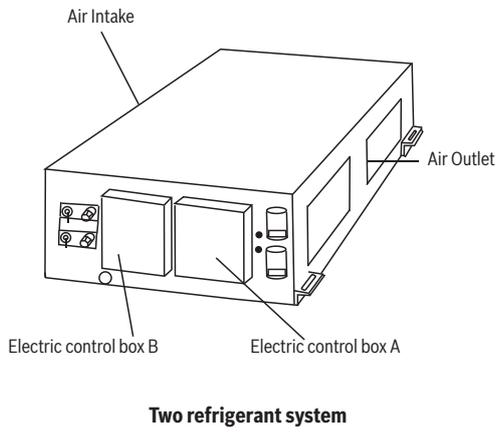
Fig. 2-8

■ **High static pressure duct type**



One refrigerant system

Fig. 2-9



Two refrigerant system

Fig. 2-10

■ **(Thin) Duct/ceiling type**

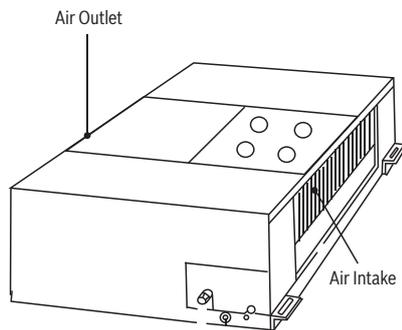


Fig. 2-11

■ **Medium static pressure duct type**

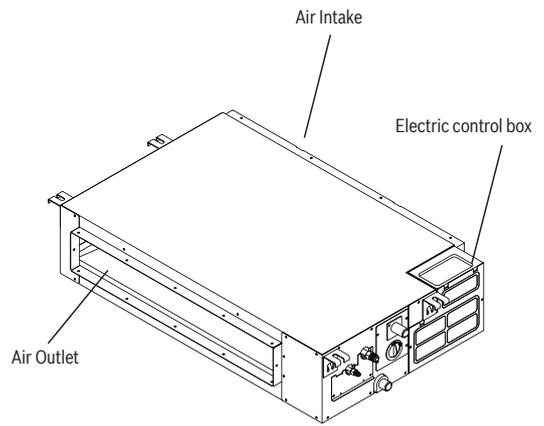
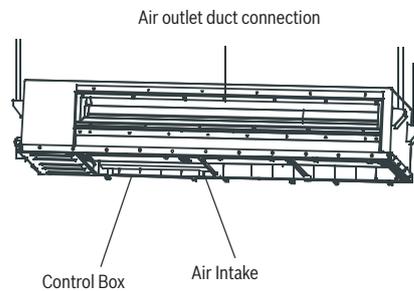


Fig. 2-13

■ **Low static pressure type**



■ **Low static pressure type**

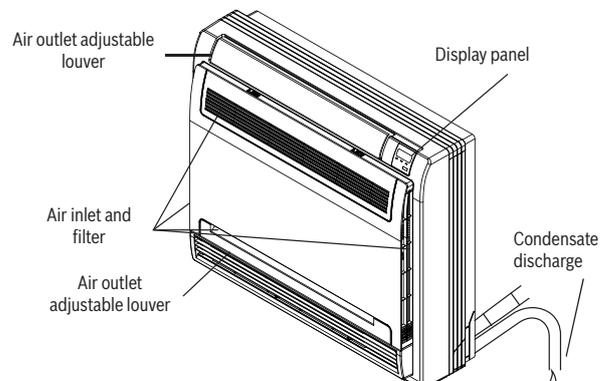


Fig. 2-15

■ Floor standing type

- Version I
Vertical unit which can be secured to the wall or on feet.

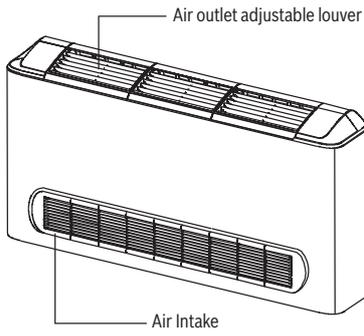


Fig. 2-16

- Version II
Vertical unit which can be secured to the wall or on feet.

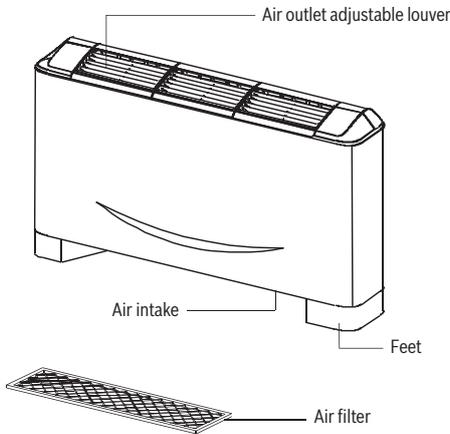


Fig. 2-17

- Version III
Vertical unit which is secured to the wall.

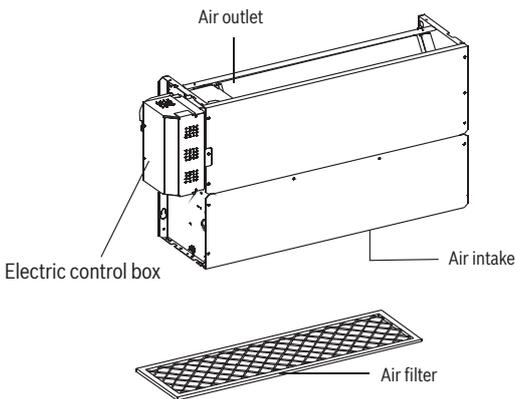


Fig. 2-18

■ Two-way cassette type

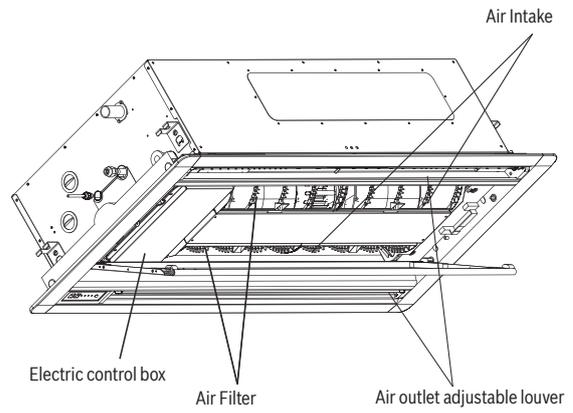


Fig. 2-19

3. AIR CONDITIONING UNIT OPERATION

Use the system in the following temperatures for safe and effective operation. The maximum operation temperature for the air conditioning unit on cooling/heating;

Table 3-1

Mode	Temperature	Indoor temperature
Cooling operation		17°C ~ 32°C
		Indoor Humidity Below 80% 80% humidity or above will Should the humidity rise above 80%, condensation will form on the unit.
Heating operating		≤27°C

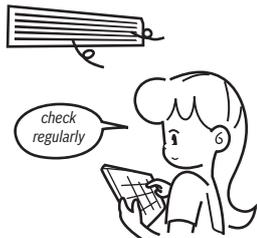


NOTE

- 1 If air conditioning unit is used outside the above conditions, it may cause the unit to function abnormally.
- 2 The units can produce condense water when the humidity is high.
- 3 Optimum performance will be achieved within these operating temperatures.
- 4 The unit will shut down for safety should the temperature be outside these parameters.

■ The following checks will save energy and improve the heating/cooling performance.

- Ensure air filters are clean.



- Close the door/window

Ensure windows and doors are not continuously left open when the unit is in operation.



- Always ensure a comfortable room temperature setting. Overheating or over cooling will create health risks and waste energy.



To maintain a comfortable temperature, always check the position of the outlet air louvers.



4. ADJUSTING AIR FLOW DIRECTION

Cold air will always fall to the bottom of the room and hot air will always rise to the top. Adjust the louvers to overcome this and give a better even heat distribution.



NOTE

- 1 See below on how to adjust the louvers to achieve optimum heating and cooling performance.

■ Four-way cassette type

- Cooling operation

Adjust the louvers horizontally.



Fig. 4-1

- Heating operation

Adjust the louvers horizontally.

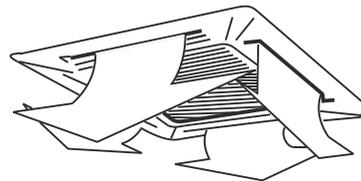


Fig. 4-2

Setting the louvers to automatic swing will achieve the best results. This can be done via the 'SWING' button on the remote controller.

■ One-way cassette type

- Adjust the air direction up and down

- Auto-swing

Press SWING button and the louver will swing up and down.

Maximum air circulation

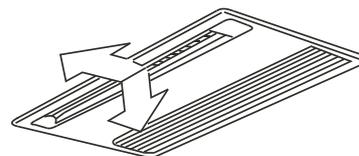


Fig. 4-3

- **When cooling**
Adjust the louver horizontally.

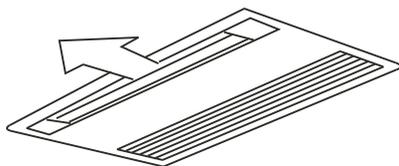


Fig. 4-4

- **When heating**
Adjust the louver down (vertically).

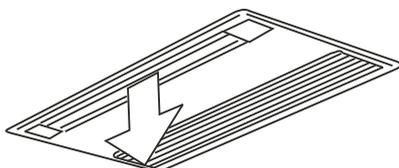


Fig. 4-5

- **Adjust the air direction left and right**
Adjust the blade inside the air outlet louver to the desired direction.
- **Adjust the air flow up and down**

- **Cooling operation**
Adjust the louver horizontally.

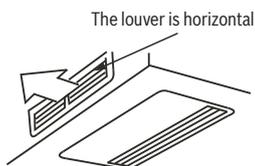


Fig. 4-6

- **When heating**
Adjust the louver down (vertically).

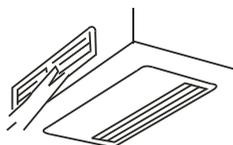


Fig. 4-7

- **Adjust the air direction left and right**

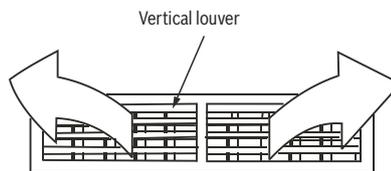


Fig. 4-8



NOTE

When adjusting the louvers from left to right, ensure the angle is not too great to avoid condensation droplets forming.

- **Duct-ceiling type**

The following is how to adjust the air flow direction when the air outlet parts (sold separately) are used with the indoor unit.

- **When cooling**
To effectively cool the room, set the louver horizontally. (Fig. 4-9)
- **When heating**
To effectively heat the room set the louver vertically. (Fig. 4-10)

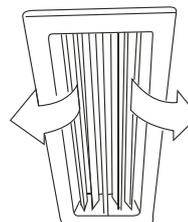


Fig. 4-9

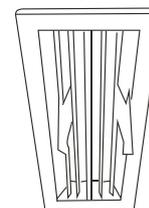
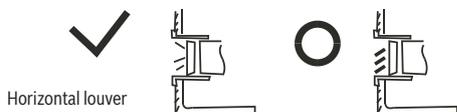


Fig. 4-10



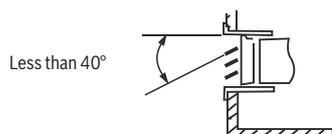
NOTE

- 1 Please adjust the horizontal louver down when the air flow is down.



Horizontal louver

- 2 The angle of the louver must be less than 40 degrees otherwise condensation droplets may form.



■ Wall-Mounted type

Adjust the Air Flow Direction Up and Down

- **Auto-swing**

Press the SWING button, the louver will swing up and down automatically.

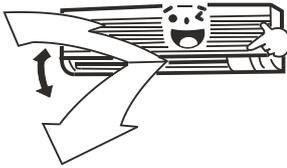


Fig. 4-11

- **Manual swing**

Manually adjust the louver using the remote controller to suit the room.

- **When cooling**

Adjust the louver horizontally.

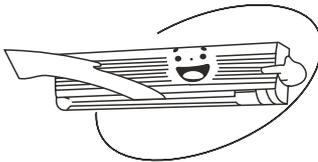


Fig. 4-12

- **When heating**

Adjust the louver downwards (vertically).

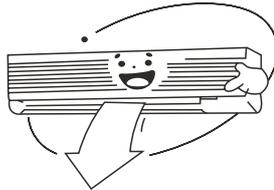


Fig. 4-13



CAUTION

- 1 Incorrectly adjusting the louver may cause condensation droplets on the unit.
- 2 The room will not be heated correctly if the louver are horizontal.
- 3 Always adjust the louver electronically via the remote controller. Do not attempt to adjust the louvers by hand as this will damage the unit.

■ Ceiling-floor type

- **Auto-swing**

Press the SWING button, the louver will swing up and down (left and right) automatically.

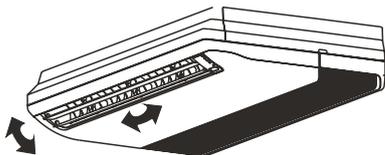


Fig. 4-14

- **Manual swing**

Manually adjust the louver using the remote controller to suit the room.

- **When cooling**

Adjust the louver horizontally.

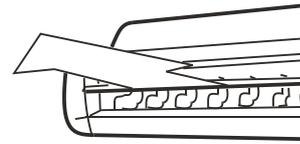


Fig. 4-15

- **When heating**

Adjust the louver downwards (vertically).

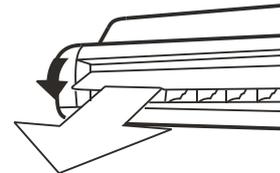


Fig. 4-16

■ Console type

■ Adjust the air direction up and down

- **Auto-swing**

Press the SWING button, the louver will swing up and down automatically.

- **Manual swing**

Manually adjust the louver using the remote controller to suit the room.

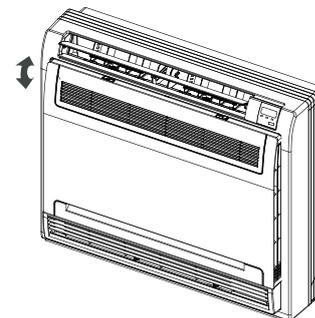


Fig. 4-17

- **When cooling**
Adjust the louver horizontally. (Refer to Fig. 4-18)
- **When heating**
Adjust the louver downwards (vertically). (Refer to Fig. 4-19)



Fig. 4-18

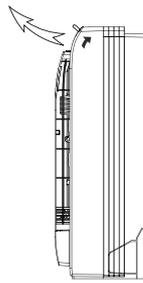


Fig. 4-19



CAUTION

Always adjust the louver electronically via the controller. Do not attempt to adjust the louvers by hand as this will damage the unit.

- **Adjust the air direction left and right**
Hold the inside supporting bracket, and turn the louver.

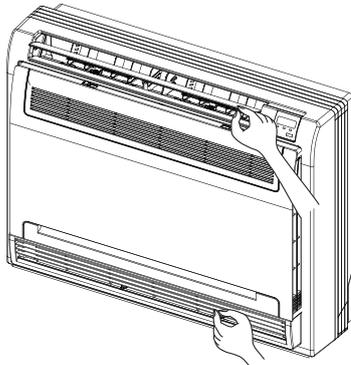


Fig. 4-20

- **Air flow selection**
Open the front panel.
How to open the front panel (Refer to Fig.5-4).



CAUTION

Before removing the front panel, ensure the electrical power supply has been isolated.
Do not touch any of the components inside the unit.

- Make air flow selection according to the room requirements. (Refer to Fig. 7-2 about the position of)
- When setting the air flow selection switch to .
The air conditioning unit automatically decides the appropriate blowing pattern depending on the operating mode

During Dry mode, the cold air is blown through the upper air outlet to avoid contact with people.

- When setting the air outlet selection switch to .
Regardless of the operating mode or situation, air blows from the upper air outlet.



CAUTION

To switch the lower air outlet from auto/manual mode, the unit must be restarted.

- **Digital scroll floor standing type**
Adjust the louver to achieve better cooling/heating effect.

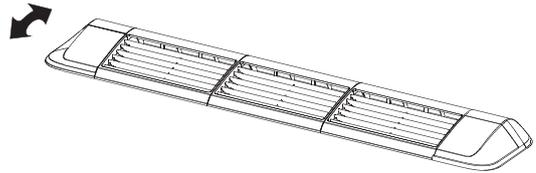


Fig. 4-21

- **Two-way cassette type**
 - **Auto-swing**
Pressing the 'SWING' button will enable the louvers to move upwards and downwards automatically.

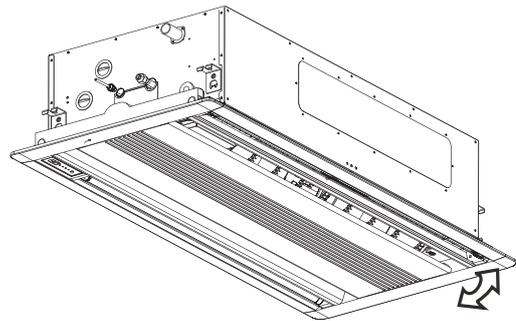


Fig. 4-22

- **Manual swing**
Adjust the louvers to achieve better cooling/ heating effect.
- **When cooling**
Adjust the louvers horizontally.

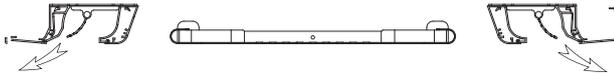


Fig. 4-23

- **When heating**
Adjust the louvers downwards (vertically).

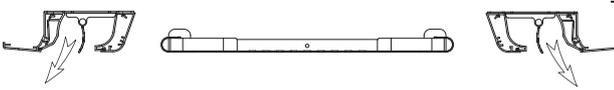


Fig. 4-24



CAUTION

Always adjust the louvers electronically via the controller. Do not attempt to adjust the louvers by hand as this will damage the unit.

5. MAINTENANCE



CAUTION

- 1 Ensure the electrical power supply is isolated prior to any maintenance work.
- 2 A dry cloth should be used to clean the unit and remote controller.
- 3 Do not use cleaning products or chemicals on the units.

■ **Cleaning the air filter**

- The air filter prevents dust particles from entering the unit. The filters should be cleaned regularly to avoid decreasing the units efficiency.
- Should the filter not be able to be cleaned properly, then it should be replaced for a new one.

1. **Removal of air filter**

• **For Four-Way Cassette Type**

Push the grill latches towards the middle simultaneously as indicated in Sketch Fig. 5-1. Then gently pull the grill downwards to a 45 degree angle and remove the filter.

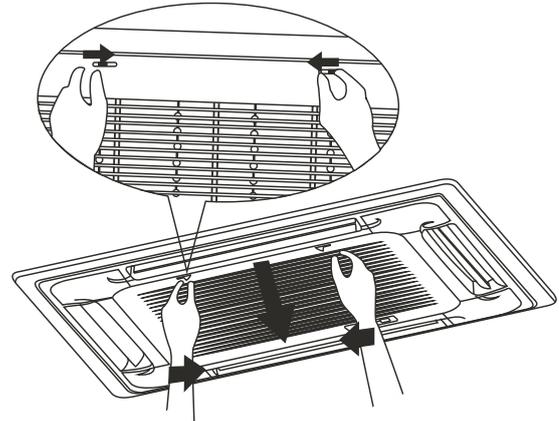


Fig. 5-1

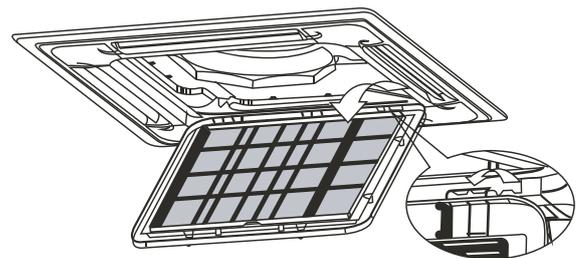


Fig. 5-2

- **For Duct/Ceiling Type**
Push the grill latches in the direction of the indicated arrows and gently pull downwards. Then remove the air filter.
- **For One-Way Cassette Type**
Remove the air-in grille, hold the air-in buckle with two hands and open the grille downwards, pull it towards inside part and push the filter buckle to remove the grille.

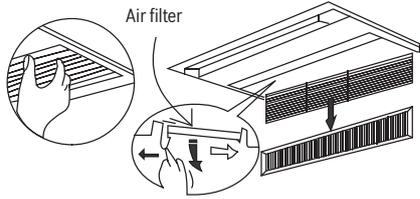


Fig. 5-3

- **For One-Way Cassette Type**
(The second generation 18-36 model)

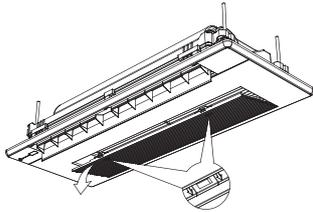


Fig. 5-4

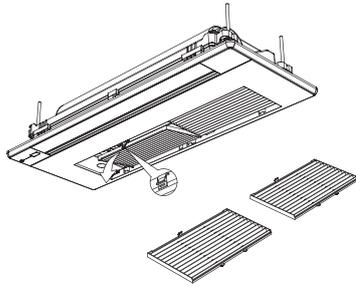


Fig. 5-5

- **For Console Type**
Push the grill latches in the direction of the indicated arrows and gently pull downwards. Then remove the air filter.

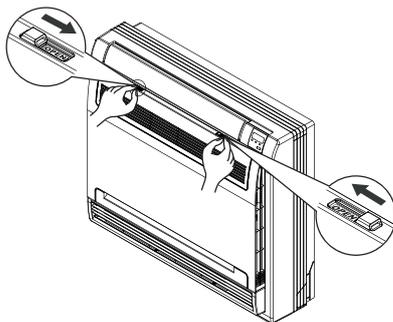


Fig. 5-6

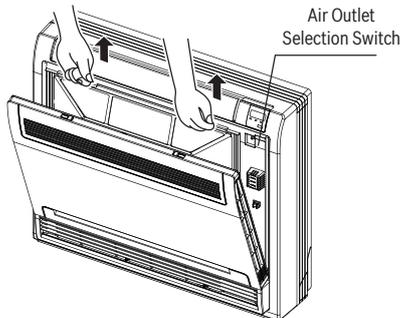


Fig. 5-7

Hold the tabs of the frame, and remove the claws in 4 places. (The especial function filter can be renewed by washing it with water once every 6 months. We recommend replacing it once every 3 years.)

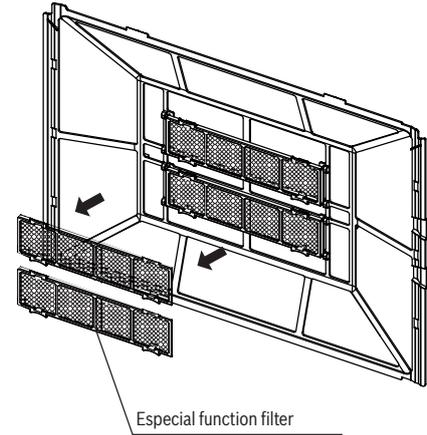


Fig. 5-8

- **For digital scroll floor standing type**
The filter is housed in the lower part of the unit in versions II and III which take in air from below or from the rear. To remove the filter in versions II and III use the following procedure.

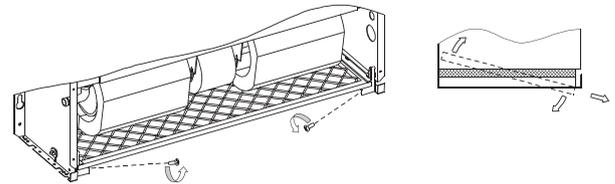


Fig. 5-9

In version 1, the air filter is located in the front cowl. To remove the filter in version I, proceed as following indicated.

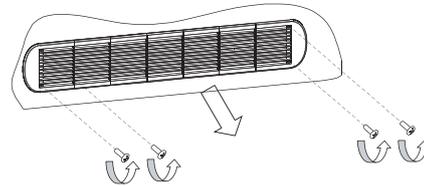


Fig. 5-10

■ **Two-way cassette type**

■ **Take off the inhalation grating from the panel**

- 1) Upright row (non-directional) one side of the inhalation grating, and putdown the other side, and then slide follow the arrow's direction refers to Fig. 5-9.
- 2) Loosen the hanger of the putdown side refers to Fig. 5-10.
- 3) Open the inhalation grating (about 45°), and remove the other side, refers to Fig. 5-11.

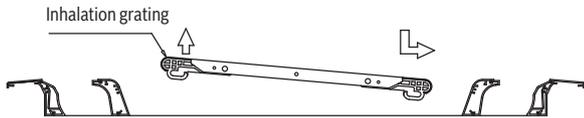


Fig. 5-11

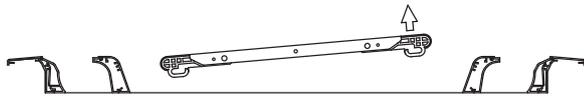


Fig. 5-12

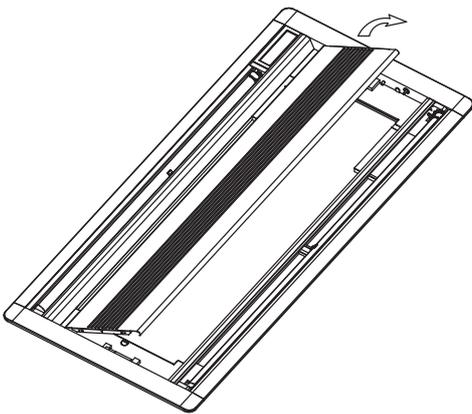


Fig. 5-13

■ According to the figure shown in the position and direction of arrow, press the filter and take it down. In the same way, take down the filter on the other side, and put it back after cleaning.

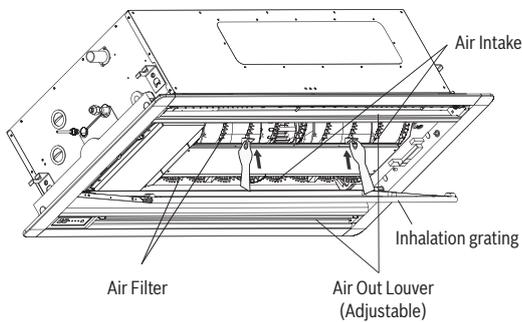


Fig. 5-14

2. Dismantle the air filter

3. Clean the air filter

The air filter prevents dust particles from entering the unit. The filters should be cleaned regularly to avoid decreasing the units efficiency.

Clean the air filter with vacuum cleaner or water.

a. The air-in side should face up when using a vacuum cleaner. (Refer to Fig. 5-13)

b. The air-in side should face down when cleaning with water. (Refer to Fig. 5-14)

If the dust accumulation is severe, use a soft brush or natural detergents to clean the filter.

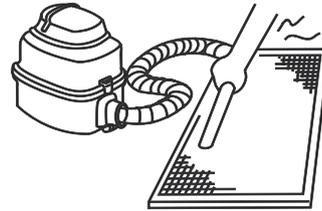


Fig. 5-15

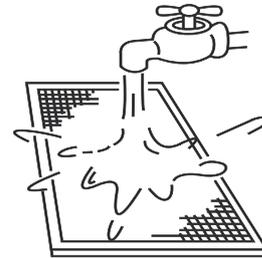


Fig. 5-16



CAUTION

- 1 Allow the filter to dry naturally away from direct sunlight or other heat sources.
- 2 For the one-way cassette type, the air filter should be installed before the unit body installation.

4. Re-install the air filter.

■ **Maintenance**

Clean the air filters and casings of the indoor units.

Refer to "Cleaning the air filter" for details on how to install cleaned air filters back in the correct position.

Turn off the unit with the "ON/OFF" button on the remote controller, then isolate the mains electrical supply.



NOTE

The unit will consume a small amount of electricity even when it is not being used. Isolate the mains electrical supply to prevent this.

Remove the remote controller batteries.

■ Maintenance

Check and remove anything which may be blocking inlet and outlet vents of indoor units and outdoor units.

Clean air filters and casings of indoor units. Refer to "Cleaning the air filter" for details on how to install cleaned air filters back in the correct position.

Turn on the power at least 12 hours prior to operating the unit to avoid damaging the compressor.

6. FOLLOWING SYMPTOMS ARE NOT AIR CONDITIONING UNIT FAULTS

Symptom 1: The system does not operate

- The air conditioning unit does not start immediately after the ON/OFF button on the remote controller is pressed. If the operation lamp lights, the system is in normal condition. To prevent overloading of the compressor motor, the air conditioning unit starts 3 minutes after it is turned ON.
- When a mode is chosen the unit will not automatically start in this mode. The indoor unit will get to set temperature before distributing desired air temperature. This is to prevent cold or warm air blowing when not required.

Symptom 2: Change into the fan mode during cooling mode

- In order to prevent the indoor evaporator frosting, the system will change into fan mode automatically, normal operation will be restored after a period of time. This only happens when the air conditioning unit has met its set temperature demand.

Symptom 3: White mist comes out of a unit

Symptom 3.1: Indoor unit

- Should there be high humidity during cooling operation or air filters are dirty.

Symptom 3.2: Indoor unit, outdoor unit

- When the system has changed over to heating operation after defrost operation. Moisture generated by defrost becomes steam and is exhausted.

Symptom 4: Noises can be heard on an air conditioning system which could be valves opening/closing or the sound of moving refrigerant. A hissing sound will be apparent when the outdoor unit starts and stops.

Symptom 4.1: Outdoor unit

- The sound of the compressor may differ pending of the demand.

Symptom 5: The units can give off odours

- The indoor units may absorb odours from the room, regular filter cleaning will help this.

Symptom 6: The outdoor unit fan does not spin

- During operation. The speed of the fan is controlled in order to optimise product operation.

7. TROUBLESHOOTING

7.1

If one of the following malfunctions occur, stop operation, isolate the electrical power supply and seek expert advice.

- A safety device such as a fuse, a breaker is frequently activated..
- Water or contaminants have entered the unit.
- Water leaks from indoor unit.
- Other malfunctions.

If the system is not working correctly and has non of the above symptoms, then refer to table 7-1.

Table 7-1

Symptoms	Causes	Solution
Unit does not start	<ul style="list-style-type: none"> • Power failure. • Power switch is off. • Fuse may have been activated. • The batteries in the remote controller may need changing. 	<ul style="list-style-type: none"> • Restore Power • Replace the fuse. • Replace the batteries or check the controller.
Air is discharging, but isn't very cold	<ul style="list-style-type: none"> • Temperature is not set correctly. • The compressor is in a 3 minute protection 	<ul style="list-style-type: none"> • Set the temperature properly. • Call for qualified Personnel to check the system.
Unit stops and starts frequently	<ul style="list-style-type: none"> • Too much or too little refrigerant inside the system. • Air or other contaminants in system. • Compressor malfunction. • Voltage is too high or too low. • System circuit is blocked. 	<ul style="list-style-type: none"> • A qualified person should check for refrigerant leaks and for the correct refrigerant pressure. • Vacuum and recharge refrigerant. • Maintenance or change compressor. • Install a thermostat. • A qualified person should investigate.
Low cooling effect	<ul style="list-style-type: none"> • Outdoor unit and indoor unit heat exchangers are dirty. • The air filter is dirty. • Inlet/outlet of indoor/outdoor units is blocked. • Doors and windows are open • Direct sunshine on outdoor unit. • Too much heat resource. • Outdoor temp. is too high. • Leakage of refrigerant or lack of refrigerant. 	<ul style="list-style-type: none"> • Clean the heat exchanger. • Clean the air filter. • Clean filters • Close doors and windows. • Ensure the unit is not exposed to direct sunlight. • Reduce heat source. • AC cooling capacity reduces (normal). • A qualified person should check for refrigerant leaks and for the correct refrigerant pressure.
Low heating effect	<ul style="list-style-type: none"> • Outdoor temperature is lower than 7°C • Doors and windows not completely closed. • Leakage of refrigerant or lack of refrigerant. 	<ul style="list-style-type: none"> • Use heating device. • Close doors and windows. • A qualified person should check for refrigerant leaks and for the correct refrigerant pressure.

7.2 Problems and causes for the remote controller

(See in Table 7-2)

Table 7-2

Symptoms	Causes	Solution
The fan speed can not be changed.	<ul style="list-style-type: none"> Check whether the MODE indicated on the display is "AUTO". 	<ul style="list-style-type: none"> When automatic mode is selected, the air conditioning unit will automatically change the fan speed.
	<ul style="list-style-type: none"> Check whether the MODE indicated on the display is "DRY". 	<ul style="list-style-type: none"> When dry operation is selected, the air conditioning unit automatically changes the fan speed. The fan speed can be selected during "COOL", "FAN ONLY", and "HEAT".
The remote controller signal is not transmitted even when the ON/OFF button is pushed.	<ul style="list-style-type: none"> Check whether the batteries in the remote controller need changing. 	<ul style="list-style-type: none"> The power supply is off.
The TEMP. indicator does not come on.	<ul style="list-style-type: none"> Check whether the MODE indicated on the display is FAN ONLY 	<ul style="list-style-type: none"> The temperature cannot be set during FAN mode.
The indication on the display disappears after time.	<ul style="list-style-type: none"> Check whether the timer operation has come to an end and TIMER OFF not indicated on the display. 	<ul style="list-style-type: none"> The air conditioning unit operation will stop at its set time.
The TIMER ON indicator goes off after time.	<ul style="list-style-type: none"> Check whether the timer operation has started and TIMER ON is indicated on the display. 	<ul style="list-style-type: none"> Up to the set time, the air conditioning unit will automatically start and the appropriate indicator will go off.
No receiving tone sounds from the indoor unit even when the ON/OFF button is pressed.	<ul style="list-style-type: none"> Check whether the signal transmitter on the remote controller is properly directed to the infrared signal receiver on the indoor unit when the ON/OFF button is pressed. 	<ul style="list-style-type: none"> Directly point the remote controller at the units receiver and press the on/off button several times.

Table 7-3

The Fault Indication for LED display

NO.	Type	Contents	LED flash	Remarks
1	Malfunction	The evaporator sensor check point is abnormal or room temp. sensor is abnormal.	The run LED flashes fast	Once the malfunction disappears, the unit will restart automatically.
2	Malfunction	Indoor/outdoor unit communication is abnormal.	The timer LED flashes fast	Once the malfunction disappears, the unit will restart automatically.
3	Malfunction	Outdoor unit is abnormal.	The alarm LED flashes slowly	Once the malfunction disappears, the unit will restart automatically.
4	Malfunction	Water level switch is abnormal.	The alarm LED flashes fast	Once the malfunction disappears, the unit will restart automatically.
5	Alarm	Mode conflict	The defrost LED flashes fast	When the indoor unit turns to heating mode or is turned off, the alarm will disappear.
6	Alarm	M_Home mismatching	4 LED flash together	When the indoor unit is replaced with a correct one or is turned off, the alarm will disappear.
7	Malfunction	EEPROM error	Defrost LED flash slowly	Once the malfunction disappears, the unit will restart automatically.
8	Alarm	Address is not found when the unit is first powered on.	Timer LED and run LED flash together	Once the malfunction disappears, the unit will restart automatically.

Table 7-4

The Fault Indication for Digit Display

NO.	Type	Contents	Display content	Remarks
1	Malfunction	Room temp. sensor is abnormal.	E2	Once the malfunction disappears, the unit will restart automatically.
2	Malfunction	Indoor/outdoor unit communication is abnormal.	E1	Once the malfunction disappears, the unit will restart automatically.
3	Malfunction	Outdoor unit is abnormal.	Ed	Once the malfunction disappears, the unit will restart automatically.
4	Malfunction	Water level switch is abnormal.	EE	Once the malfunction disappears, the unit will restart automatically.
5	Alarm	Mode conflict	E0	When the indoor unit turns to heating mode or is turned off, the alarm will disappear.
6	Alarm	M_Home mismatching	H0	When the indoor unit is replaced with a correct one or is turned off, the alarm will disappear.
7	Malfunction	EEPROM error	E7	Once the malfunction disappears, the unit will restart automatically.
8	Alarm	No address when first time power on.	FE	Once the malfunction disappears, the unit will restart automatically.
9	Malfunction	The evaporator temp. sensor is abnormal.	E3	Once the malfunction disappears, the unit will restart automatically.
10	Malfunction	The evaporator outlet temp. sensor is abnormal.	E4	Once the malfunction disappears, the unit will restart automatically.



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