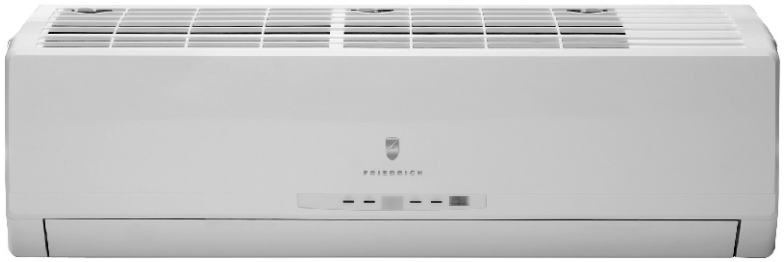
Installation and Operation Manual

FRIEDRICH



Models

Indoor Unit	MW09C1H	MW12C1H
Outdoor Unit	MR09C1H□□	MR12C1H□□

920-088-01

CONTENTS

Operation and maintenance

Installation service

This symbol stands for the items should be forbidden.

This symbol stands for the items should be followed

Thank you for choosing Friedrich Air Conditioning, please read this owner's manual carefully before operating the unit and keep it carefully for consulation.

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 reponsible for their safety.
Children should be supervised to ensure that they do not play with the appliance.

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

Image shown in this operating instruction manual here is indicative only. Actual product you receive may differ!

Congratulations

Thank you for your decision to purchase Friedrich. Your new Friedrich has been carefully engineered and manufactured to give you many years of dependable, efficient operation, maintaining a comfortable temperature and humidity level. Many extra features have been built into your unit to assure quiet operation, the greatest circulation of cool, dry air, and the most economic operation.

General Instructions

This Installation and Operation Manual has been designed to insure maximum satisfaction in the performance of your unit. For years of trouble-free service, please follow the installation instructions closely. We cannot overemphasize the importance of proper installation.

⚠WARNING

Refrigeration system under high pressure

Do not puncture, heat, expose to flame or incinerate.

Only certified refrigeration technicians should service this equipment.

R410A systems operate at higher pressures than R22 equipment. Appropriate safe service and handling practices must be used.

Only use gauge sets designed for use with R410A. Do not use standard R22 gauge sets.

Here are some suggestions to help you use your new Friedrich most efficiently:

1. Carefully read and follow the installation instructions.
2. Make sure the unit is the right capacity for the area being cooled. An undersized unit makes the unit work too hard, using more electricity than needed and increases wear. An oversized unit will cycle on and off too rapidly, and therefore cannot control humidity as well.
3. Clean the filter frequently (See Routine Maintenance, Page 27).
4. Do not block the air flow to and from the unit.
5. A dirty filter or improperly set controls can affect the cooling ability of the unit.
6. If cooling is weak and you have verified that the filter is clean and the controls are properly set, the unit may need service and you should call your Friedrich service provider to check the unit.
7. Keep blinds, shades and drapes closed on the sunny side of the room being cooled to reduce radiant heat.
8. Proper insulation helps your unit maintain the desired inside temperature.
9. Whenever possible, shade south and west facing windows.
10. Keep window coverings away from the unit to provide free air flow.

⚠WARNING

Read Installation Operation Manual

Please read this manual thoroughly prior to equipment installation or operation.

It is the installer's responsibility to properly apply and install the equipment. Installation must be in conformance with the NFPA 70 -2008 National Electric Code or current edition, International Mechanic Code 2009 or current edition and any other applicable local or national codes.

Failure to do so can result in property damage, personal injury or death.

Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.

This is a safety Alert symbol.
This symbol alerts you to potential hazards that can kill or hurt you and others.
All safety messages will follow the safety alert symbol with the word "WARNING" or "CAUTION". These words mean:

⚠WARNING — Indicates a hazard which, if not avoided, can result in severe personal injury or death and damage to product or other property.

⚠CAUTION — Indicates a hazard which, if not avoided, can result in personal injury and damage to product or other property.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what will happen if the instructions are not followed.

NOTICE — Indicates property damage can occur if instructions are not followed.

Notices for use

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 decreases below 32°F, the indoor unit microcomputer will stop compressor running and protect the unit.

Working principle and special functions for heating

Principle:

* Air conditioner absorbs heat from outdoor and transmits to indoor, in this way to increase room temperature. This is the heat pump heating principle, its heating capacity will be reduced due to outdoor temperature decrease.
* If outdoor temperature becomes very low, please operate with other heating 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.

◆ Notices for use

Anti-cool wind function:

In "Heat" mode, under the following three kinds of state, if indoor heat exchanger doesn't arrive at certain temp., indoor fan will not start, in order to prevent cool wind blowing(within 2 mins):

1. Heating starts. 2.After Auto Defrost finished. 3.Heating under the low temperature.

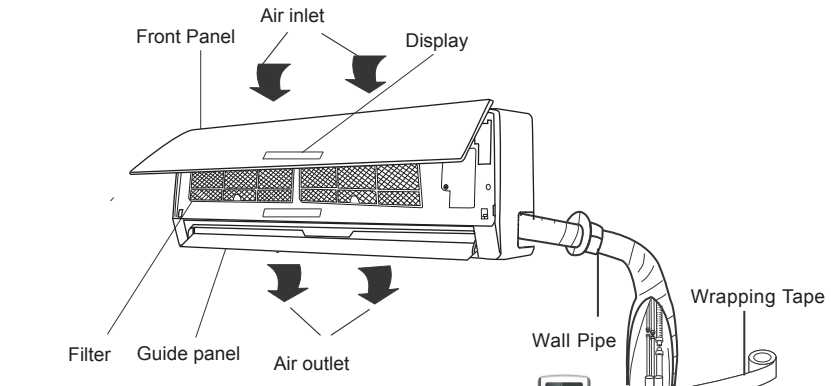
※ Working temperature range

	Indoor sideDB/WB(°F)	Outdoor sideDB/WB(°F)
Maximum cooling	95/75	115/86
Minimum cooling	70/59	70/-
Maximum heating	75/—	75/60
Minimum heating	68/—	5/-

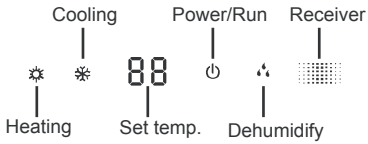
The operating temperature range (outdoor temperature) for cooling unit is 32℉~115℉; for cooling and heating unit is 5℉~115℉.

Typical Unit Components

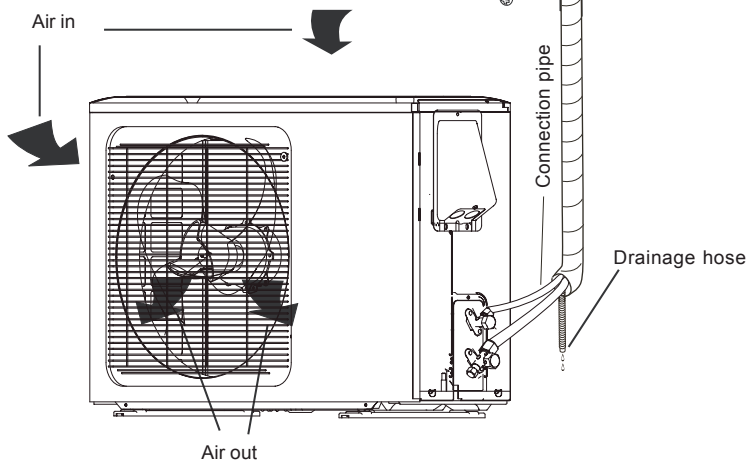
Indoor unit (Image shown here is indicative only. Actual product you receive may differ)



Display icon（Only for some Units）:



Outdoor unit



Operation of Remote Controller

1 START / STOP
Press to start or stop operation.

2 ▼ : Press to decrease temperature setting.

3 ▲ : Press to increase temperature setting.

4 FAN AUTO
Press to set fan speed.

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

6 SENSOR

7 CLOCK
Press it set clock.

8 TIMER ON
Press it to set auto-on timer.

9 AIR SWEEP
Press it set swing angle.

10 EXTEND

11 TEMP

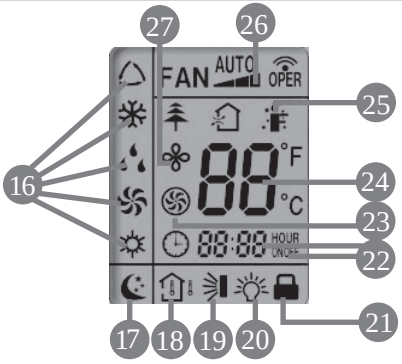
12 TIMER OFF
Press it to set auto-off timer

13 TURBO

14 SLEEP

15 LIGHT
Press it to turn on/off the light.

Operation of Remote Controller



16 MODE icon:

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

17 SLEEP icon :

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

18 TEMP icon:

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

19 AIR SWEEP icon:

is displayed when pressing the AIR SWEEP button. Press this button again to clear the display.

20 LIGHT icon:

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

21 LOCK icon:

is displayed by pressing "+" and "-" buttons simultaneously. Press them 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.

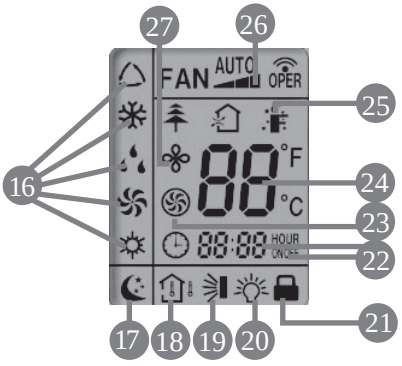
23 TURBO icon:

is displayed when pressing the TURBO button.Press this button again to clear the display.

24 DIGITAL display:

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

◆ Operation of Remote Controller



25 SENSOR icon:

is displayed when pressing the SENSOR button. Press this button again to clear the display.

26 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.

27 EXTEND icon:

is displayed when pressing the EXTEND button. Press this button again to clear the display.

Remote Control Instructions

Remote Controller Description

1 START / STOP:

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

2 ▼:

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

3 ▲ :

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

4 FAN AUTO:

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

Low speed Medium speed High speed

5 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.

6 SENSOR:

Press this button to turn on SENSOR function. The unit automatically adjust temperature according to the sensed temperature. Press this button again to cancel SENSOR function.

7 CLOCK:

Pressing CLOCK button, blinks. Within 5 seconds, pressing + or - button adjusts the present time. Holding down either button above 2 seconds increases or decreases the time by 1 minute every 0.5 second and then by 10 minutes every 0.5 second. During blinking after setting, press CLOCK button again to confirm the setting, and then will be constantly displayed.

Remote Control Instructions

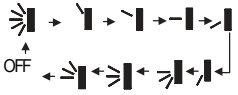
8 TIMER ON :

Press this button to initiate the auto-ON timer. To cancel the auto-timer program, simply press this button again.

After pressing this button, ◷ disappears and "ON "blinks. 00:00 is displayed for ON time setting. Within 5 seconds, press + or - button to adjust the time value. Every press of either button changes the time setting by 1 minute. Holding down either button rapidly changes the time setting by 1 minute and then 10 minutes. Within 5 seconds after setting, press TIMER ON button to confirm.

9 AIR SWEEP:

Press this button to set up & down swing angle, which circularly changes as below:



This remote controller is universal. If any command  ,  or  is sent out, the unit will carry out the command as 

 indicates the guide louver swings as:

10 EXTEND:

Pressing EXTEND button in COOL or DRY mode, the icon  is displayed and the indoor fan will continue operation for 10 min utes in order to dry the indoor unit even though you have turned off the unit.

After energization, EXTEND OFF is defaulted. EXTEND is not available in AUTO, FAN or HEAT mode.

11 TEMP:

By pressing this button you can display the indoor setting temperature or indoor ambient temperature.When the indoor unit is first powered on it will display the setting temperature, if the temperature's display status is changed from other status to" ⌂",displays the ambient temperature, 5s later or within 5s, it receives other remote control signal that will return to display the setting temperature. if the users haven't set up the temperature displaying status,that will display the setting temperature.(This function is not applicable for some models).

12 TIMER OFF :

Press this button to initiate the auto-off timer. To cancel the auto-timer program, simply press the button again.TIMER OFF setting is the same as TIMER ON.

13 TURBO:

Press this button to activate / deactivate the Turbo function which enables the unit to reach the preset temperature in the 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).

Remote Control Instructions

14 SLEEP:

Press this button to go into the SLEEP operation mode. Press it again to cancel this function. This function is available in COOL or DRY mode to maintain the most comfortable temperature for you.

15 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 tunrned off, disappears.

16 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.

17 Combination of "MODE" and "-" buttons: Allows you to toggle between Fahrenheit and Celsius.

When the unit is OFF, press "MODE" and "-" buttons simultaneously to switch between ℃ and ℉.

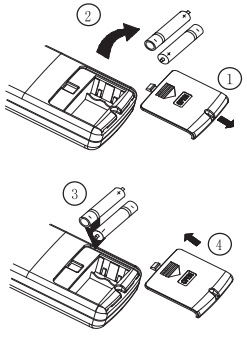
Replacement of Batteries

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.



Sketch map for replacing batteries

★ Notes:

- When replacing the batteries, do not use old or different types of batteries, otherwise, it may cause malfunction.
- If the remote controller will not be used for a long time, please remove batteries to prevent batteries from leaking.
- The operation should be performed in its receiving range.
- It should be kept 3 feet away from the TV set or stereo sound sets.
- If the 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.

Front Panel Illumination On/Off

Display indicator light control of indoor unit

- Display indicator light on: To turn 'On' the light function,the mark will display on the remote controller screen by pressing this button. In which case,the diss-player indicator light will be on if the AC receives this signal.
- Display indicator light off: To turn 'Off' the light function,the will disappear on the remote controller screen by pressing this button. In which case, the display indicator light will be off if the AC receives this signal.

Emergency operation

If the wireless remote control is lost or broken, please use the manual switch button. At this time, the unit will run in the Auto mode, but the temperature and fan speed cannot be changed. The operation is shown below:

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

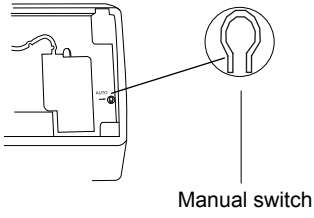


Fig.3

- Turn on the unit: Press manual button and unit will run in Auto mode immediately. The microcomputer will adjust to the indoor temperature to select (Cooling or Fan) and obtain a comfortable setting.
- Turn off the unit: Press manual switch to turn off unit.

Routine Maintenance

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

When cleaning the front panel, please dip the cloth into the water temperature of 45℃ below, then to dry the cloth and wipe the dirty part.

Note: Please do not to immerse the front panel in water, due to there are microcomputer components and circuit diagrams on the front panel.

Clean the air filter (Recommended once every three months)

NOTE: If there is an excessive amount of dust around the air conditioner, the air filter should be cleaned more frequently. Once filters are removed do not touch fins, edges may be sharp. Failure to do so can result in minor to moderate personal injury.

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. 4(a, b).

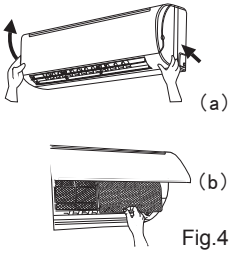
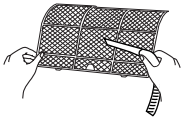


Fig.4

② Clean the air filter

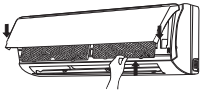
To clean the dust adhering to the filters, you can either use a vacuum cleaner, or wash them with warm water the water with the neutral detergent should below 45 degree) ,and dry it in the shade.

NOTE: Never use water above 45℃ to clean, or it can cause deformation or discoloration.



③ Insert the air filter

Reinsert the filters along the direction of arrowhead, and then to cover the cover and clasp it.



Basic 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.

Complaint	Cause	Solution
Unit does not operate.	• Unit turned off • Thermostat is satisfied • Local power failure	• Turn unit on. • Raise/Lower temperature setting. • Unit will resume normal operation once power has been restored.
Unit has an unual odor.	• Ambient Air	• Clean air filter. • Clean air conditioner. Please contact an Authorized Friedrich Service Agency
The sound of water flow during operation.	• Sound of refrigerant flowing	• When the compressor starts or stops running you may here a swoosh or gugle, this isn't a malfunction.
In COOL Mode there is a mist emitted from the vent.	• When the indoor temperature and humidity are high and there is a rapid cool down in the room.	• After running for a period of time the indoor temperature and humidity will decrease, mist will fade away.
Unit does not cool/heat room sufficiently, or cycles on and off too frequently	• The return/discharge air grille is blocked • Windows or doors to the outside are open • The temperature is not set at a cool enough/warm enough setting • The filter is dirty or obstructed • The outdoor coil is dirty or obstructed • The temperature of the room you are trying to cool is extremely hot • The ouside termperature is below 60°F • The digital control is set to fan cycling mode • The air conditioner has insufficient cooling capacity to match the heat gain of the room	• After running for a period of time the indoor temperature and humidity will decrease, mist will fade away. • Ensure that the return and/or discharge air paths are not blocked by curtains, blinds, furniture, etc • Ensure that all windows and door are closed. • Adjust the temperature control to a cooler or warmer setting as necessary. • Clean the filter, (See Recommended Maintenance) or remove obstruction. • Allow addtitional time too cool a very hot room • Do not try to operate your air conditioner in the cooling mode when the outside

Basic Troubleshooting

Complaint	Cause	Solution
	• The air conditioner has insufficient heating capacity to match the heat loss of the room	• Do not try to operate your air conditioner in the cooling in the cooling mode when the outside temperature is below 60°F. The unit will not cool properly, and the unit may be damaged. • Since the fan does not circulate the room air continuously at this setting, the room air does not mix as well and hot (or cold) spots may result. Using the continous fan setting is recommended to obtain optimum comfort levels. Check the cooling capacity of your unit to ensure • it is properly sized for the room in which it is installed. Room air conditioners are not designed to cool multiple rooms. • Check the heating capacity of your unit. Air conditioners are sized to meet the cooling load, & heater size is then selected to meet the heating load. In extreme, northern climates, room air conditioners may not be able to be used as a primary source of heat.
Unit runs too much	• This may be due to an excessive heat load in the room • This may be normal for higher efficiency (EER) air conditioners.	• If there are heat product appliances in use in the room, or if the room is heavily occupied, the unit will need to run longer to remove the additional heat. • Be sure to use exhaust vent fans while cooking or bathing and, if possible, try not to use heat producing appliances during the hottest part of the day.It may also be due to an improperly sized unit. • Depending upon the size of the room being cooled, a higher capacity air conditioner may be necessary • The use of higher effieciency components in your new air conditioner may result in the unit running longer than you feel it should . This may be more apparent, if it replaced an older, less efficient, model. The acutal energy usage, however, will be significantly less when compared to older models. • Likewise, you may notice that the discharge air temperature of your new air conditoner may not seem as cold as you may be accustomed to from older units. This does not, however, indicate a reduction in the cooling capacity of the unit. • The energy efficiency ratio (EER) and cooling rating (Btu/h) listed on the unit's rating plate are both agency certified.

Basic Troubleshooting

Complaint	Cause	Solution
Wireless remote control doesn't work	• Frequent function switchover • Not in frequency range, or obstructed	• Unplug unit and plug in again. • Replace the batteries.
There is water leakage in the room	• Air humidity	• Air humidity is high. • Condensation overflow. • Indoor unit drainage pipe is loose.
There is water leakage from outdoor unit	• Unit is running in COOL Mode • Unit is running in Auto Defrost Mode • Unit is running in HEAT Mode	• The refrigerant piping may have developed condensation. • Ice on refrigerant piping is thawing and escaped unit. • Condensation on the heat exchanger dripped off
Noise from indoor unit	• The sound of fan or compressor relay • Defrost is starting or stopping	• The sound is the swtiching on and off of fan and/or compressor relay. • Due to the refrigerant flowing in the reverse direction.
Indoor unit not blowing air	• Unit is in Heat Mode • In Defrost Mode • In Dehumidifier Mode	• When the temperature of indoor heat exchanger is very low, it will stop delievering air in order to prevent cool air, usually within 2 minutes. • When the outdoor temperature is low or there is high humidity, frost may form on the outdoor heat exchanger and the unit will automatically defrost, indoor unit will stop blowing air for 3-12 minutes • There may be condensation and/or mist • Indoor fan may stop in order to continue removing humidity without affecting termperature. To resume air circulation change from dehumidification mode to cooling or fan mode.
Moisture on air vent	• Humid weather	• The unit has been running for a long period of time condensation may have formed and dripped off grill.

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

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.
Accidently splash water or something into unit.
There is an abnormal heat in power supply cord and power plug.

▶ Turn off unit and switch off breaker.

Service & Assistance

Before calling for service, please check the "Basic Troubleshooting" section above. This may help you to find the answer to your problem, avoidunnecesary service calls, and save you the cost of a service call if the problem is not due to the product itself. If you have checked the "Basic Troubleshooting" section and still need help, here is a list of available services:

1. You can find the name of you local Authorized Service Provider by visiting our web site at www.friedrich.com.
2. If you require further assistance you can call the Customer Support Call Center at 1-877-599-5665 (KOOL).
3. Before calling, please make sure that you have the complete model and serial numer, and date of purchase of your equipment available. By providing us with this information we will be better able to assist you.

Our specialists are able to assist you with:

* Specifications and Features of our equipment
* Referrals to dealers, and distributors.
* Use and Care information
* Recommended maintenance procedures
* Installation information
* Referrals to Authorized Service Providers and Parts depots.

Installation

Important Notices

Indoor Unit Placement

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 8 ft or more from the floor.
6. Select a place about 3 ft 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. Do not use the unit in the immediate surroundings of a laundry a bath a shower or a swimming pool.

Outdoor Unit Placement

1. Select a location from which noise and outflow air emitted by unit will not inconvenience neighbors, animals, plants.
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 are in accordance with installation dimension diagram, convenient for maintenance, repair.
7. The height difference of connecting the tubing within 16 ft, the length of connecting the tubing within 33 ft.
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.

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 damage power cord.
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 5 feet.
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 9 feet in all poles should be connected in fixed wiring.

Note:

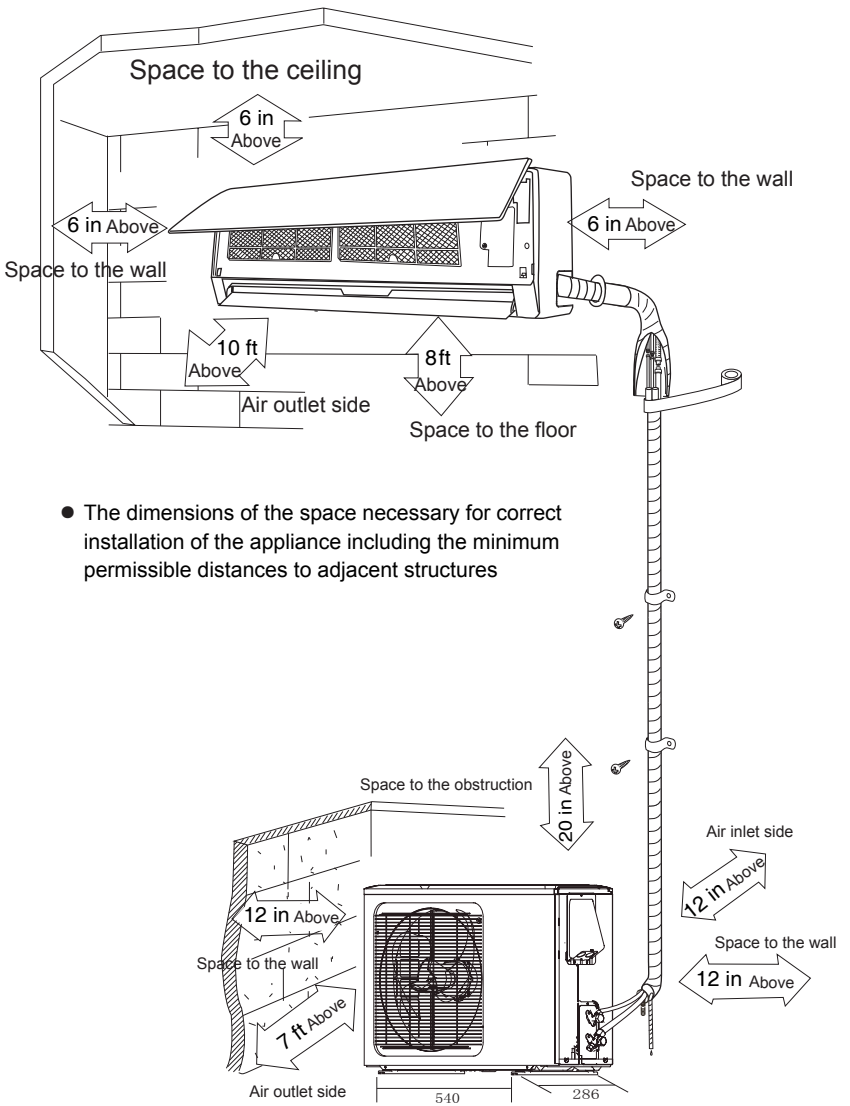
- Make sure that the Live wire or Zero line as well as the earth wire in the family power socket can not be wrong connected, there should be reliable and no short circuit in the diagram.
- wrong connection may cause fire.

Grounding requirements

1. Air conditioner needs to be properly grounded.
2. The yellow-green two-color wire in air conditioner is the grounding wire and cannot be used for any other purpose. Do not cut.

Typical Unit Dimensions

Installation dimension diagram



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

Install indoor unit

Install the rear panel

1.Always mount the rear panel horizontally. Due to the water tray of indoor unit has been adopted the both-way drainage design, the outlet of water tray should be adjusted slightly down when installing, that is taking the outlet of the water tray as the center of a circle, the included angle between the evaporator and level should be 0 or more, that is good for condensing water drainage.

2.Fix the rear panel on the wall with screws. (Where is pre-covered with plastic granula)

3.Be sure that the rear panel has been fixed firmly enough to withstand the weight of an adult of 60kg, further more, the weight should be evenly shared by each screw.

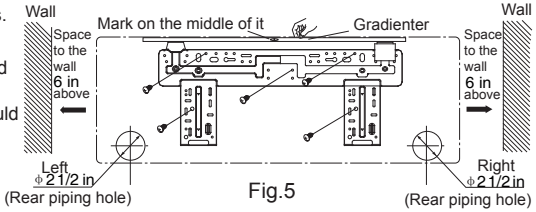
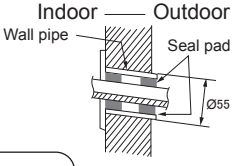


Fig.5

Install the piping hole

1.Make the piping hole (Φ 21/2) in the wall at a slight downward slant 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.

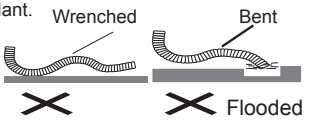


Install the water drainage pipe

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 surface panel.

2.Remove the wiring cover Fig 6.

3.Route the power connection cord and signal control wire (for cooling and heating unit only) from the back of the indoor unit and pull it toward the front through the wiring hole for connection.

4.Reassemble the clampand wiring cover.

5.Recover the surface panel.

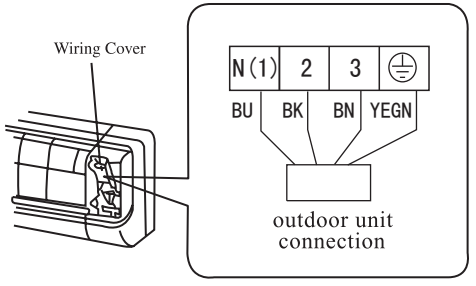


Fig.6

◆ 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, slight 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(Show 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 electric wire, water pipe with tape and pull them through the piping hole (As show in Fig.8)
3. Hange the mounting slots of the indoor unit on the upper tabs of the rear panel and check if it is firm enough.(As show in Fig.9)
4. The height of the installed location should be 8 ft or more from the floor.
5. The water drainage pipe can also be installed on the left of the indoor-uint.

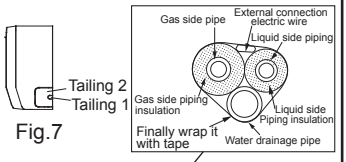


Fig.7

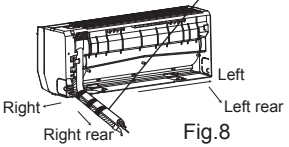


Fig.8

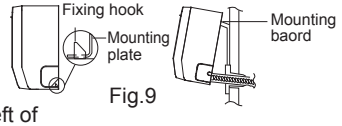
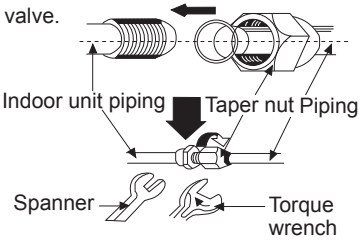


Fig.9

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:

Hex nut diameter	Tightening torque (lb . ft)
Φ6	11~14.7
Φ 9. 52	22.8~25.8
Φ 12	36.9~40.6
Φ 16	44.3~47.9
Φ 19	51.6~55.3

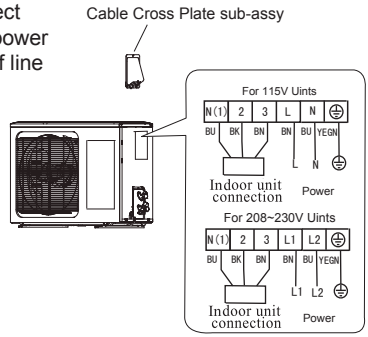


Note: First connect pipe to indoor unit, then to outdoor unit. Pay attention not to bending piping as this may cause damage. Do not overtighten joint nut as this may cause leakage.

◆ Install outdoor unit

Electric wiring

1. Disassemble the cable cross plate sub-assy on the outdoor unit right side plate.
2. Take off wire clamp. Connect and fix power connect cord (for cooling and heating unit,connect and fix power connect cord and signal control wire)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, use the wire clamp to fix the power connection cable and the signal control wire), then connect the corresponding connector.
4. Ensure wire has been fixed well.
5. Install the cable cross plate sub-assy.



NOTE:

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

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 handle handle of Lo manifold valve.
4. Open the vacuum pump to evacuate. 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 evacuating 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 bonnet of low-pressure valve. (As shown in Fig.10)

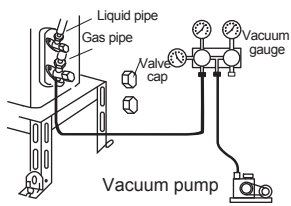
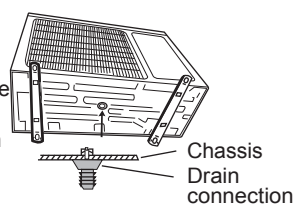


Fig. 10

Condensate drainage of outdoor unit (no for cooling only)

The condensate and defrosting water formd during heating in the outdoor unit can be properly discharged by drainage pipe .
Installation method:set the drain connection in Ø 25 hole of the chassis has been installed and then connect drainage pipe with drain nozzle,so that condensate and defrosting waer can be properly discharged



Checklist

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 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 completely finished.
   (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 "START / STOP" button on the wireless remote control to start the operation.
   (2) Press MODE button, to select the COOL, or/and FAN to check whether the operation is normal or not.

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