







# Features of your new air conditioner

## Cool Summer Offer

On those hot sweltering summer days and long restless nights, there is no better escape from the heat than the cool comforts of home. Your new air conditioner brings an end to exhausting hot summer days and lets you rest. Beat the heat with your own air conditioner this summer.

## Cost Efficient System

Your new air conditioner not only provides maximum cooling power in the summer, but also can be an efficient heating method in the winter with the advanced "Heat pump" system. "Heat pump" system is 3 times more efficient compare to the other electrical heating appliance, so you can further reduce its running cost. Now, meet year-round needs with one air conditioner.

## Look for Everywhere

The elegant and harmonious design gives priority to the esthetics of your space and complements any of your existing interior décor. With its soft color and rounded-edge shape, the new air conditioner adds class to any room. Enjoy what your air conditioner offers both functionally and esthetically.

## Easy Filter

There is no grille to remove before separating the filter from the air conditioner! Therefore, filter can be cleaned easily, more frequently! Frequent filter cleaning will prevent dust from entering into the product or accumulating on the filter.

## good'sleep function

good'sleep function will allow you to have deep, good night's sleep by adjusting the temperature, fan speed and air flow direction.





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## Safety precautions

Before using your new air conditioner, please read this manual thoroughly to ensure that you know how to safely and efficiently operate the extensive features and functions of your new appliance.

Because the following operating instructions cover various models, the characteristics of your air conditioner may differ slightly from those described in this manual. If you have any questions, call your nearest contact center or find help and information online at [www.samsung.com](http://www.samsung.com).

### Important safety symbols and precautions:

 <b>WARNING</b>	Hazards or unsafe practices that may result in <b>severe personal injury or death.</b>		
 <b>CAUTION</b>	Hazards or unsafe practices that may result in <b>minor personal injury or property damage.</b>		
	Follow directions.		Cut-off the power supply.
	Do NOT attempt.		Do NOT disassemble.
	Make sure the machine is grounded to prevent electric shock.		

### FOR INSTALLATION

### **WARNING**

- ❗ **Use the power line with the power specifications of the product or higher and use the power line for this appliance only. In addition, do not use an extension line.**

- ▶ Extending the power line may result in electric shock or fire.
- ▶ Do not use an electric transformer. It may result in electric shock or fire.
- ▶ If the voltage/frequency/rated current condition is different, it may cause fire.

**The installation of this appliance must be performed by a qualified technician or service company.**

- ▶ Failing to do so may result in electric shock, fire, explosion, problems with the product, or injury and may also void warranty on the installed product.

**Install a Isolation Switch next to the Air Conditioner (but not on the panels of the Air Conditioner) and circuit breaker dedicated to the air conditioner.**

- ▶ Failing to do so may result in electric shock or fire.

**Fix the outdoor unit firmly so that the electric part of the outdoor unit is not exposed.**

- ▶ Failing to do so may result in electric shock, fire, explosion, problems with the product.







- ⊘ **Do not install this appliance near a heater, inflammable material. Do not install this appliance in a humid, oily or dusty location, in a location exposed to direct sunlight and water (rain drops). Do not install this appliance in a location where gas may leak.**
  - ▶ This may result in electric shock or fire.**Never install the outdoor unit in a location such as on a high external wall where it could fall.**
  - ▶ If the outdoor unit falls, it may result in injury, death or property damage.
- ⚡ **This appliance must be properly grounded. Do not ground the appliance to a gas pipe, plastic water pipe, or telephone line.**
  - ▶ Failure to do so may result in electric shock, fire, and explosion.
  - ▶ Make sure to use a socket-outlet with ground.

## FOR INSTALLATION

### ⚠ CAUTION

- ❗ **Install your appliance on a level and hard floor that can support its weight.**
  - ▶ Failing to do so may result in abnormal vibrations, noise, or problems with the product.**Install the draining hose properly so that water is drained correctly.**
  - ▶ Failing to do so may result in water overflowing and property damage. Avoid adding drain to waste pipes as odours may arise in the future.**When installing the outdoor unit, make sure to connect the draining hose so that draining is performed correctly.**
  - ▶ The water generated during the heating operation by the outdoor unit may overflow and result in property damage.  
In particular, in winter, if a block of ice falls, it may result in injury, death or property damage.

## FOR POWER SUPPLY

### ⚠ WARNING

- ❗ **When the circuit breaker is damaged, contact your nearest service center.**
- ⊘ **Do not pull or excessively bend the power line. Do not twist or tie the power line. Do not hook the power line over a metal object, place a heavy object on the power line, insert the power line between objects, or push the power line into the space behind the appliance.**
  - ▶ This may result in electric shock or fire.





## Safety precautions

### FOR POWER SUPPLY



#### CAUTION

- ⚠ **When not using the air conditioner for a long period of time or during a thunder/lightning storm, cut the power at the circuit breaker.**
  - ▶ Failing to do so may result in electric shock or fire.

### FOR USING



#### WARNING

- ⚠ **If the appliance is flooded, please contact your nearest service center.**
  - ▶ Failing to do so may result in electric shock or fire.

**If the appliance generates a strange noise, a burning smell or smoke, cut-off the power supply immediately and contact the nearest service center.**

  - ▶ Failing to do so may result in electric shock or fire.

**In the event of a gas leak (such as propane gas, LP gas, etc.), ventilate immediately without touching the power line. Do not touch the appliance or power line.**

  - ▶ Do not use a ventilating fan.
  - ▶ A spark may result in an explosion or fire.

**To reinstall the air conditioner, please contact your nearest service center.**

  - ▶ Failing to do so may result in problems with the product, water leakage, electric shock, or fire.
  - ▶ A delivery service for the product is not provided. If you reinstall the product in another location, additional construction expenses and an installation fee will be charged.
  - ▶ Especially, when you wish to install the product in an unusual location such as in an industrial area or near the seaside where it is exposed to the salt in the air, please contact your nearest service center.
- ⊘ **Do not touch the circuit breaker with wet hands.**
  - ▶ This may result in electric shock.

**Do not turn the air conditioner off with the circuit breaker while it is operating.**

  - ▶ Turning the air conditioner off and then on again with the circuit breaker may cause a spark and result in electric shock or fire.

**After unpacking the air conditioner, keep all packaging materials well out of the reach of children, as packaging materials can be dangerous to children.**

  - ▶ If a child places a bag over its head, it may result in suffocation.







- ⊘ **Do not touch the air flow blade with your hands or fingers during the heating operation.**
  - ▶ This may result in electric shock or burns.
- Do not insert your fingers or foreign substances into the air inlet/outlet of the air conditioner.**
  - ▶ Take special care that children do not injure themselves by inserting their fingers into the product.
- Do not strike or pull the air conditioner with excessive force.**
  - ▶ This may result in fire, injury, or problems with the product.
- Do not place an object near the outdoor unit that allows children to climb onto the machine.**
  - ▶ This may result in children seriously injuring themselves.
- Do not use this air conditioner for long periods of time in badly ventilated locations or near infirm people.**
  - ▶ Since this may be dangerous due to a lack of oxygen, Open a window at least once an hour.
- ⊘ **If any foreign substance such as water has entered the appliance, cut-off the power supply and contact the nearest service center.**
  - ▶ Failing to do so may result in electric shock or fire.
- ⊘ **Do not attempt to repair, disassemble, or modify the appliance yourself.**
  - ▶ Do not use any fuse (such as cooper, steel wire, etc.) other than the standard fuse.
  - ▶ Failing to do so may result in electric shock, fire, problems with the product, or injury.





# Safety precautions

## FOR USING

## ⚠ CAUTION

- ❗ **Do not place objects or devices under the indoor unit.**
  - ▶ Water dripping from the indoor unit may result in fire or property damage. (example electrical appliances)

**Check that the installation frame of the outdoor unit is not broken at least once a year.**

  - ▶ Failing to do so may result in injury, death or property damage.

**Max current is measured according to IEC standard for safety and current is measured according to ISO standard for energy efficiency.**
- ⊘ **Do not stand on top of the appliance or place objects (such as laundry, lighted candles, lighted cigarettes, dishes, chemicals, metal objects, etc.) on the appliance.**
  - ▶ This may result in electric shock, fire, problems with the product, or injury.

**Do not operate the appliance with wet hands.**

  - ▶ This may result in electric shock.

**Do not spray volatile material such as insecticide onto the surface of the appliance.**

  - ▶ As well as being harmful to humans, it may also result in electric shock, fire or problems with the product.

**Do not drink the water from the air conditioner.**

  - ▶ The water may be harmful to humans.

**Do not apply a strong impact to the remote controller and do not disassemble the remote controller.**

**Do not touch the pipes connected with the product.**

  - ▶ This may result in burns or injury.

**Do not use this air conditioner to preserve precision equipment, food, animals, plants or cosmetics, or for any other unusual purposes.**

  - ▶ This may result in property damage.

**Avoid directly exposing humans, animals or plants from the air flow from the air conditioner for long periods of time.**

  - ▶ This may result in harm to humans, animals or plants.





- ⊘ This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

## FOR CLEANING

### ⚠ WARNING

- ⊘ Do not clean the appliance by spraying water directly onto it. Do not use benzene, thinner or alcohol to clean the appliance.
  - ▶ This may result in discoloration, deformation, damage, electric shock or fire.**Before cleaning or performing maintenance, cut-off the power supply and wait until the fan stops.**
  - ▶ Failing to do so may result in electric shock or fire.

## FOR CLEANING

### ⚠ CAUTION

- ❗ **Take care when cleaning the surface of the heat exchanger of the outdoor unit since it has sharp edges.**
  - ▶ This should be done by a qualified technician please contact your installer or service center.
- ⊘ **Do not clean the inside of the air conditioner by yourself.**
  - ▶ For cleaning inside the appliance, contact your nearest service center.
  - ▶ When cleaning the internal filter, refer to the descriptions in the 'Cleaning the air conditioner' section.
  - ▶ Failure to do so may result in damage, electric shock or fire.





## Checking before use

### Operation ranges

The table below indicates the temperature and humidity ranges the air conditioner can be operated within. Refer to the table for efficient use.

Mode	Indoor temperature	Outdoor temperature	Indoor humidity
Cooling	17 °C~32 °C	17 °C~43 °C	Relative humidity 80% or less
Dry	10 °C~32 °C	17 °C~43 °C	-

- ▶ If the air conditioner operates in cooling mode for long period of time in high humidity area, dew may be formed.

### Maintaining your air conditioner

#### Internal protections via the unit control system

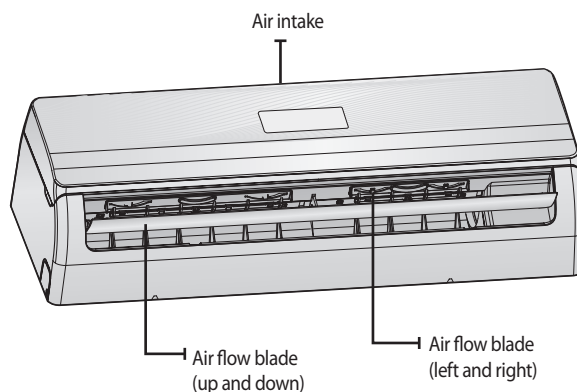
- ▶ This internal protection operates if an internal fault occurs in the air conditioner.

Type	Description
Protect compressor	The air conditioner does not start operating immediately to help protect the compressor of the outdoor unit after it has been started.

## Checking the name of the parts

Your air conditioner may slightly look different from illustration shown below depending on your model.

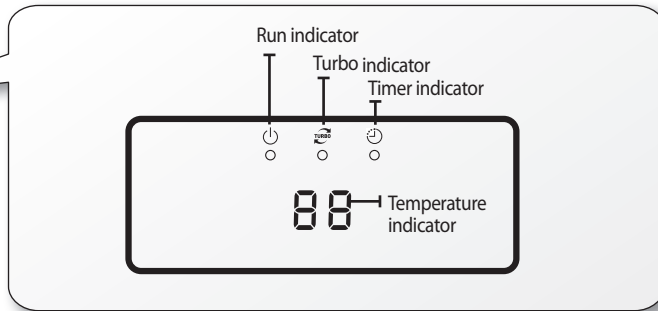
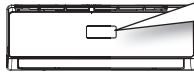
### Main parts







## Display



### Run indicator

This lamp illuminates when the air conditioner is in operation.

### Turbo indicator

Lights up during Turbo operation.

### Timer indicator

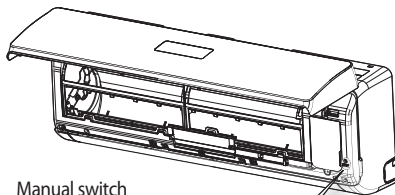
Lights up during Timer operation.

### Temperature indicator

- First displays the temperature remote controller setting.  
After 5 seconds displays the room temperature.

## Manual operation

Units are equipped with a switch to run emergency operation mode. It can be accessed by opening the front panel. This switch is used for manual operation in case the remote controller fails to work or maintenance necessary.



Manual switch



1. Open the front panel by carefully lifting both ends at the same time. Once lifted sufficiently, a click is heard and it becomes self-supporting.
2. Once you push the manual button, the operation mode is shifted in an order as : AUTO, COOL, OFF. The temperature will be set at 24°C and the fan on Auto.
3. After operation, close the panel by firmly tugging downwards on both ends until it returns to its original position.




- This switch is used for testing purpose only. You had better not choose it.
- To restore the remote controller operation, use the remote controller directly.



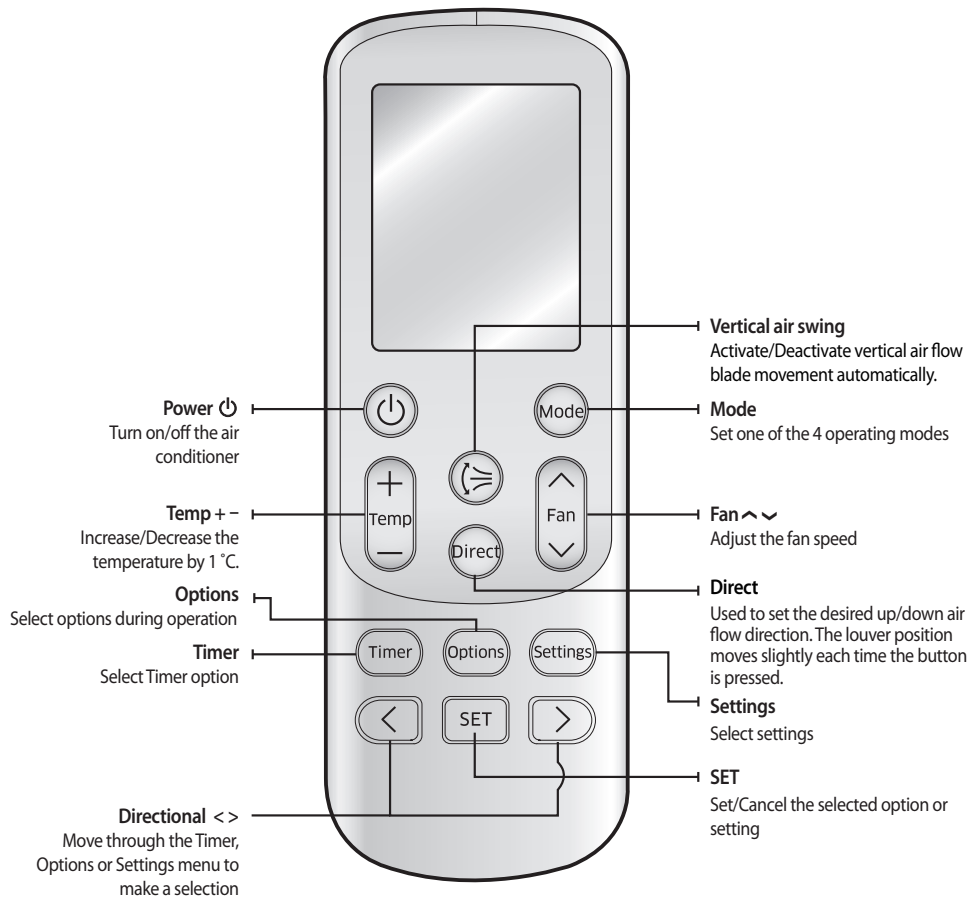




## Checking the remote controller

- Point the remote controller towards the remote controller receiver of the indoor unit.
- When you properly press the button on the remote controller, you will hear beep sound from the indoor unit and a transmit indicator( ) appears on the remote controller display.

### Remote controller buttons



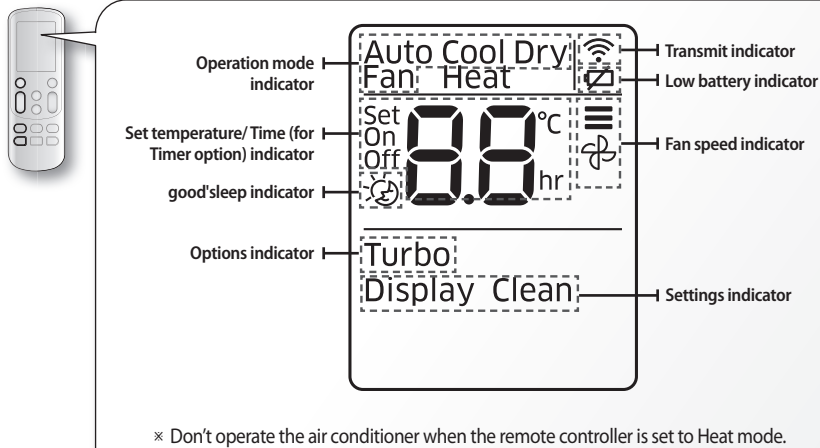
- In case you wish to cancel the options or settings that you have just set, press the **Options** or **Settings** button again, then the most recently selected item will blink and you may simply cancel it by pressing the SET button while selected item is blinking.







## Remote controller display



- Make sure that the water does not get to the remote controller.

## Low Battery warning

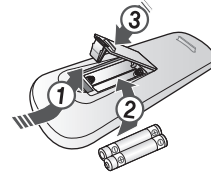
When the battery is exhausted, (🔋) will be displayed in the remote controller display. When the icon appears, change the batteries. The remote controller requires two 1.5 V AAA type batteries.

## Storing the remote controller

When you do not use the remote controller for long time, remove the batteries from the remote controller and store it.

## Inserting the batteries

1. Push the lever as arrow indicates on the rear side of the remote controller and pull up.
2. Insert two AAA batteries.  
Check and match the "+" and "-" signs accordingly. Make sure you have inserted the batteries in correct position.
3. Close the cover by place it back to its original position.  
You should hear click sound when the cover is locked properly.



- The signal may not be received properly if electronic fluorescent lamps such as inverter fluorescent lamps are operating in the same space.
- If other electrical products operate by the remote controller, call your nearest contact center.





# Basic function

Basic operation is an operation mode that can be selected by pressing the **Mode** button.

## Auto

In Auto mode, the air conditioner will automatically set the temperature and fan speed depending on the room temperature.

## Cool

In Cool mode, the air conditioner will cool your room. You can adjust the temperature and the fan speed to feel cooler in hot season.

- If current outside temperature is much higher than the selected indoor temperature, it may take time to bring the inner temperature to the desired coolness.

## Dry

The air conditioner in Dry mode acts like a dehumidifier by removing moisture from the indoor air.

Dry mode makes the air feel refreshing in a humid climate.

To activate the Dry mode, set temperature on the remote controller should be lower than indoor room temperature.

## Fan


Fan mode can be selected to circulate your room. Fan mode will be helpful to refresh the stale air in your room.



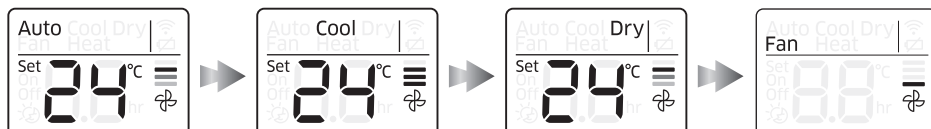


## Basic function











Press the  button to turn on the air conditioner.

Press the  button to set the operating mode.

- Each time you press the **Mode** button, the mode will change in order of Auto, Cool, Dry and Fan.



Press the  button to set the desired fan speed.

Auto	 (Auto)
Cool	 (Auto),  (Low),  (Med),  (High)
Dry	 (Auto)
Fan	 (Auto),  (Low),  (Med),  (High)

Press the  button to adjust the temperature.

Auto	You can adjust the set temperature by 1 °C within the range of 17 °C~30 °C.
Cool	You can adjust the set temperature by 1 °C within the range of 17 °C~30 °C.
Dry	You can adjust the set temperature by 1 °C within the range of 17 °C~30 °C.
Fan	Temperature adjustment is not possible.





## Airflow direction control

Adjust the air flow direction properly otherwise it might cause discomfort or cause uneven room temperatures.  
Adjust the vertical louver using the remote controller.

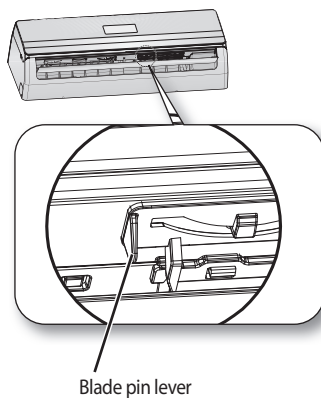
### Vertical air flow



### To set the vertical air flow(Up--Down) direction

- Use the SWING and DIRECT button to adjust the desired airflow direction.
  - Each time you press the DIRECT button on the remote controller, the angle of the vertical airflow direction louver moves at 6 degree.
  - When push the SWING button, the louver will swing up and down automatically.

### Horizontal air flow



### To set the horizontal air flow direction (left - right)

Make sure one of the blade pin lever that stick out of the air flow blades are not broken.

- Move the deflector rod manually to adjust the air flow in the direction you prefer.



- Be extremely careful with your fingers while adjusting the Horizontal air flow direction.  
There is a potential risk of personal injury when the unit is mishandled.







# Setting the On/Off timer

## Setting the On timer

When the air conditioner is off;



Remote controller display

1. Press the **Timer** button.
2. Press the button until (On) indicator starts to blink.
3. Press the **SET** button to set the On timer.
  - (On) indicator will keep blinking and you can set the time.
4. Press the button to set the time.
  - You can set the time in half hour unit from 30 minutes (0.5 on the display) ~ 3 hours and hour unit from 3~24 hours.
  - Time can be set from minimum 30 minutes to maximum 24 hours.
5. Press the **SET** button to complete the On timer setting.
  - (On) indicator and the set time of the timer will be displayed on the remote controller display and the Timer indicator will be lighted up on the indoor unit display.
  - On timer setting will be cancelled if you don't press the **SET** button within 10 seconds after setting the time. Therefore, check for the (On) indicator on the remote controller display and the Timer indicator on the indoor unit display.

### Cancel

- ▶ Press the button to make the set time to display as , and press the **SET** button.
- ▶ Press the **Power** button. The air conditioner will turn off.

### Additional options available in On time

	You can select from Auto/Cool/Dry/Fan.
	You can set the temperature after selecting the operation mode. Temperature adjustment is available when Auto/Cool/Dry mode is selected.



### NOTE

- After 10 seconds from the completion of the On timer setting, only (On) indicator will remain displayed on the remote controller display.
- You can set the fan speed when setting the On timer.
- If you press the **Power** button on the indoor unit after setting the On timer from the remote controller, Timer indicator on the indoor unit display will disappear and the On timer will be cancelled. Even though the On timer is cancelled, (On) indicator on the remote controller will remain displayed.
- When the On timer is set while the air conditioner is off, Timer indicator will be displayed and remain on until the On timer turns on.





# Setting the On/Off timer

## Setting the Off timer

When the air conditioner is on;



Remote controller display

1. Press the **Timer** button.
2. Press the button until (Off) indicator starts to blink.
3. Press the **SET** button to set the Off timer.
  - (Off) indicator will keep blinking and you can set the time.
4. Press the button to set the time.
  - You can set the time in half hour unit from 30 minutes (0.5 on the display) ~ 3 hours and hour unit from 3~24 hours.
  - Time can be set from minimum 30 minutes to maximum 24 hours.
5. Press the **SET** button to complete the Off timer setting.
  - (Off) indicator and the set time of the timer will be displayed on the remote controller display and the Timer indicator will be lighted up on the indoor unit display.
  - Off timer setting will be cancelled if you don't press the **SET** button within 10 seconds after setting the time. Therefore, check for the (Off) indicator on the remote controller display and the Timer indicator on the indoor unit display.

### Cancel

- ▶ Press the button to make the set time to display as , and press the **SET** button.
- ▶ Press the Power button. The air conditioner will turn off.



NOTE

- Off timer may not work depending on the On/Off status of the indoor unit and the On/Off status of the indicator on the remote controller display.

## Combining On Timer and Off Timer

### When the air conditioner is off

#### When set time on On timer is shorter than Off timer

Ex) On timer : 3 hours, Off timer : 5 hours

- The air conditioner will turn on after 3 hours from the moment you have set the timer and the air conditioner will remain on for 2 hours and then turn off automatically.

### When the air conditioner is on

#### When set time on On timer is longer than Off timer

Ex) On timer : 3 hours, Off timer : 1 hour

- The air conditioner will turn off after 1 hour from the moment you have set the timer and turn on after 2 hours from the moment it was turned off.



NOTE

- Set time for the On timer and the Off timer should be different from each other.





## good'sleep mode

When the air conditioner is operating in Auto/Cool mode;



Remote controller display

1. Press the **Timer** button.
2. Press the button until indicator starts to blink.
3. Press the **SET** button to complete the **good'sleep** mode setting.
  - indicator will be displayed on the remote controller display.
  - **good'sleep** mode setting will be cancelled if you don't press the **SET** button within 10 seconds after setting the time. Therefore, check for the indicator on the remote controller display.

**Cancel** ▶ Press the **Timer** button again to make the indicator blink and press the **SET** button.

03 TIMER

### Additional options available in good'sleep mode

	You can adjust the set temperature by 1 °C within the range of 17 °C~30 °C.
	Fan speed will be adjusted automatically according to the <b>good'sleep</b> mode. However, if you select <b>good'sleep</b> mode while heating operation is on, you can adjust fan speed.
	When the <b>good'sleep</b> mode is on. Adjusting air flow direction is available.



NOTE

- Recommended set temperature is between 25 °C ~ 27 °C for cooling and 21 °C~23 °C for heating.
- If the set temperature is too low, you may feel cold during sleep or catch a cold.
- Optimal operation hour of **good'sleep** mode is 8 hours. Therefore, if the time is set too short or long, you may not feel as comfortable as you would expect.
- If the **good'sleep** mode is set over 5 hours, Wake up stage will begin when 1 hour is remaining in the operation time and the air conditioner will stop automatically.







## Using the Turbo function

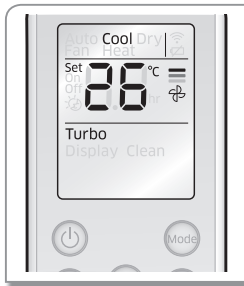
Turbo function will be helpful to cool your room quickly and effectively.



1. Press the **Options** button.
2. Press the button until (Turbo) indicator starts to blink.
3. Press the **SET** button, the Turbo function is activated and the symbol Turbo disappears. Turbo indicator will be lighted up on the indoor unit display.

Cancel

- Press the **Options** button again to make the (Turbo) indicator blink and press the **SET** button.



Remote controller display



NOTE

- Turbo function is only available in Cool mode.







## Setting the Display option

Display lighting can be adjusted by following this instruction.



1. Press the **Settings** button.
2. Press the button until (Display) indicator starts to blink.
3. Press the **SET** button to set the display status.
  - Press the **SET** button to turn on/off the lighting display.



NOTE

- Display option cannot be set when the air conditioner is off.

## Using the Auto clean function

Auto clean function will minimise the moisture inside of the indoor unit. Activate this function to help provide you with clean air.

When the air conditioner is operating;



1. Press the **Settings** button.
2. Press the button until (Clean) indicator starts to blink.
3. Press the **SET** button to set the Auto clean function.
  - Press the **SET** button, the Auto clean function is activated and the symbol Clean disappears.
  - If you set the function, the indicator will display ( ) on the indoor unit display.
  - Duration of the Auto clean function can be different depending on the previous operation mode used.
    - Cool, Dry mode : 30 minutes.

Cancel

- ▶ Press the **Settings** button again to make the (Clean) indicator blink and press the **SET** button.







# Cleaning the air conditioner



## CAUTION

- **Make sure to turn off the power of the indoor unit and cut-off the power supply before cleaning the air conditioner.**

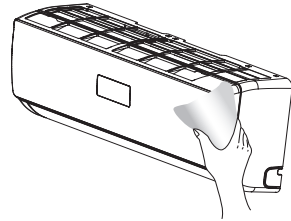
## Cleaning the indoor unit

- ▶ Wipe the surface of the unit with a slightly damp micro fiber cloth when needed.



### NOTE

- Contact the service center when you clean the indoor unit heat exchanger because it needs to be disassembled.
- Since the panel of the indoor unit is easily scratched, you should use a micro fiber cloth to clean the panel. When you use the micro fiber cloth, slightly dampen the cloth and remove any debris on the cloth to avoid scratches.



## CAUTION

- Do not clean the display using alkaline detergent.
- Do not use sulfuric acid, hydrochloric acid, organic solvents (such as thinner, kerosene and acetone etc.) to clean the surface of the product or put any stickers on it. They may damage the surface of the air conditioner.

## Cleaning the outdoor unit heat exchanger

- ▶ When dust accumulates on the heat exchanger, it may decrease cooling performance. Therefore, clean it regularly.
- ▶ Spray water to clean the dust.



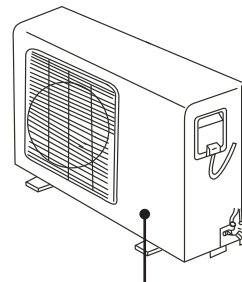
### NOTE

- If it is difficult to clean the outdoor unit heat exchanger on your own, contact service center.



## CAUTION

- Be careful with the sharp edges on the outdoor unit heat exchanger.



**Heat exchanger**

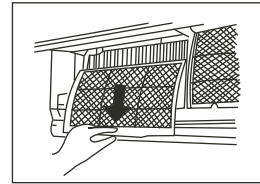
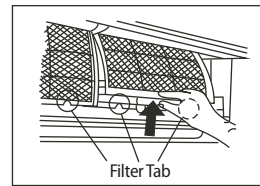
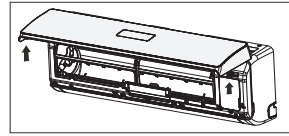
(Illustration may differ slightly depending on the models)



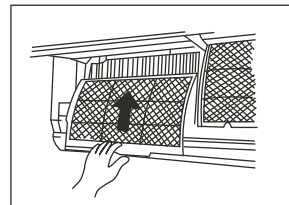
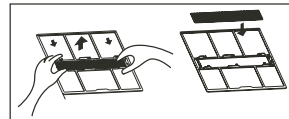


## Removing the Air filter

1. Lift the indoor unit panel up to an angle until it stops with a clicking sound. For some models, please use suspension bars to prop up the panel.
2. Take hold of the handle of the air filter and lift it up slightly to take it out from the filter holder, then pull it downwards.
3. Remove the AIR FILTER from the indoor unit.  
Remove the Air Freshening Filter from its supporting frame (on some models).
4. Install the air freshening filter back into position.



Air freshening filter







# Cleaning the air conditioner

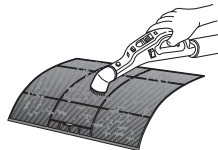
## Cleaning the air filter

Washable foam based air filter captures large particles from the air. The filter is cleaned with a vacuum or by hand washing.

Remove the Air filter from the main body.



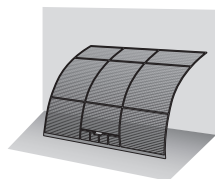
Clean the Air filter with a vacuum cleaner or soft brush.  
If dust is too heavy, rinse it with running water.



Insert the Air filter back in its original position.



Dry the Air filter in a ventilated area.



NOTE

- Clean the Air filter every 2 weeks. Cleaning term may differ depending on the usage and environmental conditions. In dusty area, clean it once a week.
- Clean the air freshening filter at least once a month, and replace it every 4-5 months.
- If the Air filter dries in a confined (or humid) area, odors may generate. If it occurs, re-clean and dry it in a well-ventilated area.







## Maintaining the air conditioner

If the air conditioner will not be used for an extended period of time, dry the air conditioner to maintain it in best condition.

1. Dry the air conditioner thoroughly by operating in Fan mode for 3 to 4 hours and cut-off the power supply. There may be internal damage if moisture is left in components.
2. Before using the air conditioner again, dry the inner components of the air conditioner again by running in Fan mode for 3 to 4 hours. This helps remove odors which may have generated from dampness.

### Periodical checks

Refer to the following chart to maintain the air conditioner properly.

Type	Description	Every 2 weeks	Every 3 months	Every 4 months	Once a year
Indoor unit	Clean the air filter (1)	●			
	Clean the condensate drain pan (2)				●
	Thoroughly clean the heat exchanger (2)				●
	Clean the cross fan (2)			●	
	Clean the condensate drain pipe (2)			●	
	Replace the remote controller batteries (1)				●
Outdoor unit	Clean the heat exchanger on the outside of the unit (2)			●	
	Clean the heat exchanger on the inside of the unit (2)				●
	Clean the electric components with jets of air (2)				●
	Verify that all the electric components are firmly tightened (2)				●
	Clean the fan (2)				●
	Verify that all the fan assembly is firmly tightened (2)				●
	Clean the condensate drain pan (2)				●

● : This check mark requires checking the indoor/outdoor unit periodically.  
Follow the description to maintain the air conditioner properly.



- (1) The described operations should be performed more frequently if the area of installation is very dusty.
- (2) These operations must always be performed by qualified personnel. For more detailed information, see the installation part in the manual.







## Troubleshooting

Refer to the following chart if the air conditioner operates abnormally. This may save time and unnecessary expenses.

PROBLEM	SOLUTION
The air conditioner does not work at all.	<ul style="list-style-type: none"><li>• Check power status and then operate the air conditioner again.</li><li>• Plug in or switch on the circuit breaker and then operate the air conditioner again.</li><li>• Ensure Isolator is switch on.</li><li>• Check if you have set the Off Timer. Operate the air conditioner again by pressing the <b>Power</b> button.</li></ul>
The temperature adjustment is not working.	<ul style="list-style-type: none"><li>• Check if you have selected Fan/Fast mode. In these modes, set temperature is set to auto and you cannot adjust the temperature.</li></ul>
Cool air does not come out of the air conditioner.	<ul style="list-style-type: none"><li>• Check if the set temperature is higher(during Cool mode) than the current temperature. Press the <b>Temp +</b> or - button on the remote controller to change the set temperature.</li><li>• Check if the Air filter is blocked by dirt. If there is a lot of dust on the Air filter, cooling performance may decrease. Clean them frequently.</li><li>• Check if the outdoor unit is covered or installed near the obstacle. Take the cover off and take the obstacle away.</li><li>• If the doors or windows are open, it may cause bad cooling performance. Close the doors and windows.</li><li>• Check if the air conditioner has just been turned on after stopping cooling operation. In this case, just a fan will run to protect the outdoor unit compressor.</li><li>• Check if the pipe length is too long. When the pipe length exceeds maximum allowable pipe length, cooling performance may decrease.</li></ul>
Air flow adjustment is not working.	<ul style="list-style-type: none"><li>• Check if you have selected good'sleep mode. In cool mode, you cannot adjust the air flow direction.</li></ul>







PROBLEM	SOLUTION
Fan speed adjustment is not working.	<ul style="list-style-type: none"><li>• Check if you have selected Auto/Dry/good'sleep mode. In these mode, fan speed is set to Auto and you cannot adjust the fan speed.</li></ul>
Remote controller is not working.	<ul style="list-style-type: none"><li>• Check if your batteries are depleted.</li><li>• Make sure nothing is blocking your remote controller sensor.</li><li>• Check that there are strong lighting apparatus near the air conditioner. Strong light which comes from fluorescent bulbs or neon signs may interrupt the electric waves.</li></ul>
Timer function does not set.	<ul style="list-style-type: none"><li>• Check if you press the <b>Set</b> button on the remote controller after you have set the time.</li></ul>
The indicator is blinking continuously.	<ul style="list-style-type: none"><li>• Press the <b>Power</b> button or disconnect the power plug/ switch off the auxiliary power switch. If the indicator is still blinking, contact the service center.</li></ul>
Odors permeate in the room during operation.	<ul style="list-style-type: none"><li>• Check if the appliance is running in a smoky area. Ventilate the room or operate the air conditioner in Fan mode for 1~2 hours. (We do not use smelly components in the air conditioner.)</li><li>• Check the Drains have been cleared Regular Maintenance.</li></ul>
Error is indicated.	<ul style="list-style-type: none"><li>• When an indoor unit indicator blinks, contact the nearest service center. Please ensure the error code is passed onto the service center when booking the service call.</li></ul>
Noise is generated.	<ul style="list-style-type: none"><li>• Depending on the status of the air conditioner usage, noise can be heard when refrigerant flow movement changes. It is normal.</li></ul>
Smoke is generated from the outdoor unit.	<ul style="list-style-type: none"><li>• If may not be a fire but it can be a steam generated by the defrost operation from outdoor heat exchanger during Heat mode in winter.</li></ul>
Water is dropping from the outdoor unit piping connection.	<ul style="list-style-type: none"><li>• Water may be generated because of the temperature difference. It is normal.</li></ul>





# Safety precautions

Carefully follow the precautions listed below because they are essential to guarantee the safety of the equipment.

- Always disconnect the air conditioner from the power supply before servicing it or accessing its internal components.
- Verify that installation and testing operations are performed by qualified personnel.
- Verify that the air conditioner is not installed in an easily accessible area.

## General information

- ▶ Carefully read the content of this manual before installing the air conditioner and store the manual in a safe place in order to be able to use it as reference after installation.
- ▶ For maximum safety, installers should always carefully read the following warnings.
- ▶ Store the operation and installation manual in a safe location and remember to hand it over to the new owner if the air conditioner is sold or transferred.
- ▶ This manual explains how to install an indoor unit with a split system with two SAMSUNG units.  
The use of other types of units with different control systems may damage the units and invalidate the warranty.  
The manufacturer shall not be responsible for damages arising from the use of non compliant units.
- ▶ This product has been determined to be in compliance with the Low Voltage Directive (2006/95/EC), and the Electromagnetic Compatibility Directive (2004/108/EC) of the European Union.
- ▶ The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and requirements set forth in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.
- ▶ The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.
- ▶ Do not use the units if damaged. If problems occur, switch the unit off and disconnect it from the power supply.
- ▶ In order to help prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact SAMSUNG's technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.
- ▶ Always remember to inspect the unit, electric connections, refrigerant tubes and protections regularly. These operations should be performed by qualified personnel only.
- ▶ The unit contains moving parts, which should always be kept out of the reach of children.
- ▶ Do not attempt to repair, move, alter or reinstall the unit. If performed by unauthorized personnel, these operations may cause electric shocks or fires.
- ▶ Do not place containers with liquids or other objects on the unit.
- ▶ All the materials used for the manufacture and packaging of the air conditioner are recyclable.
- ▶ The packing material and exhaust batteries of the remote controller(optional) must be disposed of in accordance with current laws.
- ▶ The air conditioner contains a refrigerant that has to be disposed of as special waste. At the end of its life cycle, the air conditioner must be disposed of in authorized centers or returned to the retailer so that it can be disposed of correctly and safely.

## Installing the unit

**IMPORTANT:** When installing the unit, always remember to connect first the refrigerant tubes, then the electrical lines.  
Always disassemble the electric lines before the refrigerant tubes.

- ▶ Upon receipt, inspect the product to verify that it has not been damaged during transport.  
If the product appears damaged, DO NOT INSTALL it and immediately report the damage to the carrier or retailer (if the installer or the authorized technician has collected the material from the retailer.)







- ▶ After completing the installation, always carry out a functional test and provide the instructions on how to operate the air conditioner to the user.
- ▶ Do not use the air conditioner in environments with hazardous substances or close to equipment that release free flames to avoid the occurrence of fires, explosions or injuries.
- ▶ To help prevent injury when accidentally touching the indoor unit fan, install the indoor unit at least 2.5 m above the floor.
- ▶ The air conditioner should be used only for the applications for which it has been designed : the indoor unit is not suitable to be installed in areas used for laundry.
- ▶ Our units must be installed in compliance with the spaces indicated in the installation manual to ensure either accessibility from both sides or ability to perform routine maintenance and repairs. The units' components must be accessible and that can be disassembled in conditions of complete safety either for people or things.  
For this reason, where it is not observed as indicated into the Installation Manual, the cost necessary to reach and repair the unit (in safety, as required by current regulations in force) with slings, trucks, scaffolding or any other means of elevation won't be considered in-warranty and charged to end user.

### Power supply line, fuse or circuit breaker

- ▶ Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- ▶ Always verify that a suitable grounding connection is available.
- ▶ Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
- ▶ Always verify that the cut-off and protection switches are suitably dimensioned.
- ▶ Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
- ▶ Always verify that electric connections (cable entry, section of leads, protections...) are compliant with the electric specifications and with the instructions provided in the wiring scheme.  
Always verify that all connections comply with the standards applicable to the installation of air conditioners.

## Choosing the installation location

### Indoor unit

- ▶ For Wi-Fi Air-conditioner installation, select indoor unit location near to wireless router.  
In case Wi-Fi signal strength weakened , Smart APP may be disconnected depending on the Wi-Fi signal strength.
- ▶ Where airflow is not blocked.
- ▶ Where cool air can be distributed throughout the room.
- ▶ Install the refrigerant piping length and the height difference of both indoor and outdoor units as indicated in the installation diagram.
- ▶ Wall that prevents vibration and is strong enough to hold the product weight.
- ▶ Out of the direct sunlight .
- ▶ 1 m or more away from the TV or radio (to prevent the screen from being distorted or noise from being generated).
- ▶ As far away as possible from the fluorescent and incandescent lights (so that the remote controller can be operated well).
- ▶ A place where the air filter can be replaced easily.
- ▶ Don't install directly above electronics equipment as leaking water may cause damage if not serviced. (eg. Computers, TV, etc).





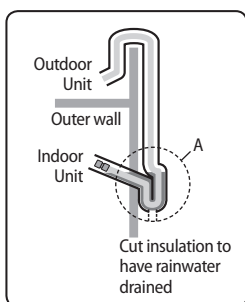
# Choosing the installation location

## Outdoor Unit

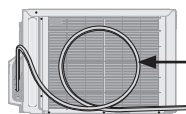
- ▶ Where it is not exposed to strong wind
- ▶ Well ventilated and dustless places
- ▶ Where possible keep out of sunlight and rain
- ▶ Where neighbors are not annoyed by operation sound or hot air
- ▶ Solid wall or support that prevents vibration and is strong enough to hold the product weight
- ▶ Where there is no risk of flammable gas leakage
- ▶ When installing the unit at a high place be sure to fix the unit legs
- ▶ 3 m or more away from the TV or radio (to prevent the screen from being distorted or noise from being generated)
- ▶ Install the unit horizontally
- ▶ Place where drained water does not become any problem.
- ▶ Place with no plants (especially climbing plants) and where small animal can not access.
- ▶ Outdoor unit should not be place higher than 2.4 m or directly under eaves for accessibility for service and OH&S reasons.



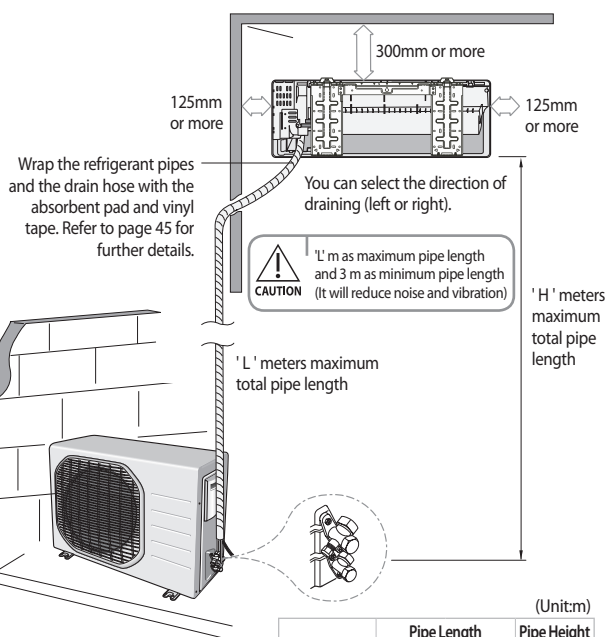
- Avoid the following places to prevent malfunction of the unit
- Where there is machine oil
  - Salty environment such as seaside areas
  - Where sulfide gas exists
  - Other special atmosphere areas



Make an U-trap(A) on the pipe (which is connected to the indoor unit) at outer wall and cut the bottom part of the insulation (about 10 mm) to prevent rainwater from getting inside through the insulation. However, be careful not to damage the pipe.



Make at least one round:  
It will help reduce noise and vibration.



(Unit:m)

Model	Pipe Length		Pipe Height
	Minimum	Maximum	Maximum
**09/12**	3	10	5
**18**	3	15	8
**24**	3	20	10

\* The appearance of the unit may be different from the diagram depending on the model.



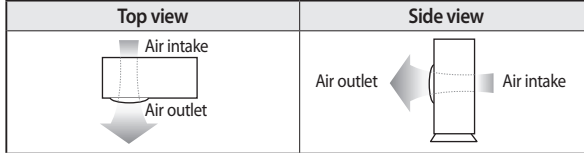




## Space Requirements for Outdoor Unit

### When installing 1 outdoor unit

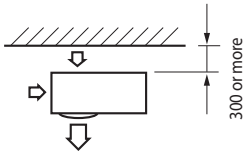
#### ◆ Figure Description



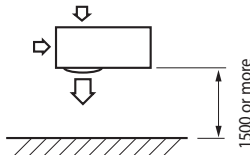
◆ Air flow direction.

(Unit : mm)

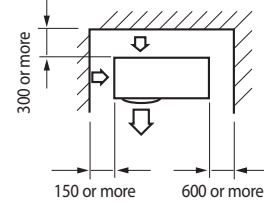
#### ◆ When the air outlet is opposite the wall



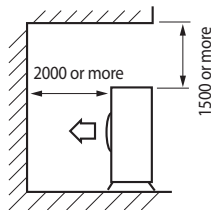
#### ◆ When the air outlet is towards the wall



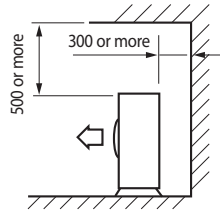
#### ◆ When 3 sides of the outdoor unit are blocked by the wall



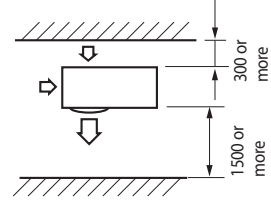
#### ◆ The upper part of the outdoor unit and the air outlet is towards the wall



#### ◆ The upper part of the outdoor unit and the air outlet is opposite the wall



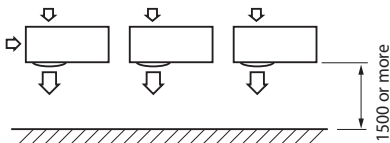
#### ◆ When the walls are blocking front and the rear side of the outdoor unit



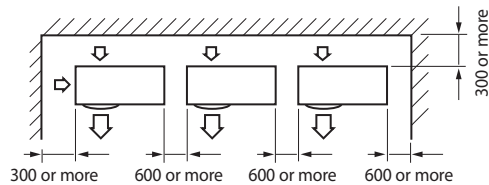
### When installing more than 1 outdoor unit

(Unit : mm)

#### ◆ When the air outlet is towards the wall



#### ◆ When 3 sides of the outdoor unit are blocked by the wall



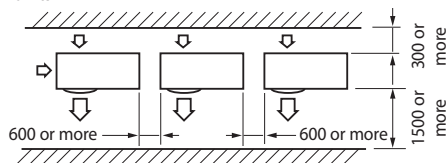




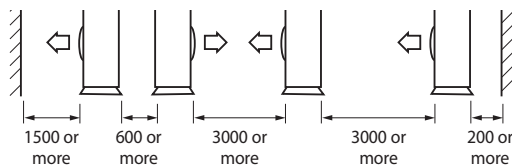
## Choosing the installation location

(Unit : mm)

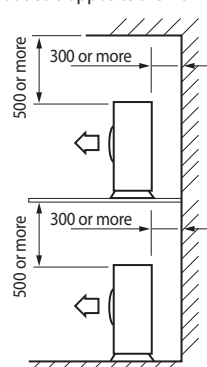
- ◆ When the walls are blocking front and the rear side of the outdoor units



- ◆ When front and rear side of the outdoor unit is towards the wall



- ◆ When the upper part of the outdoor unit and the air outlet is opposite the wall



- If installation is done in inappropriate space, unit may generate sound and cause bad effect on the product.
- Installation must be done in level and in a place where vibration will not cause any effect.



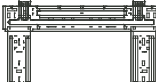





## Accessories

The following accessories are supplied with the air conditioner:



- The number of each accessory is indicated in parentheses.

### Accessories in the indoor unit case

<b>Installation Plate (1)</b> **09/12** 	<b>Installation Plate (1)</b> **18** 	<b>Installation Plate (1)</b> **24** 	<b>Remote controller (1)</b> 
<b>Batteries for Remote controller (2)</b> 	<b>User's &amp; Installation Manual (1)</b> 	<b>Clip anchor (5)</b> 	<b>Self-tapping screw (5)</b> 














## Optional accessories

The following connection accessories are optional. If they are not supplied, you should obtain them before installing the air conditioner.

<b>Insulated Assembly Pipe, Ø6.35 mm (1)</b> **09/12/18** 	<b>Insulated Assembly Pipe, Ø9.52 mm (1)</b> **09/24** 	<b>Insulated Assembly Pipe, Ø12.70 mm (1)</b> **12/18** 	<b>Insulated Assembly Pipe, Ø15.88 mm (1)</b> **24** 
<b>3-wire Assembly Cable (1)</b> **09/12/18** 	<b>4-wire Assembly Cable (1)</b> **24** 	<b>Rubber Leg (4)</b> 	

## Tools required for installation

### General Tools

- |                                             |                  |                  |
|---------------------------------------------|------------------|------------------|
| • Vacuum Pump (Backward flowing prevention) | • Manifold Gauge | • Stud Finder    |
| • Torque Wrench                             | • Pipe Cutter    | • Reamer         |
| • Screw Driver                              | • Spanner        | • Drill          |
|                                             | • L Wrench       | • Measuring Tape |

### Tools for test operations

- |               |                    |               |
|---------------|--------------------|---------------|
| • Thermometer | • Resistance Meter | • Electrocope |
|---------------|--------------------|---------------|



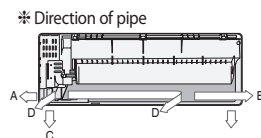


## Fixing the installation plate

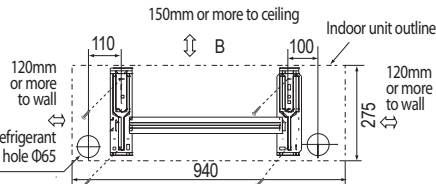
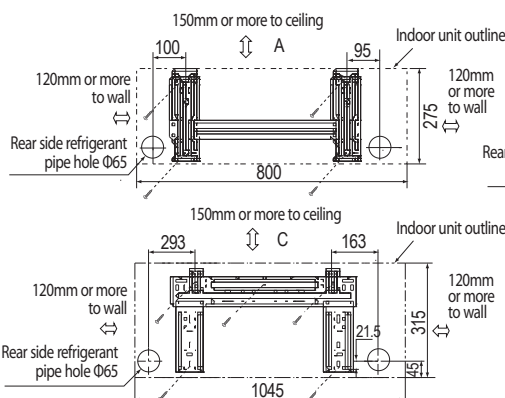
You can select the direction of the drain hose depending on where you want to install the indoor unit. Therefore before fixing the installation plate to a wall or a window frame, you must determine the position of the 65 mm hole through which the cable, pipe and hose pass to connect the indoor unit to the outdoor unit.

When facing the wall, the pipe and cable can be connected from the:

- Right (A)
- Left (B)
- Underside\_right (C)
- Rear\_right or left (D)



1. Determine the position of the pipe and drain hose hole as seen in the picture and drill the hole with an inner diameter of 65 mm so that it slants slightly downwards.



Model	Plate Type
**09/12**	A
**18**	B
**24**	C



- Make sure to drill only one hole after choosing the direction of the pipe.

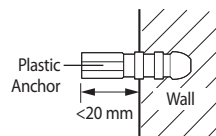
### 2. Fix the indoor unit.

If you fix the indoor unit on a wall

- (1) Fix the installation plate to the wall giving attention to the weight of the indoor unit.



- If you mount the plate to a concrete wall using plastic anchors, make sure that gaps between the wall and the plate, created by projected anchor, is less than 20 mm.



If you fix the indoor unit on a window frame

- (1) Determine the positions of the wooden uprights to be attached to the window frame.
- (2) Attach the wooden uprights to the window frame giving attention to the weight of the indoor unit.
- (3) Attach the installation plate to the wooden upright using tapping screws.

If you fix the indoor unit on a gypsum board

- (1) Use stud finder to find out locations of the studs.
- (2) Fix the plate hanger on two studs.



- Search for other spots if there are less than two studs, or the distance between the studs are different from the plate hanger.
- Fix the installation plate without inclining to one side.



- Make sure that a wall can withstand the weight of the product. If you install the product in a place where it is not strong enough to withstand the product weight, the unit could fall and cause injury.







# Connecting the assembly cable

## Cable specification

Model	Power cable	Interconnection cable
**09/12**	3G x 1.5 mm <sup>2</sup> , H05VV-F	3G x 1.5 mm <sup>2</sup> , H07RN-F
**18**	3G x 2.5 mm <sup>2</sup> , H05VV-F	3G x 2.5 mm <sup>2</sup> , H07RN-F
**24**	3G x 2.5 mm <sup>2</sup> , H05VV-F	4G x 2.5 mm <sup>2</sup> , H07RN-F



NOTE

- Connect the power cable to the auxiliary circuit breaker. If every pole fails to connect to the power supply, it must be incorporated in a wire with a contact opening of  $\geq 3$  mm.
- Use shield cable (Category 5; less than 50pF/m) for noisy environmental site.
- Power supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC: 60245 IEC 66/CENELEC: H07RN-F, IEC: 60227 IEC 53/CENELEC: H05VV-F)
- Power & Communication cable shall not exceed 30m.

## Connecting the cable

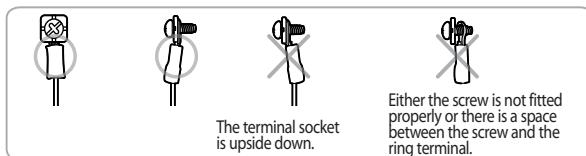
### Electrical work

- (1) For electrical and earth works, comply with the 'technical standards of electrical installations' and the 'wiring regulations' of the Local wiring regulations.
- (2) Tighten the terminal block screw to under 1.2 N·m (12 kgf·cm).
- (3) Precautions when connecting terminal blocks of the indoor unit

- ▶ Before connecting, make sure the connecting part of the terminal socket is facing upwards.



- ▶ There must be no space between the terminal and the screw when connected.
  - Any remaining space may become a fire hazard due to overheating of the electrical contact.



CAUTION

- For the terminal block wiring, use a wire with a ring terminal socket only. Regular wires without a ring terminal socket may become a fire hazard due to overheating of the electrical contact during a wiring work.

※ When you install the unit, make first refrigerant connections and then electrical connections.

Connect the air conditioner to grounding system before performing the electrical connection.

If unit is uninstalled, first disconnect electrical cables, then refrigerant connections.

If the outdoor unit is more than 4.5 meters away from the indoor unit, you must extend the cable. The maximum length of the cable is 10(\*\*09/12/18\*\*) / 20(\*\*24\*\*) meters.

### 1. Extend the assembly cable if necessary.



CAUTION

- Do not connect two or more different cables to extend the length. It may cause fire.







## Connecting the assembly cable

2. Open the cover panel.
3. Remove the screw securing the connector cover.
4. Pass the assembly cable through the rear of the indoor unit and connect the assembly cable to terminals.  
(Refer to the picture below)

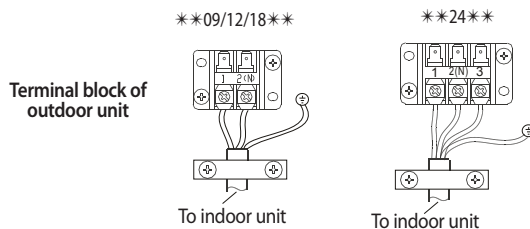
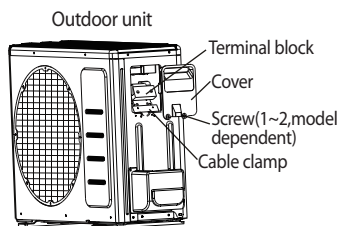
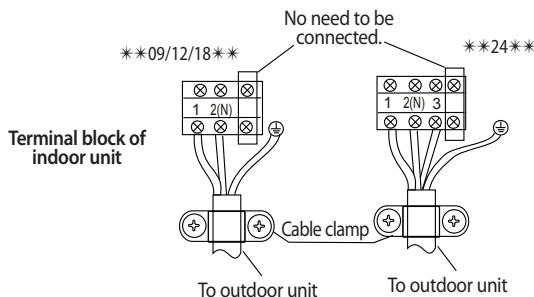
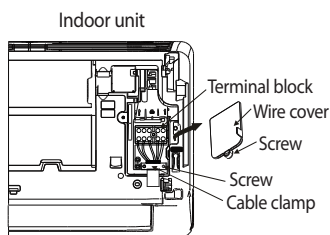


- Each wire is labeled with the corresponding terminal number.

5. Pass the other end of the cable through the 65 mm hole in the wall.
6. Close the connector cover by tightening the screw carefully.
7. Close the cover panel.
8. Remove the terminal board cover on the side of the outdoor unit.
9. Connect the cables to the terminals as seen in the picture.



- Each wire is labeled with the corresponding terminal number.



- Also circular terminal must be matched with screw size in terminal block.
- After connecting the cables, make sure terminal numbers on the indoor/outdoor unit matches.
- Please ensure that Power & Communication cables are separated, they must not be in the same cable.

10. Connect the grounding conductor to the grounding terminals.
11. Close the terminal board cover by tightening the screw carefully.



- In Russia and Europe, consult with the supply authority to determine the supply system impedance before installation.



- Connect the wires firmly so that wires can not be pulled out easily.  
(If they are loose, it could cause burn-out of the wires.)
- Connect the wires according to color codes, referring to the wiring diagram.
- The power cable and the interconnection cable should be selected according to the specification in page 35.







## Installing and connecting the assembly pipe of the indoor unit

Connect indoor and outdoor units with field-supplied copper pipes by means of flare connections. Use insulated seamless refrigeration grade pipe only, (Cu DHP type according to ISO1337), degreased and deoxidized, suitable for operating pressures of at least 4200 kPa and for burst pressure of at least 20700 kPa. Under no circumstances must sanitary type copper pipe be used.

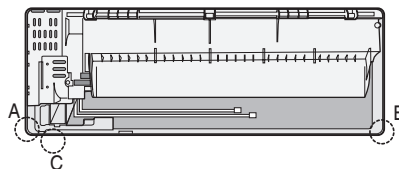
There are 2 refrigerant pipes of different diameters:

- The smaller one is for the liquid refrigerant
- The larger one is for the gas refrigerant

A short pipe is already fitted to the air conditioner. You may need to extend the pipe using the assembly pipe (optional).

The connection procedure for the refrigerant pipe varies according to the exit position of the pipe when facing the wall:

- Right(A)
- Left(B)
- Underside(C)
- Rear



1. Cut out the appropriate knock-out piece (A or B) on the rear of the indoor unit unless you connect the pipe directly from the rear.
2. Smooth the cut edges.
3. Remove the protection caps of the pipes and connect the assembly pipe to each pipe. Tighten the nuts first with your hands, and then with a torque wrench, applying the following torque:

Outer Diameter	Torque	
	N·m	kgf·cm
ø6.35 mm	14~18	140~180
ø9.52 mm	34~42	350~430
ø12.70 mm	49~61	500~620
ø15.88 mm	68~82	690~830



• If you want to shorten or extend the pipes, refer to page 38~39.

4. Cut off the remaining foam insulation.
5. If necessary, bend the pipe to fit along the bottom of the indoor unit. Then pull it out through the appropriate hole.
  - ▶ The pipe should not project from the rear of the indoor unit.
  - ▶ The bending radius should be 100 mm or more.
6. Pass the pipe through the hole in the wall.
7. For further details on how to connect to the outdoor unit and evacuate the air, refer to page 42~43.



• The pipe will be insulated and fixed permanently into position after finishing the installation and the gas leak test; refer to page 45 for further details.



- Tighten the flare nut with torque wrench according to specified method.  
If the flare nut is over-tightened, the flare may break and cause refrigerant gas leakage.
- DO NOT WALL UP THE PIPE CONNECTION!  
All refrigerant pipe connection must be easy accessible and serviceable.





## Evacuating the indoor unit

The indoor unit is supplied with inert gas (nitrogen).

Before installing the unit, check if nitrogen gas flow out of indoor unit.

If this one isn't true, DO NOT INSTALL THE UNIT since leakage could be inside the indoor unit.

### 1. Unscrew the caps at the end of each pipe.

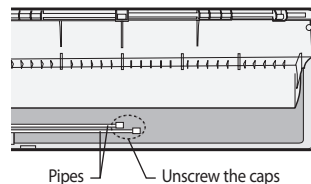
- ▶ All inert gas exhausts from the indoor unit.



- To prevent dirt or foreign substances from getting into the pipes during installation, do NOT remove the caps completely until you are ready to connect the pipes.



- The remaining air in the Refrigeration cycle, which contains moisture, may cause malfunction on the compressor.
- Always contact the service center or a professional installation agency for product installation.



## Cutting or extending the pipe

The length of the pipe can be:

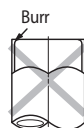
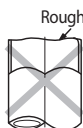
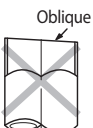
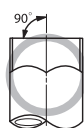
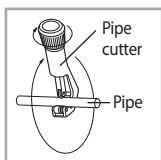
- Extended up to : see table page 30
- Shorten up to: see page 30



If you need a pipe longer than 4 meters:

- You must add refrigerant to the pipes; otherwise, the indoor unit may freeze.

1. Make sure that you have all the required tools (pipe cutter, reamer, flaring tool and pipe holder).
2. If you want to shorten the pipe, cut it using a pipe cutter, ensuring that the cut edge remains at 90° with the side of the pipe (see below examples of correct and incorrect cut edges).



3. To prevent a gas leak, remove all burrs at the cut edge of the pipe using a reamer.



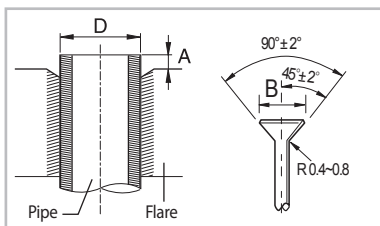
- Face the pipe down while removing the burrs to make sure that burrs do not get in to the pipe.







4. Put a flare nut slightly into the pipe and modify the flare.



Outer Diameter (D)	Depth (A)	Flaring Size (B)
ø6.35 mm	1.3 mm	8.7 - 9.1 mm
ø9.52 mm	1.8 mm	12.8 - 13.2 mm
ø12.70 mm	2.0 mm	16.2 - 16.6 mm
ø15.88 mm	2.2 mm	19.3 - 19.7 mm

5. Check if you flared the pipe correctly (see examples of incorrectly flared pipes below).



Correct



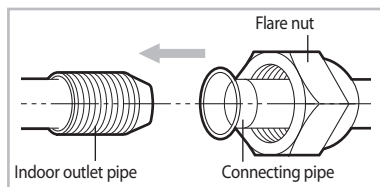
Inclined


Damaged  
Surface


Cracked


Uneven  
Thickness

6. Align the pipes to connect them easily. Tighten the flare nuts first with your hands, and then with a torque wrench, applying the following torque:



Outer Diameter	Torque	
	N·m	kgf·cm
ø6.35 mm	14~18	140~180
ø9.52 mm	34~42	350~430
ø12.70 mm	49~61	500~620
ø15.88 mm	68~82	690~830



- Excessive torque can be cause of gas leakage. If extending pipe by welding/brazing please ensure nitrogen is used during welding/brazing process. The joint must be accessible and serviceable.

7. For further details on how to connect to the outdoor unit and evacuate the air, refer to page 42~43.



- Tighten the flare nut with torque wrench according to specified method.  
If the flare nut is over-tightened, the flare may break and cause refrigerant gas leakage.

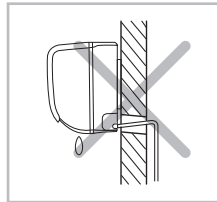
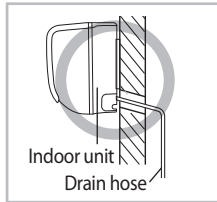




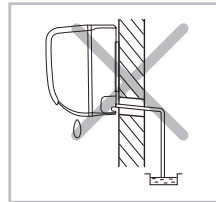


# Installing and connecting the drain hose of the indoor unit

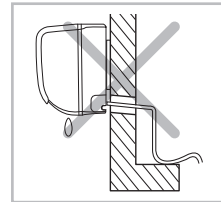
When installing the drain hose for the indoor unit, check if condensation draining is adequate.  
When passing the drain hose through the 65 mm hole drilled in the wall, check the followings:



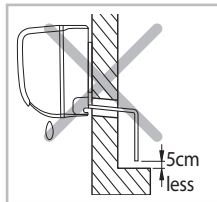
The drain hose must NOT slant upwards.



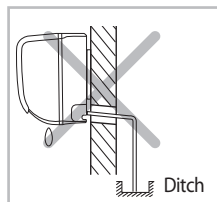
The end of the drain hose must NOT be placed under water.



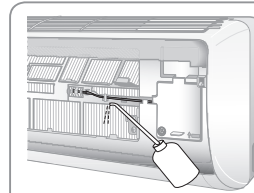
The drain hose must not be bent.



Keep a clearance of at least 5cm between the end of the drain hose and the ground.

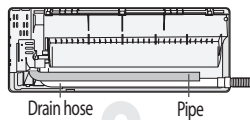


Do not place the end of the drain hose in a hollow.

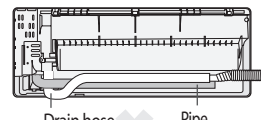


After completing the installation of the drain hose, pour water into the drain pan to check whether the hose is well drained.

1) Correct connection



2) Incorrect connection



- Don't tie drain hose to the assembly pipe which may lead to water leakage.
- If the diameter of the connection hose is smaller than the product's drain hose, water leakage may occur.

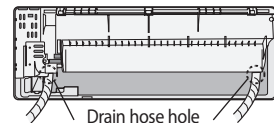
## Drain hose installation

1. If necessary, connect the 2 meter extension drain hose to the drain hose.
2. If you use the extension drain hose, insulate the inside of the extension drain hose with a shield.
3. Fit the drain hose into 1 of 2 drain hose holes, then fix the end of the drain hose tightly with a clamp.

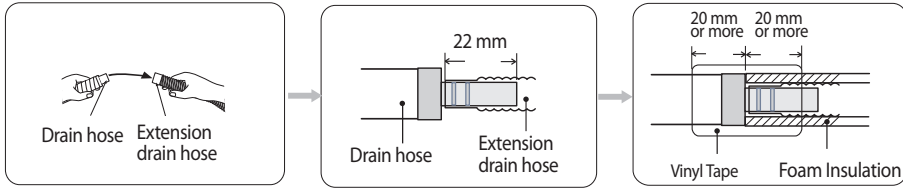


- If you do not use the other drain hose hole, block it with a rubber stopper.

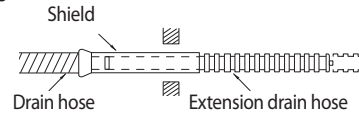
4. When extending the Drain Hose, hold the end of Drain Hose and Extended Hose, rotate and insert the drain hose into Extended hose for 40~45 mm. Make sure the two hoses are firmly connected, there is no water leakage.
5. Connect the Drain Hose after using Foam Insulation to wrap the Extended Hose. Then, Use vinyl tape to wrap the each side of connection by 20 mm.







6. Pass the drain hose under the refrigerant pipe, keeping the drain hose tight.
7. Pass the drain hose through the hole in the wall. Check if it slants downwards as seen in the picture.
8. Using natural drainage method, check the drainage is normal.



- The hose will be fixed permanently into position after finishing the installation and the gas leak test; refer to page 45 for further details.

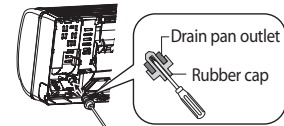
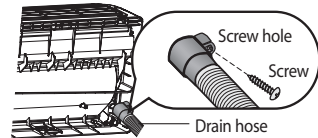


- Make sure the installed direction of the drain hose is correct. Inadequate installation may cause condensate water leakage.
- If the drain hose is routed inside the room, insulate the hose so that dripping condensation does not damage the furniture or floors.
- **DO NOT WALL UP THE DRAIN HOSE CONNECTION !**  
Drain hose connection must be easy accessible and serviceable.

## Changing direction of the drain hose

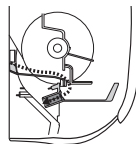
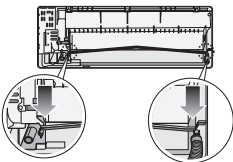
Change the direction only when it is necessary.

1. Detach the rubber cap with the plier.
2. Detach the drain hose by pulling it and turning to the right.
3. Insert the drain hose by fixing it with the screw into the groove of the drain hose and the outlet of the drain pan.
4. Attach the rubber cap with a screwdriver by turning it to the left until it fixes to the end of the groove.
5. Check for leakage on both side of the drain outlet.



Pour the water in direction of arrow.

✱ Direction of the drained water



- Make sure the indoor unit is in upright position when you pour water to check for leakage. Make sure that the water does not overflow onto the electrical part.







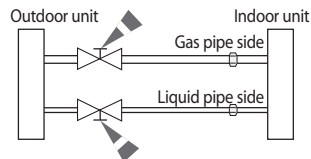
## Evacuating the connected pipes

The outdoor unit is loaded with sufficient R22 refrigerant. You should evacuate the air in the indoor unit and in the pipe. If air remains in the refrigerant pipes, it affects the compressor. It may cause reduction of cooling capacity and malfunction.



- When installing, make sure there is no leakage. When recovering the refrigerant, ground the compressor first before removing the connection pipe. If the refrigerant pipe is not properly connected and the compressor works with the service valve open, the pipe inhales the air and it makes the pressure inside of the refrigerant cycle abnormally high. It may cause explosion and injury.

1. Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.
2. Tighten the flare nut first with your hands, and then with a torque wrench, applying the following torque.



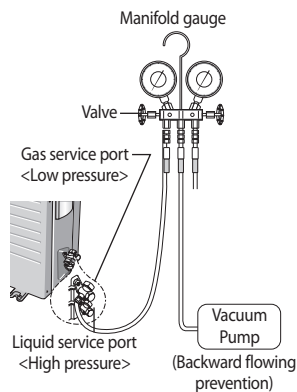
- Excessive torque can be cause of gas leakage.



- Make the electrical connection and leave the system into "stand by mode". Do not turn on the system!  
This is necessary for better vacuum operation (full OPEN position of Electronic Expansion Valve - EEV -).

Outer Diameter	Torque	
	N·m	kgf·cm
ø6.35 mm	14~18	140~180
ø9.52 mm	34~42	350~430
ø12.70 mm	49~61	500~620
ø15.88 mm	68~82	690~830

3. Connect the charging hose of the low-pressure side of manifold gauge to a gas service port as seen in the picture.
4. Open the valve of the low pressure side of manifold gauge counterclockwise.
5. Evacuate the air in the connected pipes using the vacuum pump for about 15 minutes.
  - ▶ Make sure that pressure gauge shows -0.1 MPa(-76 cmHg) after about 10 minutes.  
This procedure is very important to avoid a gas leak.
  - ▶ Close the valve of the low pressure side of manifold gauge clockwise.
  - ▶ Turn off the vacuum pump.
  - ▶ Check for 2 minutes if there is any pressure change.
  - ▶ Remove the hose of the low pressure side of manifold gauge.
6. Set a valve cork of liquid and gas service port to the open position.







## Adding Refrigerant

Add refrigerant charge according to table below:

**If you use a pipe longer than 4 m,**  
'A' g of refrigerant R22 must be added for each extra meter.

**If you use a pipe shorter than 4 m,**  
The evacuate time is normal.

Refer to the Service Manual for further details.

Model	A
**09/12/18**	30
**24**	60



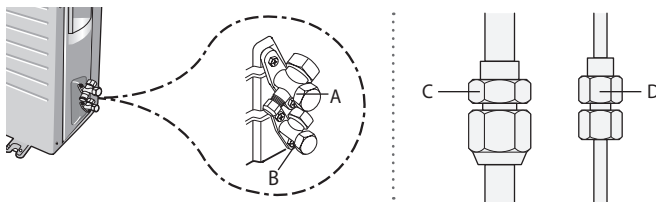
- The remaining air in the Refrigeration cycle, which contains moisture, may cause malfunction on the compressor.
- Always contact the service center or a professional installation agency for product installation.



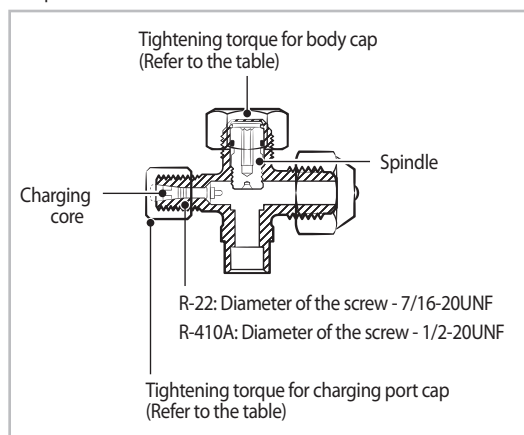


## Performing the gas leak tests

Make sure to check for gas leaks before completing the installation process (connecting the assembly pipe and hose between indoor unit and outdoor unit, insulating the cables, hose and pipe, and fixing the indoor unit to the installation plate).



Test part for outdoor unit



**To check for gas leaks on the outdoor unit,**  
Check the valve A and B using a leak detector.

**To check for gas leaks on the indoor unit,**  
Check the flare nut C and D using a leak detector.

Test part for indoor unit

- ▶ Before inspecting the leakage, use a torque wrench to close the cap for the service valve. (Comply with a tightening torque for each size of the diameter, and tighten the cap firmly to prevent any leakage.)
- ▶ To check for any possible leakage, insert inert gas into the pipes connected to indoor/outdoor units and check the connection part of the indoor/outdoor units with soap lather or liquid for leakage test.

Outer Diameter (mm)	Tightening torque	
	Body cap (N·m)	Charging port cap (N·m)
ø 6.35	20 ~ 25	10 ~ 12
ø 9.52	20 ~ 25	
ø 12.70	25 ~ 30	
ø 15.88	30 ~ 35	
ø 19.05	35 ~ 40	

( 1 N·m = 10 kgf·cm )







## Fixing the indoor unit in place

Perform the following work on the area where gas leak test was done priory.

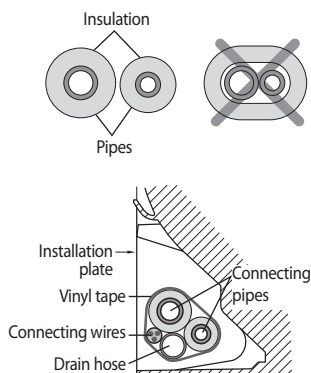
After checking for gas leaks in the system, insulate the pipe, hose and cables.  
Then place the indoor unit on the installation plate.

1. To minimise condensation problems, wrap foam insulation (as shown in the figure) on a part without insulation on the end of the pipes.
2. Wind the pipe, assembly cable and drain hose with vinyl tape.
3. Place the bundle (the pipe, assembly cable and drain hose) in the lower part of the indoor unit carefully so it does not project from the rear of the indoor unit.
4. Hook the indoor unit to the installation plate and move the unit to the right and left until it is securely in place.



- Make sure pipe does not move when you install the indoor unit on an installation plate.

5. Wrap the rest of the pipe with vinyl tape.
6. Attach the pipe to the wall using clamps (optional).



## Fixing the outdoor unit in place

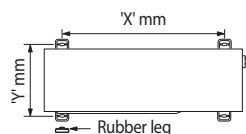
Install the outdoor unit in level on a stable base to help avoid the generation of noise and vibration, especially when installing the unit close to a neighbor.

If you install the outdoor unit in a place exposed to strong winds or at a height, fix it to an appropriate support (wall or ground).

1. Place the outdoor unit as indicated on the top of the unit to let the discharged air out properly.
2. Fix the outdoor unit in level to an appropriate support using anchor bolts.
3. If the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit so that the fan can operate correctly.



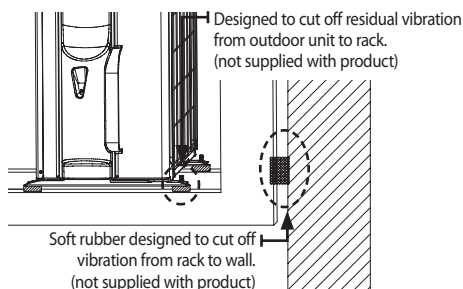
- Secure the rubber leg to help prevent the generation of noise and vibration.



Model	X	Y
**09**	460	276
**12/18**	549	276
**24**	560	335

### Outdoor unit installed on the wall by rack

- Ensure the wall will be able to suspend the weight of rack and outdoor unit;
- Install the rack close to the column as much as possible;
- Install proper grommet in order to help reduce noise and residual vibration transferred by outdoor unit towards wall.







## Final check and trial operation

To complete the installation, perform the following checks and tests to ensure that the air conditioner operates correctly.

### Check the followings:

- Strength of the installation site
- Tightness of pipe connection to detect gas leak
- Electric wiring connection
- Heat-resistant insulation of the pipe
- Drainage
- Grounding conductor connection
- Correct operation (follow the steps below)

#### 1. Press the **Power** button and check the following:

- ▶ The indicator on the indoor unit lights up.
- ▶ The airflow blade opens and the fan gears up for operation.

#### 2. Press the **Mode** button to select **Cool mode**.

- ▶ In Cool mode, use **Temp** + or – button and set the temperature at 17 °C.



- Approximately 3~5 minutes later, outdoor unit will start to operate and the Cool air will blow out.
- After 12 minutes of stationary condition check the indoor unit air treatment.

Cooling mode (indoor unit check) → Inlet air temp. - Outlet air temp:  
From 10 °C to 12 °C (indicative delta T)

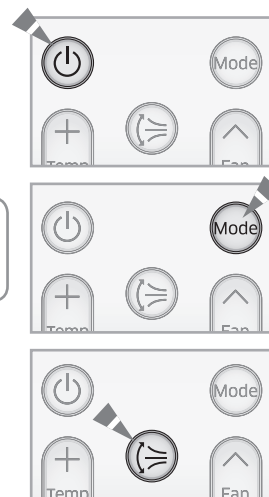
#### 3. Press the **Air swing** button and check the following:

- ▶ The airflow blades work properly.

#### 4. Press the **Power** button to stop the operation.



- When you complete the installation successfully, hand over this manual to the user for storage in a handy and safe place.



## Pump down procedure (when removing the product)

1. Turn on the air conditioner and select Cool mode to run the compressor for 3 minutes.
2. Release the valve caps on High and Low pressure side.
3. Use L wrench to close the valve on the high pressure side.
4. Approximately 1 minutes after, close the valve on the low pressure side.
5. Stop operation of the air conditioner.
6. Disconnect the pipes.









# How to connect your extended power cables

Items to prepare

(compressor and insulation tape should be prepared by an installation technician.)

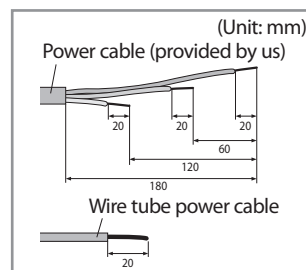
Tools	Crimping pliers	Connection sleeve (mm)	Insulation tape	Contraction tube (mm)
Spec	MH-14	20xØ7.0(HxOD)	Width 18 mm	50xØ8.0(LxOD)
Shape				

1. As shown in the figure, peel off the shields from the rubber/wire of the power cable.

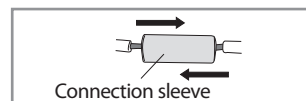
- Peel off 20 mm of the wire shields of the tube installed already.



• After peeling off the tube wire, you must insert a contraction tube.



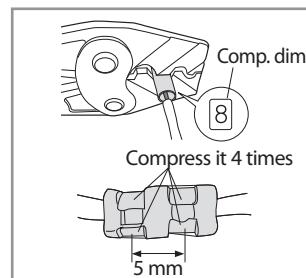
2. Insert both sides of core wire of the power cable into the connection sleeve.



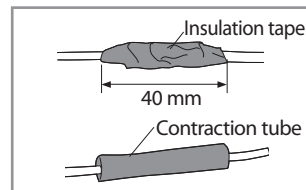
3. Using a compressor, compress the two points and flip it over and compress another two points in the same location.

- The compression dimension should be 8.0.

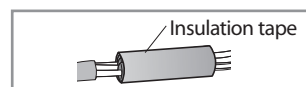
- After compressing it, pull both sides of the wire to make sure it is firmly pressed.



4. Wrap it with the insulation tape twice and position your contraction tube in the middle of the insulation tape.



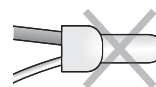
5. Apply heat to the contraction tube to contract it.



6. After tube contraction work is completed, wrap it with the insulation tape to finish.



• In case of extending the electric wire, please DO NOT use a round-shaped pressing socket.  
- Incomplete wire connections can cause electric shock or a fire.







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