

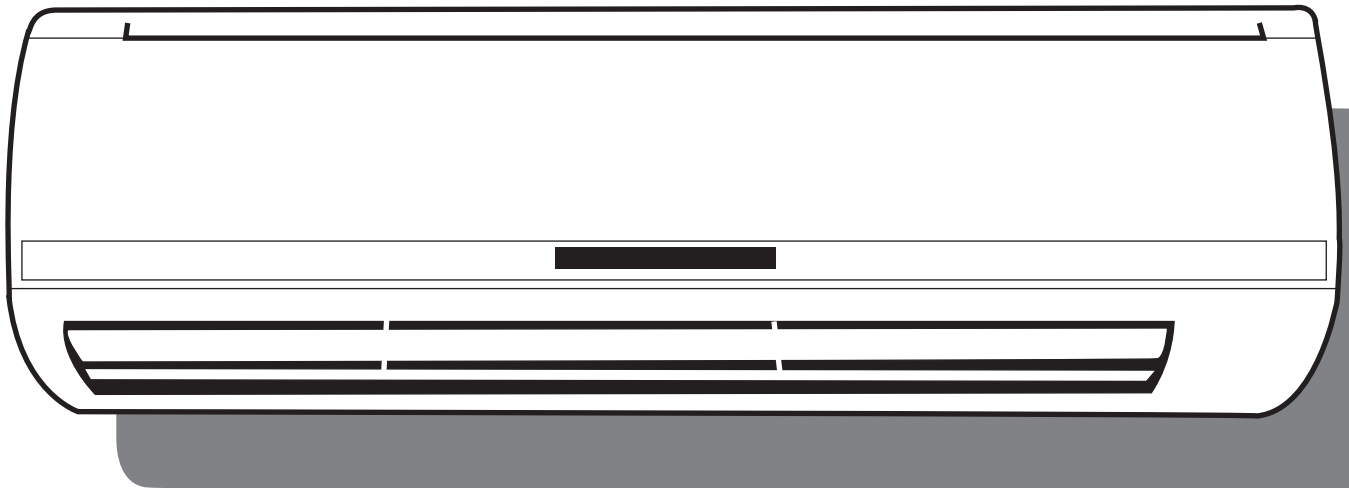
GERMAN
POOL



德國寶

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

ST-18



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

Operation and maintenance

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This symbol stands for the items should be forbidden.



This symbol stands for the items should be followed.

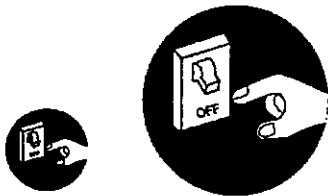
Thank you for choosing GERMAN POOL air conditioner, please read this owner's manual carefully before operating the unit and keep it carefully for consultation.

◆ Operation and maintenance-Notices for operation

Please read the following carefully before operating.

WARNING

★ When having a burning smell or smoke, please turn off the power supply and contact with the service center of GERMAN POOL.



If the abnormality still exists, the unit may be damaged, and may cause electric shock or fire.

★ Don't operate the air conditioner with wet hands.

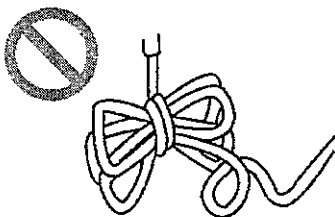


Otherwise, it can cause an electric shock or fire.

★ Never cut off or damage power cables and control wires. If the power cable and signal control wire were damaged, change them by professional

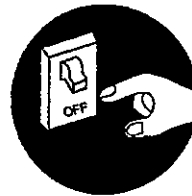


★ Power must adopt the special circuit to prevent fire.



Otherwise, it can cause an electric shock or fire.

★ Be sure to pull out the power plug as the air conditioner not in use for a long time.



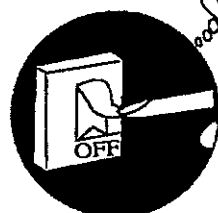
Otherwise, the accumulated dusts that may cause overheating or fire.

★ Never damage the electric wire or use the electric wire, which is not appointed.



Otherwise, it will cause overheating or fire.

★ When cleaning, it is necessary to stop driving and turn off the power supply.








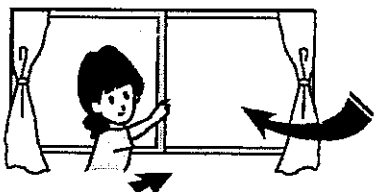
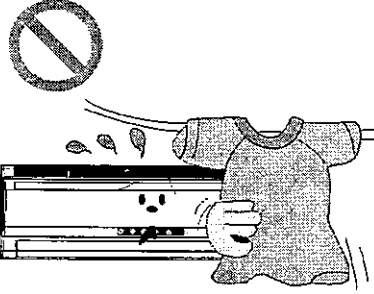

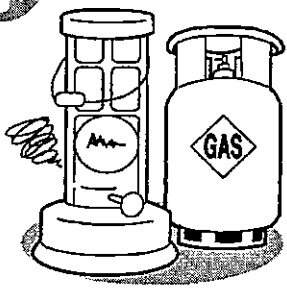

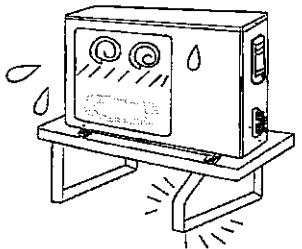

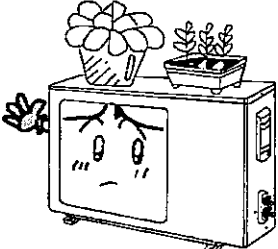

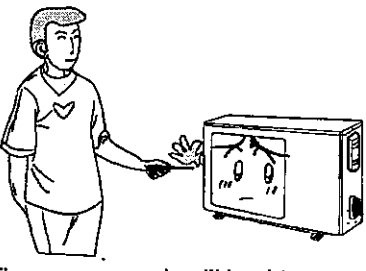
Cut off power supply

Otherwise, it may cause electric shock or damage.

★ The air conditioner should be operated with the voltage fluctuation $\pm 10\%V$, the rated voltage is 220-240V, when the voltage is very low, the compressor vibrates terribly and that will damage the refrigerant system; When the voltage is very high, the electrical component would be easily damaged.

★ The power supply must adopt the special circuit that with air switch protection and assure it has enough capacity. The unit will be turned on or off according to your requirement automatically, please do not turn on or turn off the unit frequently, otherwise disadvantage effect may be caused to the unit.

◆ Notices for use

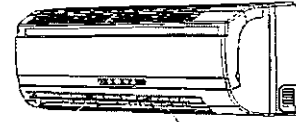
<p>⚠ ★ Earth: The ground be connected!</p>   <p>If not, please ask the qualified personnel to install. Furthermore, don't connect each wire to the gas pipe, water pipe, drainage pipe or any other improper places.</p>	<p>★ Be sure to pull out the power plug when not using the air conditioner for a long time.</p>   <p>Otherwise, the accumulated dust may cause fire or electric shock.</p>	<p>★ Select the most appropriate temperature.</p>  <p>It can preclude the electricity wasted.</p>
<p>★ Don't leave windows and doors open for a long time while operating the air conditioner.</p>  <p>It can decrease the air conditioning capacity.</p>	<p>★ Don't block the air intake or outlet vents of both the outdoor and indoor units.</p>  <p>It can decrease the air conditioning capacity or cause a malfunction.</p>	<p>★ Keep combustible spray away from the units more than 1m.</p>   <p>It can cause a fire or explosion.</p>
<p>★ Please note whether the installed stand is firm enough or not.</p>   <p>If it is damaged, it may lead to the fall of the unit and cause the injury.</p>	<p>★ Don't step on the top of the outdoor unit or place something on it.</p>   <p>As falling off the outdoor unit can be dangerous.</p>	<p>★ Don't attempt to repair the air conditioner by yourself.</p>   <p>The wrong repair will lead to an electric shock or fire, so you should contact the service center of GERMAN POOL to repair.</p>

◆ Notices for use

★ 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.

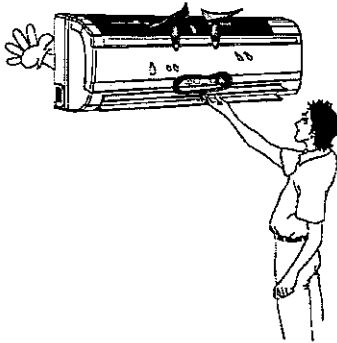


★ To adjust the airflow and direction appropriately. At operating the louvers of air conditioner could be adjusted by pressing the SWING button on wireless remote control to change the airflow direction.

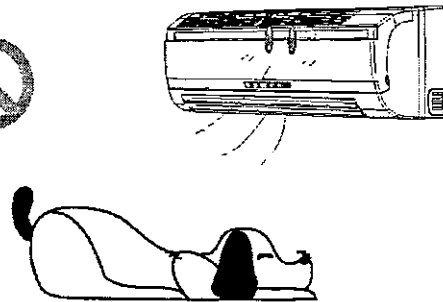


Guide louver

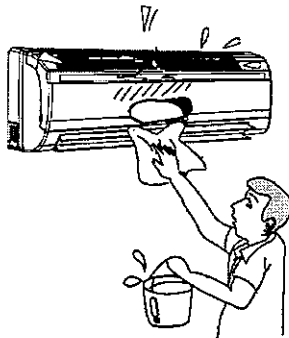
★ Don't insert your hands or stick into the air intake or outlet vents.



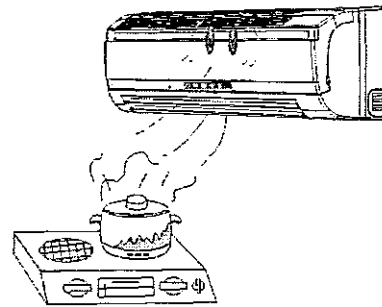
★ Don't blow the wind to animals and plants directly. It can cause a bad influence to them.



★ Splashing water on the air conditioner can cause an electric shock and malfunction.

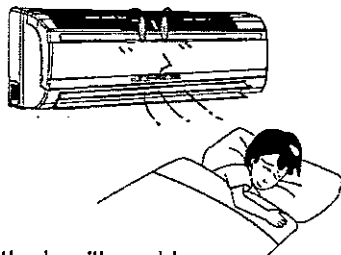


★ Don't place a space heater near the air conditioner.



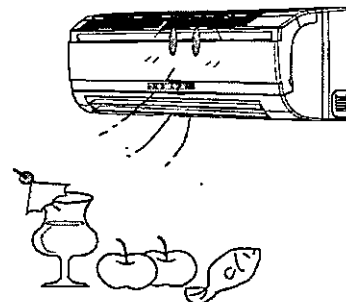
Or CO toxicosis may occur for incomplete burning.

★ Don't apply the cold wind to the body for a long time.



It can cause the health problems.

★ Don't use the air conditioner for other purposes, such as drying clothes, preserving foods, etc.



◆ Notices for operation

Working principle and special functions for cooling

Principle:

Air conditioner absorbs heat in the room and transmit to outdoor and discharged, so that indoor ambient temperature decreased, its cooling capacity will increase or decrease by outdoor ambient temperature.

Anti-freezing function

If the unit is running in COOL mode and in low temperature, there will be frost formed on the heat exchanger, when indoor heat exchanger temperature decreased below 0°C, the indoor unit microcomputer will stop compressor running and protect the unit.

Working principle and special functions for heating

Principle:

- * Air conditioner absorbs heat in the room and transmit to outdoor and discharged, will increase, its heating capacity will decrease by outdoor ambient temperature. so that indoor ambient temperature increased, so room heating capacity.
- * This heating air circulation system can enhance the indoor temperature in a short while.
- * If outdoor temperature got lower, please operate with the other heating ventilating equipments.

Defrosting:

- * When outdoor temperature is low but high humidity, after a long while running, frost will form on outdoor unit, that will effect the heating effect, at this time, the auto defrosting function will act, the heat running will stop for 8-10mins.
- * During the auto defrosting, the fan motors of indoor unit and outdoor unit will stop.
- * During the defrosting, the indoor indicator flashes, the outdoor unit may emit vapor. This is due to the defrosting, it isn't malfunction.
- * After defrosting finished, the heating will recover automatically.

Anti-freezing function:

In "HEAT" mode, if in the following status, the indoor heat exchanger haven't achieve the certain temperature, that the indoor unit will not act, in order to prevent cool air blowing. (Within 3mins)

1.Heating starts. 2.Afer Auto defrosting finished. 3.Heating under the low temperature.

★ The conditions of unit can't normally run

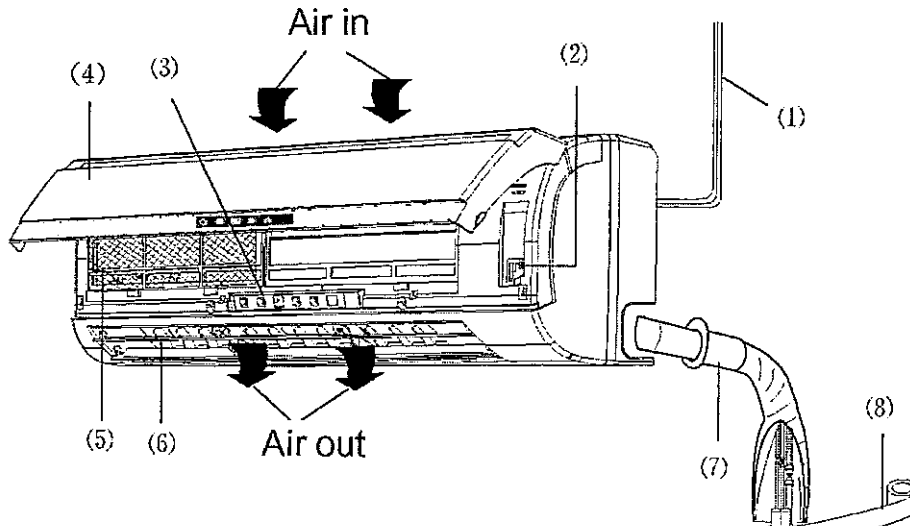
The following temperature range protection device may act, that may cause stop running.

"HEAT" running	Outdoor temp above 24°C	"COOL" running	Outdoor temp above 43°C	"DRY" running	Indoor temp. below 18°C
	Outdoor temp below -7°C		Indoor temp. below 21°C		
	Indoor temp. above 27°C				

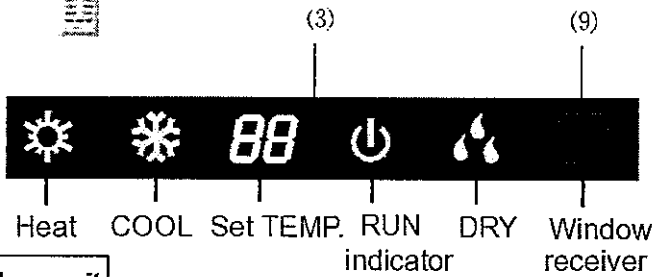
Under the relative humidity above 80%(doors and windows opened) when cooling or dihumidifying for a long time, there will be dew drip off near the air vent.

◆ Name of each part

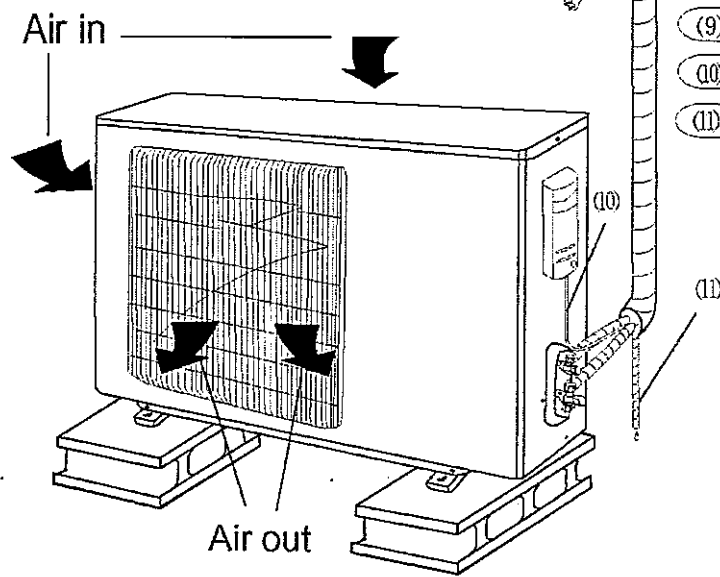
Indoor unit



Wireless remote control



Outdoor unit



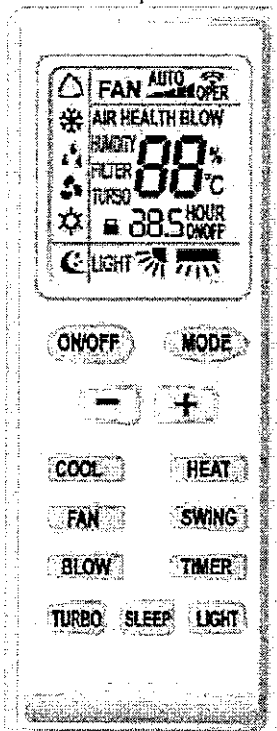
- (1) Power cords
- (2) Manual switch
- (3) Display board
- (4) Front panel
- (5) Filter
- (6) Guide louver
- (7) Wall pipe
- (8) Bind tape
- (9) Window receiver
- (10) Connection wire
- (11) Drainage pipe

◆ Operation of wireless remote control

Name and function of wireless remote control

Note: Besure that there are no obstructions between receiver and remote controoler; Don't drop or throw the remote control; Don't let any liquid in the remote control and put the remote control directly under the sunlight or any place where is very hot.

Signal transmitter



Remote control

ON/OFF

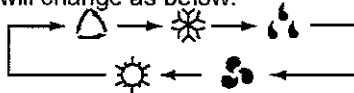
ON/OFF button

- Press this button, the unit will start to run, when repressed, the unit will stop to run.

MODE

Mode button

- Press this button, the running mode will change as below.



△ AUTO

❄ COOL

💧 DRY

••• FAN

☀ only for cooling and heating unit

TEMP.

Temperature button

- When pressing+, the setting temperature will be increased 1°C, when pressing -, the setting temperature will be decreased 1°C (When continuously press and holding + or - button, the temperature will be changed quickly). The temperature setting range is 16-30 °C

COOL

COOL button

- At operating, pressing this button could enter into the COOL mode directly.

HEAT

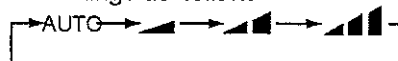
HEAT button

- At operating, pressing this button could enter into the HEAT mode directly.

FAN

Fan speed button

- Press this button once, fan speed will change as follow:



▴ Low fan

▴▴ Middle fan

▴▴▴ High fan

SWING

SWING button

- Pressing this button once the guide louver will start swing at certain angle, when repressed, it will stop swing.

TIMER

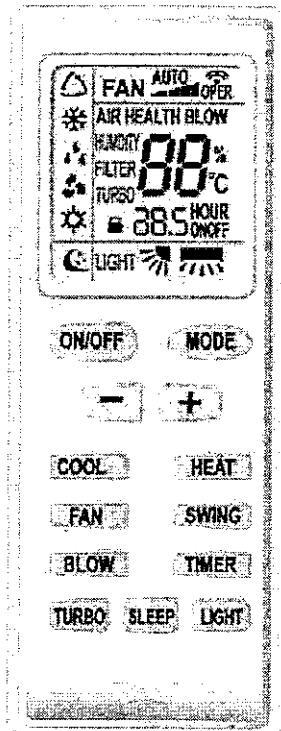
TIMER button

- Pressing this button, will display the last Timer setting, and sample of Hour Off (On) will flash. At this time, to press + or - button could adjust the Timer (when continuously press and holding + or - button, the time value will be changed swiftly) the setting range is 0.5-24hour; when pressing this button again to confirm the time, to send relevant information by the wireless remote control immediately, that the sample of Hour Off (On) will not flash anymore. If it is flashing, and the TIMER button hasn't been pressed, it will quit the Timer setting after 10s. At operating, press this button could set Timer off; When the unit is stopped, press this button could set Timer on. if the time has been confirmed, and repress this button will cancel the TIMER.

◆ Operation of wireless remote control

Names and functions of wireless remote control

This wireless remote control is universal, and it could be used for many units, some buttons of this control which are not available to this unit will not be described below.



Wireless remote control

BLOW

BLOW button

- At COOL and DRY modes, press this button, could set BLOW ON (and Displays the "BLOW") or OFF (the "BLOW" will disappear). After powered on, that is default to BLOW OFF. At AUTO, FAN or HEAT modes, the BLOW function cannot be set, and there is no "BLOW" displayed.

TURBO

TURBO button

- At COOL and HEAT mode, press this button could set TURBO ON (and displays "TURBO") or OFF ("TURBO" disappear). After powered on, it is default to TURBO OFF. At AUTO, DRY, FAN mode, the TURBO function cannot be set, and there is no "TURBO" displayed.

SLEEP

SLEEP button

- Pressing this button, enter into SLEEP state or quit the SLEEP state. After unit is turned off and cancel the SLEEP function. At FAN and AUTO mode, the SLEEP function cannot be set. Is for SLEEP.
- At COOL, DRY mode: Enter into SLEEP state and after one hour running later, the temp. of main unit be increased 1°C, 2hours later, the setting temp. will be increased 2°C, after pressing this button, the unit normally runs at the setting temp.
- In HEAT mode: After entered the SLEEP mode and run for 1hour later, the temperature of main unit will be decreased 1°C, 2hours later, setting temperature will be decreased 2°C, after pressing this button, the unit normally runs at the setting temp. After SLEEP mode is set up, the setting of wireless remote control will not change.

Light

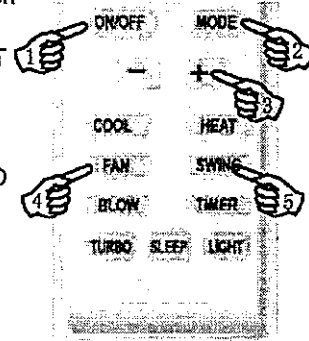
LIGHT button

- Pressing this button, can select the Light On and Light Off.

◆ Operation of wireless remote control

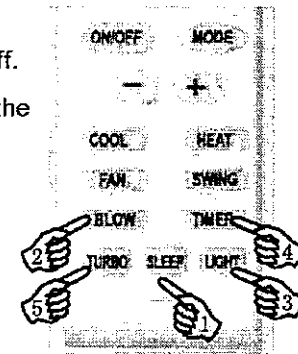
Guide for operation- general operation

1. After powered on, press ON/OFF button, the unit will start to run. (Note: When it is powered on, the guide louver of main unit will close automatically.)
2. Press MODE button, select desired running mode, or press COOL or HEAT mode to enter into the corresponding operation directly.
3. Pressing + or - button, to set the desired temperature (It is unnecessary to set the temp. at AUTO mode.)
4. Pressing FAN button, set fan speed, can select AUTO FAN, LOW, MID and HIGH.
5. Pressing SWING button, to select the swing.



Guide for operation- Optional operation

1. Press SLEEP button, to set sleep.
2. Press TIMER, + and - button, can set the scheduled timer on or timer off.
3. Press LIGHT button, to control the on and off of the displaying part of the unit (This function may be not available for some units).
4. Press TURBO button, can realize the ON and OFF of TURBO function.



Introduction for special functions

★ About AUTO mode

When AUTO mode is selected, the setting temperature will not be displayed on the LCD of the wireless remote control, according to the indoor temperature, unit will automatically select the appropriate running mode, to make the environment comfortably, without the user to operate.

★ About DRY Function

The DRY function is used for after the unit turned off, to dry the moisture on the evaporator of indoor unit, in order to prevent the moldy.


1. The DRY ON has been set up: At this time, press ON/OFF button, the whole unit will be turned off, but the indoor fan motor still run at low fan speed for a while and then stop. During this course, repress the BLOW button, can stop the indoor fan motor directly.
2. The DRY OFF has been set up: At this time, press ON/OFF button, the whole unit will directly turn off.

◆ Operation of wireless remote control


★ About the Super Strong function

When the Super Strong function is turned on, the whole unit runs at the high fan speed, and runs at the Quick COOL or Quick HEAT operation, to make the ambient temperature swiftly approach to the setting temperature. Turn off the Super Strong function, the whole unit runs at the setting fan speed.

★ About LOCK

To press + and - button, can lock or unlock the keyboard, after locked, the symbol of the lock  will be displayed at this time, to press any key, the symbol will flash for 3 times. After it is unlocked, the symbol will disappear.

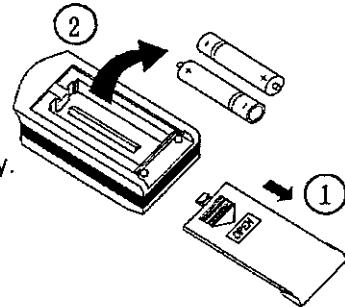
Changing batteries and notices

1. Slightly to press the place with , along the arrowhead direction to push the back cover of wireless remote control. (As show in figure)


2. Take out the old batteries. (As show in figure)

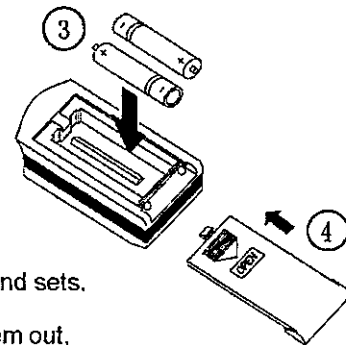
3. Insert two new AAA1.5V dry batteries, and pay attention to the polarity. (As show in figure)

4. Attach the back cover of wireless remote control. (As show in figure)



★ NOTE:

- When changing the batteries, do not use the old or different batteries, otherwise, it can cause the malfunction of the wireless remote control.
- If the wireless remote control will not be used for a long time, please take them out, and don't let the leakage liquid damage the wireless remote control.
- The operation should be in its receiving range.
- It should be placed at where is 1m away from the TV set or stereo sound sets.
- If the wireless remote control cannot operate normally, please take them out, after 30s later and reinsert, if they cannot normally run, please change them.
- When it is need to control the main unit, please aim at the receiving device, in order to improve the sensitivity of the main unit. When the wireless remote control is sending information,  the symbol will flash 1s. The main unit is receiving the information, will send a sound.

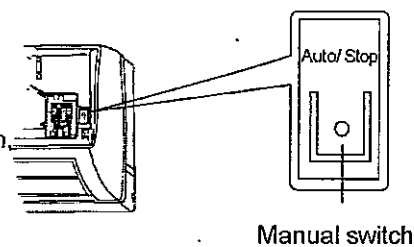


Sketch map for changing batteries

Emergency running

When the wireless remote control is lost or damaged, please use the manual switch, at this time, it is running in Auto Run mode, that will not change the temperature setting value and fan speed.

- At operation: When the unit stopped running, press ON/OFF button, unit will enter into AUTO RUN mode. The microcomputer will accord to the room temperature to select the (COOL, HEAT, FAN) mode automatically, to obtain the comfortable effect.
- At stopping: When the unit is running, press the ON/OFF button of the manual switch, the unit will stop work.



Manual switch

◆ Clean and care

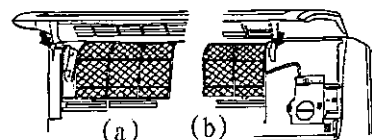
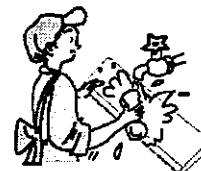
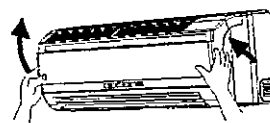


Caution

- Turn power off and pull out the power plug before cleaning air conditioner, or it may cause electric shock.
- 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. (So wipe the units with a dry soft cloth, or a cloth slightly moistened with water or cleanser.)

Clean the front panel (make sure to take it off before cleaning)

- ① Take off the front panel
Along the direction of arrowhead to lift up the front panel, and after disassembled the displayer, to pull the front panel at the both slots of the front panel, then take it off.
- ② Washing
Clean with a soft hairbrush, water and neutral detergent, then to dry it in the shade. (Note: Before cleaning, please take off the displayer at first, then clean the front panel, in order to prevent the water damage and never use the water above 45°C to wash the panel, or it could cause deformation or discolouration.)



- ③ Install front panel
Place two supporters of the front panel into the slots, along the direction of arrowhead to cover and clasp the front panel.
Fig.4(a,b)

Fig.4

Clean the air filter (Recommended once every three months)

Note: If dust is much more around the air conditioner, the air filters should be cleaned many times. After taking off the filter, don't touch the fin of indoor unit, in order to avoid hurt your fingers.

- ① Take down the air filter
At the slot of surface panel to open an angle, pull the air filter downward and take it out, please see the Fig. 5(a,b).
- ② Clean the air filter
To clean the dust adhering to the filters, you can either use a vacuum cleaner, or wash them with warm water (the water with the neutral detergent should below 45°C, and dry it in the shade.

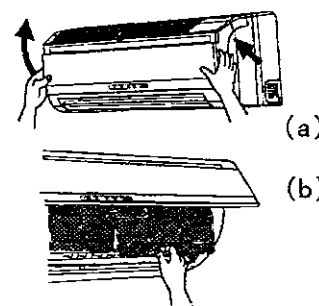
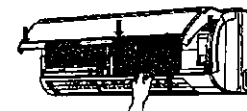
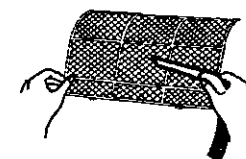


Fig. 5

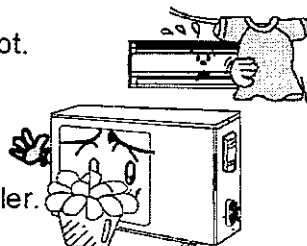
Note: Never use water above 45°C to clean, or it can cause deformation or discoloration. Never parch it by fire, or can cause a fire or deformation.

- ③ Insert the air filter
Reinsert the filters along the direction of arrowhead, and then to cover the cover and clasp it.



Check before use

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



Maintain after use

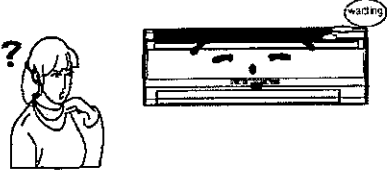
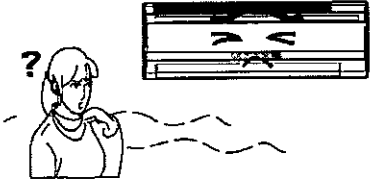
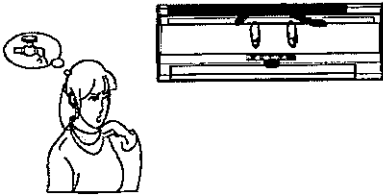
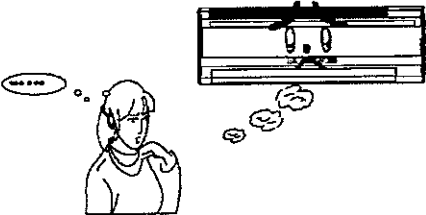
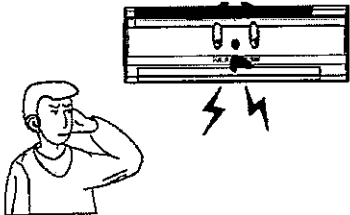
- ① Turn main power off.
- ② Clean the filter and indoor and outdoor units' bodies.
- ③ Clear dust and obstructions from the outdoor unit.
- ④ Repaint the rubiginous place on the outdoor unit to prevent it from spreading.

◆ Troubleshooting

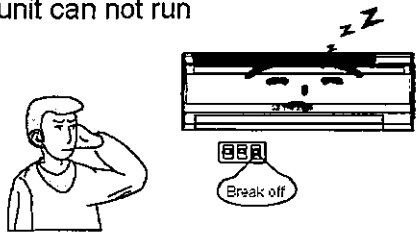
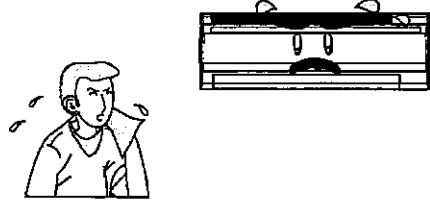
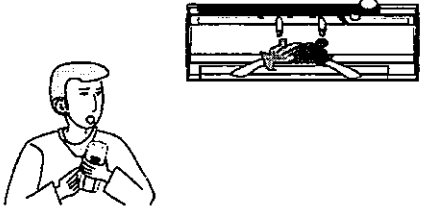


CAUTION

• 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	Troubleshooting
<p>Not operate immediately when the air conditioner is restarted.</p> 	<p>Once the air conditioner is stopped, it will not operate in approximately 3minutes to protect itself.</p>
<p>There's unusual smell blowing from the outlet after operation is started.</p> 	<p>The unit has no peculiar smell by itself. If has, that is due to the smell accumulated in the ambient. Solution method: Cleaning the filter(refer to P16). If problem still has, so need to clean air conditioner. (please contact with GERMAN POOL authorized maintenance center.)</p>
<p>Sound of water flow can be heard during the operation.</p> 	<p>The air conditioner is started, when it is running the compressor started or stopped running, or the unit is stopped, sometimes there is swoosh or gurgle, the sound is due to refrigerant flowing they are not malfunctions.</p>
<p>In COOL mode, sometimes the mist emitted from the air outlet vent.</p> 	<p>When the indoor temperature and humidity are very high, this phenomenon would happen. This is caused by the room air is swiftly cooled down. After running for a while, indoor temperature and humidity will fall down, the mist will die away.</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 changes of temperature.</p>

◆ Troubleshooting

Phenomenon	Troubleshooting
<p>The unit can not run</p> 	<ul style="list-style-type: none"> ● Has the power been shut down? ● Is the circuit protection device tripped off or not? ● Is voltage higher or lower? (Tested by professionals) ● Is the Timer correctly used?
<p>Cooling(Heating) efficiency is not good.</p> 	<ul style="list-style-type: none"> ● Is Temp. setting suitable? ● Were inlet and outlet vents obstructed? ● Is filter dirty? ● Are the windows and doors closed? ● Did Fan speed set at low speed? ● Is there any heat sources in the room?
<p>Wireless remote control is not available</p> 	<ul style="list-style-type: none"> ● The unit is interfered by abnormal or frequent functions switchover occasionally the controller cannot operate. At this time, you need to pull out of the plug, and reinsert it. ● Is it in its receiving range? Or obstructed? ● To check the voltage in wireless remote control inside is charged, otherwise to replace the batteries. ● Whether the wireless remote control is damaged.
<p>If water leakage in the room</p>	<ul style="list-style-type: none"> ● The air humidity is on the high side. ● Condensing water over flowed. ● The connection position of indoor unit drainage pipe is loosed.
<p>If water leakage in outdoor unit</p>	<ul style="list-style-type: none"> ● When the unit is running in COOL mode, the pipe and connection of pipe would be condensed due to the water cooled down. ● When the unit is running in Auto Defrosting mode the ice thawed and flowed out. ● When the unit is running in HEAT mode, the water adhered on heat exchanger dripped off.
<p>Noise from indoor unit emitted.</p>	<ul style="list-style-type: none"> ● The sound of fan or compressor relay is switching on or off. ● When the defrosting is started or stop running, it will sound. That is due to the refrigerant flowed to the reverse direction.

◆ Troubleshooting

Phenomenon	Troubleshooting
Indoor unit cannot deliver air	<ul style="list-style-type: none"> ● In HEAT mode, when the temperature of indoor heat exchanger is very low, that will stop deliver air in order to prevent blowing cool air. ● In HEAT mode, when the outdoor temperature is low or high humidity, there are much frost be formed on the outdoor heat exchanger, that the unit will automatically defrost, indoor unit stop blowing air for 8-10min. During the defrosting, there is water flowing out or vapor be produced. ● In dehumidifying mode, sometimes indoor fan will stop, in order to avoid condensing water be vaporized again, restrain temperature rising.
Moisture on air outlet vent	If unit is running under the high humidity for a long time, the moisture will be condensed on the air outlet grill and drip off.



Immediately stop all operations and plug out, contact the dealer in following situations.

- ▲ There is harsh sound during operation
- ▲ The terrible odors emitted during operation
- ▲ Water is leaking in the room
- ▲ Air switch or protection switch often breaks
- ▲ Carelessly splash water or something into air conditioner
- ▲ There is an abnormal heat in power supply cord and power plug.

Stop running and pull out of the plug.

◆ Installation service- Notices for installation



Important Notices

1. The unit installation work must be done by qualified personnel according to the local rules and this manual.
2. Before installing, please contact with local authorized maintenance center, if unit is not installed by the authorized maintenance center, the malfunction may not solved, due to discommodious contacts.
3. When removing the unit to the other place, please firstly contact with the authorized GERMAN POOL Maintenance Center in the local area.
4. A air switch having a contact separation of at least 3mm in all poles should be fixed in fixed wiring.
5. The appliance shall be installed in accordance with national wiring regulation.

Basic Requirements For Installation Position

Install in the following place may cause malfunction. If it is unavoidable contact with service center please:

- Place where strong heat sources, vapors, flammable gas or volatile object are emitted
- Place where high-frequency waves are generated by radio equipment, welders and medical equipment.
- Place where a lot of salinities such as coast exists.
- Place where the oil (machine oil) is contained in the air.
- Place where a sulfured gas such as the hot spring zones is generated.
- Other place with special circumstance.

Indoor Unit Installation Position Selection

1. The air inlet and outlet vent should be far from the obstruction, make sure that the air can be blown through the whole room.
2. Select a position where the condensing water can be easily drained out, and the place is easily connected for outdoor unit.
3. Select a location where the children can not reach.
4. Can select the place where is strong enough to withstand the full weight and vibration of the unit. And will not increase the noise.
5. Be sure to leave enough space to allow access for routine maintenance. The height of the installed location should be 230cm or more from the floor.
6. Select a place about 1m or more away from TVset or any other electric appliances.
7. Select a place where the filter can be easily taken out.
8. Make sure that the indoor unit installation should accord with installation dimension diagram requirements.
9. The appliance shall not be installed in the laundry.
10. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
11. The temperature of refrigerant circuit will be high, please keep the interconnection cable away from the copper tube.
12. Avoid a location where there is heat source high humidity or inflammable gas.
13. Do not use the unit in the immediate surroundings of a laundry a bath a shower or a swimming pool.

Outdoor Unit Installation Position Selection

1. Select a location from which noise and outflow air emitted by unit will not inconvenience neighbors, animals, plants.

◆ Notices for installation

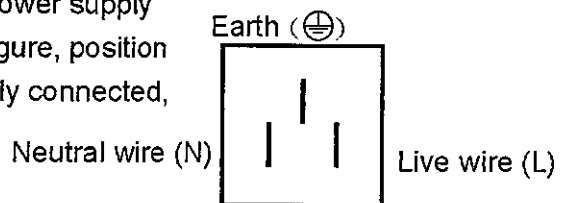
2. Select a location where there should be sufficient ventilation.
3. Select a location where there should be no obstructions cover the inlet and outlet vent.
4. The location should be able to withstand the full weight and vibration of the outdoor unit and permit safe installation.
5. Select a dry place, but do not expose under the direct sunlight or strong wind.
6. Make sure that the outdoor unit installation dimension should accord with installation dimension diagram, convenient for maintenance, repair.
7. The height difference of connecting the tubing within 5m, the length of connecting the tubing within 10m.
8. Select a place where it is out of reach for the children.
9. Select a place where will not block the passage and do not influence the city appearance.

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. Voltage applying range: the normal running range is rated voltage 90%-110%.
3. Don't drag the power cable emphatically.
4. 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.
5. The min. distance from the unit and combustive surface is 1.5m.

Note:

- In the family, the live wire, neutral wire in the power supply socket that should be connected as the right figure, position cannot be wrong connected, and should reliably connected, there should be not short circuit in the inside.
- wrong connection may cause fire.

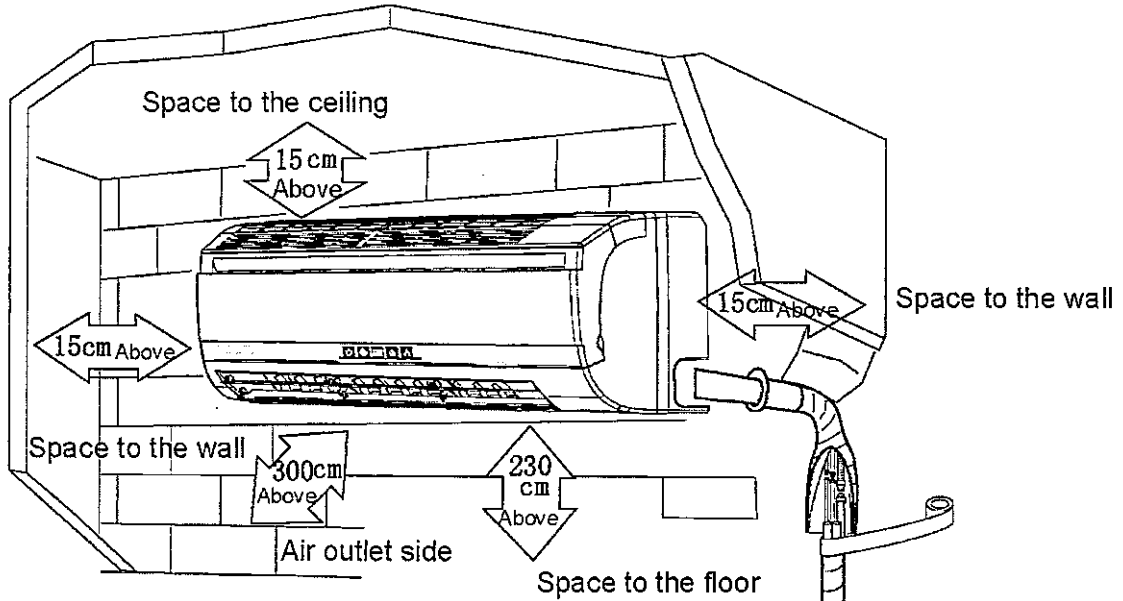
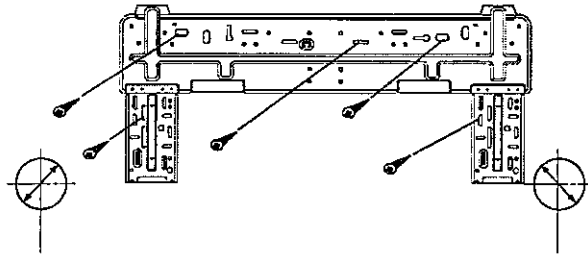


Earthing requirements

1. Air conditioner is type I electric appliance, thus please do conduct reliable earthing measure.
2. The yellow-green two-color wire in air conditioner is earthing wire and cannot be used for other propose. It cannot be cut off and be fix it by screw, otherwise it would cause electric shock.
3. The user power must offer the reliable earthing terminal. Please don't connect the earthing wire with the following place:
 - ① Tap water pipe
 - ② Gas pipe
 - ③ Contamination pipe
 - ④ Other places that professional personnel consider them unreliable.

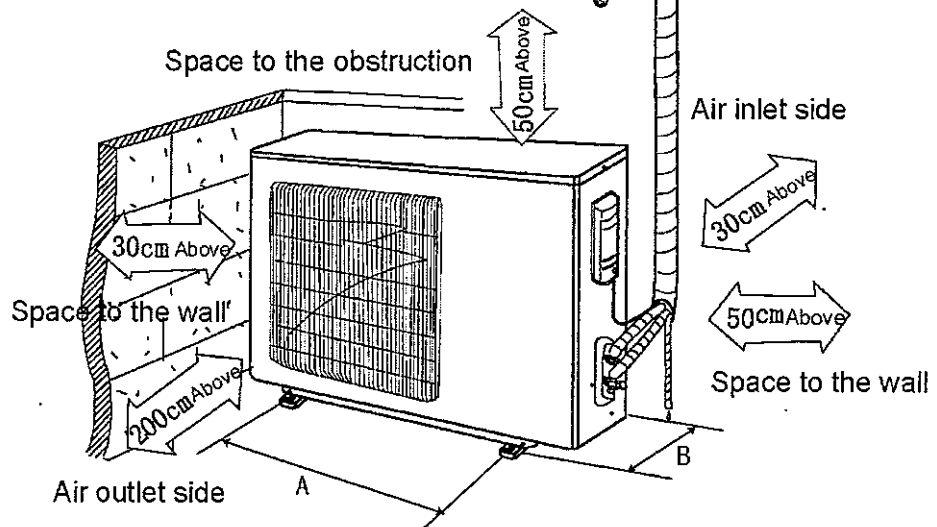
◆ Installation dimension diagram

Installation dimension diagram



The outdoor unit installation dimension

A	B
572 (mm)	378 (mm)



◆ Installation Service- Install indoor unit

Install the rear panel

1. Always mount the rear panel horizontally. As the water drainage pipe at the left, when adjusting the rear panel, this side should not be too high; the right side should be slightly high.
2. Fix the rear panel on the selected location.
3. Be sure that the rear panel has been fixed firmly enough to withstand the weight of an adult of 60kg, furthermore, the weight should be evenly shared by each screw.

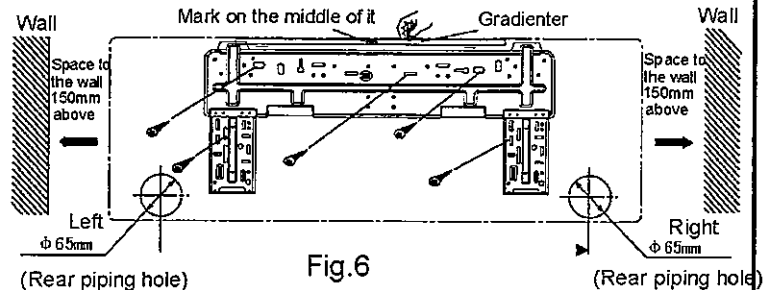
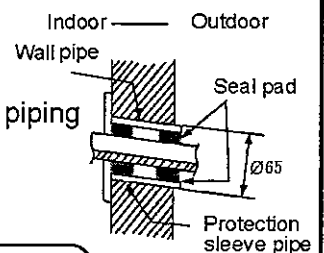


Fig.6

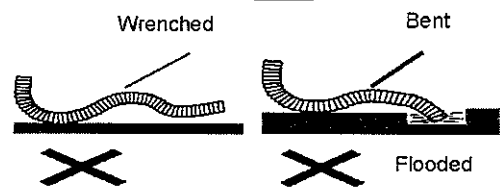
Install the piping hole

1. Make the piping hole ($\phi 65$) in the wall at a slight downward slant to the outdoor side. At Fig.6.
2. Insert the piping-hole sleeve into the hole to prevent the connection piping and wiring from being damaged when passing through the hole.



Install the water drainage pipe

1. For well draining, 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. When the long drainage hose passing through indoor, should wrap the insulation materials.



Connect indoor and outdoor electric wires

1. Open the front panel upwardly;(Fig.5a)
2. Screw off the fixing screw of cover plate and screw off cover plate (Fig. 7)
3. Put the power connection cable through the back of indoor unit wire hole and take it out
4. Connect the blue wire of power connection cord to the terminal on "N(1)", the black one to "2", the brown one to "3", the yellow-green one (earth wire) to "⊕" (Fig. 8)
5. Put the power connection cable the section, which with sheath into wire groove, and cover the cover plate, screw on the fixing screw tighten the connection wire.
6. Cover the front panel cover.

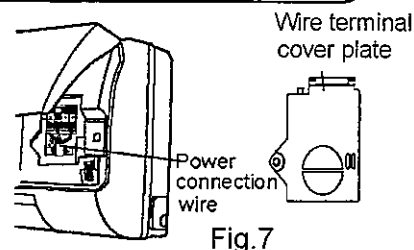


Fig.7

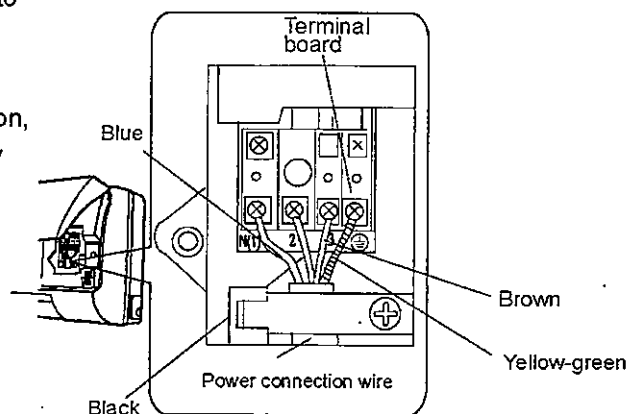


Fig. 8

◆ Install indoor unit

NOTE:

When connecting the electric wire if the wire length is not enough, please contact with the authorized service shop to buy a exclusive electric wire that is long enough and the joint on the wire are not allowed.

- The electric wiring must be correctly connected, wrong connection may cause spare parts malfunction.
- Tighten the terminal screw in order to prevent loose.
- After tighten the screw, slightly pull the wire and confirm whether is it firm or not.
- If the earth wire is wrong connection, that may cause electric shock.
- The cover plate must be fixed, and tighten the connection wire, if it is poor installed, that the dust, moisture may enter in or the connection terminal will be affected by outside force, and will cause fire or electric shock.

Install the indoor unit

- The piping can be lead out from right, right rear, left, 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 in necessary (10).
 - (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 electric wire, water pipe with tape and put them through the piping hole (Fig.11)
 3. Hang the mounting slots of the indoor unit on the upper tabs of the rear panel and check if it is firm enough. (Fig.12)
 4. The height of the installed location should be 2m or more from the floor.

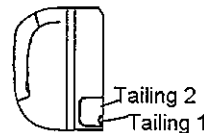


Fig.10

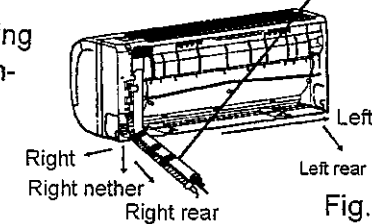
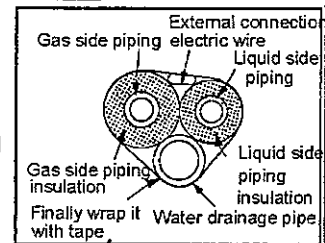


Fig.11

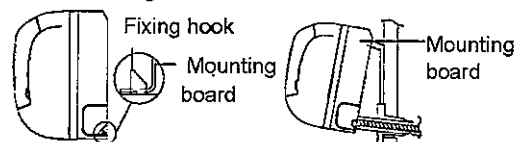


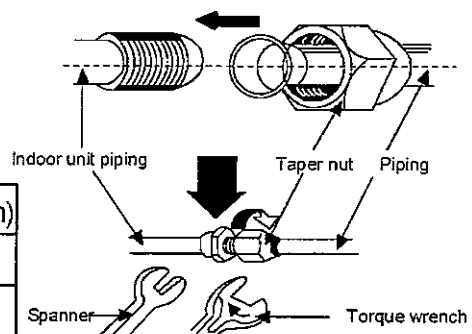
Fig.12

Install the 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 refer to the following.

Tightening torque table

Hex nut diameter	Tightening torque table(N.m)
Φ6	15~20
Φ9.5	31~35
Φ12	50~55

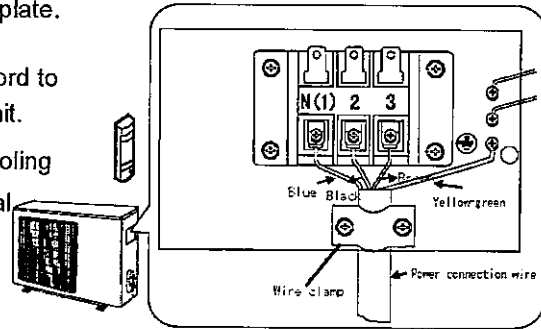


NOTE: Firstly connect the connection pipe to indoor unit, then to outdoor unit; pay attention to the piping bending, do not damage the connection pipe; the joint nut couldn't tighten too much, otherwise it may cause leakage.

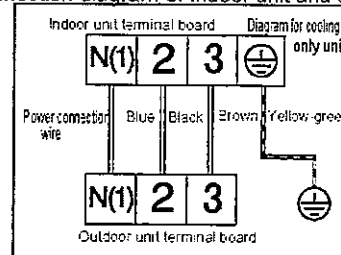
◆ Installation service- Install outdoor unit

Electric wiring

1. Disassemble the handle on the outdoor unit right side plate. (1pc screw)
2. Take off wire clamp. Connect and fix power connect cord to terminal of line bank. Wiring should fit that of indoor unit.
3. Fix the power connection cable with wire clamp, for cooling and heating unit, then use the wire clamp to fix the signal control wire, then connect the corresponding connector.
4. Ensure wire has been fixed well.
5. Install the handle. (1 screw to fix)



Connection diagram of indoor unit and outdoor unit:



Note:

- Wrong wiring may cause spare parts malfunction.
- After the cable fixed, make sure there should be a free space between the connection and fixing place on the lead wire.

Air purging and leakage test

1. Take out the nut cover of the inlet for refrigerant. Fig.12
2. Align the center of the piping and tighten the conical nut with hands.
3. To tighten the conical nut with spanner.
4. Take off the valve cover of liquid valve and gas valve and nut of Freon charge nozzle.
5. Loosen the valve stem of liquid valve with a hex wrench. Push the check valve core of gas valve to discharge air and moisture remaining in refrigerant system.
6. After 15seconds, stop pushing the valve core as soon as the refrigerant starts to be discharged, and reinstall the service port nut.
7. Open the stem of liquid valve and gas valve completely. (Fig. 12)
8. Tighten the valve cover, use the soap water or leakage detector to test, the outdoor unit and pipeline connection leak or not.
9. If possible, adopt vacuum pump vacuum the air from the gas stem. (Fig.13)

Fig.12

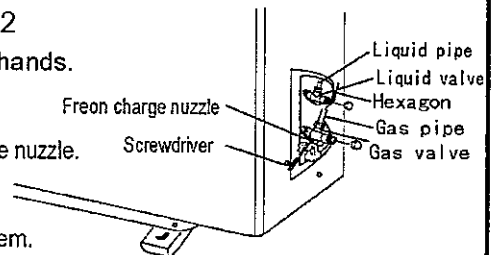
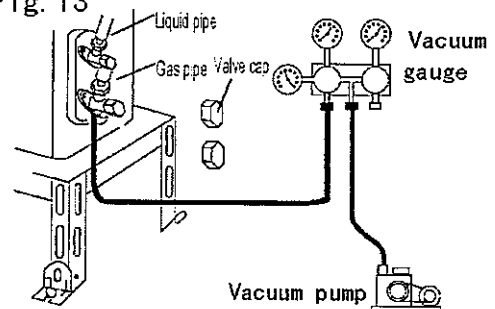


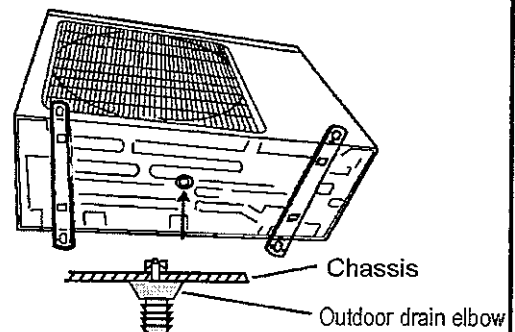
Fig. 13



Outdoor condensation drainage (Heat pump type only)

When the unit is heating, the condensing water and defrosting water can be drained out reliably through the drain hose.

Installation: Install the outdoor drain elbow in $\varnothing 25$ hole on the base plate, and joint the drain hose to the elbow, so that the waste water formed in the outdoor unit can be drained out to a proper plate.



◆ Check after installation and test operation

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.
Is water drainage 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
Is 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.

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, press "ON/OFF" button on the wireless remote control to start the operation.
- (2) Press MODE button, to select the COOL, HEAT, FAN to check whether the operation is normal or not.

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-18

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；燈泡及塑膠配件；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

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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
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此保用證只適用於香港

This warranty card is valid only in Hong Kong

GERMAN
POOL



德國寶

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