### 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 yearround 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.

#### good'sleep function

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**good'sleep** function allows you to set a comfortable sleep temperature while saving energy and having sound sleep.

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This product has been determined to be in compliance with the Low Voltage Directive (2006/95/EC), and the Electromagnetic Compatibility Directive (2004/108/EEC) of the European Union.



Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

act take these items for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

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### USING PARTS 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.

#### Important safety symbols and precautions:

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	Hazards or unsafe practices that m	nay result in <b>severe pe</b> r	rsonal injury or death.
	Hazards or unsafe practices that m	nay result in <b>minor per</b>	sonal injury or property damage.
0	Follow directions.	()	Unplug the power plug from the wall socket.
$\otimes$	Do NOT attempt.	$\odot$	Do NOT disassemble.
	Make sure the machine is grounde	ed to prevent electric s	hock.

- FOR INSTALLATION WARNING Plug the power cord into a wall socket with the power specifications of the product or higher and use the socket for this appliance only. In addition, do not use an extension cord. Sharing a wall socket with other appliances using a power strip or extending the power cord 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. ۲ Failing to do so may result in electric shock, fire, explosion, problems with the product, or injury. Install a switch 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 or fire. Do not install this appliance near a heater, inflammable material. Do not install this appliance in a humid, oily or dusty  $\bigcirc$ 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. If using a multi system, RJ\*\*\*outdoor unit can only be connected to european products among AQV\*\*PSB series. 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, an explosion, or other problems with the product. Never plug the power cord into a socket that is not grounded correctly and make sure that it is in accordance with local and national codes / CAUTION FOR INSTALLATION This appliance should be positioned in such a way that it is accessible to the power plug. Ω Failing to do so may result in electric shock or fire due to electric leakage 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. 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.

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F		ety precaution	WARNING	
	0	<ul> <li>Remove all foreign substa on a regular basis.</li> <li>Unplug the power plug.</li> <li>Failing to do so may resu</li> <li>Plug the power plug into '</li> <li>If you plug the power plu this may result in electric</li> </ul>	ances such as dust or water from the power plug terminals and contact points using a dry cloth and clean it with a dry cloth. If in electric shock or fire. the wall socket in the right direction so that the cord runs towards the floor. ug into the socket in the opposite direction, the electric wires within the cable may be damaged and shock or fire.	
(	0	Plug the power plug into a socket.         ▶ This may result in electric         Do not pull the power cor         ▶ Unplug the power plug         ▶ Failing to do so may resu         Do not pull or excessively	rd, when unplugging the power plug. by holding the plug. Ilt in electric shock or fire. bend the power cord. Do not twist or tie the power cord. Do not hook the power cord over a vy object on the power cord, insert the power cord between objects, or push the power cord appliance.	
F	OR P	POWER SUPPLY		
	- T	<ul><li>When not using the air cocircuit breaker.</li><li>Failing to do so may result.</li></ul>	nditioner for a long period of time or during a thunder/lightning storm, cut the power at the ult in electric shock or fire.	
F	ORL	JSING	WARNING	
		<ul> <li>Failing to do so may result the appliance generates your nearest service centes</li> <li>Failing to do so may result in the event of a gas leak (not touch the appliance of bo not use a ventilating</li> <li>A spark may result in an art or reinstall the air conditis</li> <li>Failing to do so may result</li> <li>A delivery service for the expenses and an installa</li> <li>Especially, when you wis</li> </ul>	s a strange noise, a burning smell or smoke, unplug the power plug immediately and contact er. It in electric shock or fire. (such as propane gas, LP gas, etc.), ventilate immediately without touching the power plug. Do or power cord. fan. explosion or fire. oner, please contact your nearest service center. It in problems with the product, water leakage, electric shock, or fire. Product is not provided. If you reinstall the product in another location, additional construction	
(	S	<ul> <li>This may result in electric Do not unplug the power</li> <li>Plugging the power plug result in electric shock or</li> <li>After unpacking the air co can be dangerous to child</li> <li>If a child places a bag ow Do not insert your fingers</li> <li>Take special care that chil</li> <li>Do not touch the air flow</li> <li>This may result in electric Do not insert your fingers</li> <li>Take special care that chil</li> </ul>	plug or turn the air conditioner off with the circuit breaker while it is operating. g into the wall outlet or turning the air conditioner on from the circuit breaker may cause a spark and r fire. onditioner, keep all packaging materials well out of the reach of children, as packaging materials dren. er its head, it may result in suffocation. s or foreign substances into the outlet when the air conditioner is operating. Idren do not injure themselves by inserting their fingers into the product. blade with your hands or fingers during the heating operation.	

	FOR USI	ING	WARNING	_
	Do	This may result in children not use this air conditio	ar the outdoor unit that allows children to climb onto the machine. n seriously injuring themselves. oner for long periods of time in badly ventilated locations or near infirm people. rous due to a lack of oxygen, Open a window at least once an hour.	ENC
	🐨 tur		uch as water has entered the appliance, cut the power by unplugging the power plug and off and then contact your nearest service center. It in electric shock or fire.	ENGLISH
		Do not use any fuse (such	<b>disassemble, or modify the appliance yourself.</b> n as cooper, steel wire, etc.)other than the standard fuse. It in electric shock, fire, problems with the product, or injury.	
	FOR USI	ING		
	Chi Ma	Water dripping from the in eck that the installation Failing to do so may result	vices under the indoor unit. indoor unit may result in fire or property damage. frame of the outdoor unit is not broken at least once a year. It in injury, death or property damage. ccording to IEC standard for safety and current is measured according to ISO standard for	1
<b>.</b>	Che ► Do ► Do	emicals, metal objects, e This may result in electric onot operate the applian This may result in electric onot spray volatile mater	shock, fire, problems with the product, or injury. nce with wet hands. shock. rial such as insecticide onto the surface of the appliance.	
٢	Do ►	not drink the water from The water may be harmfu		
	Do ► Do	not touch the pipes con This may result in burns o not use this air conditio	nnected with the product.	
	•	usual purposes. This may result in property pid directly exposing by	ty damage. <b>Jmans, animals or plants from the air flow from the air conditioner for long periods of time.</b>	
	► Thi cap	This may result in harm to is appliance is not intend pabilities, or lack of expe	annais, animals or plants from the an now norm the an conditioner for long periods of three o humans, animals or plants. ded for use by persons (including children) with reduced physical, sensory or mental errence and knowledge, unless they have been given supervision or instruction concerning use on responsible for their safety. Children should be supervised to ensure that they do not play	
		th the appliance.		
	FOR CLE	EANING	WARNING	-
	or apj → Bef	<b>pliance.</b> This may result in discolor	e by spraying water directly onto it. Do not use benzene, thinner or alcohol to clean the ration, deformation, damage, electric shock or fire. ning maintenance, unplug the air conditioner from the wall socket and wait until the fan stops. It in electric shock or fire.	
	FOR CLE	EANING		
			he surface of the heat exchanger of the outdoor unit since it has sharp edges.	-
	· ·	TO AVOID CUTTING YOUR TING	gers, wear thick cotton gloves when cleaning it.	

### 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	Remark
Cooling	16°C~32°C	-10°C~43°C 16°C~43°C 16°C~43°C	Relative humidity 80% or less	AQV09PSB, AQV12PSB, AQV18PSB, AQV24PSB AQV09PWA, AQV12PWA
Heating	27°C or less	-10°C~43°C 16°C~43°C 16°C~43°C	-	AQV09PSB, AQV12PSB, AQV18PSB, AQV24PSB AQV09PWA, AQV12PWA
Dry	16°C~32°C	-15°C~24°C -10°C~24°C	-	AQV09PSB, AQV12PSB, AQV18PSB, AQV24PSB AQV09PWA, AQV12PWA

If the air conditioner operates in cooling mode for long period of time in high humidity area, dew may be formed.
 If the outdoor temperature goes down to -5°C, heating capacity may decrease as much as 60%~70% of

#### specified capacity according to the using conditions.

#### Model:RJ\*\*\*

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Mode	Indoor temperature	Outdoor temperature	Indoor humidity	If out of conditions
Cooling	16°C~32°C	-5°C~46°C	80% or less	Condensation may occur on the indoor unit with risk to have either water blow off or drop on the floor.
Heating	27°C or less	-15°C~24°C	-	Internal protection triggers and the air conditioner will stop.
Dry	18°C~32°C	-5°C~46°C	-	Condensation may occur on the indoor unit with risk to have either water blow off or drop on the floor.

► The standardized temperature for heating is 7°C. If the outdoor temperature drops to 0°C or below, the heating capacity can be reduced depending on the temperature condition.

▶ If the cooling operation is used at over 32°C(indoor temperature), it does not cool at its full capacity.

#### Maintaining your air conditioner

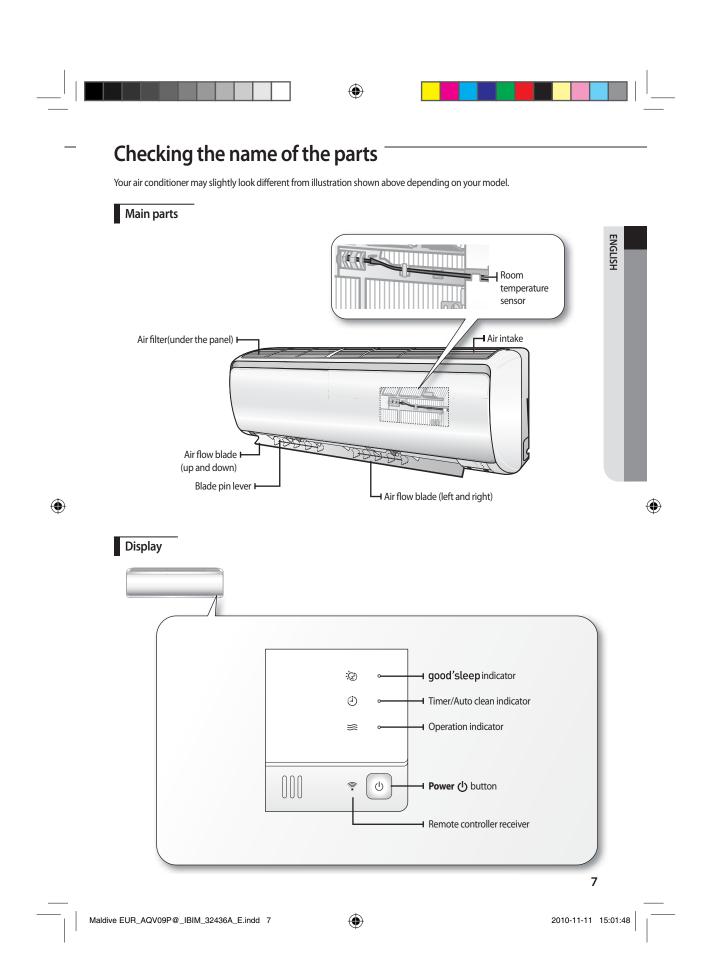
#### Internal protections via the unit control system

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

Туре	Description
Against cold air	The internal fan will be off to against cold air when the heat pump is heating.
De-ice cycle	The internal fan will be off to against cold air when the heat pump is heating.
Anti-protection of internal battery	The compressor will be off to protect internal battery when the air conditioner operates in Cool mode.
Protect compressor	The air conditioner does not start operating immediately to protect the compressor of the outdoor unit after it has been started.
• If the heat pump is open notein have deposited at low	erating in Heat mode, De-ice cycle is actuated to remove frost from an outdoor unit that may temperatures.

The internal fan is switched off automatically and restarted only after the de-ice cycle is completed.

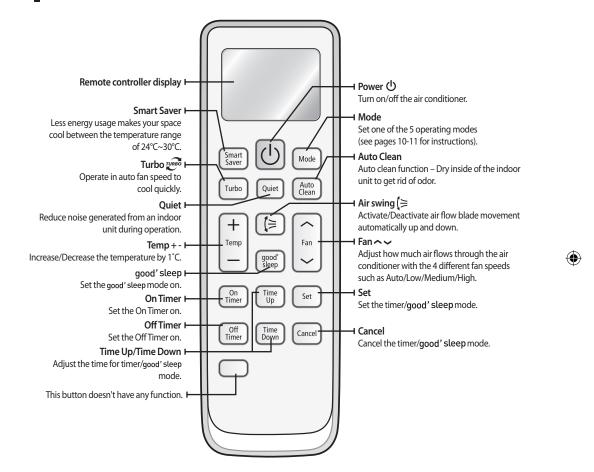
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### Checking the remote controller

- · Point the remote controller towards the remote controller receiver of the indoor unit.

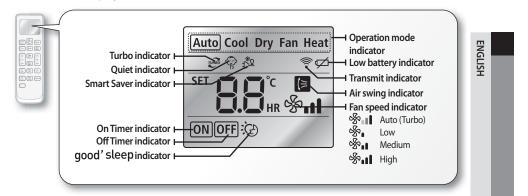
#### Remote controller buttons



 $\sum_{\text{caurion}}^{1}$  · Make sure that the water does not get to the remote controller.



#### Remote controller display



#### Battery changing time

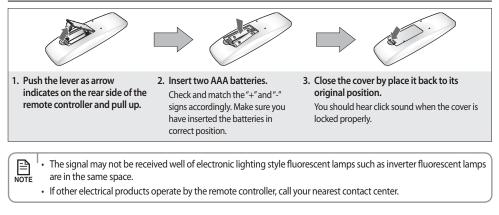
When the battery is exhausted, (()) will be displayed in the remote controller display. When the icon appears, change the batteries. The remote controller requires two 1.5V AAA type batteries.

#### 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

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#### Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.) This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66.

If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

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### **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 detected by the room temperature.

 If using a multi system, in Auto operation, the system selects a temperature setting and an appropriate operation mode (COOL or HEAT) based on the room temperature at the start of the operation.

#### 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 temperatures are much higher than the selected indoor temperature, it may take time to bring the inner temperature to the desired coolness.
- Quiet mode ( ) makes the noise quieter during operating the indoor unit in the Cool mode.

### Dry

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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 maximize the dehumidification capacity during the Dry operation, the air conditioner could be operating at lower or higher temperature than the remote controller set temperature.

#### Fan

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

#### Heat

The air conditioner heats as well as cools. Warm your room with this versatile appliance in the cold of winter.

• Fan may not operate for about 3~5 minutes at the beginning to prevent any cold blasts while the air conditioner is warming up.

• Quiet mode ( makes the noise quieter during operating the indoor unit in the Heat mode.

• Since the air conditioner heats the room by taking heat energy from outdoor air, the heating capacity may decrease when outdoor temperature is extremely low.

Use an additional heating appliance in combination with the air conditioner if you feel the air conditioner heats insufficiently.

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Press the Mode	button to turn on the air conditioner. button to set the operating mode. ess the Mode button, the mode will change in order of Auto, Cool, Dry, Fan and Heat.	ENGLISH
Press the Auto Cool	outton to set the desired fan speed. جهرا (Auto) ههرا (Auto), ههر (Low), همرا (Med), همرا (High)	I
Dry	ண் <sub>∎∎</sub> (Auto)	
Fan	&்_ (Low), &்_ (Med), &்_ (High)	
Heat	အို <sub>ရရီ</sub> (Auto), အို <sub>ရ</sub> (Low), အို <sub>ရရီ</sub> (Med), အို <sub>ရရီ</sub> (High)	
Press the $\begin{bmatrix} + \\ - \end{bmatrix}$ b	outton to adjust the temperature.	¢
Auto	You can adjust the desired temperature by 1°C within the range of $16^{\circ}C \sim 30^{\circ}C$ .	
Cool	You can adjust the desired temperature by 1°C within the range of 16°C~30°C.	
Dry	You can adjust the desired temperature by 1°C within the range of 18°C~30°C.	
Fan	Temperature adjustment is not possible.	
	You can adjust the desired temperature by 1°C within the range of 16°C~30°C.	

• Air flow can be adjusted manually.(see page 12 for instructions.)

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### Adjusting the air flow direction

Air flow can be directed to your desired position.

#### Vertical air flow

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Air flow blades move up and down.

#### Press the **Air swing** ( $\geq$ button on the remote controller.

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- ▶ Air swing indicator will be on and air flow blades move up and down continuously to circulate the air.
- ▶ Press the Air swing (∋ button on the remote controller again, to keep the air flow direction in a constant position.

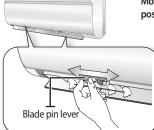
#### Horizontal air flow

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

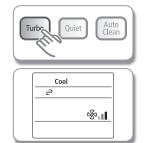


Move the blade pin lever left or right to keep the air flow direction in a constant position you prefer.

> 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.

### Using the Turbo function

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



Press the Turbo button on the remote controller during Cool mode.

▶ Turbo indicator appears on the remote controller display and the air conditioner operates in Turbo function for 30 minutes.

Cancel Press the Turbo button once again.

- Turbo function is only available in Cool mode.
- Turbo function is only available in Cool mode.
   NOTE
   If you press the Mode button while the Turbo function is on, it will cancel the function.
  - Temperature/Fan speed cannot be adjusted while using this function.

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### good' sleep mode

For a comfortable sleep, the air conditioner will operate it Fall asleep  $\triangleright$  Sound sleep  $\triangleright$  Wake up from **good' sleep** mode.



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#### When the air conditioner is on and in cool/heat mode

#### 1. Press the good' sleep button on the remote controller.

▶ good' sleep indicator appears and Off timer indicator starts blinking on the remote controller display.

#### 2. Press the Time Up or Time Down button to set the time.

- ▶ You can set the time in half hourly unit from 30 minutes ~ 3 hours and hour unit from 3 hours ~ 12 hours.
- Operating hour can be set from minimum 30 minutes to maximum 12 hours.
- ▶ Default operation hour is set to 8 hours.

#### 3. Press the Set button to active it on.

- Off timer indicator stops blinking and reserved time will be displayed for 3 seconds. Then the air conditioner operates in good'sleep(Cool) mode.
- If you don't press Set button within 10 seconds after pressing the good' sleep or Time Up or Time Down button, the air conditioner will return to previous status. Check Off timer indicator and 😳 indicator on the indoor unit.

Cancel Press the Cancel button once again.

+ Temp -	You can set the desired temperature by $1^{\circ}$ C in the range of $16^{\circ}$ C $\sim$ 30 $^{\circ}$ C.
Fan	Fan speed will be adjusted automatically according to the <b>good' sleep</b> mode. However, I f you select <b>good' sleep</b> mode while heating operation is on, you can adjust fan speed.
	Air flow direction will be adjusted automatically according to the good' sleep mode. However, if you select good' sleep mode while heating operation is on, you can adjust air flow direction.

#### Temperature and fan speed changes in good' sleep mode

- Fall asleep: Eases you into sleep by dropping the temperature.
- Sound sleep: Relaxes your body and raises your temperature slightly.
- Wake up from good' sleep mode: Allows you to wake up from comfortable intermittent air and it makes you feel refreshed.

Set Off timer in good' sleep mode over 5 hours. You fell disturbed sleep if the good' sleep is set too short or long because the default is set to 8-hour-operation.

- If the good' sleep mode is set less than 4 hours, the operation will stop at the same time.
- If the good' sleep mode is set over 5 hours, it will run as Wake up stage from the last one hour before it stops.
- Recommended set temperature is between 25  $^\circ\text{C}$  ~27  $^\circ\text{C}$  for cooling and 21  $^\circ\text{C}$  ~23  $^\circ\text{C}$  for heating.

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### Setting the On/Off timer

You can set the air conditioner to turn on/off automatically at desired time.

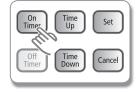
Setting On timer while the air conditioner is off / Off timer while the air conditioner is on

#### Setting On timer

#### 1. Press the On Timer/Off Timer button.

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• On/Off timer indicator will blink on the remote controller display.





2. Press the Time Up or Time Down button to set the time.

- ▶ Operating hour can be set from minimum 30 minutes to maximum 24 hours.
- 3. Press the Set button to active it on.

3 hours ~ 24 hours.

- > On timer indicator stops blinking and reserved time will be displayed for 3 seconds.
- ▶ If you don't press **Set** button within 10 seconds after selecting the time the air conditioner will return to previous status. Check On timer or Off timer indicator and (indicator on the indoor unit.

▶ You can set the time in half hourly unit from 30 minutes ~ 3 hours and hour unit from

Cancel Pro	ess the <b>Cancel</b> button.
	Additional options available in On timer mode
Mode	You can select from Auto/Cool/Dry/Fan/Heat.
Fan	You can adjust the fan speed in Cool/Fan/Heat mode.
+ Temp -	You can adjust the temperature in Auto/Cool/Dry/Heat mode.
NOTE an • Or	nly the latest setting timer will be applied between the On Timer/Off Timer ad good' sleep Off timer functions. nly remaining time will be displayed after 10 seconds from the setting the ner.

#### Setting Off timer

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If the air conditioner is on	If the air conditioner is off
Preset time on On timer is shorter than Off timer	Preset time on On timer is shorter than Off timer
Ex) On timer : 3 hours, Off timer 5 hours	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. Your air conditioner will remain on for 2 hours and then turn off automatically.	- The air conditioner will operate On timer after 3 hours from the moment you have set the timer. Your air conditioner will remain on for 2 hours and then turn off automatically.
Preset time on On timer is longer than Off timer	Preset time on On timer is longer than Off timer
Ex) On timer : 3 hours, Off timer : 1 hour	Ex) On timer : 3 hours, Off timer : 1 hour
- The air conditioner will operate the Off timer after 1 hour from the moment you have set the timer. Your air conditioner will turn on after 2 hours.	<ul> <li>The air conditioner will be turned off after 1 hour from the moment you have set the timer.</li> <li>After 2 hours, your air conditioner will turn on.</li> </ul>

NOTE • Press the **Cancel** button on the remote controller while timer combination is on.

Both of the On and Off timer will be canceled and the indicator will disappear.



### Using the Smart Saver function

This function will set the temperature range limit to help you save energy while the air conditioner is operating in Cool mode.





Press the Smart Saver button on the remote controller while the air conditioner is operating in Cool mode.

Smart Saver indicator and air swing indicator appears automatically on the remote controller display.

The air flow blades move up and down.

▶ If the current set temperature is lower than 24°C, it will automatically raise to 24°C.

Cancel Press the Smart Saver button once again.

- Smart Saver function is only available in Cool mode.
- Smart Saver function is only available in coornect.
   When Smart Saver function is activated, temperature range will be limited to
  - If the desired temperature is lower than 24°C, turn off the Smart Saver function by pressing the **Smart Saver** button again.
  - Temperature/Fan speed can also be adjusted (see page 11 for instructions).
  - Air flow can be adjusted manually (see page 12 for instructions).
  - If you press the Mode button while the Smart Saver function is on, it will cancel the function.

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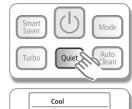
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### Using the Quiet function

You can reduce the noise generated from an indoor unit.



Press the Quiet button on the remote controller while the air conditioner is operating in Cool/Heat mode.

- Quiet indicator appears on the remote controller display.
- ▶ The indoor unit will operate more quietly.



Cancel Press the **Quiet** button once again.

If using a multi system, this function will work only when the Quiet function is set on all operated indoor units.

### Using the Auto Clean function

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NOTE

Auto clean function will prevent from growing mold by eliminating the moisture inside of the indoor unit. Your indoor unit evaporates the moisture inside of the unit. Activate this function to provide you with more clean and healthier air.



#### Press the Auto Clean button.

The Auto clean indicator on the indoor unit display appears and the Auto cleaning function runs.

When the air conditioner is turned on,

When the air conditioner is turned off,

The Auto clean indicator on the indoor unit display appears and the Auto cleaning function runs after stopping the air conditioner operation.

Auto Cleaning time can vary, depending on the previously used mode. Auto(cool), Cool, Dry mode : approximately 30 minutes. Auto(heat), Heat, Fan mode :

approximately 15 minutes.

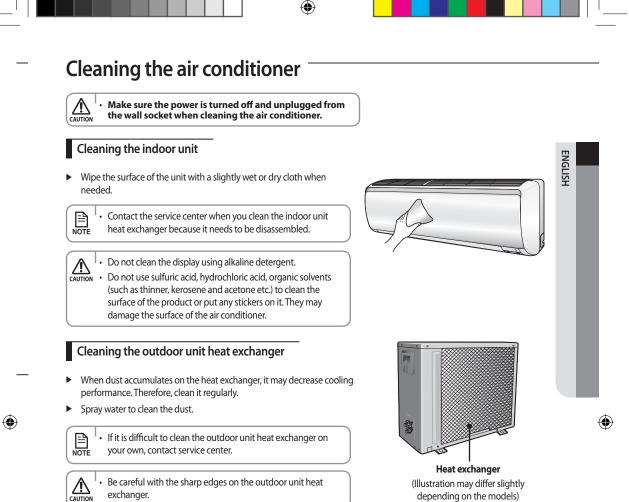
Cancel Press the Auto Clean button once again.

NOTE Vhen the air conditioner is turned on, the Auto clean function runs after stopping the air conditioner operation.

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

#### Opening the panel

Tightly grab top of the front panel and pull it down to open. Then slightly lift the panel up.

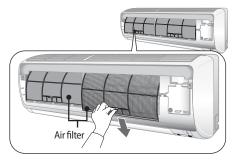
depending on the models)



### Cleaning the air conditioner

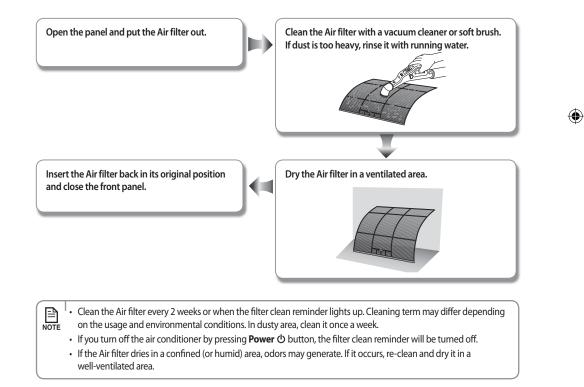
#### Removing the Air filter

Grab the handle and lift it up. Then, pull the Air filter towards you and slide it down.



#### 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.



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### 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.

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- 1. Dry the air conditioner thoroughly by operating in Fan mode for 3 to 4 hours and disconnect the power plug. 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

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

Туре	Description	Every 2 weeks	Every 3 months	Every 4 months	Once a year
	Clean the air filter (1)	•			
	Clean the condensate drain pan (2)				•
Indoor unit	Thoroughly clean the heat exchanger (2)				•
	Clean the condensate drain pipe (2)			•	
	Replace the remote controller batteries (1)				•
	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)				•
Outdoor unit	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, following to 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.

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## Troubleshooting

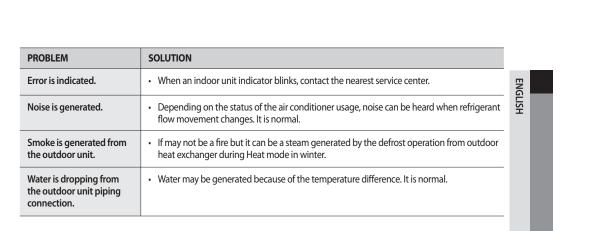
Refer to the following chart if the air conditioner operates abnormally. This may save time and unnecessary expenses.

PROBLEM	SOLUTION
The air conditioner does not work at all.	<ul> <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>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> <li>Check if you have selected Fan/Turbo mode. In these modes, desired temperature is set to auto and you cannot adjust the temperature.</li> </ul>
Cool/Warm air does not come out of the air conditioner.	<ul> <li>Check if the set temperature is higher(during Cool mode)/lower(during Heat 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(heating) 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 you want to operate the air conditioner in the sunlight, cover the outdoor unit using curtains or etc.</li> <li>Check if the air conditioner is operating in De-ice mode. When the ice formed in winter or the outdoor temperature is too low, the air conditioner operates in De-ice mode automatically. In De-ice mode, indoor fan stops and cool air does not come out.</li> <li>If the doors or windows are open, it may cause bad cooling (heating) performance. Close the doors and windows.</li> <li>Check if the air conditioner has just been turned on after stopping cooling(heating) 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 (heating) performance may decrease.</li> </ul>
Air flow adjustment is not working.	<ul> <li>Check if you have selected Auto/Dry/good' sleep mode. In these modes, desired temperature is set to auto and you cannot adjust the temperature.</li> </ul>
Fan speed adjustment is not working.	<ul> <li>Check if you have selected Auto/Dry/Turbo/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> <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.	Check if you press the <b>Set</b> button on the remote controller after you have set the time.
The indicator is blinking continuously.	・ Press the <b>Power</b> ひ button or disconnect the power plug/switch off the auxiliary power switch. If the indicator is still blinking, contact the service center.
Odors permeate in the room during operation.	<ul> <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> </ul>

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### **INSTALLATION PARTS**

\* In this manual, you may find model names written in simplified forms as indicated in following table.

Model Names	Included Models	Remark
AQV**P*	AQV07P*, AQV09P*, AQV12P*, AQV18P*, AQV24P*	Grouping was done by series.
**07/09**	AQV07P*, AQV09P*	
**12**	AQV12P*	
**18**	AQV18P*	Grouping was done by capacity.
**24**	AQV24P*	

### **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

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- 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.
- The air conditioner is compliant with the requirements of the Low Voltage Directive (72/23/EEC), the EMC Directive (89/336/EEC) and the Directive on pressurized equipment (97/23/EEC).
- 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 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.
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#### 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. If using a multi system, carry out a functional test as described in the installation manual supplied with the outdoor unit.
- 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 prevent injury when accidentally touching the indoor unit fan, install the indoor unit at least 2.5m 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

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- 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
- > 1m 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

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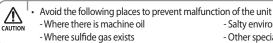
### Choosing the installation location

#### Outdoor Unit

- Where it is not exposed to strong wind
- Well ventilated and dustless places
- Out of the direct 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
- 3m or more away from the TV or radio (to prevent the screen from being distorted or noise from being generated)

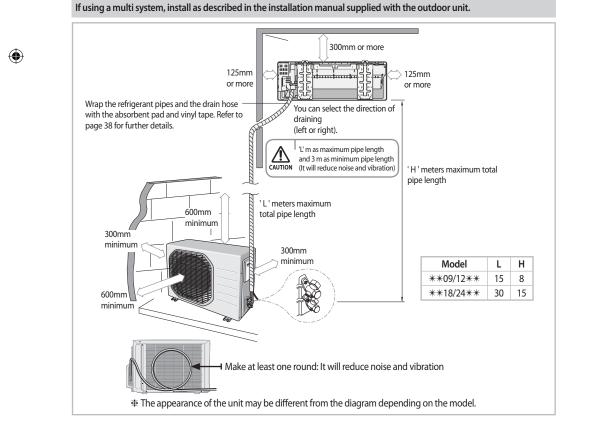
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- Install the unit horizontally
- Place where drained water does not become any problem.
- ► Place with no plants (especially climbing plants) and where small animal can not access.



- Salty environment such as seaside areas - Other special atmosphere areas

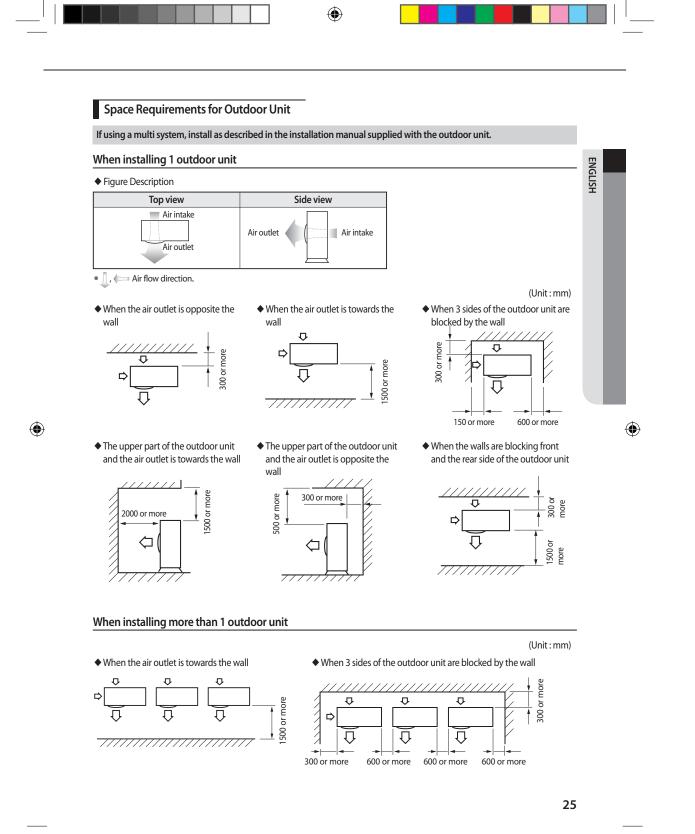
Observe the clearances and maximum lengths as seen in the picture below when installing the air conditioner.





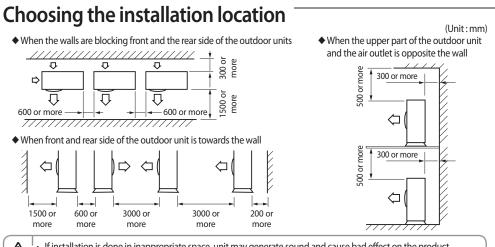
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If installation is done in inappropriate space, unit may generate sound and cause bad effect on the product.
 Installation must be done in level and in a place where vibration will not cause any effect.

### Accessories

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The following accessories are supplied with the air conditioner:

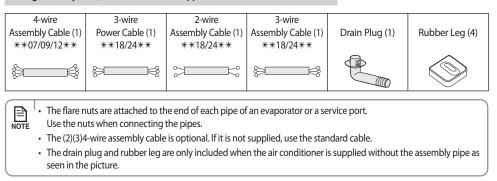
• The number of each accessory is indicated in parentheses.

Accessories in the indoor unit case

Installation Plate (1)	Remote controller (1)	Batteries for Remote controller (2)	User's & Installation Manual (1)
		(=)); 	$\Box$

#### Accessories in the outdoor unit case

If using a multi system, refer to the manual supplied with the outdoor unit.



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#### **Optional accessories**

#### If using a multi system, refer to the manual supplied with the outdoor unit.

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

Insulated Assembly Pipe, Ø6.35mm (1)	Insulated Assembly Pipe, Ø9.52mm (1) **07/09/12**	Insulated Assembly Pipe, Ø12.70mm (1) **18**	Insulated Assembly Pipe, Ø15.88mm (1) **24**	PE T3 Foam Tube Insulation (1)	Vinyl Tapes (2)	Drain Plug (1)	ENGLISH
					8		£
Rubber Legs (4)	Pipe Clamps A (3)	Pipe Clamps B (3)	Cement Nails (6)	M4 x 25 Tapped Screws (6)	Drain Hose, length 2m (1)	Putty 100g (1)	
				<a>annand)</a>			
If these	accessories are su	pplied, they will be	e in the accessory b	юх.			
Tools requir	ed for installa	tion					
General Tools							
	p(Backward flowin	51	Manifold	<b>J</b>	ud Finder		
<ul> <li>Torgue Wrence</li> </ul>	h • Pipe Cut	ter • Reame	r • Pipe Ben	der • Sp	pirit Level		

• L Wrench

Measuring Tape

<ul> <li>Screw Driver</li> </ul>	<ul> <li>Spanner</li> </ul>

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Tools for test operations

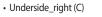
• Thermometer
 • Resistance Meter
 • Electroscope

### Fixing the installation plate

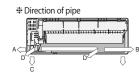
You can select the direction of the drain hose depending on where you want to install the indoor unit. Therefore before fixing the installation plate to a wall or a window frame, you must determine the position of the 65mm hole through which the cable, pipe and hose pass to connect the indoor unit to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

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

- Right (A)
- Left (B)

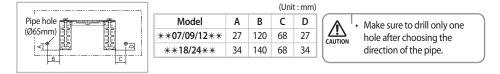


• Rear\_right or left (D)



• Drill

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 65mm so that it slants slightly downwards.



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### Fixing the installation plate

#### 2. Fix the indoor unit.

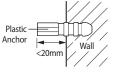
#### If you fix the indoor unit on a wall

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

NOTE 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 20mm.

#### 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.
- (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.

<sup>1</sup> 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

If using a multi system, install as described in the installation manual supplied with the outdoor unit.

#### Cable specification

Model	Power cable	Interconnection cable	Type GL
**09/12PW*	3G, 1.5mm <sup>2</sup> H07RN-F	4G, 1.5mm <sup>2</sup> H07RN-F	20A
**09/12PS*	3G, 2.5mm <sup>2</sup> H07RN-F	3G, 1.5mm <sup>2</sup> H07RN-F	20A
本本09/12P3本	3G, 2.5mm <sup>-</sup> H0/KN-F	2G, 0.75mm <sup>2</sup> H05RN-F	20A
x x 10/04 x x	3G, 1.5mm <sup>2</sup> H0		254
**18/24**	3G, 2.5mm <sup>2</sup> H07RN-F	2G, 0.75mm <sup>2</sup> H05RN-F	25A

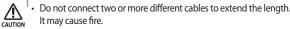
Connect the power cable to the auxiliary circuit breaker. If every pole fails to connect to the power supply, it must be incorporated in a wire with a contact opening of ≥3mm.

#### Connecting the cable

\* 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 5 meters away from the indoor unit, you must extend the cable. The maximum length of the cable is 15(\*\*09/12\*\*)/20(\*\*18/24\*\*) meters.

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



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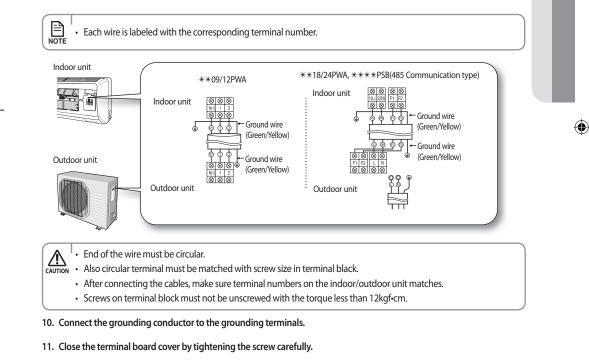
- 3. Remove the screw securing the connector cover.
- 4. Pass the assembly cable through the rear of the indoor unit and connect the assembly cable to terminals. (Refer to the picture below)

NOTE Each wire is labeled with the corresponding terminal number. 5. Pass the other end of the cable through the 65mm hole in the wall.

- 6. Close the connector cover by tightening the screw carefully.
- 7. Close the front grille.

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- 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.



• 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. A (If they are loose, it could cause burn-out of the wires.) WARNING · 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 28.

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### 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

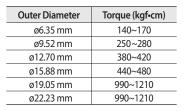
A short pipe is already fitted to the air conditioner. You may need to extend the pipe using the assembly pipe (optional).

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

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- 1. Cut out the appropriate knock-out piece (A, B, C) 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:

If you want to shorten or extend the pipes, refer to page 31~32.

- 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 purge the air, refer to page 34~36.

<sup>1</sup> The pipe will be insulated and fixed permanently into position after finishing the installation and the gas leak test; refer to page 37 for further details.

NOTE

- 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.

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### Purging 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.

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Pipes -

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Unscrew the caps

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#### 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,



NOTE

may cause malfunction on the compressor.
Always contact the service center or a professional installation agency for product installation.

### Cutting or extending the pipe

A 5-meter pipe is supplied with the air conditioner (optional NOT FOR ITALY). The length of the pipe can be:

• Extended up to : see table page 24

Shorten up to: see page 24

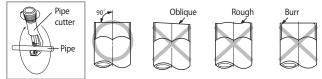


<sup>I</sup> If you need a pipe longer than 5 meters:

 $\Delta_{ON}$  • You must extend the assembly cable.

• 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).



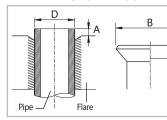
3. To prevent a gas leak, remove all burrs at the cut edge of the pipe using a reamer.



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

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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	9.0 mm
2	ø9.52 mm	1.8 mm	13.0 mm
	ø12.70 mm	2.0 mm	16.2 mm
	ø15.88 mm	2.2 mm	19.3 mm
	ø19.05 mm	2.2 mm	22.5 mm
	ø22.23 mm	2.2 mm	25.7 mm

### Cutting or extending the pipe

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



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:

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	Flare nut	Outer Diameter	Torque (kgf•cm)
-		ø6.35 mm	140~170
		ø9.52 mm	250~280
<b>                                </b>		ø12.70 mm	380~420
		ø15.88 mm	440~480
		ø19.05 mm	990~1210
Indoor outlet pipe	Connecting pipe	ø22.23 mm	990~1210

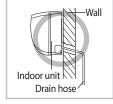
Excessive torque can be cause of gas leakage. In case brazing the pipe, the nitrogen gas must be blown into the pipe (50 Pa). The joint must be accessible and serviceable.

#### 7. For further details on how to connect to the outdoor unit and purge the air, refer to page 34~36.

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

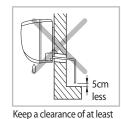
When installing the drain hose for the indoor unit, check if condensation draining is adequate. When passing the drain hose through the 65-mm hole drilled in the wall, check the followings:



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The drain hose must NOT slant upwards.



5cm between the end of the

drain hose and the ground.



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



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

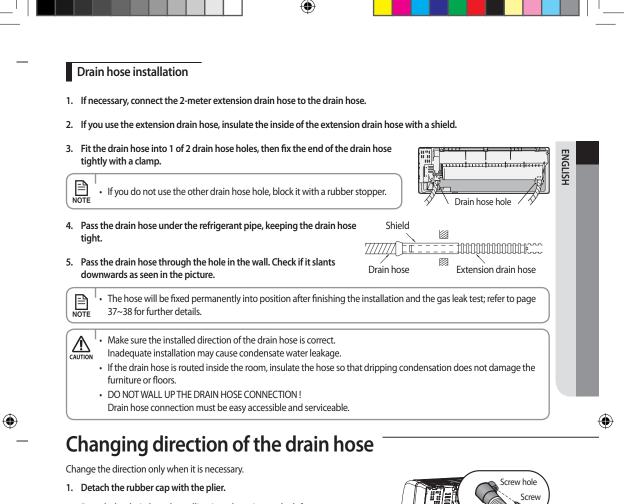
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The drain hose must not

be bent.

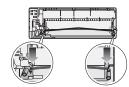
32

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- 2. Detach the drain hose by pulling it and turning to the left.
- 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 right 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.





<sup>1</sup> 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.

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Drain hose

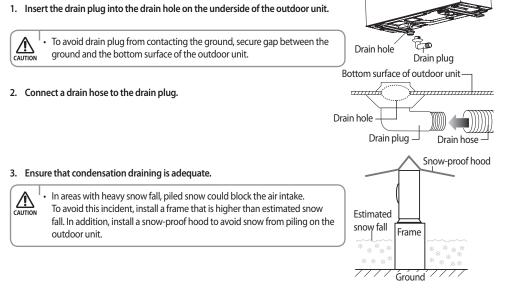
Drain pan outlet

Rubber cap



### Installing and connecting the drain hose of the outdoor unit

While heating, ice may accumulate. During the process of defrosting, check if condensation draining is adequate. For adequate draining, do the following:





### Purging the connected pipes

If using a multi system, install as described in the installation manual supplied with the outdoor unit.

The outdoor unit is loaded with sufficient R410A refrigerant. Do not vent R410A into atmosphere: it is a fluorinated greenhouse gas, covered by Kyoto Protocol, with a Global Warming Potential (GWP) = 1975.

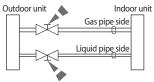
You should purge the air in the indoor unit and in the pipe. If air remains in the refrigerant pipes, it affects the compressor. It may cause reduction of cooling capacity and malfunction. Refrigerant for air purging is not charged in the outdoor unit. Use Vacuum Pump as seen in the picture.

Aution I • 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 U 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 (kgf•cm)
ø6.35 mm	140~170
ø9.52 mm	250~280
ø12.70 mm	380~420
ø15.88 mm	440~480
ø19.05 mm	990~1210
ø22.23 mm	990~1210



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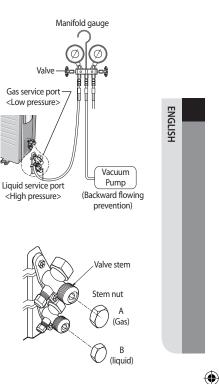
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3.	Connect the charging hose of the low-pressure side of manifold gauge to a
	gas service port as seen in the picture.

4. Open the valve of the low pressure side of manifold gauge counterclockwise.

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- 5. Purge the air in the connected pipes using the vacuum pump for about 15 minutes.
  - Make sure that pressure gauge shows -0.1MPa(-76cmHg) 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.
- 7. Mount the valve stem nuts and the service port cap to the valve, and tighten them at the torque of 183kgf•cm with a torque wrench.
- 8. Check for a gas leak paying particular attention to the 3-way valve's stem nuts and to the service port cap (Refer to page 37).



#### Adding Refrigerant

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Add refrigerant charge according to table below:

If you use a pipe longer than 5m, 'A'g of refrigerant R410A must be added for each extra meter.

If you use a pipe shorter than 5m,

The purge time is normal.

Refer to the Service Manual for further details.

Model	Α
**09/12PW*	15
AQV09/12PS*	15
**18/24**	20

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.

### Purging the connected pipes

#### Important information regulation regarding the refrigerant used

This product contains fluorinated greenhouse gases covered by the Kyoto Protocol.

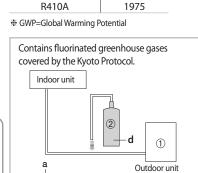
Do not vent gases into the atmosphere.

#### 1. Please fill in with indelible ink,

- ① the factory refrigerant charge of the product,
- ② the additional refrigerant amount charged in the field and
- ①+② the total refrigerant charge. on the refrigerant charge label supplied with the product.

 a. Factory refrigerant charge of the product: see unit name plate
 b. Additional refrigerant amount charged in the field (Refer to the above information for the quantity of refrigerant replenishment.)

- c. Total refrigerant charge
- d. Refrigerant cylinder and manifold for charging



GWP value

**Refrigerant type** 

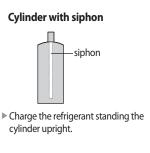
Aution The filled-out label must be adhered in the proximity of the product charging port (e.g. onto the inside of the stop valve cover).

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#### Charging the refrigerant under conditions of liquid by using a liquid pipe

R410A is a mixed type of refrigerant. It is necessary for recharging under conditions of liquid. When recharging refrigerant from the refrigerant cylinder to the equipment, follow the instructions below.

1. Before recharging, check whether the cylinder has a siphon or not. There are two ways to recharge the refrigerant.



#### Cylinder without siphon



Charge the refrigerant turning the cylinder upside down.

If R410A refrigerant is charged with gas, the composition of the charged refrigerant changes and the characteristics of the equipment vary.
 During the measuring operation of refrigerant quantity added use an electronic balance.

If cylinder doesn't have syphon, upset it.

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NOTE

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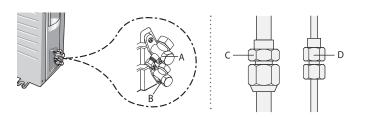
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### Performing the gas leak tests

If using a multi system, install as described in the installation manual supplied with the outdoor unit.

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).

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#### 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,

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Check the flare nut C and D using a leak detector.

#### Leak test with nitrogen (before opening valves)

In order to detect basic refrigerant leaks, before recreating the vacuum and recirculating the R410A, it's responsible of installer to pressurize the whole system with nitrogen (using a cylinder with pressure reducer) at a pressure above 40 bar (gauge).

#### Leak test with R410A (after opening valves)

Before opening valves, discharge all the nitrogen from the system and create vacuum according to page 34~36. After opening valves, check leaks using a leak detector for refrigerant.

#### Pump down (before disconnecting the refrigerant connections for unit repair, removal or disposal)

Pump-down is an operation intended to collect all the system refrigerant in the outdoor unit. This operation must be carried out before disconnecting the refrigerant tubing in order to avoid refrigerant loss to the atmosphere.

- ► Shut off the liquid valve with the Allen wrench.
- ▶ Turn the system on in cooling with fan operating at high velocity.
- (Compressor will immediately start, provided 3 minutes have elapsed since the last stop).
- After 2 minutes of operation, shut the suction valve with the same wrench.
- ▶ Turn the system off and switch mains supply off.
- ▶ Disconnect tubing. After disconnection, protect valves and tubing ends from dust.
- ► Compressor damage may occur if run at a negative suction pressure.

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ENGLISH

### Fixing the indoor unit in place

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

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 avoid condensation problems, wrap foam insulation (as shown in the figure) on a part without insulation on the end of the pipes.

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- 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.



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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).

Outdoor unit installed on the wall by rack

• Install the rack close to the column as much as possible; Install proper grommet in order to reduce noise and residual vibration transferred by outdoor unit towards wall.

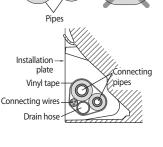
### Fixing the outdoor unit in place

Install the outdoor unit in level on a stable base to 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

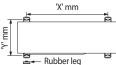
appropriate support (wall or ground).

- 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 prevent the generation of noise and vibration.



Insulation



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Model	Х	Y
**09/12PWA	538	290
**09/12PSB **18**	612	317
RJ040/050**	612	317
AQV24**	660	340
RJ060/070/080**	660	350

(not supplied with product) · Ensure the wall will be able to suspend the weight of rack and Soft rubber designed to cut off vibration from rack to wall. (not supplied with product)

Designed to cut off residual vibration from outdoor unit to rack.

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NOTE

outdoor unit:

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#### ۲ **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 ENGLISH 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 or Heat mode. ▶ In Cool mode, use **Temp +** or - button and set the temperature at 16°C. ▶ In Heat mode, use **Temp +** or - button and set the temperature at 30°C. NOTE • Approximately 3~5 minutes later, outdoor unit will start to operate and the Cool or Warm 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°K to 12°K (indicative delta T) ۲ ۲ Heating mode (indoor unit check) → Outlet air temp. - Inlet air temp : From 11°K to 14°K (indicative delta T) In heating mode, the indoor fan motor can remain off to avoid cold air blown into conditioned space.

#### 3. Press the Air swing ( $\geq$ button and check the following:

▶ The airflow blades work properly.

#### 4. Press the Power () button to stop the operation.

<sup>1</sup> 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 2 minutes after, close the valve on the low pressure side.
- 5. Stop operation of the air conditioner.
- 6. Disconnect the pipes.

NOTE

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# How to connect your extended power cables

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#### Items to prepare

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

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

#### 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.

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.

4. Wrap it with the insulation tape twice and position your

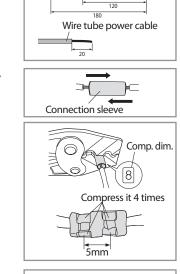
5. Apply heat to the contraction tube to contract it.

contraction tube in the middle of the insulation tape.

6. After tube contraction work is completed, wrap it with the

- The compression dimension should be 8.0. - After compressing it, pull both sides of the wire to

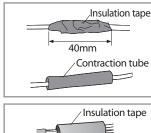
make sure it is firmly pressed.



Power cable (provided by us)

(Unit: mm)

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. In case of extending the electric wire, please DO NOT use a round-shaped pressing socket.

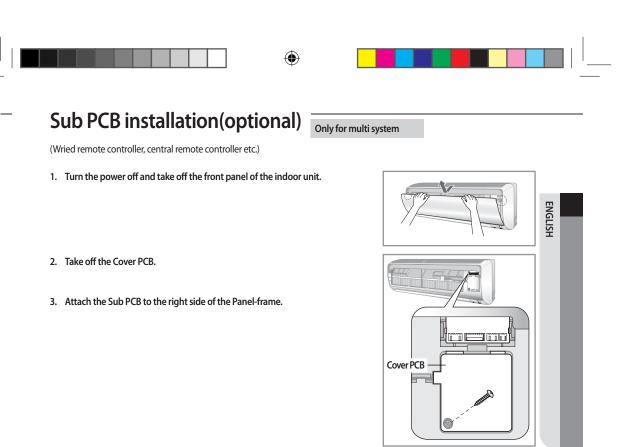
- Incomplete wire connections can cause electric shock or a fire.

#### 40

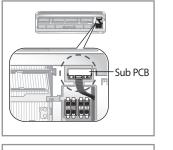
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insulation tape to finish.



- 4. Find the PCB wire, and connect the wire to the Sub PCB as seen in the picture.
- 5. Connect the wire(remote controller, central remote controller etc) to the Sub PCB.
- 6. Assemble the Cover PCB and the front panel.



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+ The Sub PCB is attached to be controlled by the wired remote controller and central controller.

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NOTE



### QUESTIONS OR COMMENTS?

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ALBANIA	42 27 5755	
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