

USER'S MANUAL

POLAR SERIES

ASH-18AIP PT, ASH-24AIP PT



◆ CONTENTS

Operation and Maintenance

■ Safety Precautions	1
■ Name of Parts	4
■ Operation of Remote controller	5
■ Emergency Operation	10
■ Care and Cleaning	11
■ Troubleshooting	13
■ Operation Tips	20

Installation Service

■ Notices for Installation	22
■ Installation Drawing	25
■ Installation of Indoor Unit	26
■ Installation of Outdoor Unit	29
■ Check after Installation and Operation Test	31
■ Installation and Maintenance of Healthy Filter(Optional)	32
■ Install snow guard (optional)	33



Never attempt.



Be sure to follow this instruction

The physical product may differ from the drawing in this manual for different display. If there are some differences between them, please refer to the physical product as the standard.

This appliance 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 appliance by a person responsible for their safety.

Children should be supervised to ensure they are away from the appliance.



Do not dispose this product as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.

◆ Safety Precautions

Please read the following notices before operation

WARNING

★ If there's abnormal phenomenon (like smell of burning), please cut off the power immediately and then contact with Gree authorized maintenance center.



If this abnormal status is kept on, air conditioner may be damaged or even cause electric shock or fire.

★ Do not operate the air conditioner with wet hands.



Otherwise, it may cause electric shock.

★ Do not cut off or damage the power cord or signal control wire. If the power cord or signal control wire of air conditioner is damaged, please replace it by the professional with specified power cord.

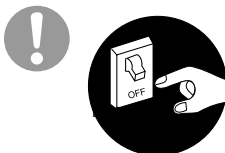


★ The special circuit must be adopted for power supply to avoid fire.



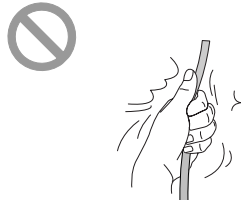
Do not use octopus multipurpose socket or mobile wiring board for wire connection.

★ Please cut off the power supply when the air conditioner won't be used for an extended period of time.



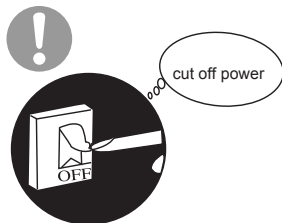
Otherwise, it will accumulate dust and it may cause overheating, fire and other accidents.

★ Do not damage the power cord or use unspecified power cord.



Otherwise, it may cause fire due to overheating of power cord.

★ Before cleaning the air conditioner, please cut off the power.




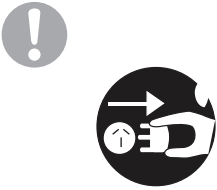

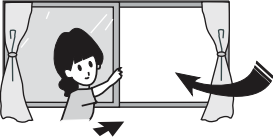
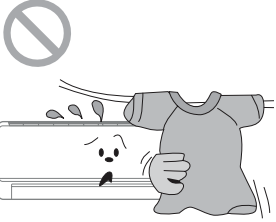
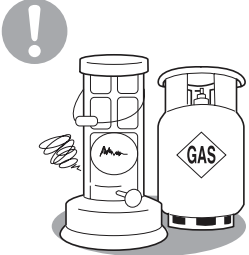
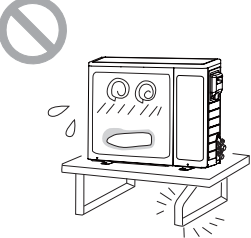
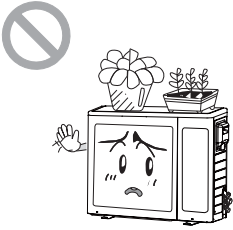
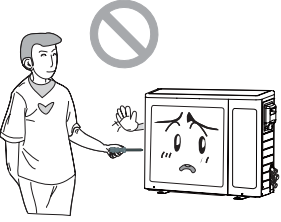
Otherwise, it will cause electric shock or injury.

★ Power supply should adopt the special circuit with the protection of air switch and the capacity must be sufficient. Please do not turn on or turn off the air conditioner frequently. □

Y-type connection is adopted for the power supply of this air conditioner. If the power cord is damaged, it must be replaced by the manufacture, maintenance center or a similarly qualified person to avoid a hazard. □ □

★ When the voltage is too high, electric elements can be damaged easily; if the voltage too low, the compressor will vibrate fiercely, which may damage the cooling system or compressor and electric components can't operate.

◆ Safety Precautions

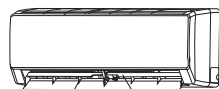
<p>★ Always ensure effective earthing.</p>  <p>No earthing may cause electric shock.</p>	<p>★ For safety, be sure to turn off the circuit breaker before performing any maintenance or cleaning or when the product is not used for an extended period of time.</p>  <p>Accumulated dust may cause fire or electric shock.</p>	<p>★ Select the most appropriate temperature.</p>  <p>It can save electric energy.</p>
<p>★ Do not keep windows and doors open for a long time during operation.</p>  <p>It will result in insufficient performance.</p>	<p>★ Do not block the air inlet or outlet.</p>  <p>It will result in insufficient performance and cause malfunctions.</p>	<p>★ Keep combustible materials away from the units at least 1m.</p>  <p>It may cause fire or explosion.</p>
<p>★ Install the outdoor unit firmly enough.</p>  <p>It may cause falling of the unit and injury to the person.</p>	<p>★ Do not step on the top of the outdoor unit or place heavy things on it.</p>  <p>It may cause damage or injury</p>	<p>★ Do not attempt to repair the air conditioner by yourself.</p>  <p>Incorrect repairs may cause electric shock or fire. Please contact the local authorised service center.</p>

◆ Safety Precautions

- ★ Do not cut off or damage the power cords or control cords. If they are damaged, please contact the dealer or qualified service personnel

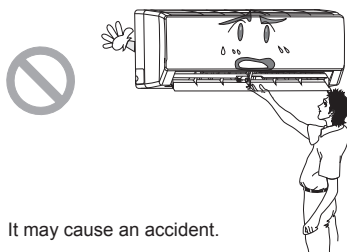


- ★ To change the airflow direction, adjust the vertical and horizontal air flow direction by using the remote controller.



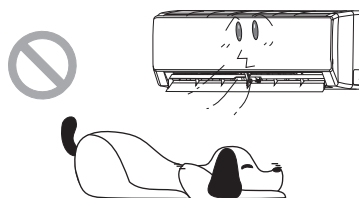
Vertical Louver Horizontal Louver

- ★ Do not insert your hands or objects into the air inlet or outlet.



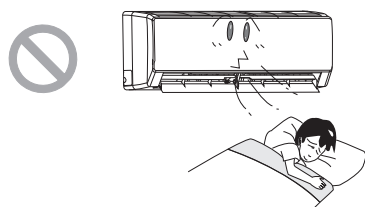
It may cause an accident.

- ★ Do not expose animals or plants directly to the air flow.



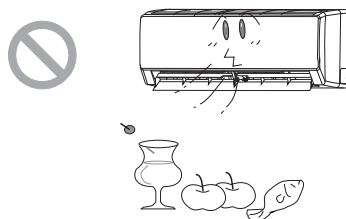
It may have a detrimental effect on them.

- ★ Do not expose yourself to cold air directly for a long time.

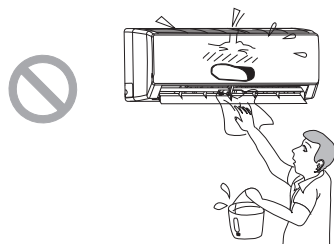


It's not good for your health.

- ★ Do not use the unit for any other purpose, such as preserving food or drying clothes.

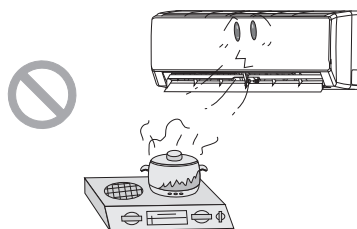


- ★ Do not splash water on the air conditioner.



It may cause electric shock or malfunction.

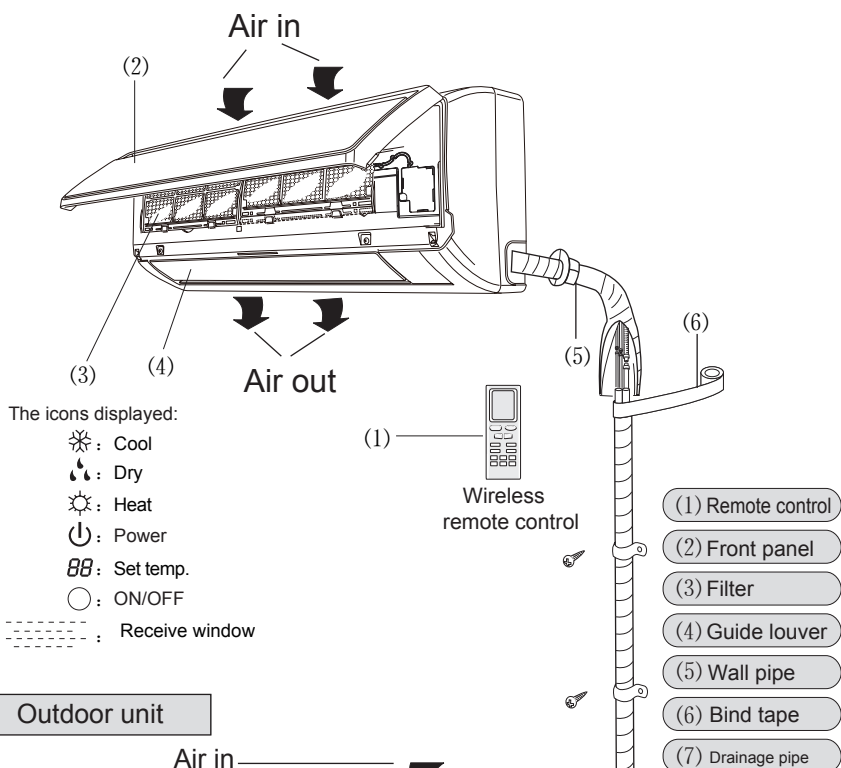
- ★ Do not place a burner near the air conditioner.



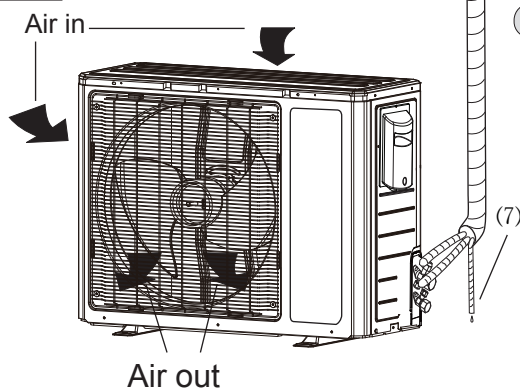
It will cause CO toxicosis due to incomplete burning.

◆ Name of Parts

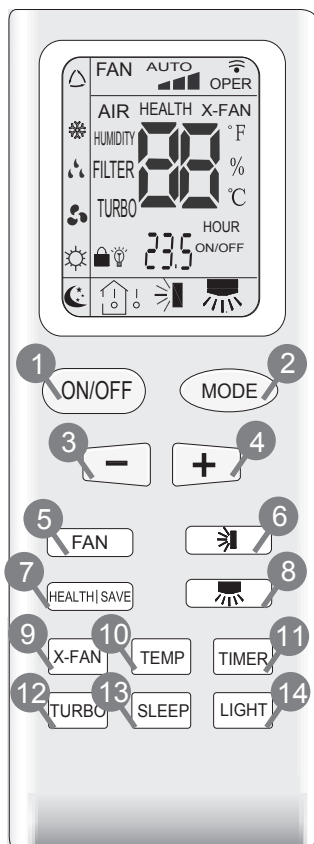
Indoor unit



Outdoor unit



◆ Operation of Remote Controller



1 ON/OFF

Press it to start or stop operation.

2 MODE

Press it to select operation mode (AUTO/COOL/DRY/FAN/HEAT).

3 - : Press it to decrease temperature setting.

4 + : Press it to increase temperature setting.

5 FAN

Press it to set fan speed.

6



Press it to set up & down swing angle.

7 HEALTH SAVE (page 8)

Press it to select health mode on or off.

8



(Remark : This function is not available for ASH-18AIP PT, ASH-24AIP PT)

Press it to set left & right swing angle.

9 X-FAN (page 8)

(Note:X-FAN is the same with BLOW)

10 TEMP(page 8)

11 TIMER

Press it set auto-on timer/auto-off timer.

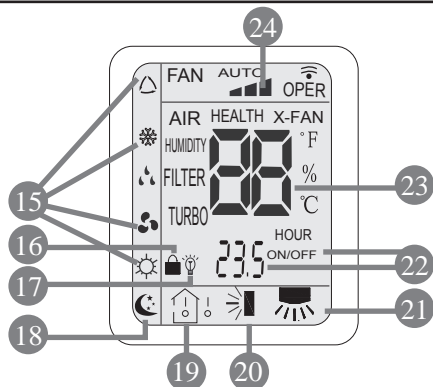
12 TURBO(page 8)

13 SLEEP(page 9)

14 LIGHT

Press it to turn on/off the light.

◆ Operation of Remote Controller



15 MODE icon:

If MODE button is pressed, current operation mode icon \triangle (AUTO), \otimes (COOL), H (DRY), F (FAN) or H (HEAT only for heat pump models) will show.

16 LOCK icon:

L is displayed by pressing "+" and "-" buttons simultaneously. Press them again to clear the display.

17 LIGHT icon:

L is displayed by pressing the LIGHT button. Press LIGHT button again to clear the display.

18 SLEEP icon :

S is displayed by pressing the SLEEP button. Press this button again to clear the display.

19 TEMP icon:

Pressing TEMP button, H (set temperature), H (indoor ambient temperature) H (outdoor ambient temperature) and blank is displayed circularly.

20 Up & down swing icon:

U/D is displayed when pressing the up & down swing button. Press this button again to clear the display.

21 Left & right swing icon:

L/R is displayed when pressing the left & right swing button. Press this button again to clear the display.

22 SET TIME display:

After pressing TIMER button, ON or OFF will blink. This area will show the set time.

23 DIGITAL display:

This area will show the set temperature. In SAVE mode, "SE" will be displayed. During defrosting operation, "H1" will be displayed.

24 FAN SPEED display:

Press FAN button to select the desired fan speed setting (AUTO-Low-Med-High). Your selection will be displayed in the LCD windows, except the AUTO fan speed.

◆ Operation of Remote Controller

Remote controller description

1 ON/OFF :

Press this button to turn on the unit .Press this button again to turn off the unit.

2 MODE :

Each time you press this button, a mode is selected in a sequence that goes from AUTO, COOL, DRY, FAN, and HEAT *, as the following:



*Note: Only for models with heating function.

After energization, AUTO mode is defaulted. In AUTO mode, the set temperature will not be displayed on the LCD, and the unit will automatically select the suitable operation mode in accordance with the room temperature to make indoor room comfortable.



3 —:

Press this button to decrease set temperature. Holding it down above 2 seconds rapidly decreases set temperature. In AUTO mode, set temperature is not adjustable.

4 + :





Press this button to increase set temperature. Holding it down above 2 seconds rapidly increases set temperature. In AUTO mode, set temperature is not adjustable.

5 FAN :

This button is used for setting fan speed in the sequence that goes from AUTO, , , then back to Auto.



6 :

- Press  button to start or stop up & down swing function. The remote controller defaults to simple swing condition.
- Press + button and  button at the same time at unit OFF to switch between simple swing and static swing,  blinking 2 seconds.
- In static swing condition, press  button, the swing angle of up & down louver changes as below:




- If the unit is turned off during swing operation, the louver will stop at present position.





◆ Operation of Remote Controller

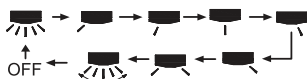
7 HEALTH SAVE:

Press HEALTH part of this button to turn on or off HEALTH function.

Pressing SAVE part of this button,  is displayed and the unit goes into SAVE operation mode. Press SAVE part of the button again to cancel SAVE function. During SAVE operation, the temperature and fan speed is not adjustable.

8 : (Remark: This function is not available for ASH-18AIP PT, ASH-24AIP PT)

- Press  button to start or stop left & right swing function. The remote controller defaults to simple swing condition.
- Press + button and  button at the same time at unit OFF to switch between simple swing and static swing,  blinking 2 seconds.
- In static swing condition, press  button, the swing angle of left & right louver changes as below:






- If the unit is turned off during swing operation, the louver will stop at present position.

9 X-FAN:

Pressing X-FAN button in COOL or DRY mode, the icon "X-FAN" is displayed and the indoor fan will continue operation for 10 minutes in order to dry the indoor unit even though you have turned off the unit.

After energization, X-FAN OFF is defaulted. X-FAN is not available in AUTO, FAN and HEAT mode.

10 TEMP:

Pressing TEMP button,  (set temperature),  (indoor ambient temperature),  (outdoor ambient temperature) and blank is displayed circularly. The unit defaults not to display the icon. During operation of TEMP button, the set temperature is always displayed. Note: Outdoor ambient temperature is only displayed for some models.

11 TIMER:

Press TIMER button at unit ON to set TIMER OFF, HOUR OFF blinking. Press TIMER button at unit OFF to set TIMER ON, HOUR ON blinking. In this case, pressing + or - button changes time setting. Holding down either button rapidly changes time setting (time setting range 0.5-24hours). Press TIMER button again to confirm setting, HOUR ON/OFF stopping blink. If there is not any operation of button within 5 seconds during HOUR ON/OFF blinking, TIMER setting will be cancelled.

12 TURBO:



Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in shortest time. In COOL mode, the unit will blow strong cooling air at super high fan speed. In HEAT mode, the unit will blow strong heating air at super high fan speed. (This function is not applicable for some models).

◆ Operation of Remote Controller



13 SLEEP :

Press this button to go into the SLEEP operation mode. Press it again to cancel this function. This function is available in COOL , HEAT (Only for models with heating function) or DRY mode to maintain the most comfortable temperature for you.

14 LIGHT:

Press LIGHT button to turn on the display's light and press this button again to turn off the display's light. If the light is turned on ,  is displayed. If the light is turned off ,  disappears.

15 Combination of "+" and "-" buttons: About lock

Press "+" and "-" buttons simultaneously to lock or unlock the keypad. If the remote controller is locked,  is displayed. In this case, pressing any button,  blinks three times.

16 Combination of "MODE" and "-" buttons: About switch between Fahrenheit and Centigrade

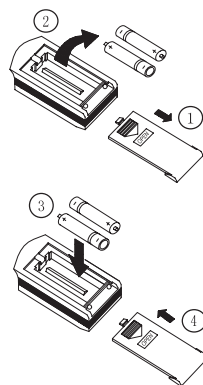
At unit OFF, press "MODE" and "-" buttons simultaneously to switch between °C and °F .

Replacement of Batteries

1. Remove the battery cover plate from the rear of the remote controller.
(As shown in the figure)
2. Take out the old batteries.
3. Insert two new AAA1.5V dry batteries, and pay attention to the polarity.
4. Reinstall the battery cover plate.

★ Notes:

- When replacing the batteries, do not use old or different batteries, otherwise, it may cause malfunction.
- If the wireless remote controller will not be used for a long time, please remove batteries to prevent damage from leaking batteries.
- The operation should be performed in its receiving range.
- It should be kept 1m away from the TV set or stereo sound sets.
- If the wireless remote controller does not operate normally, please take the batteries out and reinsert them after 30 seconds. If it still can't operate properly, replace the batteries.



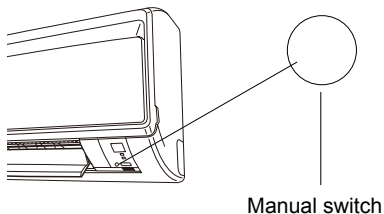
Sketch map for replacing batteries

◆ Emergency Operation

Emergency Operation

When the remote controller is lost or damaged, please use the manual switch on the main unit. In that case, the unit operates in AUTO mode and the temperature setting or fan speed can not be changed.

The manual switch can be operated as below:



Open the panel. The manual switch is on the display box.

- **Turn on the unit:** Press this button to enter AUTO mode.
The microcomputer will select the mode (COOL, HEAT, FAN) automatically according to the room temperature for reaching comfortable effect.

- **Turn off the unit:** Press this button to switch off the unit.

- The operation mode is seen in the following.

When ambient temperature $\geq 26^{\circ}\text{C}$,
the unit will operate in cooling mode at set temperature 25°C .

When ambient temperature $\leq 22^{\circ}\text{C}$,
the unit will operate in cooling mode at set temperature 20°C .

When $23^{\circ}\text{C} \leq \text{ambient temperature} \leq 25^{\circ}\text{C}$, the unit will operate in auto fan mode.

- This switch is to be applied when the remote controller is missing.

Care and Cleaning



Caution

- Disconnect the power supply before cleaning and maintenance.
- Do not splash water on the units for cleaning, as electric shocks may occur.
- Wipe the units with a dry soft cloth, or a cloth slightly moistened with water or cleaner (not with volatile liquid such as thinner or gasoline).

Cleaning the Front Panel

Remove the front panel. Dip a piece of cloth into the water colder than 45 °C and dry it. Then wipe the dirty part of front panel.

Note: Do not immerse the front panel into water so as to protect microcomputer components and circuit diagram on the front panel.

Cleaning the Air Filter (every 3 months)

Note: Do not touch the fin of indoor unit during cleaning to avoid personal injury.

① Take down the air filter

Lift up the front panel.

Pull the air filter downwards to take it off, as shown in Fig.(a,b).



(Fig. a)

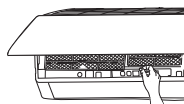
② Clean the air filter

Use a vacuum cleaner to remove dust.

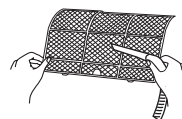
If the filter are dirty, wash them with warm water and a mild detergent.

Dry the filters in the shade.

Note : Never use water above 45°C to clean the air filter or it can cause deformation or discoloration.



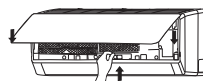
(Fig. b)



③ Reinstall the air filter

Reinstall the filters along the direction of arrowhead.

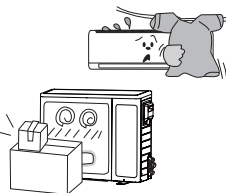
Close the panel.



◆ Care and Cleaning

Check before Use

- ① Be sure that nothing obstructs the air outlet and inlet.
- ② Check if the batteries of remote controller are replaced.
- ③ Check if the installation stand of the outdoor unit is damaged. If damaged, consult the technicians.



Maintenance after Use

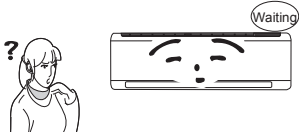
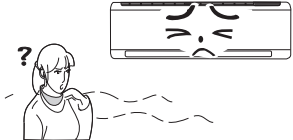
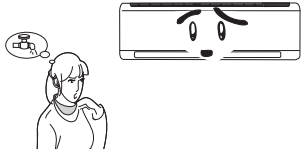

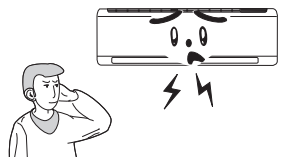
- ① Switch off the power supply.
- ② Clean the filter and bodies of indoor and outdoor units.
- ③ Clear obstructions from the outdoor unit.
- ④ Repaint the rubiginous place on the outdoor unit to prevent it from spreading.

◆ Troubleshooting

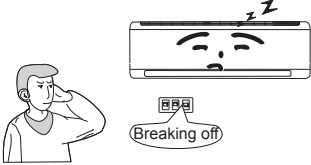
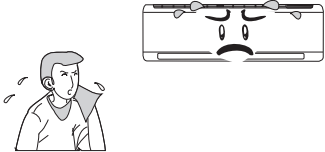
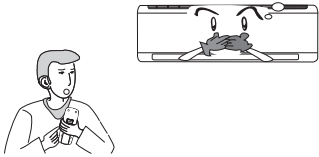


CAUTION



The air conditioner is not user serviceable. Incorrect repair may cause electric shock or fire, so please contact an authorized service center for professional repair. Following checks prior to contact may save your time and money.

Phenomenon	Troubleshooting
<p>The unit does not operate:</p> 	<ul style="list-style-type: none"> ● The unit does not operate if it is turned on immediately after it is turned off. This is to protect the unit. You should wait about for 3 minutes.
<p>Odours are emitted:</p> 	<ul style="list-style-type: none"> ● Some odours may be emitted from the indoor unit. This is the result of room smells (such as furniture, tobacco, ect.) which have been taken into the air conditioner. ● Consult authorized service center for cleaning if the odours still exist.
<p>"Water flowing" noise:</p> 	<ul style="list-style-type: none"> ● The swishing noise like water flowing is the refrigerant flowing inside the unit.
<p>Mist is emitted in COOL mode:</p> 	<ul style="list-style-type: none"> ● During cooling operation, a thin mist may be seen emitted from the indoor unit due to high room temperature and humidity. After a period of time, the mist will disappear with the decrease of room temperature and humidity.
<p>Cracking noise:</p> 	<ul style="list-style-type: none"> ● This is the sound of friction caused by expansion and/or contraction of panel or other parts due to the change of temperature.

◆ Troubleshooting

Phenomenon	Troubleshooting
<p>The unit can not be started up:</p> 	<ul style="list-style-type: none"> ● Is the power cut off? ● Is the power plug loose?(if applicable) ● Is the circuit protection device tripped off? ● Is voltage higher or lower? (Tested by professionals) ● Is the TIMER correctly used?
<p>Cooling/Heating effect is poor:</p> 	<ul style="list-style-type: none"> ● Is temperature setting appropriate? ● Is the inlet or outlet blocked? ● Is the filter dirty? ● Is the window or the door open? ● Is low fan speed set? ● Are there heat sources in the room?
<p>Remote controller is not available:</p> 	<ul style="list-style-type: none"> ● Check if there is magnetic or electrical interference near the unit that may affecting operation of the controller. In this case, pull the plug out and reinsert it. ● Is the remote controller within its operating range or obstructed? Check the condition of the batteries and replace them if necessary. ● Check if the remote controller is damaged.
<p>Water leakage of indoor unit :</p>	<ul style="list-style-type: none"> ● The humidity is high. ● Condensing water overflows. ● Drain hose is loose.
<p>Water leakage of outdoor unit :</p>	<ul style="list-style-type: none"> ● During cooling operation, water condensate is generated around the pipes and connection joints. ● During defrosting operation, the thaw water flows out. ● During heating operation, the water on the heat exchanger drips out.
<p>Noise from indoor unit :</p>	<ul style="list-style-type: none"> ● The noise emitted when the fan or compressor relay is switching on or off. ● When the defrosting operation is started or stopped, there is a sound of refrigerant flowing in the reverse direction.

◆ Troubleshooting

Phenomenon	Troubleshooting
Indoor unit can not blow air:	<ul style="list-style-type: none"> ● In HEAT mode, when the temperature of indoor heat exchanger is very low, air flow is stopped in order to prevent cold air. (Within 2minutes) ● In HEAT mode, when the outdoor temperature is low or humidity is high, frost will be formed on the outdoor heat exchanger. The unit will defrost automatically and indoor unit will stop blowing air for 3-12minutes. ● During defrosting operation, water or vapour may be emitted. ● In DRY mode, the indoor fan will stop blowing air for 3-12 minutes in order to avoid condensing water being vaporised again.
Moisture on air outlet :	<ul style="list-style-type: none"> ● If the unit operates at high humidity for a long time, moisture will be generated on the air outlet grill and then drip off.
C5:Malfunction of connector jumper:	<ul style="list-style-type: none"> ● Check if the connector jumper contacts properly. If the PCB is to be replaced, please take off the old for the new PCB.
F1:Malfunction of indoor ambient temperature sensor	<ul style="list-style-type: none"> ● Check if indoor room temperature sensor is connected properly.
F2:Malfunction of evaporator temperature sensor	<ul style="list-style-type: none"> ● Check if the evaporator temperature is connected properly.
H1:Defrosting	<ul style="list-style-type: none"> ● It is normal.
 If any one of the following situations occurs, immediately stop all operations, cut off the power supply, and contact the authorized personnel	
<div> <ul style="list-style-type: none"> ● There is harsh sound during operation. ● Strong odours are emitted during operation. ● Water is leaking from the unit. ● The air switch or protection switch often trips. ● Water or other liquid is splashed into the unit. ● Power cord and power plug is overheating. </div> <div>  <div>Stop operation and cut off the power supply.</div> </div>	

◆ Troubleshooting

Malfunction Indication Table

No.	Malfunction Name	Display method of indoor unit	Display method of outdoor unit (3 kinds of display status for indicator; □OFF ■ON ☆blink)				A/C Status	Meaning of Malfunction
			D5	D6	D16	D30		
1	High pressure protection of system	E1	□	☆	☆	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Pressure of A/C system is too high.
2	Antifreezing protection	E2	■	□	■	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	During cooling operation, indoor tube temperature is too low.
3	High discharge temperature protection of compressor	E4	■	□	■	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Discharge temperature is too high.
4	Overcurrent protection	E5	□	■	☆	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	The current of complete unit is too high.
5	Current detection malfunction of the complete unit	U5	□	■	☆	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	The current detection circuit of the complete unit is invalid.
6	Communication malfunction of indoor and outdoor units	E6	□	□	□	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Poor communication of indoor and outdoor units.
7	High temperature resistant protection	E8	■	□	■	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	In heating mode, the indoor tube temperature is too high.
8	Indoor ambient temperature sensor is open/short-circuited	F1					During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Indoor ambient temperature sensor is open/short-circuited.
9	Indoor evaporator temperature sensor is open/short-circuited	F2					During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Indoor evaporator temperature sensor is open/ short-circuited
10	Outdoor ambient temperature sensor is open/short-circuited	F3	□	□	☆	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Outdoor ambient temperature sensor is open/short-circuited
11	Outdoor condenser temperature sensor is open/short-circuited	F4	□	□	☆	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Outdoor evaporator temperature sensor is open/short-circuited

◆ Troubleshooting

Malfunction Indication Table

No.	Malfunction Name	Display method of indoor unit	Display method of outdoor unit (3 kinds of display status for indicator; □ OFF ■ ON ☆ blink)				A/C Status	Meaning of Malfunction
			D5	D6	D16	D30		
12	Outdoor discharge temperature sensor is open/short-circuited	F5	□	□	☆	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Outdoor discharge temperature sensor is open/short-circuited.
13	Malfunction of zero-crossing detection	U8	□	■	□	□	The complete unit stops operation	Malfunction of zero-crossing signal detection
14	Limit/decrease frequency due to overload	F6	■	□	☆	☆	Load operates normally; operation frequency of compressor is decreasing	During cooling operation, the outdoor tube temperature sensor is too high; during heating operation, the indoor tube temperature sensor is too high.
15	Decrease frequency due to high current	F8	■	■	□	■	Load operates normally; operation frequency of compressor is decreasing	The current of complete units is too high.
16	Decrease frequency due to high discharge temperature	F9	■	■	□	□	Load operates normally; operation frequency of compressor is decreasing	Discharge temperature is too high.
17	Malfunction of slide door	FC						
18	Limit/decrease frequency due to antifreezing	FH	■	■	■	□	Load operates normally; operation frequency of compressor is decreasing	During cooling operation, the indoor tube temperature sensor is too low.
19	Decrease frequency due to high temperature resistant in heating	H0	■	□	☆	☆	Load operates normally; operation frequency of compressor is decreasing	During heating operation, the indoor tube temperature sensor is too high.
20	Defrosting	H1					A normal operation mode under heating operation. Compressor and indoor fan stop operation	Too much frost on outdoor condenser.
21	Electrostatic dedusting protection	H2						
22	Overload protection of compressor	H3	□	☆	☆	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Temperature of compressor is too high.
23	System is abnormal	H4	■	□	■	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	During cooling operation, the outdoor tube temperature is too high; During heating operation, the indoor tube temperature sensor is too high.
24	IPM protection	H5	□	☆	□	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Current of compressor is too high

Troubleshooting

Malfunction Indication Table

No.	Malfunction Name	Display method of indoor unit	Display method of outdoor unit (3 kinds of display status for indicator; □OFF ■ON ☆blink)				A/C Status	Meaning of Malfunction
			D5	D6	D16	D30		
25	High temperature protection of module	P8	■	□	☆	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Temperature of module is too high.
26	Circuit malfunction of module temperature sensor	P7	□	□	■	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Thermistor of module is open/short-circuited.
27	No motor feedback of indoor unit	H6						
28	Desynchronizing of compressor	H7	□	☆	■	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Desynchronizing of compressor.
29	Overcurrent protection of phase current for compressor	P5	□	☆	□	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	The current of compressor is too high.
30	Detection circuit malfunction of phase current for compressor	U1	□	☆	■	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	The current detection circuit of compressor invalid
31	Failure startup	Lc	□	☆	□	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Poor startup for compressor.
32	PFC protection	HC	□	■	☆	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	PFC overcurrent protection.
33	EEPROM malfunction	EE	□	□	□	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	The data of EEPROM is wrong.
34	Charging malfunction of capacitor.	PU	□	■	□	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Charging circuit of electrolytic capacitor is invalid.
35	Voltage dropping malfunction for DC bus bar	U3	□	■	■	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	AC power supply is decreased a lot suddenly.
36	Voltage of DC bus bar is too low	PL	□	■	■	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	After the rectification of power, the DC voltage is too low.

◆ Troubleshooting

Malfuction Indication Table

No.	Malfunction Name	Display method of indoor unit	Display method of outdoor unit (3 kinds of display status for indicator; □OFF ■ON ☆blink)				A/C Status	Meaning of Malfunction
			D5	D6	D16	D30		
37	Voltage of DC bus bar is too high	PH	□	■	□	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	After the rectification of power, the DC voltage is too high.
38	Limit/decrease frequency because the module temperature is too high	EU	■	■	■	☆	Load operates normally; operation frequency of compressor is decreasing.	Temperature of module is too high.
39	Reversing for 4-way valve is abnormal	U7	■	□	☆	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	In heating mode, the 4-way valve hasn't reversed.
40	Zero crossing malfunction for outdoor unit		■	■	☆	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Outdoor unit detected that the zero crossing circuit of AC power is invalid.
41	Malfunction of DC fan for outdoor fan	L3	■	□	□	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Malfunction of outdoor fan.
42	The voltage for the option outlet is abnormal		■	■	☆	■	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	The voltage for the option outlet is abnormal.
43	PFC offset voltage is wrong	HC	■	☆	□	□	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	PFC offset voltage is wrong.
44	Malfunction of tube temperature sensor which stays at middle part of copper pipe for condenser	F4	■	■	☆	☆	During cooling operation: compressor stops while indoor fan operates. During heating operation: all loads stop.	Malfunction of tube temperature sensor which stays at middle part of copper pipe for condenser.

◆ Operation Tips

Cooling Operation

Principle:

Air conditioners absorb heat in the room and transmit it to the outdoor unit, so that the room temperature is decreased. The cooling capacity will increase or decrease according to outdoor ambient temperature.

Antifreezing Function:

If the unit is operating in COOL mode and in low ambient temperature, frost may be formed on the heat exchanger. When indoor heat exchanger temperature decreases below zero, compressor will stop operation to protect the unit.

Heating Operation

Principle:

- * Air conditioners absorb heat from outdoors and transmit it to the indoor unit, increasing room temperature. The heating capacity will decrease at low ambient temperature.

Defrosting:

- * When outdoor temperature is low but humidity is high, frost may form on the outdoor unit during extended operation, affecting heating efficiency. The air conditioner may stop operation during auto defrosting operation.
- * During auto defrosting, the fan motors of indoor unit and outdoor unit will stop.
- * During defrosting, the indoor indicator flashes and the outdoor unit may emit vapor. This is not malfunction.
- * After defrosting is finished, the heating operation will recover automatically.

Anti-cold Air Function:

In HEAT mode, the indoor fan will not operate in order to prevent cold air blowing out (within 2 minutes) if indoor heat exchanger doesn't reach a certain temperature under the following three states:

1. Heating operation starts; 2. After Auto Defrosting is finished; 3. Heating at low temperature.

Gentle Breeze

In the following situations, the indoor unit may blow gentle breeze, and the horizontal louver rotates to a certain position:

1. In HEAT mode, the compressor does not start operation after the unit is turned on.
2. In HEAT mode, the temperature reaches the setting value and the compressor has stopped operation for about 1minutes.

◆ Operation Tips

※ Operating Temperature Range

	Indoor side DB/WB(°C)	Outdoor side DB/WB(°C)
Maximum cooling	32/23	48/-
Minimum cooling	21/15	-15/-
Maximum heating	27/—	24/18
Minimum heating	20/—	-20/-

The operating temperature range (outdoor temperature) for cooling only unit is -15°C ~ 48°C ;
for heat pump unit is -20°C ~ 48°C.

Tips for energy saving:

- * Do not overcool or overheat.
Setting temperature at a moderate level helps energy saving.
- * Cover windows with a blind or a curtain.
Blocking sunlight and air from outdoors is favorable for cooling (heating).
- * Clean air filters once per two weeks.
Clogged air filters lead to inefficient operation and energy waste.

Tip for relative humidity:

Condensate water is likely to form at the air outlet if cooling or drying for a long time
when the relative humidity is more than 80% (with doors and windows open).

◆ Notices for Installation



Caution

1. The unit must only be installed by authorized service center according to local or government regulations and in compliance with this manual .
2. Before installation, please contact with local authorized maintenance center. If the unit is not installed by the authorized service center, the malfunction may not be solved due to discommodious contacts.
3. When removing the unit to the other place, please firstly contact with the local authorized service center.
4. Warning: Before obtaining access to terminals, all supply circuits must be disconnected.
5. For appliances with type Y attachment, the instructions shall contain the substance of the following. 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.
6. The appliance must be positioned so that the plug is accessible.
7. The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
8. The instructions shall state the substance of the following:
This appliance 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 appliance by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the appliance.

Installation Site Instructions

Proper installation site is vital for correct and efficient operation of the unit. Avoid the following sites where:

- strong heat sources, vapours, flammable gas or volatile liquids are emitted.
- high-frequency electro-magnetic waves are generated by radio equipment, welders and medical equipment.
- salt-laden air prevails (such as close to coastal areas).
- the air is contaminated with industrial vapours and oils.
- the air contains sulphures gas such as in hot spring zones.
- corrosion or poor air quality exists.

◆ Notices for Installation

Installation Site of Indoor Unit

1. The air inlet and outlet should be away from the obstructions. Ensure the air can be blown through the whole room.
2. Select a site where the condensing water can be easily drained out, and where it is easily connected for outdoor unit.
3. Select a place where it is out of reach of children.
4. Select the place where the wall is strong enough to withstand the full weight and vibration of the unit.
5. Be sure to leave enough space to allow access for routine maintenance. The installation site should be 250cm or more above the floor.
6. Select a place about 1m or more away from TV set or any other electric appliance.
7. Select a place where the filter can be easily taken out.
8. Make sure that the indoor unit is installed in accordance with installation dimension instructions.
9. Do not use the unit in the laundry or by swimming pool etc.

Installation Site of Outdoor Unit

1. Select a site where noise and outflow air emitted by unit will not annoy neighbors.
2. Select a site where there is sufficient ventilation.
3. Select a site where there is no obstruction blocking the inlet and outlet.
4. The site should be able to withstand the full weight and vibration.
5. Select a dry place, but do not expose the unit to direct sunlight or strong wind.
6. Make sure that the outdoor unit is installed in accordance with the installation instructions, and is convenient for maintenance and repair.
7. The height difference between indoor and outdoor units is within 10 m, and the length of the connecting tubing does not exceed 25 m.
8. Select a place where it is out of reach of children.
9. Select a place which will not block pedestrian passage and influence the city appearance.

Safety Precautions for Electric Appliances

1. A dedicated power supply circuit should be used in accordance with local electrical safety regulations.
2. Don't drag the power cord emphatically.
3. The unit should be reliably earthed and connected to the special earth device by the professionals.
4. The air switch must have the functions of magnetic tripping and heat tripping to prevent short circuit and overload.
5. The minimum distance between the unit and combustive surface is 1.5m.
6. The appliance shall be installed in accordance with national wiring regulations.
7. An all-pole disconnection switch with a contact separation of at least 3mm in all poles should be connected in fixed wiring.

Note:

- Make sure the live wire, neutral wire and earth wire in the family power socket are properly connected. There should be reliable circuit in the diagram.
- Inadequate or incorrect electrical connections may cause electric shock or fire.

◆ Notices for Installation

Safety Requirements For Electric Appliances

1. The power supply should be used the rated voltage and AC exclusive circuit, the power cable diameter should be satisfied.
2. Don't drag the power cable emphatically.
3. It should be reliably earthed, and it should be connected to the special earth device, the installation work should be operated by the professional.
The air switch must have the functions of magnetic tripping and heat tripping, in order to protect the short circuit and overloading.
4. The min. distance from the unit and combustive surface is 1.5m.
5. The appliance shall be installed in accordance with national wiring regulations.
6. An all-pole disconnection switch having a contact separation of at least 3mm in all poles should be connected in fixed wiring.

Note:

- Make sure that the Live wire or Zero line as well as the earth wire in the family power socket can not be wrong connected, there should be reliable and no short circuit in the diagram.
- wrong connection may cause fire.

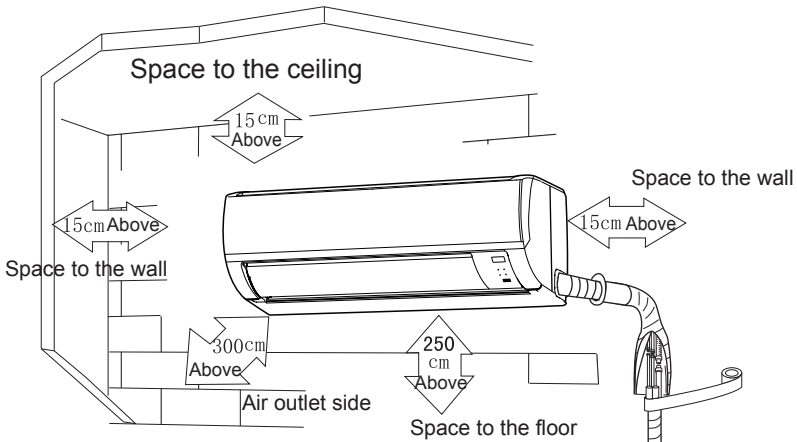
Air-conditioner (Btu/h)	Air switch capacity
18、24K	25A

Earthing Requirements

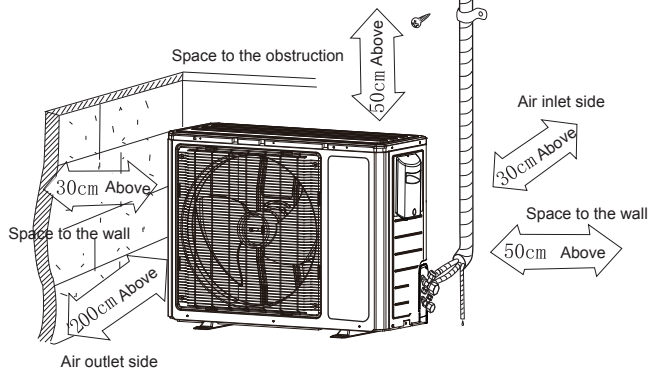
1. Air conditioner is type I electric appliance. Please ensure that the unit is reliably earthed.
2. The yellow-green wire in air conditioner is the earthing wire which can not be used for other purposes. Improper earthing may cause electric shock.
3. The earth resistance should accord to the national criterion.
4. The user's power must have reliable earthing terminal. Please don't connect the earthing wire with the following:
 - ① Water pipe
 - ② Gas pipe
 - ③ Contamination pipe
 - ④ Other place that professional personnel consider is unreliable
5. The model and rating values for fuses accord with the silk print on fuse cover or related PCB.

◆ Installation Drawing

Installation Drawing



- The dimensions of the space necessary for correct installation of the appliance including the minimum permissible distances to adjacent structures



◆ Installation of Indoor Unit

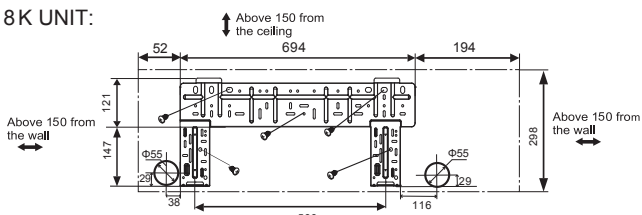
Installation of Mounting Plate

1. Mounting plate should be installed horizontally. As the water tray's outlet for the indoor unit is two-way type, during installation, the indoor unit should slightly slant to water tray's outlet for smooth drainage of condenser water.

18K UNIT:

2. Fix the mounting plate on the wall with screws.

3. Be sure that the mounting plate has been fixed firmly enough to withstand about 60 kg. Meanwhile, the weight should be evenly shared by every screw.



24K UNIT:

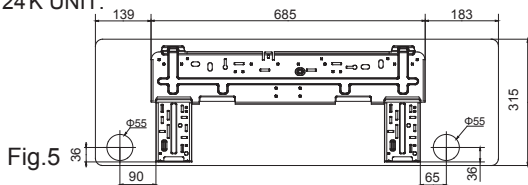
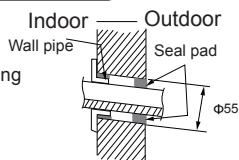


Fig.5

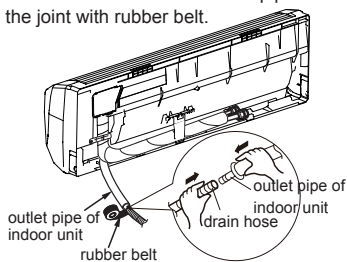
Drill Piping Hole

1. Slant the piping hole ($\Phi 55$) on the wall slightly downward to the outdoor side.
2. Insert the piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.

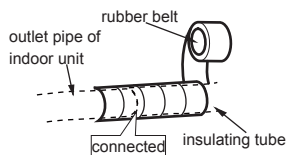
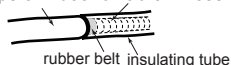


Installation of Drain Hose

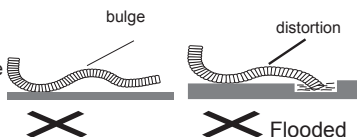
1. Connect the drain hose to the outlet pipe of the indoor unit. Bind the joint with rubber belt.
3. Wrap the insulating tube with wide rubber belt to prevent the shift of insulating tube. Slant the drain hose downward slightly for smooth drainage of condensing water.



2. Put the drain hose into insulating tube.



Note: The insulating tube should be connected reliably with the sleeve outside the outlet pipe. The drain hose should be slanted downward slightly, without distortion, bulge or fluctuation. Do not put the outlet in the water.



◆ Installation of Indoor Unit

Connecting Indoor and Outdoor Electric Wires

1. Open the front panel.
2. Remove the wiring cover as shown in Fig 6.
3. Make the power connection cord pass through the hole at the back of indoor unit.
4. Reinstall the cord anchorage and wiring cover.
5. Reinstall the front panel.

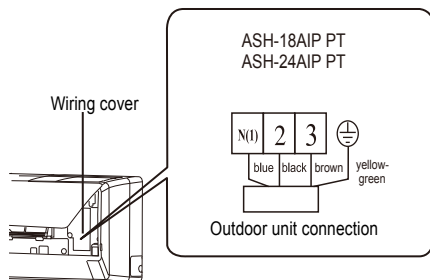


Fig.6

NOTE:

All wires between indoor and outdoor units must be connected by the qualified electric contractor.

- Electric wires must be connected correctly. Improper connection may cause malfunction.
- Tighten the terminal screws tightly.
- After tightening the screws, pull the wire slightly to confirm whether it's firm or not.
- Make sure that the electric connections are earthed properly to prevent electric shock.
- Make sure that all wiring connections are secure and the cover plates are reinstalled properly. Poor installation may cause fire or electric shock.

◆ Installation of Indoor Unit

Installation of Indoor Unit

- The piping can be output from right, right rear, left or left rear.

1. When routing the piping and wiring from the left or right side of indoor unit, cut off the tailings from the chassis when necessary (As shown in Fig.7)
 - (1) Cut off the tailings 1 when routing the wiring only;
 - (2) Cut off the tailings 1 and tailings 2 when routing both the wiring and piping.
2. Take out the piping from body case, wrap the piping, power cords, drain hose with the tape and then make them pass through the piping hole. (As shown in Fig.8)
3. Hang the mounting slots of the indoor unit on the upper hooks of the mounting plate and check if it is firm enough. (As shown in Fig.9)
4. The installation site should be 250cm or more above the floor.

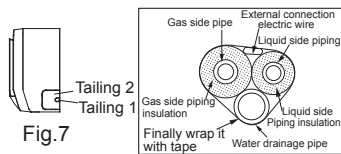


Fig.7

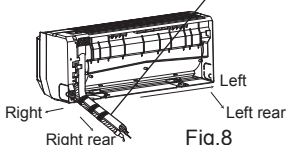


Fig.8

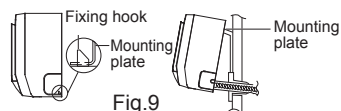
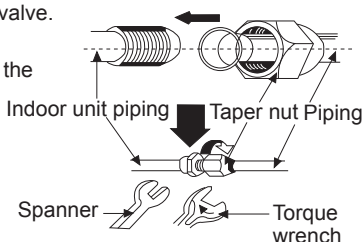


Fig.9

Installation of Connection Pipe

1. Align the center of the piping flare with the related valve.
2. Screw in the flare nut by hand and then tighten the nut with spanner and torque wrench by referring to the following:

Hex nut diameter	Tightening torque (N · m)
Φ6	15~20
Φ 9. 52	30~40
Φ 12	45~55
Φ 16	60~65
Φ 19	70~75

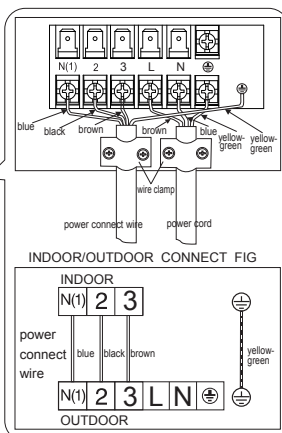
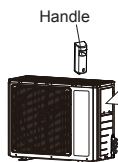


NOTE: Connect the connection pipe to indoor unit at first and then to outdoor unit. Handle piping bending with care. Do not damage the connection pipe. Ensure that the joint nut is tightened firmly, otherwise, it may cause leakage.

◆ Installation of Outdoor Unit

Electric Wiring

1. Remove the handle on the right side plate of outdoor unit.
2. Take off wire cord anchorage. Connect and fix power cord and power connect cord to the terminal board. Wiring should fit that of indoor unit.
3. Fix the power cord and power connect cord with wire clamps.
4. Confirm if the wire has been fixed properly.
5. Reinstall the handle



NOTE:

- Incorrect wiring may cause malfunction of spare part.
- After the wire has been fixed, ensure there is free space between the connection and fixing places on the lead wire.

Schematic diagram being reference only, please refer to real product for authentic information.

Air Purging and Leakage Test

1. Connect charging hose of manifold valve to charge end of low pressure valve (both high/low pressure valves must be tightly shut).
2. Connect joint of charging hose to vacuum pump.
3. Fully open the handle of Lo manifold valve.
4. Open the vacuum pump for vacuumization. At the beginning, slightly loosen joint nut of low pressure valve to check if there is air coming inside. (If noise of vacuum pump has been changed, the reading of multimeter is 0) Then tighten the nut.
5. Keep vacuuming for more than 15mins and make sure the reading of multi-meter is -1.0×10^5 pa (-76cmHg).
6. Fully open high/low pressure valves.
7. Remove charging hose from charging end of low pressure valve.
8. Tighten lid of low pressure valve. (As shown in Fig.10)

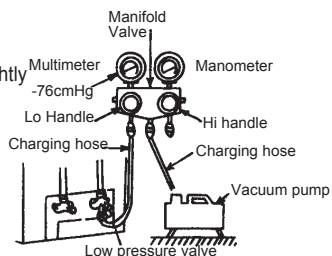


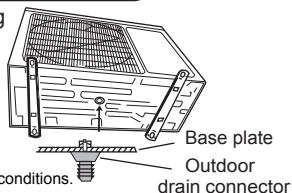
Fig.10

Outdoor Condensation Drainage (only for Heat pump unit)

During heating operation, the condensing water and defrosting water should be drained out reliably through the drain hose.

Install the outdoor drain connector in a $\varnothing 25$ hole on the base plate and attach the drain hose to the connector, so that the waste water formed in the outdoor unit can be drained out .The hole diameter 25 must be plugged.

Whether to plug other holes will be determined by the dealers according to actual conditions.



◆ Installation of Outdoor Unit

Electric heating belt

When outdoor ambient sensor malfunction happened, both of the electric heating belts stop working, otherwise, it will run at the following control: ① When $T_{\text{outdoor ambient}} \leq -5^{\circ}\text{C}$ and the compressor doesn't started, that the compressor electric heating belt starts to work; Otherwise if compressor started or compressor doesn't start but $T_{\text{outdoor ambient}} > -2^{\circ}\text{C}$, the electric heating belt will not work. Compressor doesn't start and $-5^{\circ}\text{C} < T_{\text{outdoor ambient}} \leq -2^{\circ}\text{C}$, compressor electric heating belt keep the original state ② When $T_{\text{outdoor ambient}} \leq 3^{\circ}\text{C}$, the condenser electric heating belt work; Otherwise, if $T_{\text{outdoor ambient}} > 6^{\circ}\text{C}$, the condenser electric heating belt will not work. $3^{\circ}\text{C} < T_{\text{outdoor ambient}} \leq 6^{\circ}\text{C}$, the condenser electric heating belt will keep the original state.



Electric heating belt

Compressor coil preheating function

① When $-10^{\circ}\text{C} < T_{\text{outdoor ambient}} \leq -5^{\circ}\text{C}$, compressor coil preheats (heating power 20W); ② When $-15^{\circ}\text{C} < T_{\text{outdoor ambient}} \leq -10^{\circ}\text{C}$, compressor coil preheats (heating power 25W); ③ When $T_{\text{outdoor ambient}} \leq -15^{\circ}\text{C}$, compressor coil preheats (heating power 30W); ④ When $-5^{\circ}\text{C} < T_{\text{outdoor ambient}} \leq -2^{\circ}\text{C}$, compressor coil keep original preheating status; ⑤ When $-2^{\circ}\text{C} \leq T_{\text{outdoor ambient}}$, compressor coil stops preheating; ⑥ When $T_{\text{discharge}} > 0^{\circ}\text{C}$ during compressor coil preheating, compressor coil quits preheating.

◆ Check after Installation and Operation Test

Check after Installation

Items to be checked	Possible malfunction
Has the unit been fixed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling(heating)
Is thermal insulation sufficient?	It may cause condensation.
Is water drainage satisfactory?	It may cause water leakage.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the unit.
Is the electric wiring or piping connection installed correctly and securely?	It may cause electric malfunction or damage the parts.
Has the unit been securely earthed?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the parts.
Is the inlet or outlet blocked?	It may cause insufficient cooling(heating)
Is the length of connection pipes and refrigerant capacity recorded?	The refrigerant capacity is not accurate.

Operation Test

1. Before Operation Test

- (1) Do not switch on power before installation is finished completely.
- (2) Electric wiring must be connected correctly and securely.
- (3) Cut-off valves of the connection pipes should be opened.
- (4) All the impurities such as scraps and thrums must be cleared from the unit.

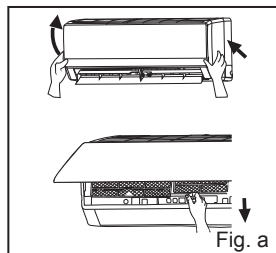
2. Operation Test Method

- (1) Switch on power and press "ON/OFF" button on the remote controller to start the operation.
- (2) Press MODE button to select the COOL, HEAT (Cooling only unit is not available), FAN to check whether the operation is normal or not.

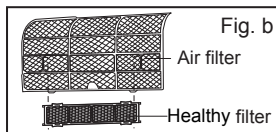
◆ Installation and Maintenance of Healthy Filter(Optional)

Installation of Healthy Filter

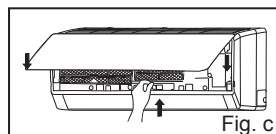
1. Lift up the front panel from the two ends of it, as shown by the arrow direction, and then remove the air filter.(as shown in Fig.a)



2. Attach the healthy filter onto the air filter, (as shown in Fig.b).



3. Install the air filter properly along the arrow direction in Fig.c, and then close the panel .



Cleaning and Maintenance

Remove the healthy filter and reinstall it after cleaning according to the installation instruction. Don't use brush or hard things to clean the filter. After cleaning, be sure to dry it in the shade.

Service Life

The general service life for the healthy filter is about one year under normal condition. As for silver ion filter, it is invalid when its surface becomes black (green).

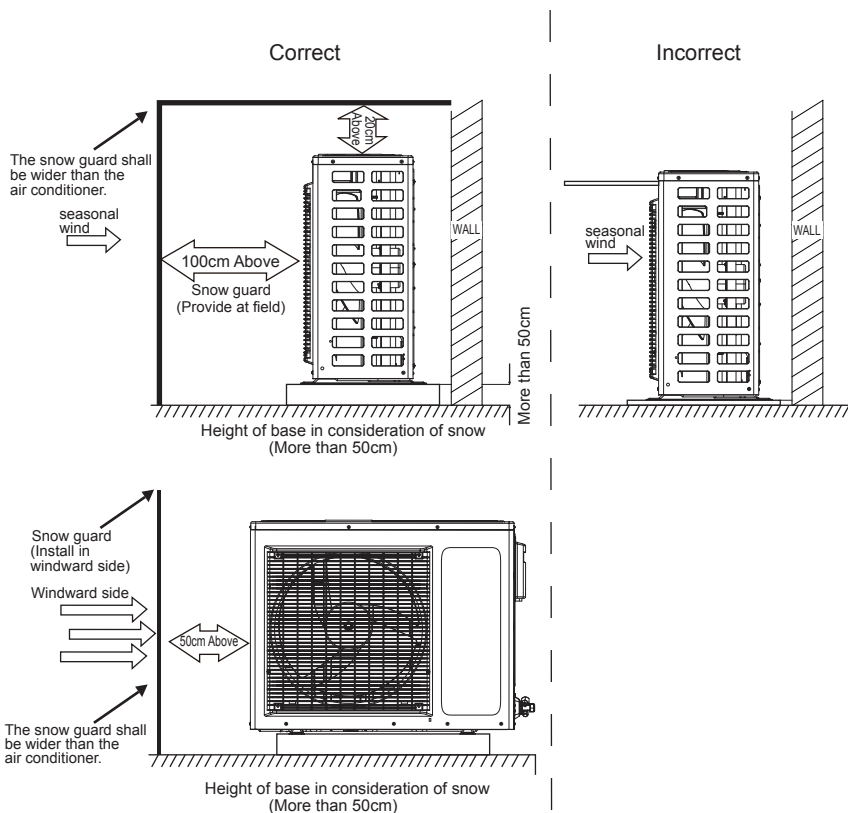
- This supplementary instruction is provided for reference to the unit with healthy filter. If the graphics provided herein is different from the actual product, please refer to the actual product. The quantity of healthy filters is based on the actual delivery.

◆ Install snow guard(Optional)

Installation method of snow guard

In consideration of snow during installation of outdoor units

Note: It is required to equip snow guard and a higher foundation base to prevent snow from covering air inlet and outlet.



SERIES			POLAR			
MODEL			ASH-09AIP PT	ASH-12AIP PT	ASH-18AIP PT	ASH-24AIP PT
Capacity	cooling	kW	2,65 (0,45-3,23)	3,53 (0,60-3,96)	5,30 (1,05-6,50)	6,45 (1,50-7,00)
	heating	kW	3,52 (0,45-4,10)	4,10 (0,60-5,13)	5,70 (1,00-7,00)	7,00 (1,20-7,80)
Power supply	Hz		50	50	50	50
	V		220-240	220-240	220-240	220-240
Power current	cooling	A	6,30	6,88	11,09	11,09
	heating	A	6,88	7,32	11,54	11,98
Power input	cooling	W	800 (200-1350)	1100 (220-1450)	1600 (360-2500)	1985 (1500-7000)
	heating	W	950 (200-1450)	1135 (220-1550)	1578 (350-2600)	1930 (350-2700)
EER	W/W		3,30	3,21	3,31	3,25
COP	W/W		3,70	3,61	3,61	3,62
Noise-indoor unit	dB(A)		41/38/30/24	42/39/31/25	45/40/37/32	46/42/37/32
Noise-outdoor unit	max	dB(A)	51	53	54	54
Air flow	m ³ /h		520	560	800	950
Dehumidifying volume	l/h		1,0	1,2	1,8	2,0
Refrigerant type / charge	type / kg		R410a/0,7	R410a/1,0	R410a/1,3	R410a/1,4
Pipe diameter	Liquid side	inch / mm	¼ / 6	¼ / 6	¼ / 6	¼ / 6
	gas side	inch / mm	⅜ / 10	⅜ / 10	½ / 12	½ / 12
Length of connection pipe	max	m	15	20	25	25
Elevation/Drop height	max	m	10	10	10	10
Dimension (w x h x d)	IU	mm	770x283x201	770x283x201	865x305x215	1008x319x221
	OU	mm	710x318x550	710x318x550	955x700x396	955x700x396
Net weight	IU	kg	8	9	12	15
	OU	kg	28	30	52	52
Operating temperature range	cooling	°C	-15 ~ 46	-15 ~ 46	-15 ~ 48	-15 ~ 48
	heating	°C	-15 ~ 24	-15 ~ 24	-15 ~ 24	-15 ~ 24
The specification of products is subject to change based further development of the units by the producer and can be changed without prior notice.						

Data are based on following conditions:

Length of connection pipe: 5m

Cooling: indoor temperature 27°C DB/19°C WB, outdoor temperature 35°C DB/24°C WB

Heating condition: indoor temperature 20°C DB/15°C WB, outdoor temperature 7°C DB/6°C WB

ES Declaration of Conformity

in compliance with Council directive 73/23/EHS amended by Council directive 93/68/EHS
(Government regulation no.168/1997 Sb. as amended by further changes and additions) and
in compliance with Council directive 89/336/EHS amended by Council directive 93/68/EHS
(Government regulation no.169/1997 Sb. as amended by further changes and additions)

Manufacturer:

NEPA, společnost s ručením omezeným
Purkyňova 45
612 00 Brno
Czech Republic

Description of the unit:

Air conditioners SINCLAIR are designed for adjustments of air by cooling and heating in residential and school facilities, offices, restaurants and similar facilities.

Models differentiate by sizing of the parts in respect of cooling / heating capacity and by design.

Wall mounted split	Multi combi	Floor-ceiling indoor
ASH-09AB	MC-H07AIC PT	ASF-18AIA
ASH-12AB	MC-H09AIC PT	ASF-24AIA
Wall mounted split	MC-H12AIC PT	ASF-36AIA
ASH-09AC PT	MC-H18AIC PT	ASF-42AIA
ASH-13AC PT	MC-F09AI	Cassette indoor
ASH-18AC PT	MC-F12AI	ASC-18AIA
ASH-24AC PT	MC-F18AI	ASC-24AIA
Wall mounted split	MC-F24AI	ASC-36AIA
ASH-09AIP PT	MC-C12AI	ASC-42AIA
ASH-12AIP PT	MC-C18AI	Duct indoor
ASH-18AIP PT	MC-C24AI	ASD-18AIA
ASH-24AIP PT	MC-D09AI	ASD-24AIA
Wall mounted split	MC-D12AI	ASD-36AIA
ASH-09AISW	MC-D18AI	ASD-42AIA
ASH-09AISB	MC-D24AI	Outdoor units
ASH-09AISR	MC-P09AI	ASGE-18AIA WK
ASH-13AISW	MC-P12AI	ASGE-24AIA WK
ASH-13AISB	MC-P18AI	ASGE-36AIA WK
ASH-13AISR	MC-E18AI	ASGE-36AIA-3 WK
	MC-E24AI	ASGE-42AIA-3 WK
	MC-E28AI	
	MC-E36AI	
	MC-E42AI	

The list of harmonized directives that were used for Declaration assessment:

EN 60335-1:2002, EN 60335-2-40:2003
EN 61000-6-3:2001, EN 55014-1:2006, EN 61000-3-2:2006, EN 61000-3-3:1995,
EN 55014-2:1997
PN-EN 55014-1:2004, PN-EN 55014-2:1999/A1:2004, PN-EN 60335-1:2004, PN-EN 60335-2-40:2004(U)
89/336/EEC, 89/392/EEC, 73/23/EEC (96/68/EEC)
PN-EN 61000-3-3:1997, PN-EN 61000-3-3:2004, PN-EN 61000-6-3:2004

The last two digits of the year when the mark CE was appointed on the product: 10

In Brno, date: 22.3.2012

.....Ing. Stanislav Jobanek, Business director.....
Name, function, signature of authorized person of manufacturer
or
name, function, signature of authorized deputy

NEPA spol. s r. o. 21
Purkyňova 45 612 00 Brno
IČ: 67155383
Tel: 541 590 140 Fax: 541 590 124

SPLIT AIR CONDITIONER INDOOR UNIT

Model	ASH-18AIP PT
Rated Voltage	220-240V~
Rated Frequency	50Hz
Cooling Capacity	5300W
Heating Capacity	5700W
Air Flow Volume	800m ³ /h
Sound Pressure Level(H)	40dB(A)
Weight	12kg
Manufactured Date	

sincclair®
ISO9001



Sinclair Corporation Ltd, 1-4 Argyll St., London, UK
63229939345

sincclair® AIR CONDITIONER OUTDOOR UNIT

Model	ASH-18AIP PT		
Rated Voltage	220-240V~	(ISO 5151)	
Rated Frequency	50Hz	Cooling Capacity	5300W
Climate Type	T1	Heating Capacity	5700W
Weight	38kg	Cooling Power Input	1600W
Isolation	I	Heating Power Input	1578W
Refrigerant	R410A	Cooling Rated Input	2200W
Refri. Charge	1.1kg	Heating Rated Input	2200W
Comp. LRA	27A	Sound Pressure Level	54dB(A)
Maximum Allowable Pressure			4.3MPa
Operating Pressure (Discharge Side/Suction Side)			4.3/2.5MPa
Manufactured Date		Moisture Protection	IP24

Contains fluorinated greenhouse gases covered by the Kyoto Protocol

CE TÜV ISO9001

Sinclair Corporation Ltd, 1-4 Argyll St., London, UK

63229939346

SPLIT AIR CONDITIONER INDOOR UNIT

Model	ASH-24AIP PT
Rated Voltage	220-240V~
Rated Frequency	50Hz
Cooling Capacity	6450W
Heating Capacity	7000W
Air Flow Volume	950m ³ /h
Sound Pressure Level(H)	42dB(A)
Weight	15kg
Manufactured Date	

sincclair®
ISO9001



Sinclair Corporation Ltd, 1-4 Argyll St., London, UK
63229939347

sincclair® AIR CONDITIONER OUTDOOR UNIT

Model	ASH-24AIP PT		
Rated Voltage	220-240V~	(ISO 5151)	
Rated Frequency	50Hz	Cooling Capacity	6450W
Climate Type	T1	Heating Capacity	7000W
Weight	52kg	Cooling Power Input	1985W
Isolation	I	Heating Power Input	1930W
Refrigerant	R410A	Cooling Rated Input	2500W
Refri. Charge	1.4kg	Heating Rated Input	2700W
Comp. LRA	41A	Sound Pressure Level	54dB(A)
Maximum Allowable Pressure			5.0MPa
Operating Pressure (Discharge Side/Suction Side)			3.8/1.2MPa
Manufactured Date		Moisture Protection	IP24

Contains fluorinated greenhouse gases covered by the Kyoto Protocol

CE TÜV ISO9001

Sinclair Corporation Ltd, 1-4 Argyll St., London, UK

63229939348

Energy

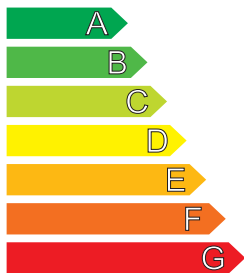
Manufacturer

sinclair®

Unit model

ASH-09AIP PT

More efficient



Less efficient

Annual Energy Consumption
kWh in cooling mode

400

(Actual consumption will depend
on how the appliance is used
and climate)

Cooling output

kW

2.65

Energy Efficiency Ratio

3.31

Full load (the higher the better)

Type	Cooling only	—
	Cooling+Heating	←
	Air cooled	←
	Water cooled	—

Heat output

kW

3.52

Heating performance

3.7

A: higher G: lower

A B C D E F G

Noise

(dB(A) re 1 pW)

38/51

Further information is contained
in product brochures

Norm EN 14511

Air-conditioner

Energy Label Directive 2002/31/EC



62229925972

Energy

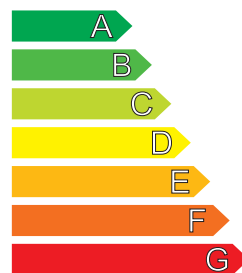
Manufacturer

sinclair®

Unit model

ASH-12AIP PT

More efficient



Less efficient

Annual Energy Consumption
kWh in cooling mode

550

(Actual consumption will depend
on how the appliance is used
and climate)

Cooling output

kW

3.53

Energy Efficiency Ratio

3.21

Full load (the higher the better)

Type	Cooling only	—
	Cooling+Heating	←
	Air cooled	←
	Water cooled	—

Heat output

kW

4.10

Heating performance

3.61

A: higher G: lower

A B C D E F G

Noise

(dB(A) re 1 pW)

39/53

Further information is contained
in product brochures

Norm EN 14511

Air-conditioner

Energy Label Directive 2002/31/EC



62229925973

Energy

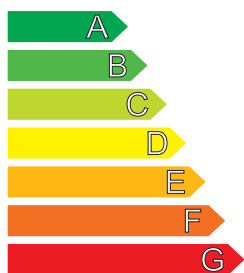
Manufacturer

sinclair®

Unit model

ASH-18AIP PT

More efficient



Less efficient

Annual Energy Consumption
kWh in cooling mode

800

(Actual consumption will depend
on how the appliance is used
and climate)

Cooling output

kW

5.30

Energy Efficiency Ratio

3.31

Full load (the higher the better)

Type	Cooling only	—
	Cooling+Heating	←
	Air cooled	←
	Water cooled	—

Heat output

kW

5.70

Heating performance

3.61

A: higher G: lower

A B C D E F G

Noise

(dB(A) re 1 pW)

55/64

Further information is contained
in product brochures

Norm EN 14511

Air-conditioner

Energy Label Directive 2002/31/EC



62229925974

Energy

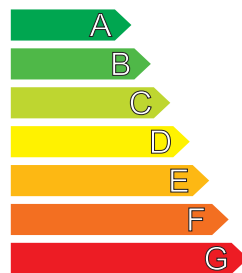
Manufacturer

sinclair®

Unit model

ASH-24AIP PT

More efficient



Less efficient

Annual Energy Consumption
kWh in cooling mode

992.5

(Actual consumption will depend
on how the appliance is used
and climate)

Cooling output

kW

6.45

Energy Efficiency Ratio

3.24

Full load (the higher the better)

Type	Cooling only	—
	Cooling+Heating	←
	Air cooled	←
	Water cooled	—

Heat output

kW

7.00

Heating performance

3.62

A: higher G: lower

A B C D E F G

Noise

(dB(A) re 1 pW)

42/54

Further information is contained
in product brochures

Norm EN 14511

Air-conditioner

Energy Label Directive 2002/31/EC



62229925975