

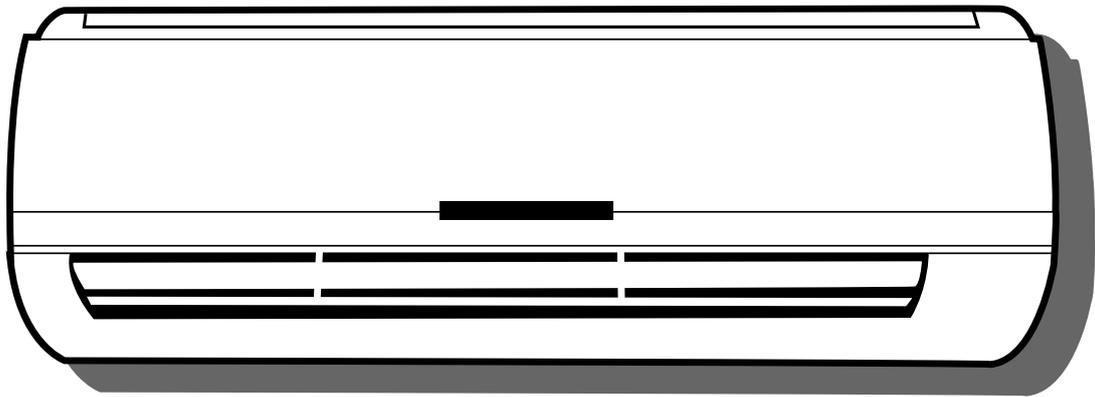
GERMAN
POOL



德國寶

分體式掛牆冷氣機
AIR CONDITIONER
WALL-MOUNT SPLIT SERIES

ST-09
ST-12



在使用之前請詳細閱讀「使用說明書」及「保用條例」，並妥為保存。
Please read these instructions and warranty information carefully before use and keep them handy for future reference.



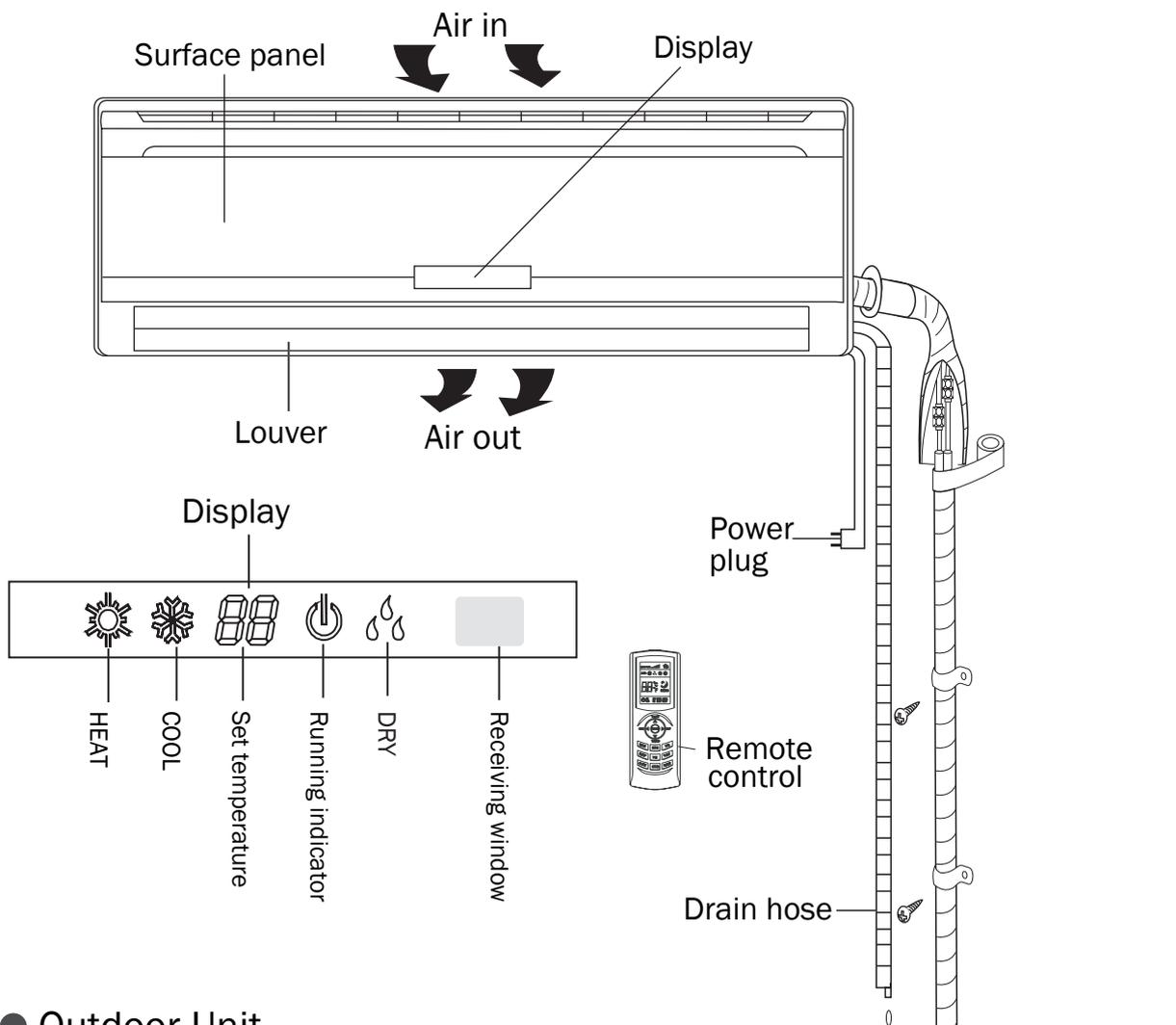
使用說明書 OPERATING INSTRUCTIONS

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PRODUCT STRUCTURE

● Indoor Unit



● Outdoor Unit

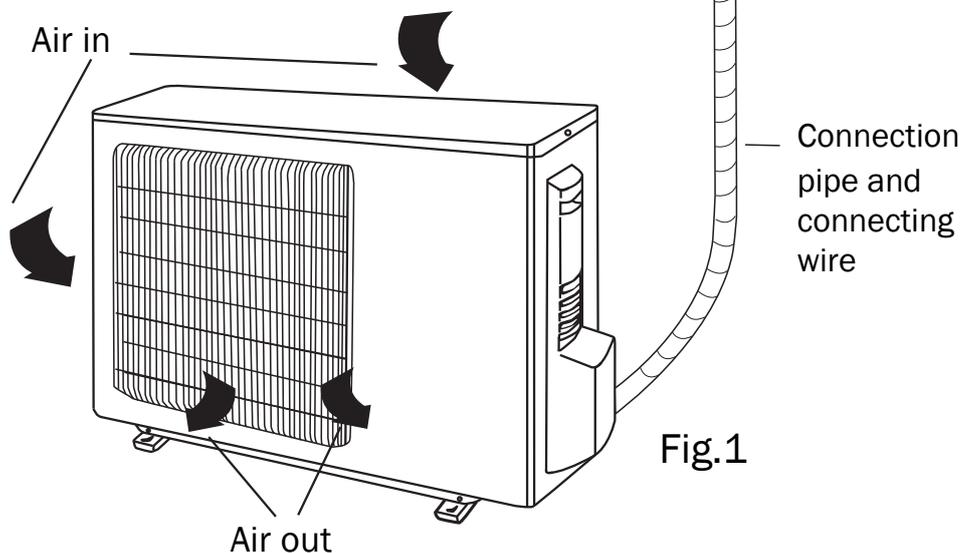
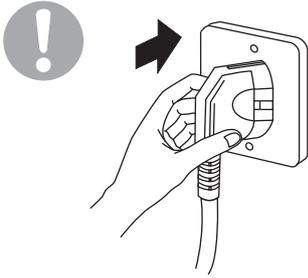


Fig.1

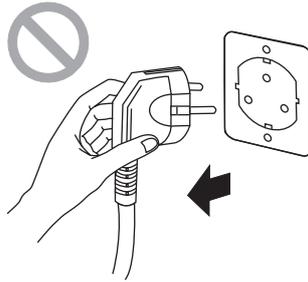
NOTICE BEFORE USE

WARNING

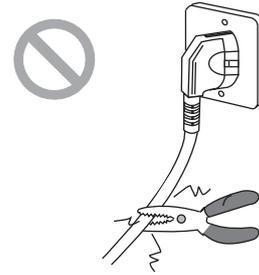
Power plug must be inserted tightly.
Otherwise, it can cause an electric shock or fire.



Do not pull out the power plug during operation.
Otherwise, it can cause electric shock or fire.



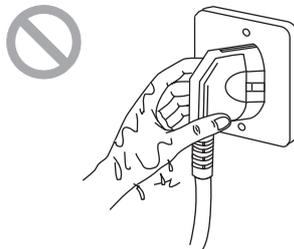
Do not damage the power cord or use an extended cord.
Otherwise, it can cause an electric shock or fire.



Do not use longer power lines or share the same socket with other electrical appliances.
Otherwise, it can cause electric shock or fire.



Do not operate air conditioner with wet hands.
Otherwise, it can cause electric shock.



Do not insert hands or sticks into the air intake or outlet vents.
Otherwise, it can cause danger.

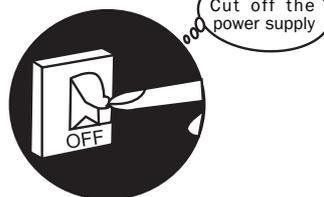


Do not let your body exposed to cold air for a long time.
Otherwise, it can cause health problems.



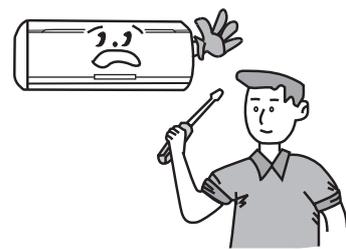
If any abnormal phenomenon (such as a burning smell or smoke) is detected, please turn off power supply and contact the service center.

If problem continues, it can cause a damage, electric shock or fire.



Do not attempt to repair the air conditioner by yourself.

False repairs will lead to electric shock or fire. Contact the service centre for repair services.



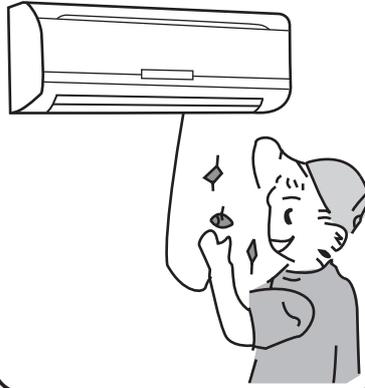
NOTICE BEFORE USE



Earth: Ground must be connected!
Earth wire should be connected to the special device.

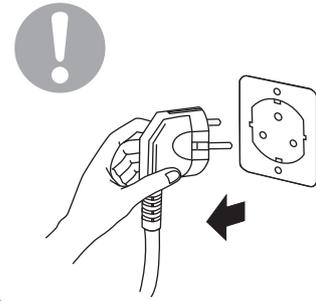
If not, please ask a qualified technician to install. Furthermore, don't connect earth wire to any gas pipe, water pipe, drainage pipe or other improper places.

Unplug power supply when air conditioner will not be used for a long time.

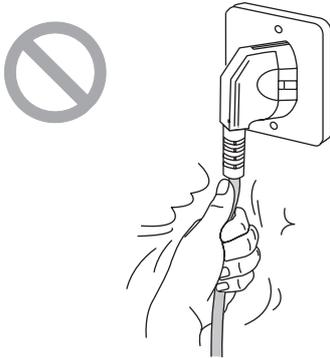


When cleaning, power supply must be disconnected.

If not, it can cause electric shock or damage.



Do not unplug the power by pulling out the power plug.
It can cause a fire.



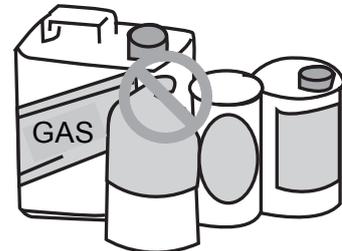
Do not place a space heater near the unit.

Air flow from air conditioner can cause incomplete combustion to the space heater.



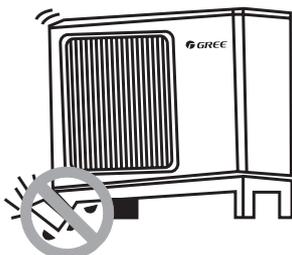
Keep combustible spray away from the units more than 1m.

It can cause fire or explosion.



Please confirm whether the support stand is firm enough or not.

If it is damaged, it may lead to the fall of the unit and cause injury.



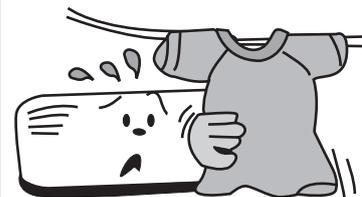
Do not step on the top of the outdoor unit or place anything on it.

As falling off of outdoor unit can be dangerous.

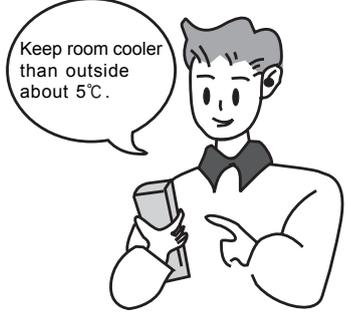
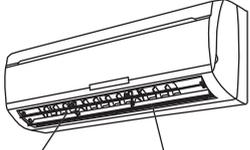
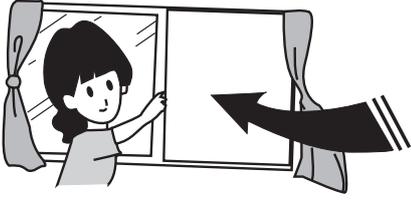
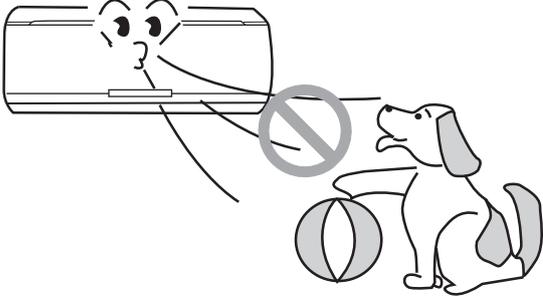
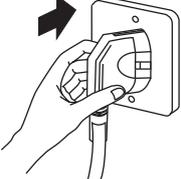


Do not block air intake or outlet vents of both the outdoor and indoor units.

It may diminish the air conditioning capacity or cause a malfunction.



NOTICE BEFORE USE

<p>Select the most appropriate temperature. It can preclude the electric wasted.</p> <p>Keep room cooler than outside about 5°C.</p> 	<p>The airflow direction can be adjusted appropriately. At operating, adjust the vertical airflow direction by adjusting the louvers of upward/downward direction. And then, hold two ends of left and right louver to adjust the horizontal airflow.</p>  <p>Louver of left/right direction Louver of upward/downward direction</p>
<p>Do not leave windows and doors open for a long time while operating the air conditioner. It can diminish the air conditioning capacity.</p> 	<p>Do not direct airflow at animals and plants. It is harmful to their health.</p> 
<p>Splashing water on the air conditioner can cause electric shock and malfunction.</p> 	<p>The power cords of this air conditioner adopt Y-type connection, please don't cut off or damage the power cords and control cords. If they are damaged, please ask the qualified personnel to change them.</p>
<p>Air conditioner should be operated with stable voltage in range of 198-242V 1ph. Otherwise; compressor would vibrate terribly to damage refrigeration system.</p> 	<p>Don't use the air conditioner for other purposes, such as drying clothes, preserving foods, etc.</p>

INSTALLATION

I. Installation location

Indoor unit

1. The inlet and outlet should not be covered so that the outflowing air can reach all parts of the room.
2. Install in a location from which the condensation water can be drained out conveniently and that is permitting easy connection with the outdoor unit.
3. Avoid a location where there is heat source, steam or inflammable gas.
4. Install in a location which 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 height of the installed location should be at least 2.3m away from the floor.
6. Install in a location where is 1m or more away from other electric appliances such as television, audio devices, etc.
7. Select a location where it is easy to remove and clean the filter.
8. Be sure that the installation conforms to the installation dimension diagram (Fig.2).
9. The plug must be accessible after the appliance is positioned.
10. The appliance should not be installed in the laundry or near a swimming pool.
11. The appliance should be installed in accordance with national wiring regulation.

Outdoor unit

1. Select a location from which noise and outflowing air emitted by unit will not bother neighbors.
2. Select a location where there should be sufficient ventilation.
3. The inlet and outlet should not be covered.
4. The location should be able to withstand the full weight and vibration of the outdoor unit and permit safe installation.
5. There should be no risk of flammable gas or corrosive gas leaks.
6. Be sure that the installation confirms to the installation dimension diagram (Fig.2).

INSTALLATION

II. Caution for electric wiring

- All the electric work must be done according to related wiring regulation.
- The rated voltage and exclusive circuit must be used. The radius of the power cord should be large enough.
- Do not pull the power cord with force.
- The air conditioner must be safely earthed! Earth wire must be connected to the special device of the building and done by qualified personnel. In fixed circuit, there must be electricity leakage protection switch of enough power capacity and air switch with enough space.

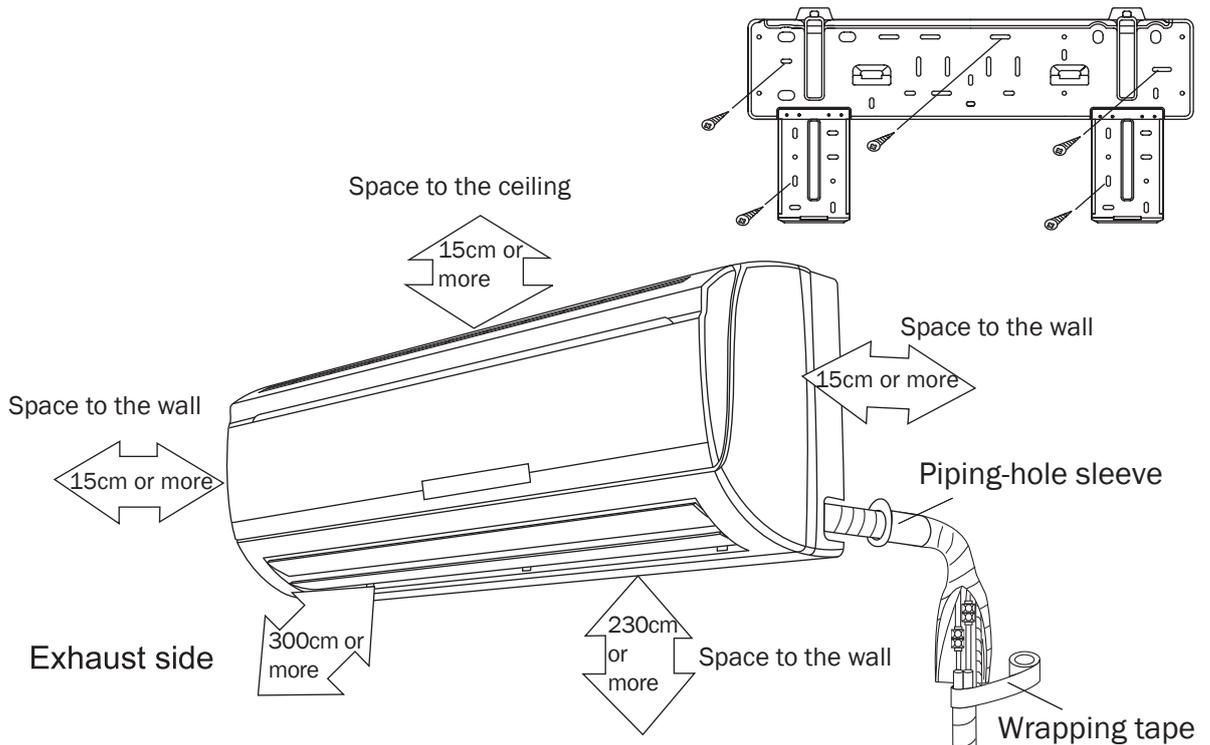
Air switch (thermal-magnetic breaker) can protect the short circuit and overloads.

Earth requirement

- Air conditioner is a class 1 appliance. It must connect with ground firmly.
- The yellow-green wires in the air conditioner are earth wires and cannot be used for other purpose. They can't be cut off and fixed by the tapping screw, otherwise it can cause an electric shock.
- The earth-resistance should confirm to the requirement of IEC Standard.
- Power supply must have an earth end. Additionally, the earth wire should not be connected to the following places:
 - a) Water pipe
 - b) Gas pipe
 - c) Drainage pipe
 - d) Other places that a qualified personnel technician disapproves.

INSTALLATION

III. Installation dimension diagram



Important Notes

- ▶ Installation must be done by a trained and qualified technician in accordance to this manual.
- ▶ Contact our service center before installation in order to avoid any malfunction due to unprofessional installation.
- ▶ When picking up and moving the units, you must be guided by trained and qualified personnel.

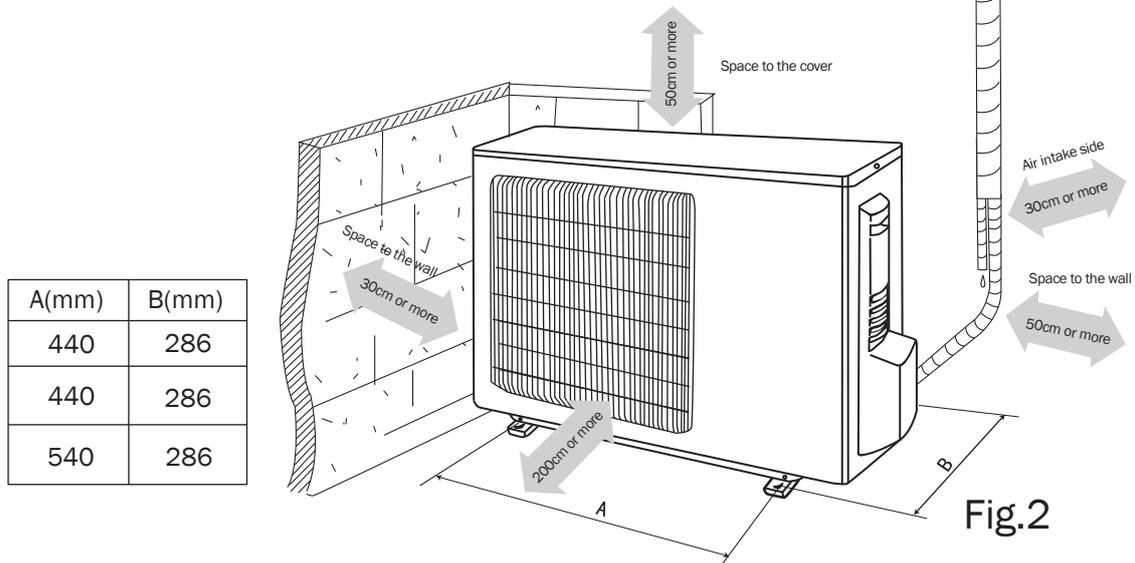


Fig.2

INSTALLATION

IV. Installing indoor unit

Rear panel

1. Always mount the rear panel horizontally.

Because the opening of drainage pipe is located on the left side and the left side of rear panel can be slightly lowered.

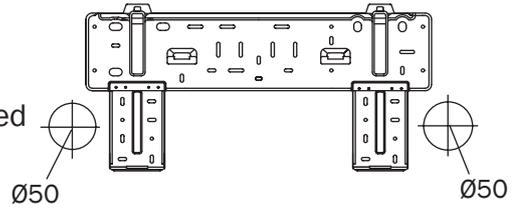


Fig. 3

2. Secure the rear panel on the selected location with screws supplied with the unit.
3. Be sure that the rear panel has been fixed firmly enough to withstand the weight of an adult of 60kg. The weight of the unit should be evenly shared by each screw.

Piping hole

1. Make the piping hole (Ø50) in the wall at a slight downward slant to the outdoor side (Fig.3).
2. Insert piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.

Drainage hose

1. For a well drainage, the drain hose should be placed at a downward slant.
2. Do not wrench or bend the drain hose or flood its end by water.
3. The extended drainage pipe in the room should be wrapped with the insulating materials.

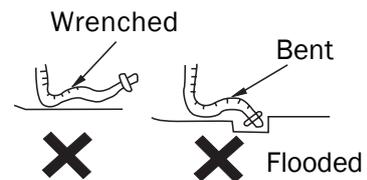


Fig. 4

Connection pipes

Connect the connection pipes with the relevant union pipes of the indoor unit and tighten the flare nut of the connection pipes (Fig.10).

Note:

- ▶ Connect the connection pipes with the indoor unit firstly and the outdoor unit secondly.
- ▶ Be careful in bending the connection pipes, or you will damage the pipes.
- ▶ If the tightening torque is too great in tightening the flare nuts, leakage will happen.

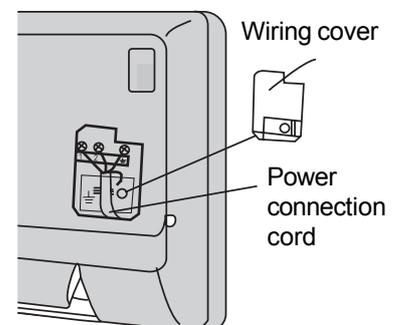


Fig. 5

INSTALLATION

IV. Installing indoor unit

Electric wiring

- 1 Remove the surface panel.
- 2 Remove the fixed screw from the wiring cover as shown below.
- 3 Route power connection cord from the back of indoor unit and pull it toward the front through the wiring hole for connection.
- 4 Connect the blue wire of the power cord to the terminal “N(1)”, black to “2”, and yellow-green (earth wire) to “⊕” as shown in Fig.6. Then tighten the power cord by the wiring clamp.
- 5 Reassemble wiring cover and tighten the screw.
- 6 Return surface panel to its original place.

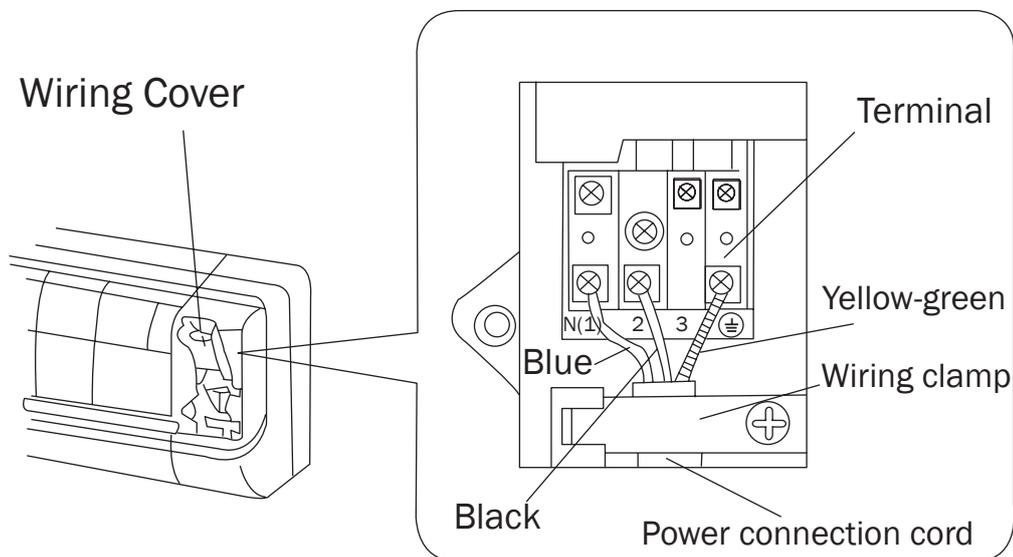


Fig. 6

INSTALLATION

IV. Installing indoor unit

Indoor unit

1. When routing the piping and wiring from the left or right side of the indoor unit, cut off the tailings from the chassis if necessary (Fig.7).

- Cut off the tailings 1 when routing the wiring only.
- Cut off the tailings 1 and tailings 2 (or tailings 1, tailings 2 and tailing 3) when routing both the wiring and piping.

①, ② and ③ in Fig.7 are the recommended piping.

2. Wrap the piping and wiring and pull them through the cut-off-tailings hole (Fig.8).

3. Hang mounting slots of the indoor unit on the upper tabs of the rear panel and check if it is firm enough.

4. The height of the installed location should be no less than 2.3m above the floor.

5. The power plug must be accessible after the appliance is positioned.

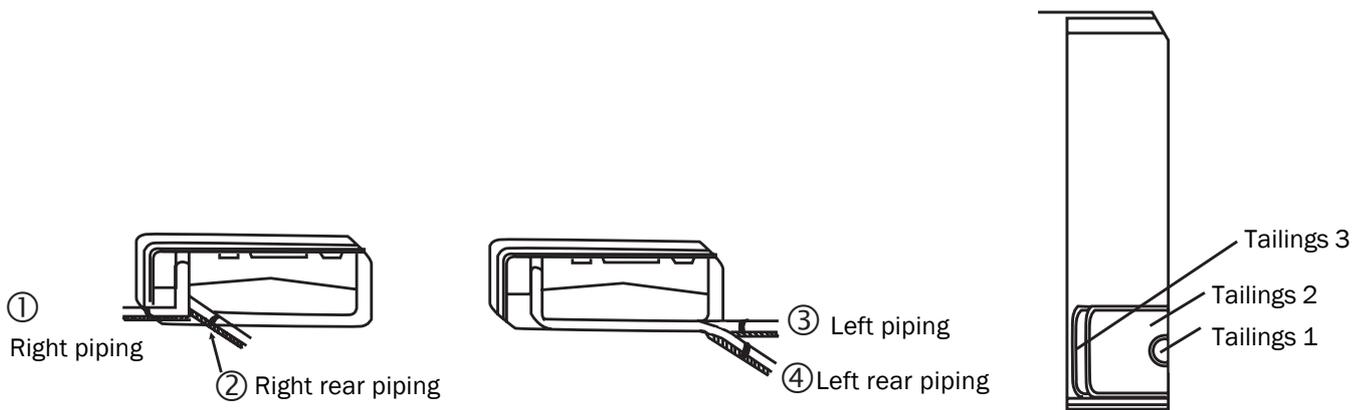


Fig. 7

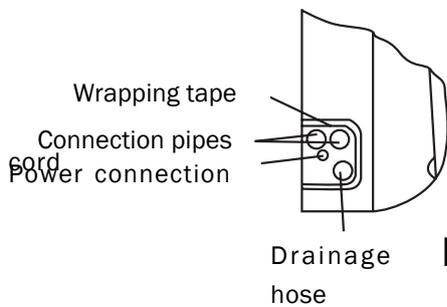


Fig. 8

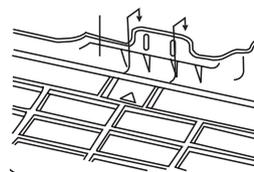


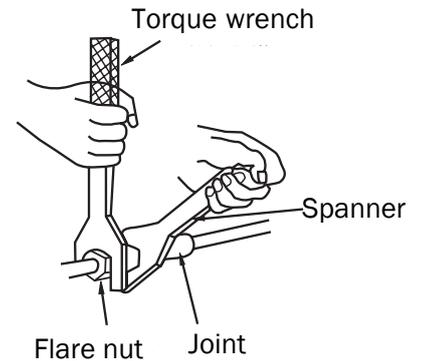
Fig. 9

INSTALLATION

V. Installing outdoor unit

Connection pipe

1. Align the center of the piping flare with the relevant valve.
2. Screw in the flare nut by hand and then tighten the nut with spanner and torque wrench (Fig.10).



Note: Exceeding tightening torque will damage the flare nut.

Fig.10

Tightening torque table

Hex nut diameter (mm)	Tightening torque (N.m)
Ø6	15~20
Ø9.5	31~35
Ø12	50~55

Electric wiring

1. Disassemble the big handle.
2. Remove the wire clamp and connect the end of the power cord with screws to the wiring terminal board. Be sure that the wiring connection is in accordance with the indoor unit's connection.
3. Fix the wiring with wire clamp.
4. Make sure that the wiring has been connected securely.
5. Reassemble the big handle.

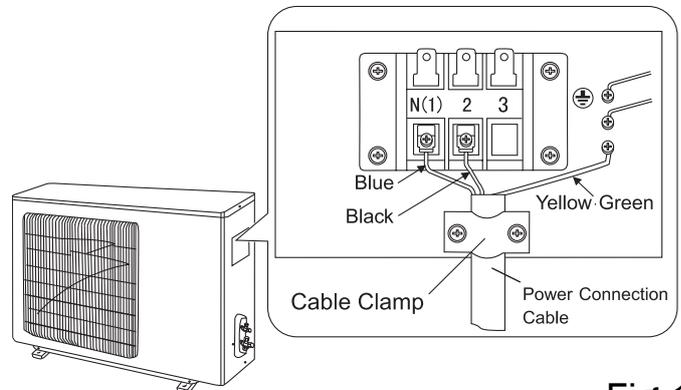


Fig.11



Warning:

- Wrong wiring connection will cause electrical malfunction.
- Do not pull the wire when fixing it with wire clamp.

INSTALLATION

V. Installing outdoor unit

Air purging and leakage test

1. Remove the flare nuts of charging end from gas valve.
2. Connect the charging hose in the middle to the vacuum pump, then Low-pressure (Lo) end should be connected to charging end of gas valve (Fig. 12).
3. Open the vacuum pump to evacuate. When multi-meter indicates 1 bar, fully tighten Lo handle of manifold valve and stop evacuation. Continue it for over 15 minutes to ensure the pressure is constant.
4. Remove bonnets of gas and liquid valve.
5. Slightly loosen core of liquid valve with hexagon wrench until the pressure exceeds 0 bar.
6. Remove charging hose from charging end of gas valve and screw the flare nuts of charging end.
7. Open cores of gas and liquid valve entirely by hexagon wrench.
8. Tighten the bonnets of gas and liquid valve, and then test whether there is any leakage or not.

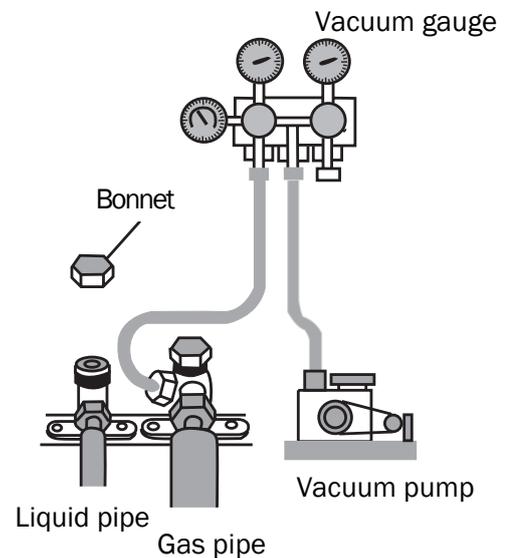


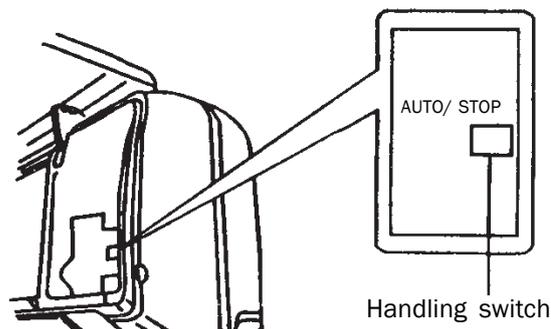
Fig. 12

TEST OPERATION

Test operation

1. Before test operation

- (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. Test operation method

- (1) Switch on power and press "ON/OFF" button on the remote control to run the air conditioner.
- (2) Press "MODE" button and check the operation condition of COOL, HEAT, SWING mode and so on.
- (3) When the remote control is lost, emergency run operation can be done as following by the ball pen or similar things:
 - (a) At stopping, set the handling switch to "AUTO" mode, then the unit will automatically run in the mode selected by the microcomputer system according to the surrounded temperature. If you want to stop running, you should repress the handling switch.
 - (b) At operation, set the handling switch to "STOP" mode to turn off the unit.

Check after installation

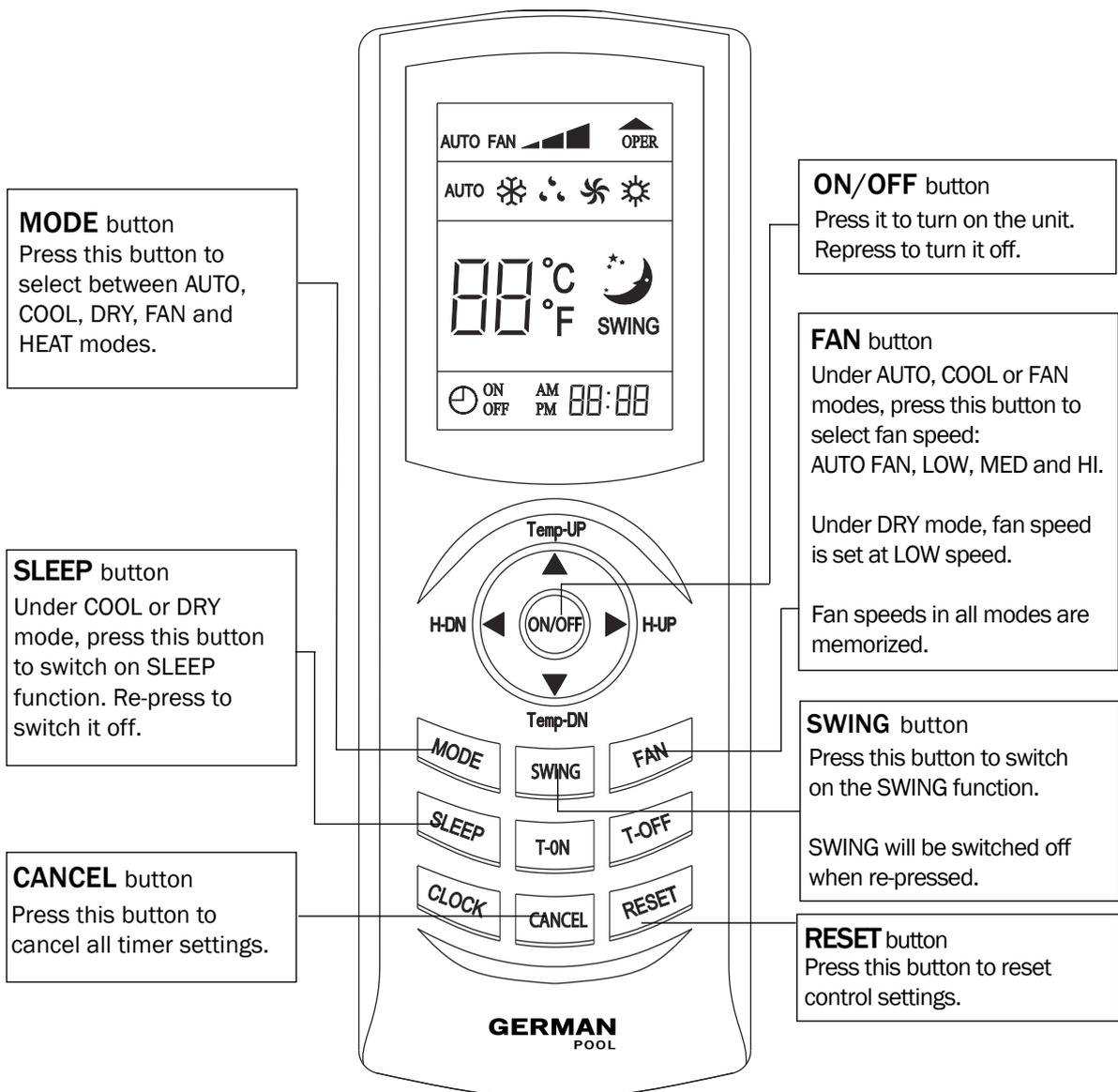
Items to be checked	Possible malfunction
Has it been fixed firmly?	The unit may drop, shake or emit noise.
Have you done the refrigerant leakage test?	It may cause insufficient cooling (heating) capacity.
Is heat insulation sufficient?	It may cause condensation and dripping.
Does the unit drain well?	It may cause condensation and dripping.
Is the voltage in accordance with the rated voltage marked on the nameplate?	It may cause electric malfunction or damage the part.
Is the electric wiring and piping connection installed correctly and securely?	It may cause electric malfunction or damage the part.
Has the unit been connected to a secure earth connection?	It may cause electrical leakage.
Is the power cord specified?	It may cause electric malfunction or damage the part.
Has the inlet and outlet been covered?	It may cause insufficient cooling (heating) capacity.
Has the length of connection pipes and refrigerant capacity been recorded?	The refrigerant capacity is not accurate.

REMOTE CONTROL

Names and functions

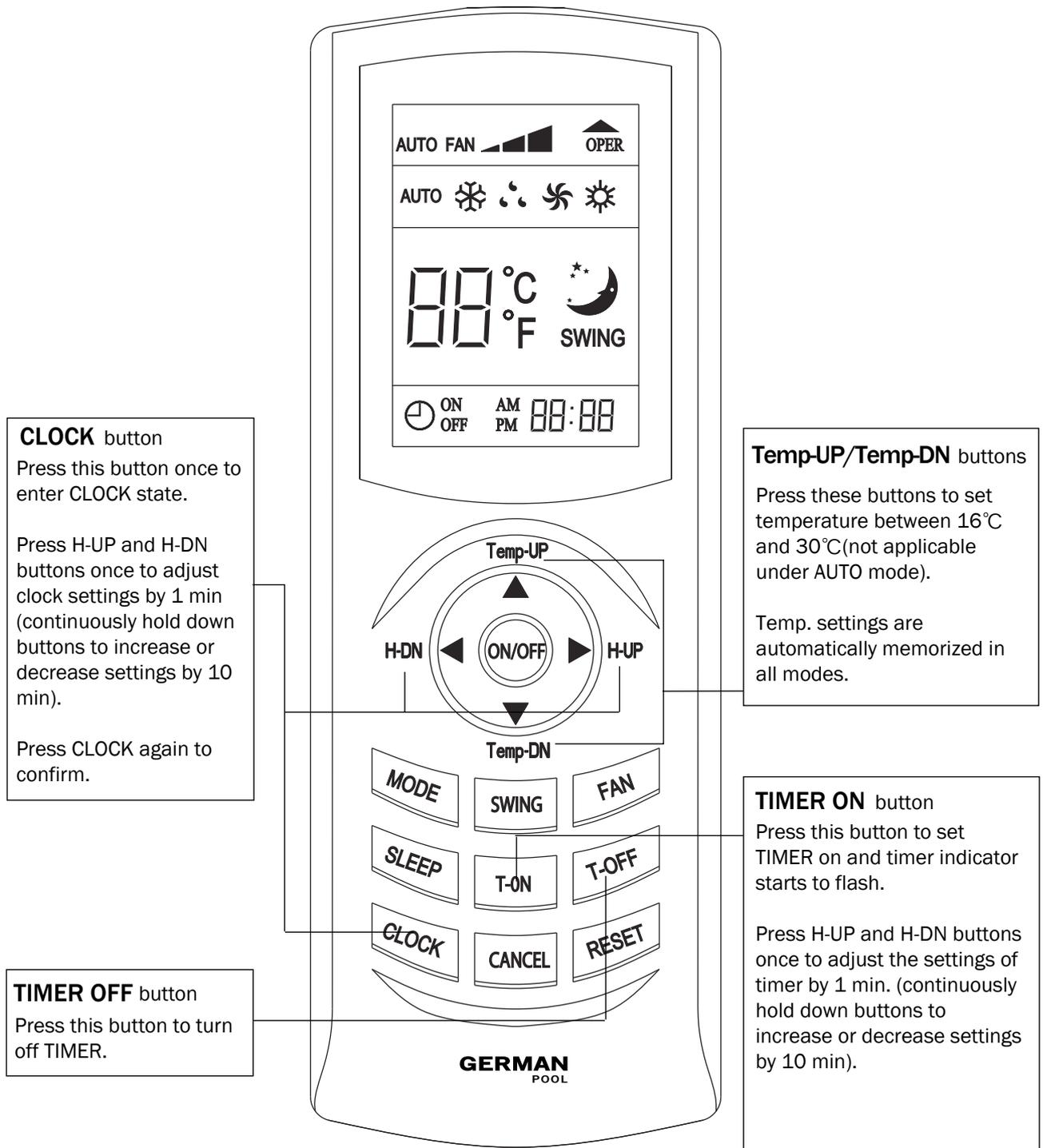
NOTE:

- Be sure the wireless remote control aims at the receiving window; There should not be any obstructions between them.
- Do not drop or toss the wireless remote control.
- Do not let any liquid run into the wireless remote control or put it directly under sunlight or near any heat source where is very hot.



REMOTE CONTROL

Names and functions



REMOTE CONTROL

Operating procedures

General procedure:

1. After power is turned on, there is a warning buzzer. Status indicators of indoor unit will light up for a few seconds. Then they will automatically turned off, except the POWER/RUN light.
The POWER/RUN running light turns red, the unit is in standby status (NOTE: Each time when power on or receive the signals from the wireless remote control, the buzzer will sound).
2. Press ON/OFF button on the wireless remote control, POWER/RUN indicator turns green, and display the running mode and setting temp.etc, the unit starts to run (NOTE: if set the SLEEP function or turn off the light button, all the displays will be turned off except the POWER/RUN indicator).
3. Press MODE, select the desirable running modes.
4. When press SWING button, the guide louver will swing automatically, when repressed the button, it will stop.
5. Press FAN button, set the fan speed.
6. Then press Temp-UP/ Temp-DN button, to set the desired temperature.

Special procedure:

7. Press SLEEP button, to set the sleep function.
8. Press T-OFF/T-ON button, then press H-UP/H-DOWN button, to set the schedule time of turning on or turning off.

Note: When select the AUTO mode, the unit choose the suitable running modes, automatically, and can obtain the comfortable effect.

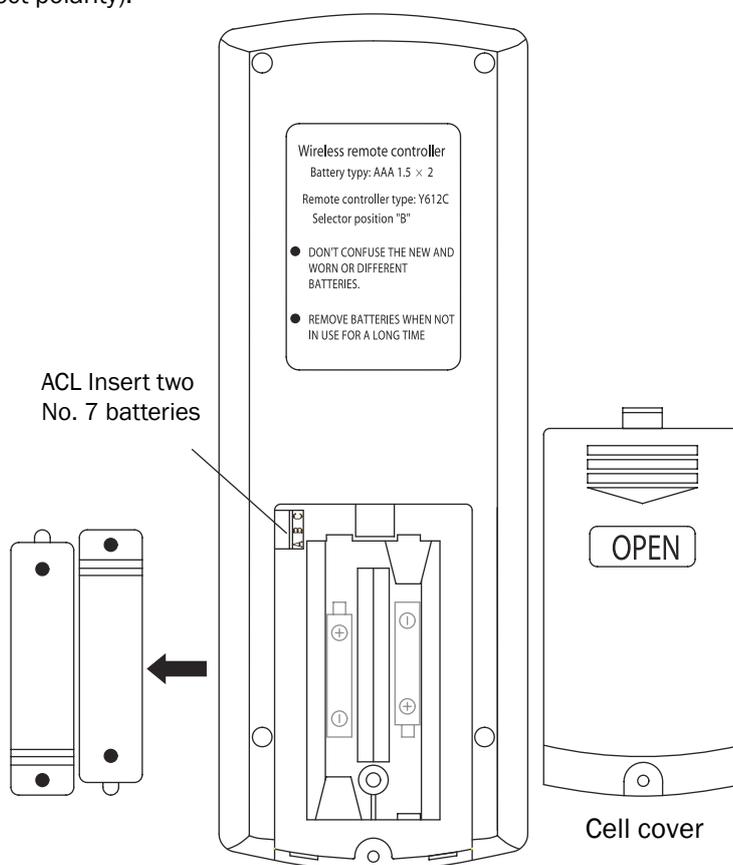
Changing batteries

The wireless remote control adopts two No.7 alkaline dry cells.

1. Slide the cell cover downward to take out the worn cells, then change two new ones (note to the correct polarity).
2. Cover the cell cover.

NOTE:

- ▶ Do not mix new and worn batteries or batteries of different types.
- ▶ If the wireless remote control would not be used for weeks, please take out batteries to prevent liquid leakage from damaging it.
- ▶ Make sure you are within its receiving range when operating the wireless remote control.
- ▶ Then wireless remote control should be placed about 1m or more away from the TV or any other electric appliances.



CARE AND MAINTENANCE

Caution

- ▶ Turn power off and pull out the power plug before cleaning air conditioner.
- ▶ Never sprinkle water on the indoor unit and the outdoor unit for cleaning because it can cause an electric shock.
- ▶ Volatile liquid (e.g. thinner or gasoline) will damage the air conditioner. Wipe the units with a dry soft cloth, or a cloth slightly moistened with water or cleanser.

Cleaning front panel (Do not remove front panel when cleaning)

When the indoor unit front panel is dirty, please use the cotton cloth which is soaked in the warm water under 40°C, dry it and wipe the dirty places slightly ,do not wrap it directly by dry cloth for it would damage the surface.

NOTE:

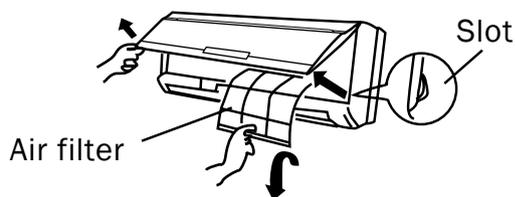
There are microcomputer components and circuit board on the displayer of the indoor unit front panel, never let it dip in the water.

Cleaning the Air Filters (Recommended once every three months)

If dust is much more around the air conditioner, the air filters should be cleaned more frequently.

1. Take down the air filter

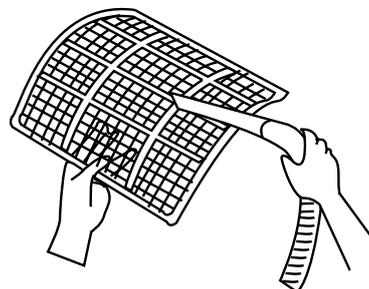
Open the surface panel, hold the tab of air filter and raise it slightly, and then take it out along the direction of arrows (see the right figure).



2. Cleaning

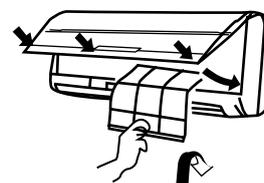
To clear the dust adhering to the filters, you can either use a vacuum cleaner, or wash them with water and dry it in the shade (see the right figure).

Note: Never use water above 45°C to wash the filter, or it could cause deformation or discoloration. Never parch it by fire, or it could cause a fire or deformation.



3. Reinsert the filter

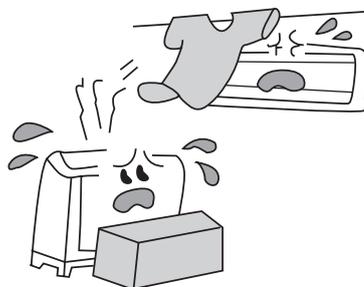
Reinsert the filters along the direction of arrow, then cover the surface panel and clasp it.



CARE AND MAINTENANCE

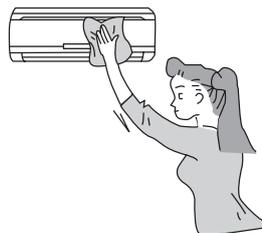
Check before use

1. Be sure that nothing obstructs the air outlet and intake vents.
2. Check whether ground wire is properly connected or not.
3. Check whether the batteries of air conditioner are changed or not.
4. Check whether the installation stand of the outdoor unit is damaged or not. If damaged, please contact the service centre.



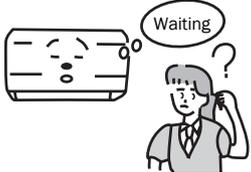
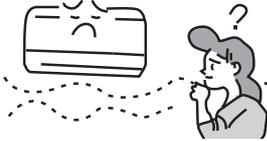
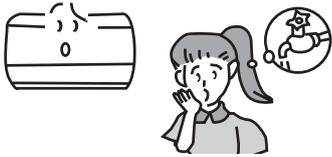
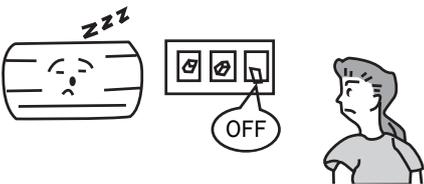
Maintain after use

1. Clean filters and other parts.
2. Turn main power off.
3. Clear dust from the outdoor unit.
4. Repaint the rubiginous place on the outdoor unit to prevent it from spreading.



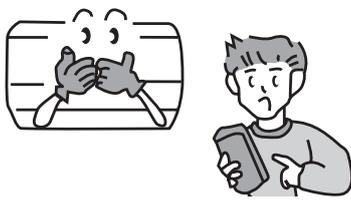
TROUBLESHOOTING

Warning: Don't attempt to repair the air conditioner by yourself, it can cause an electric shock or fire. Please check the following items before asking for repair, it can save your time and money.

Phenomenon	Trouble Shooting
 <p>Indoor unit does not operate immediately when the air conditioner is restarted.</p>	<p>Once the air conditioner is stopped, it will not operate in approximately 3 minutes to protect itself.</p>
 <p>There's unusual smell blowing from the outlet after operation is started.</p>	<p>This is caused by the odors in the room which have been breathed into the air conditioner.</p>
<p>Sound of water flow can be heard during operation.</p> 	<p>This is caused by the refrigerant flowing inside the unit.</p>
<p>Mist is emitted during cooling operation.</p> 	<p>As the air in the room is cooled down rapidly, it is normal cold wind looks like fog.</p>
<p>Creaking noise can be heard when start or stop the unit.</p> 	<p>This is caused by the deformation of plastic due to the change of temperature.</p>
<p>Air conditioner does not operate at all.</p> 	<ul style="list-style-type: none"> • Has the power been shut down? • Is the wiring loose? • Is the leakage protection switch in operation? • Is voltage higher or lower? • Is TIMER ON in operation?

(Turn to next page)

TROUBLE SHOOTING

Phenomenon	Trouble Shooting
<p>Cooling efficiency is not good.</p> 	<ul style="list-style-type: none"> • Is SET TEMP. suitable? • Is air inlet or outlet obstructed? • Are air filters dirty? • Are the windows and door closed? • Is indoor fan speed set at low speed? • Is there any other heat source in your room?
<p>Remote control is not available.</p> 	<ul style="list-style-type: none"> • Remote control cannot be used occasionally when the air conditioner is disturbed or changing its functions frequently. At that time, pull out the power plug and insert it again to recover the operation. • Is the remote control out of effective distance to the indoor unit? Are there any obstruction between the remote control and the signal receptor? • Replace the worn batteries of remote control if the voltage of the batteries is not sufficient.

In following situations, immediately stop all operations, unplug air conditioner and then contact the service center.

- Unusual noise being heard during operation.
- Air switch and leakage protection switch break very often.
- Accidentally splash water or something into air conditioner.
- Water is leaked in the room.
- Electrical lines and power plug are very hot.
- Air release from the outlet smells weird during operation.



If you have any question, please inform the service centre .

請填妥以下空格並與發票一併保存，以便維修時核對資料。用戶提供本公司之所有資料必須正確無誤，否則免費保用將會無效。
Please fill out the form below. This information and the purchase invoice will be required for any repairs. Warranty will be invalid if information provided is found to be inaccurate.

型號 Model No. : ST-09 ST-12

機身號碼 Serial No. : _____ 發票號碼 Invoice No. : _____

購買商號 Purchased From : _____ 購買日期 Purchase Date : _____

保用條例

此保用提供德國寶產品之機件在正常使用下壹年(自購買日起計算)保用，壓縮器保用五年(此保用只包括每年續保客戶)，但不包括安裝，維修、雪種、保養及更換零件之人工或其他費用。

* 貴戶須在購機十天內，以下列其中一種方式向本公司登記資料，保用手續方正式生效：

1) 填妥本公司網頁內之保用登記表格

www.germanpool.com/warranty

2) 填妥保用登記卡，並連同購機發票之副本一併郵寄到維修及客戶服務部

(本公司將不發還發票副本或登記卡)

* 此保用不包括：非家庭性質用途；塑膠配件；因意外而造成的損壞(包括運輸及其它)；任何附件及輔助裝置；以及一切因人為、電源接合不當、不依說明書而錯誤或疏忽使用本機、經非本公司認可之安裝及不適當維修等等所引致之損壞。

** 保用只在香港、九龍、新界區有效，東涌、愉景灣及離島，需額外收取交通費用。

維修及客戶服務部

德國寶(香港)有限公司
香港九龍土瓜灣馬頭角道116號
新寶工商中心高層地下2-4號室
電話 : +852 2333 6249
傳真 : +852 2355 7100
電郵 : repairs@germanpool.com

Warranty Terms & Conditions

Our Repairs & Customer Service Centre will provide rectification of any defect of manufacturing materials free of charge given that such defect is reported within 12 months from date of sale.

* This warranty is not valid until Customer's registration information is returned to and received by our Service Centre within 10 days of purchase via one of the following methods:

1) Visit our website and register online:

www.germanpool.com/warranty

2) Complete all fields on the attached Warranty Card and mail it back to our Repairs & Customer Service Centre along with a photocopy of the purchase invoice (Warranty Card and invoice copy will not be returned to Customer)

* Product must be used solely for domestic purposes. Customer should always follow the operating instructions. This warranty does not apply to: replacement of accessories and parts; damages caused by incorrect voltage, improper operations, unauthorized installation or repairs as well as accidents.

** Service area includes Hong Kong Island, Kowloon and New Territories. Repairs in Tung Chung, Discovery Bay or other areas are subject to extra service charge.

Repairs & Customer Service Centre

German Pool (Hong Kong) Limited
Room 2-4, Upper Ground Floor
Newport Centre, 116 Ma Tau Kok Road
Tokwawan, Kowloon, Hong Kong
Tel : +852 2333 6249
Fax : +852 2355 7100
Email : repairs@germanpool.com

此保用證只適用於香港

This warranty card is valid only in Hong Kong

GERMAN
POOL



德國寶

德國寶 (香港) 有限公司 German Pool (Hong Kong) Limited

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