

*Life*  
*Style* **innovator**



**HEADQUARTERS (SEOUL, KOREA)**

12th Fl., Samsung Main Bldg  
250, 2-Ka, Taepyung-Ro, Chung-Ku, Seoul, Korea 100-742  
TEL : 82-2-751-6451 FAX : 82-2-751-6533  
Internet Website : [www.samsungelectronics.com](http://www.samsungelectronics.com)



*We Promise  
Healthy Air*

**Take a deep breath!**



Life Style **innovator**

# SAMSUNG ELECTRONICS



**What do you think your home will be like in the future? What home appliances will you use in fifty years? People are puzzled in guesses. Scientists draw various scenarios. Samsung continuously innovates its products keeping pace with rapidly changing technology and sophisticating people lifestyles. We bring progressive concepts and revolutionary ideas into the real world. We work today to design tomorrow.**

Samsung Electronics is committed to innovation at the forefront of change. Every product we make and every product we are now inventing - from the latest LCD-TVs, rotating camera phones, and home appliances to our next generation Net Theater, Fresh Closet, Step Vacuum, and Mobile Hub is designed to be simple, accessible and to wow customers with great value and design.

To push our lead in differentiation is even higher this year. We are initiating a new drive to create market-driven, customer-centered products that will bring a consistent Samsung identity and unique values to every customer.

From the insides of our products to their user interfaces and finishes, you will know a Samsung - with its distinctive balance of reason and feeling - as soon as you see it. The products on the next pages are the best representation of this fresh approach to the new realities of digital revolution and convergence.

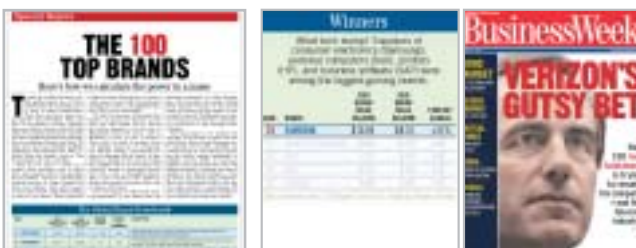
With regards to all home appliances including air conditioners, our future vision is focus on intelligent home-networking, build-in and interior products that will always bring new experiences and pleasant emotions to people around the globe.

We serve our customers for the healthier and happier life offering a more convenient and comfortable life style. Our determination is growth - a perpetual challenge - but always working within the context of cooperation and inclusion of our customers.



# Samsung Electronics Designing Tomorrow

1010  
0101010010100101010101010101



## Samsung named the fastest growing brand

Interbrand, the world's leading brand consultant, has ranked SAMSUNG's brand the 'fastest growing' in the world for the second year in a row. In only three years time, SAMSUNG's brand value has more than doubled from \$5.2 billion in 2001 to its current \$10.8 billion. Interbrand's annual survey of the top 100 global brands ranks SAMSUNG as the world's 25th largest brand, up from 34th place in 2002 and from 42nd place in 2001.

SAMSUNG is part of an elite group of multinationals whose brands comprise premium mind share with consumers, thought leaders and retailers worldwide.

"The continuously strong rise of SAMSUNG's brand value reflects the company's commitment to invest in its brand on a global scale and make brand value a key corporate target throughout the organization from including the CEO and all employees. SAMSUNG has successfully made brand building the key focus of its marketing strategy including product development, selection of distribution channels, channel marketing as well as external and internal communications," said Jan Lindemann, Global Managing Director of Interbrand. "SAMSUNG's key success factor is management's ambition and determination to make SAMSUNG the leading brand in its field and to put the required investments and organization behind the brand."



# SAMSUNG AIR CONDITIONER



Samsung air conditioner's basic policy is to seek out and to be a partner for the consumer with a competitive edge in core technology, speed and quality.

This approach will enable the customer to secure the technology required for Samsung air conditioner to be a leader in digital era.

Samsung air conditioner has rolled out new products that keep our life more enhanced in quality so far for consumers. Ultimately, Samsung air conditioner is making products people want and aims to engage in win-win arrangements with consumers.

## Brief History

- 1980** Started production of air conditioners
- 1986** Started production of Package air conditioners
- 1988** Completed new air conditioner production facility in Suwon, Korea
- 1991** Completed second renovation of air conditioner production facility in Suwon, Korea Production capacity reached RAC 560K / year, PAC 300K / year started production of Rotary Compressors
- 1993** Received ISO 9001
- 1999** Annual production capacity reached 1.66 million sets / year for air conditioners and 2 million sets / year for Rotary Compressors. Produced the 5 millionth set air conditioner in April, 1999
- 2000** Annual production capacity reached 2.5 million sets / year for Air Conditioners and 4 million sets / year for Rotary Compressors established overseas manufacturing in China(SSEC)
- 2002** Completed new air conditioner production facility in Mexico

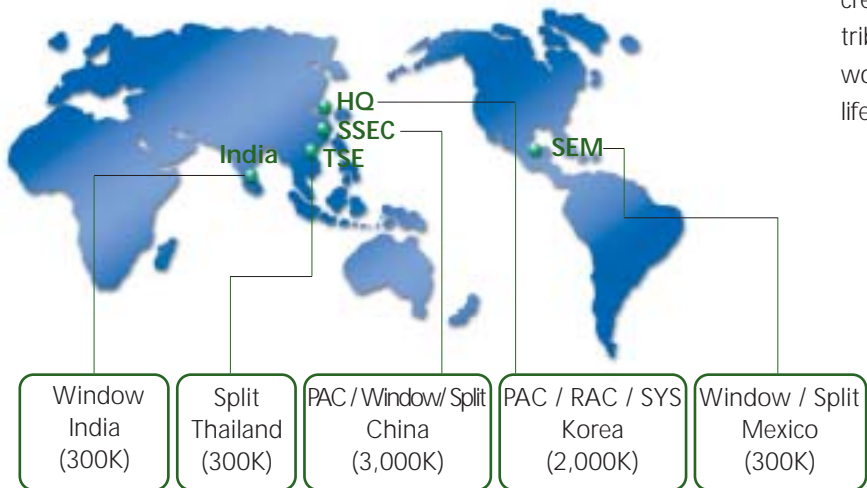


# Samsung Air Conditioner

Digital convergence for human being and nature










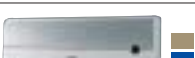
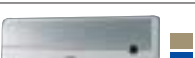
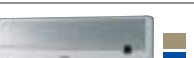


















## Production Capacity ('04)






















Samsung will devote our people and technologies to create superior products and services, there by contributing to a better global society and will become world top air conditioner manufacturer and lead comfort life with its various products that meet customers' needs.

# 2004 LINE UP

Type \ Btu		Refrigerant	5000	7000	9000	12000
DC INVERTER	Premium	R410A				
	Classic	R410A				
AC INVERTER	C&C	R22				
SPLIT TYPE	Premium	R410A				
	Premium	R22				
	Deluxe	R410A/ R22				
	Classic	R410A/ R22				
	Interior	R410A				
	C&C	R22				
MULTI SPLIT	Premium	R410A				
	C&C	R410A/ R22				
WINDOW TYPE	Mechanical	R22				
	Electronic	R22				
FLOOR STANDING TYPE		R22				

Cooling Only Heat Pump

18000	19000	24000	26000	28000	30000	45000
						
						
						
						
						
						
						
						
						

## CONTENTS

Split Type ..... 8

Multi Split Type ..... 32

Window Type ..... 36

Floor Standing Type ..... 44

Air Purifier ..... 48

Product Specifications ..... 52



# SPLIT TYPE



## SPLIT type

*The cleanest air from the split-type air conditioners, the most popular type of air conditioners in the world*



- DC Inverter
- CFC-Free (R410A)
- BIOnizer™
- Energy Saving
- Antibacterial Bio Components
- Stylish Design
- Easy Maintenance & Installation

SPLIT TYPE

# *We Promise Healthy Air*

- **Blonizer** generates
- DC Inverter Control
- Bio Green Air filter
- Antibacterial formula
- Clean Design to fit decor
- Digital / (Half Mirror Display)
- set temperature and operational
- R410A / R22 available





*anions that reduce stress and relaxation.  
enhanced comfort and energy efficiency  
removes dust particles, cigarette smoke, pollen and micro-organisms.  
are used for main parts to prevent propagation of mold and bacteria.  
of any room.  
for display of indoor temperature,  
status.*



## BIONIZER™ SYSTEM

# Wealth of cutting-edge highly efficient Samsung technology for you

## The interior of the air conditioner is ultra-clean, so only ultra-fresh air is produced

To deliver fresh air, it is essential not only to purify the air but also maintain the cleanliness of the interior of the air conditioner. However an air conditioner's interior is an ideal place for molds. If no countermeasures are taken, molds will propagate and the air conditioner produces air with an unpleasant odor. So, all key components inside Samsung air conditioners are treated with antibacterial and anti-mold agents. Because propagation of molds and bacteria inside air conditioners is prevented, you always enjoy the freshest and cleanest air.

### •Cross Fan

Since Samsung's Bio Cross Fan has been molded with the antibacterial formula, it can suppress proliferation of molds and bacteria, preventing the causes of foul odors. This extends durability of the unit.

### •Bio Green Filter

Catechin, extracted from green tea, contained in the filter deactivates captured bacteria and unpleasant odors.

### •BIONizer



Negative discharge system generates ozone-free anions (1.25billion anions per second) to fill the room with anions.

### •Heat Exchanger

Patent No.  
10-346876 (Japan 07. Dec. 1998)

Heat Exchanger with antibacterial treatment prohibits proliferation of molds and bacteria remaining in the unit, allowing cleaner storage conditions.

### •Bio Deodorizing Filter

Activated carbon incorporated in the filter efficiently adsorbs cigarette, pet and food smells, etc..

### •Bio Antibacterial Filter

The unit's outermost filter, which is uniquely treated with antibacterial agent, catches very small dust particles in the air.



\* This is an image diagram. Some parts may not be shown in actual size.

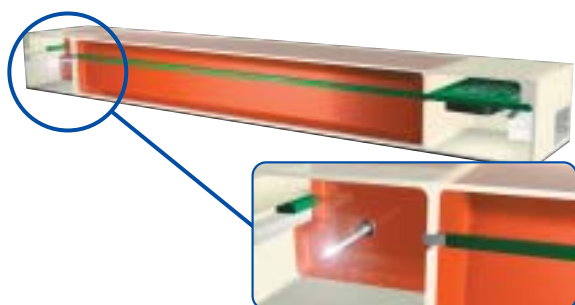
## BIONIZER™ (ANION GENERATOR)

# Anions refresh your body and the air

Vast quantities of anions are generated in nature, for example in forests or by waterfalls. Anions have a wonderful power to refresh you both physically and mentally. However, if you live in a city, anions are scarce because of the unnatural environment and air pollution. So, Samsung air conditioners are equipped with an ozone-free anion generator (1.25 billion anions per second) to fill the room with anions, refreshing your mind and body.

### BIONIZER (Anion Generator)

Thanks to the adoption of a negative discharge system using a needle-type electrode, anions are generated without generating ozone that is harmful to the body.



Samsung Bionizer (Anion Generator) generates about 400,000 ions/cc (when estimated in 1m from air conditioner outlet). As a result, all the family benefit from health-enhancing clean air.



### Plenty of anions in nature

There are vast quantities of anions in nature, such as by waterfalls and in forests. Their existence is one reason why exposure to the natural environment is such a refreshing experience. Anions diffused in the blood assist the cells' metabolism and refresh you.



### Anions are great for home

Anions help prevent mites, termites and mosquitoes as well as molds and combat odors. Anions attach to dust particles, bacteria and toxic substances in the air, causing them to fall to the floor for easy removal by cleaning.



## BIO nizer™ FILTER

# Healthy air solution for your family

### Bio Green Filter for refreshing air

There are numerous invisible dust particles and bacteria and unpleasant odors in rooms. Unless countermeasures are taken, your family's health will be at risk. Samsung adopted Bio Green Filter manufactured by 3M of the United States using static electricity to capture invisible dust particles and bacteria. Catechin coating, extracted from green tea, on the filter deactivates captured bacteria. Also, unpleasant odors from sweat, cigarettes, etc. are decomposed and deodorized. Bio Green Air Tech refreshes the air and makes it healthy for you and your family.

#### •Catechin's antibacterial effect

Staphylococcus aureus, methicillin-resistant Staphylococcus aureus (MRSA), Escherichia coli, etc. are deactivated.

#### •Catechin's deodorizing effect

The causes of odors from sweat and cigarettes (ammonia, acetaldehyde, hydrogen sulfide, etc.) can be reduced by physical decomposition and adsorption.

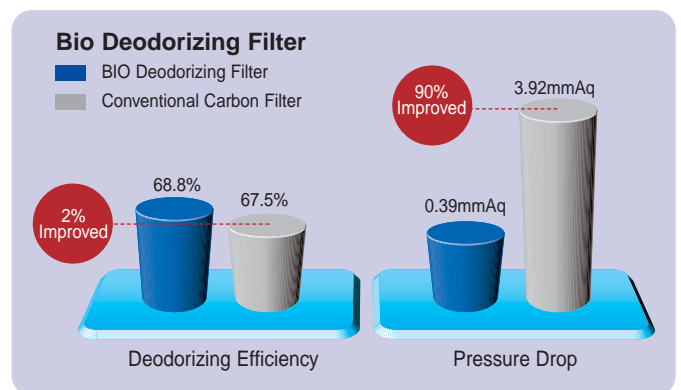
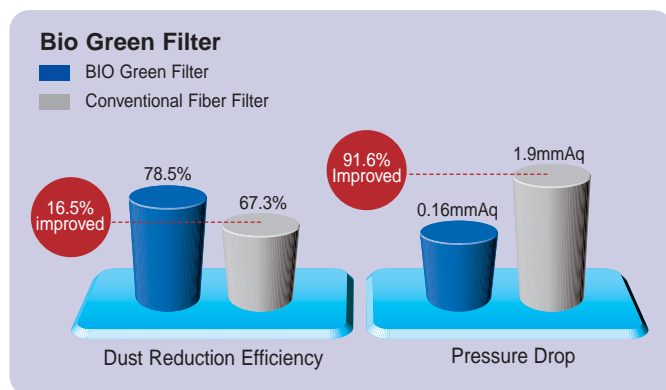


### Bio Deodorizing Filter

Activated carbon incorporated in the filter efficiently adsorbs cigarette, pet and food smells, etc.. When the filter is dirty, wash it with water and the filter can be used again and again.



### Filter Efficiency Comparison



Tested by Samsung Air conditioning Lab. (Ashrae Standard 52.1-1992)  
-Air flow velocity=0.5m/s

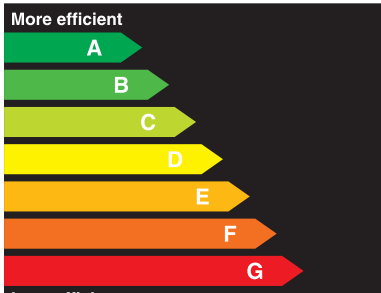

## ENERGY SAVING

# High energy efficiency is the result of advanced technology of Samsung air conditioners

### Samsung's new air conditioners bear **Energy Grade A**

Energy Label is a system applied by the EU. Air conditioners are ranked in descending order from "A" to "G" according to their energy-saving performance. The classification is based on the Energy Efficiency Ratio (EER), which is the ratio of the cooling capacity (Btu per hour) to energy input (watt). Samsung new air conditioners' EER is higher than 3.2 COP and they are accredited with Energy Label A, the highest rank.

#### Energy Label for Cooling only Air Conditioners

Energy		SAMSUNG ELECTRONICS
Manufacturer		SH12APGX
Outside unit		SH12APG
Inside unit		
<b>More efficient</b> 		<b>A</b>
<b>Less efficient</b>		
<b>Annual energy consumption, kWh in cooling mode</b> <small>(Actual consumption will depend on how the appliance is used and climate)</small>		<b>545</b>
<b>Cooling output</b> kW		<b>3.50</b>
<b>Energy efficiency ratio</b> <small>Full load (the higher the better)</small>		<b>3.21</b>
<b>Type</b>	Cooling only <input type="checkbox"/> Cooling + Heating <input type="checkbox"/> Air cooled <input type="checkbox"/> Water cooled <input type="checkbox"/>	← ←
<b>Heating</b> <b>Energy efficiency ratio</b> <small>Full load (the higher the better)</small>		<b>3.8</b> A B C D E F G
<b>Noise</b> (dB(A) re 1 pW)		<b>42</b>
Further information is contained in product brochures <small>Norm EN 814 Air-conditioner Energy Label Directive 2002/31/EC</small>		

### Samsung's measures to prevent global warming

Global environmental issues are becoming more pressing. CO<sub>2</sub> produced when electricity is generated from fossil fuels is one of the major causes of global warming. Reduction of CO<sub>2</sub> is an important issue. If the volume of CO<sub>2</sub> continues to increase at the current rate, it is estimated that the average temperature on the Earth will increase by up to 6°C. That could trigger large-scale melting of the Antarctic ice cap, causing sea levels to rise. Lowlands would be submerged and the temperate zone would become arid. Such a catastrophe must be prevented. Reduction of power consumption by individuals can greatly reduce emission of CO<sub>2</sub>. Because air conditioners are heavy consumers of power, it is important that you select an energy-saving type.





# LUXURIOUS DESIGN

## Stylish and Modern design to fit decör of any room

### Automatic Clean Grille

---

The design is slit-less and stylish in new models. When the air conditioner is not in operation, the front panel is closed.



### Clean Design

---

The slit-less front panel prevents build up of dust. A quick wipe or washing is all the cleaning necessary.



### Digital *i* - Easy to view circular LED display

---

Digital *i*, a large circular LED display, allows you to monitor the "health" of the room. In addition to the current operation mode and power, the room temperature is displayed. The status of the room can be viewed at a glance. The Digital *i* display keeps an eye on the conditions that ensure your family's comfort.



### Washable Front Grille

---

The front grille can be detached easily so that the dust on the grille can be washed off with water.



# R410A



## New refrigerant takes good care of your health and the environment

Samsung Electronics replaced CFCs(R22) with new refrigerant R410A, which is in line with our vision as a responsible corporate citizen. Our R410A system launched in Europe in 2001, has been widely recognized as the very efficient and environment-friendly refrigerant. Our new 2004 models implement R410A refrigerant keeping nature clean that Samsung air conditioner aimed to.

### CFC-free Refrigerants

The refrigerant R22, used in many air conditioners at present, contains CFCs - ozone-depleting substances. Within the next few years, use of CFCs in new products is to be abolished in accordance with international agreements. Samsung has already adopted CFC-free new refrigerants R410A to prevent ozone-layer depletion by CFCs.

### Characteristics of R410A, R407C

1. Do not contain harmful chlorine so they do not damage our environment.
2. Non-toxic and non-flammable, which means safe to handle.
3. As the boiling point is almost the same as conventional Freon (R22), it is easy to handle.
4. You can get almost same performance in energy efficiency that keep the size of the air conditioner.

### Comparison with Refrigerants

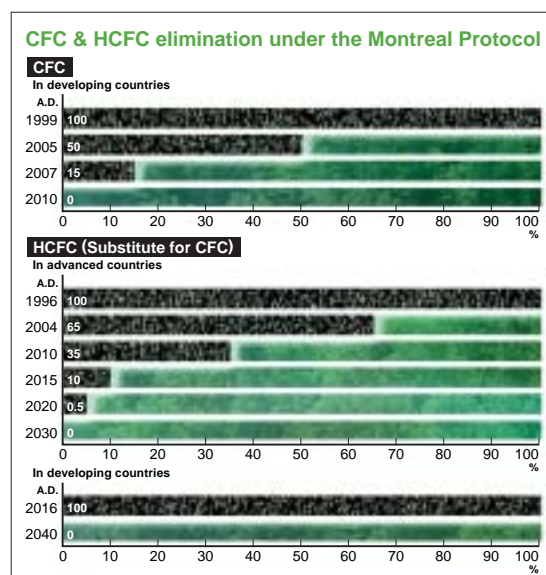
Refrigerants	ODP (CFC=1.0)	GWP (CO <sub>2</sub> =1,000yr)	Combination
R22	0.05	1700	-
R407C	0	1370	HFC32 : HFC125 : HFC134a 23 : 25 : 52 (wt%)
R410A	0	1370	HFC32 : HFC125 50 : 50 (wt%)

\* ODP (Ozone Depletion Potential : Montreal Protocol ODP=0)

\* GWP (Global warning Potential : Kyoto Protocol)

### Harmful Effects caused by CFCs

Chlorine contained in CFC goes up into the ozone layer where it causes a photo-reaction with ozone and destroys it. This is a chain reaction, which means a small amount of CFC can destroy a large amount of ozone. If we damage the ozone layer, the direct radiation of UV rays can cause skin cancer cataracts. And also increase in UV rays may denaturalize plant genes that can lead to destruction of eco system.



# SPLIT TYPE | Line - up

## Premium Series (R410A)

Cooling Only

Heat Pump



7000-9000 Btu/h

SH07APG SH09APG

SC07APG SC09APG

12000 Btu/h

SH12APG

SC12APG

18000-24000 Btu/h

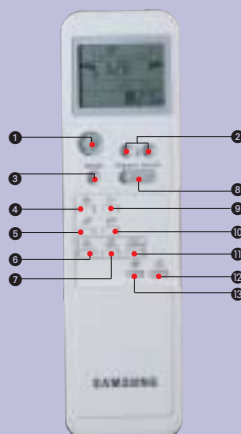
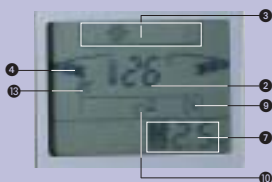
SH18AP0 SH24AP6

SC18AP0 SC24AP6



- Bionizer
- Components molded with Antibacterial Formula
- Energy Grade A
- Digital i

## Remote Control - Buttons and Display



- 1 On/Off button
- 2 Temperature adjustment buttons
- 3 Mode selection button  
(AUTO, COOL, DRY, FAN, HEAT)
- 4 Fan speed adjustment button
- 5 Turbo Button
- 6 On Timer button
- 7 Off Timer button
- 8 Digital i On/Off button
- 9 Swing button
- 10 Energy Saving button
- 11 Timer Set/Cancel button
- 12 Sleep Button
- 13 Anion button

## Deluxe Series (R410A)

Cooling Only

Heat Pump



7000-9000 Btu/h

SH07AS2 SH09AS2

SC07AS2 SC09AS2

12000 Btu/h

SH12AS4

SC12AS4

18000-24000 Btu/h

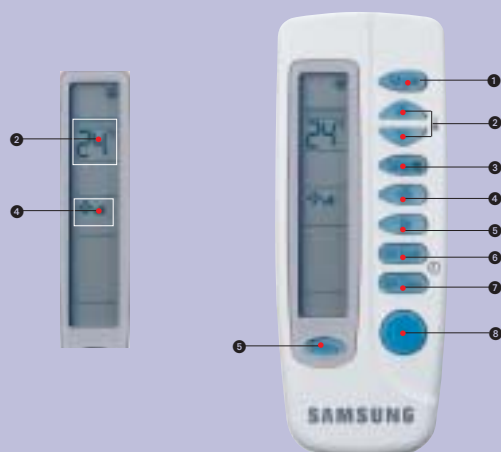
SH18AS0 SH24AS6

SC18AS0 SC24AS6



- Components molded with Antibacterial Formula
- Bio Components

## Remote Control - Buttons and Display



- 1 Mode selection button  
(AUTO, COOL, DRY, FAN, HEAT)
- 2 Temperature adjustment buttons
- 3 Turbo button
- 4 Fan Speed adjustment
- 5 Swing button
- 6 On Timer button
- 7 Off Timer button
- 8 On/Off button
- 9 Energy Saving



# SPLIT TYPE | Line - up

## Premium Series(R22)

Cooling Only

Heat Pump



### R22

7000-9000 Btu/h

SH07ZP2 SH09ZP2

SC07ZP2 SC09ZP2

12000 Btu/h

SH12ZP4

SC12ZP4

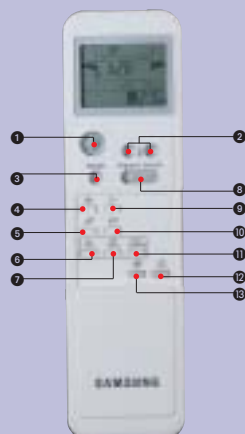
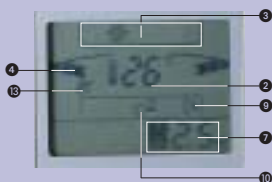
18000-24000 Btu/h

SH18ZP0B SH24ZP6B

SC18ZP0B SC24ZP6B

- Bionizer
- Components molded with Antibacterial Formula
- Digital i

## Remote Control - Buttons and Display



- 1 On/Off button
- 2 Temperature adjustment buttons
- 3 Mode selection button  
(AUTO, COOL, DRY, FAN, HEAT)
- 4 Fan speed adjustment button
- 5 Turbo Button
- 6 On Timer button
- 7 Off Timer button
- 8 Digital i On/Off button
- 9 Swing button
- 10 Energy Saving button
- 11 Timer Set/Cancel button
- 12 Sleep Button
- 13 Anion button

## Deluxe Series (R22)

Cooling Only

Heat Pump



### R22

7000-9000 Btu/h

SH07ZS2 SH09ZS2

SC07ZS2 SC09ZS2

12000 Btu/h

SH12ZS4

SC12ZS4

18000-24000 Btu/h

SH18ZS0A SH24ZS6A

SC18ZS0A SC24ZS6A



- Components molded with Antibacterial Formula
- Bio Components

## C & C

Cooling Only

Heat Pump



### R22

30000 Btu/h

SH30ZC2



- Components molded with Antibacterial Formula
- Bio Components



## State-of-the-art air conditioner for people who appreciate new technology

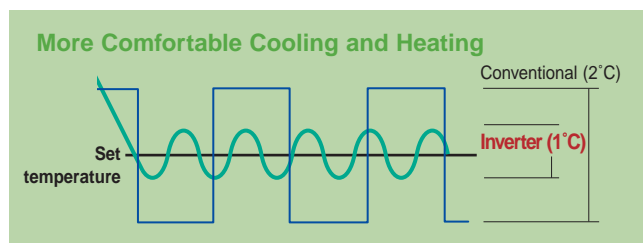
DC inverter air-conditioner is a compilation of cutting-edge technologies, improving energy saving with lower power consumption and providing wider operating range as per the room temperature. Thus, consumers get the electric bill around 43% less than conventional air conditioners and more comfort as well. It is also implemented new refrigerant of R410a, which is meeting the EU regulation banning CFC, effective in 2004.

### Enhanced comfort and energy efficiency

The capacity of an air conditioner depends on the rotational frequency of its compressor. The faster the compressor rotates, the greater is the power. On the other hand, the lower the speed of rotation of the compressor, the lower the energy consumption is. The rotational frequency of a compressor is flexibly controlled by changing the frequency of input electricity by means of the inverter. At the start-up, high-speed rotation achieves high power to reach the set temperature quickly and once the set temperature is attained, low-speed rotation for energy-saving operation maintains the temperature. Wasteful power consumption is prevented and fine temperature adjustment is possible.

### Temperature maintained at a constant level for enhanced comfort

Flexible inverter control according to the temperature maintains the temperature within 1°C of the set temperature. In contrast to the temperature adjustment of conventional air conditioners that is done by turning the machine on or off, comfort is enhanced. Children and the elderly, who tend to be more sensitive to temperature variation, stay comfortable.



### Cut your electricity charges by preventing wasteful power consumption

With the inverter control, high power is maintained at high-speed rotation until the temperature reaches the set temperature. Once the temperature reaches the set temperature, low-speed rotation for energy-saving operation maintains the set temperature. Compared with a conventional air conditioner that can only operate at the highest power, the set temperature can be maintained with less power, and the result is a substantial reduction in your electricity bill.



### CFC-free refrigerants applied for environment

The refrigerant R22, used in many air conditioners at present, contains CFCs - ozone-depleting substances. Within the next few years, use of CFCs in new products is to be abolished in accordance with international agreements. Samsung has already adopted CFC-free new refrigerants R410A to prevent ozone-layer depletion by CFCs.



# Bionizer™ System

DC inverter air conditioner includes also Bionizer™ system, which removes micro size dirt particles and unpleasant odors not only by filters but also anion generating function.

## Anion Generator

Samsung conditioners are equipped with an ozone free anion generator to fill the room with anion, refreshing your mind and body.

- Anions make forest-like atmosphere
- 1.2 billion/sec anion are generated per second
- Anions remove dust particles
- Anions prevent pests



**Cross fan**  
molded with the antibacterial formula



**Heat exchanger**  
Patent No. 10-346876 (Japan 07. Dec. 1998)  
with antibacterial treatment



**Bio Green air filter with catechin**



**Bio Deodorizing filter**

**Bio Antibacterial filter**

## Energy Grade A

Energy Label is a system applied by the EU. Air conditioners are ranked in descending order from "A" to "G" according to their energy-saving performance. The classification is based on the Energy Efficiency Ratio (EER), which is the ratio of the cooling capacity (Btu per hour) to energy input (watt). Samsung new air conditioners' EER is 11.0 and they are accredited with Energy Label A, the highest rank.

Energy Label for Cooling only Air Conditioners

<b>Energy</b> Manufacturer: SH12APGX Outside unit: SH12ZAGX Inside unit: SH12ZAGX	
More efficient A B C D E F G Less efficient	<b>A</b>
Annual energy consumption, kWh in cooling mode <small>(Actual consumption will depend on how the appliance is used and climate)</small>	545
Cooling output Energy efficiency ratio <small>(Full load (the higher the better))</small>	3.50 3.21
Type Cooling only: <input type="checkbox"/> Cooling + Heating: <input checked="" type="checkbox"/> Air-cooled: <input type="checkbox"/> Water-cooled: <input type="checkbox"/>	←
Heating Energy efficiency ratio <small>(Full load (the higher the better))</small>	3.8
Noise <small>(dB(A) @ 1 m)</small>	42
<small>Further information is contained in product brochures                  Norm EN14184 - A++conditioner - Energy Label Directive 2002/91/EC</small>	

## Luxurious Design

### Automatic clean grille

The design is slit-less and stylish in new models. When the air conditioner is not in operation, the front panel is closed.



### Digital i

Digital i, a large circular LED display, allows you to monitor the current operation mode, power and room temperature. The status of the room can be viewed at a glance. And it keeps an eye on the conditions that ensure your family's comfort.





# SPLIT TYPE | Line - up

## DC Inverter - Premium

Cooling Only

Heat Pump

new



9000 Btu/h

SH09BPD

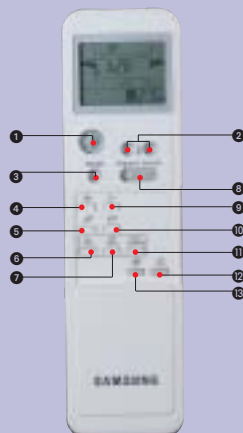
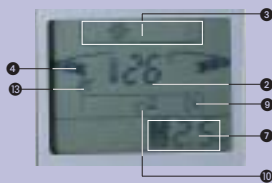
12000 Btu/h

SH12BPD



- DC Inverter
- Bionizer
- Components molded with Antibacterial Formula
- Energy Grade A
- Digital i

## Remote Control - Buttons and Display



- 1 On/Off button
- 2 Temperature adjustment buttons
- 3 Mode selection button  
(AUTO, COOL, DRY, FAN, HEAT)
- 4 Fan speed adjustment button
- 5 Turbo Button
- 6 On Timer button
- 7 Off Timer button
- 8 Digital i On/Off button
- 9 Swing button
- 10 Energy Saving button
- 11 Timer Set/Cancel button
- 12 Sleep Button
- 13 Anion button

## DC Inverter - Classic

Cooling Only

Heat Pump

*new*



9000 Btu/h

SH09BWH

12000 Btu/h

SH12BWH

- DC Inverter
- Components molded with Antibacterial Formula
- Energy Grade A

## AC Inverter - C&C

Cooling Only

Heat Pump



R22

9000 Btu/h

SC09VCD

12000 Btu/h

SC12VCD

- AC Inverter
- Bio Components
- Energy Grade A

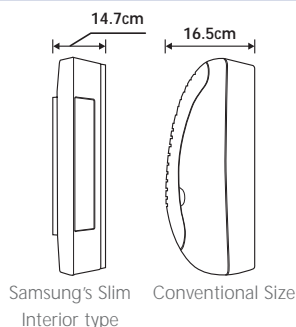


## Fashionable air conditioner for people with taste

Continuously innovating products' design, Samsung launches new interior air conditioners that best express individuality and spirit of fashion. These air conditioners are best in the category as they not only please one's sight with distinct slim shapes but also have the wealth of cutting - edge technologies inside - they ensure the lowest noise level and can distribute cool airflow in three dimensions quickly creating a uniform atmosphere for every comfort.

### Super-slim Interior Design

This super slim model looks great on the wall and gives the room a sophisticated flair.



### 123 Digital Flow

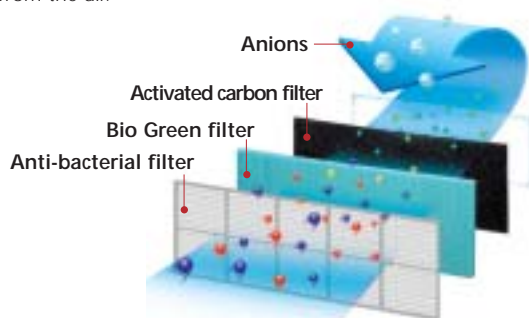
#### Concentrated Cooling-1way

The Concentrated Cooling mode directs the airflow in a single direction and is the setting of choice during the hottest part of the day of just after returning home.



### Digital Air Purification System

The Bio Green Filter includes catechin, a natural substance found in green tea that improves the ability to remove dust particles, odors and bacteria from the air.



Bacterial Filter, Bio Green Filter and activated carbon filter collect all the airborne pollutants inside the home, keeping the air you breathe free of dust, germs and odors.

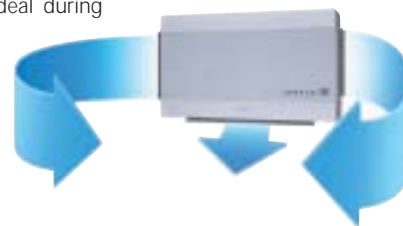


#### What is Catechin?

The crystalline substance catechin can be used to fight bad breath and remove foul odors. It also retards oxygenation and is very effective for eliminating mold, bacteria and other microbes..

#### Sleep Cooling-2way

The Sleep Cooling mode sends the airflow in opposite directions for a gentle breeze ideal during sleeping hours.



#### Cubic Cooling -3way

The Cubic Cooling mode offers a soft breeze from the left, right and bottom of the unit. This is most suitable for frail and elderly persons.



Interior

Cooling Only

Heat Pump

new



9000 Btu/h

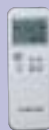
SH09AI8



Tropical Red

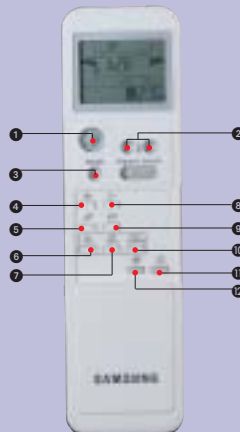
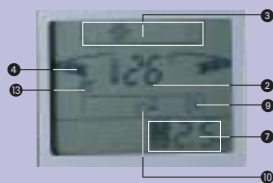


Satin Silver



- Super - Slim Interior Design
- Air Purification System
- 123 Digital Flow

Remote Control - Buttons and Display



- 1 On/Off button
- 2 Temperature adjustment buttons
- 3 Mode selection button (AUTO, COOL, DRY, FAN, HEAT)
- 4 Fan speed adjustment button
- 5 Turbo Button
- 6 On Timer button
- 7 Off Timer button
- 8 Swing button
- 9 Energy Saving button
- 10 Timer Set/Cancel button
- 11 Sleep Button
- 12 Anion button



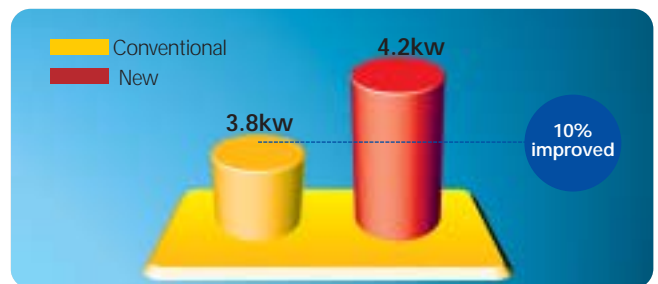


## New split generation for people who treasure performance

Samsung is challenging 2004 with the new wall-mounted products, which will provide better performance and easier maintenance to customers. These products address the main values of customers, which are the high energy efficiency and easy installation. Additionally, the super air cleaning system with Bio components and new environment friendly refrigerant R410a are adopted inside to provide fresher and safer air to please both our customers and environment.

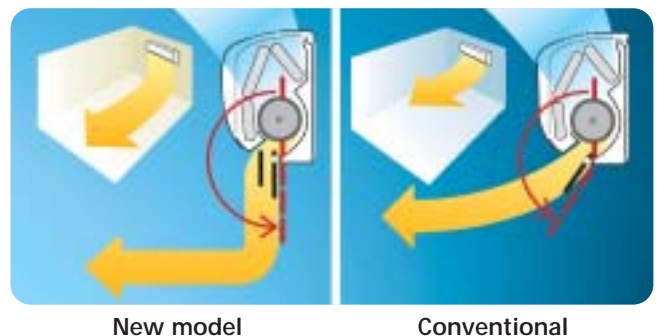
### Bigger Heating Capacity

New Samsung air conditioners ensure a higher heating capacity, which has been the key concern of the most European customers. By applying cutting edge technologies, Samsung improved heating capacity by as much as 10% compared to other models. From now on our customers can enjoy even more warm air as ever.



### Waterfall Heating Air Flow

Previously, indoor unit's blade could open up to the angle of 60degrees, which made difficult to direct heating airflow to the lower spaces of the room. Since 2004 new Samsung models are equipped with the new blades that can open to the angle of 90 degrees, therefore providing our customers even distribution of the heating air to any place of the room.



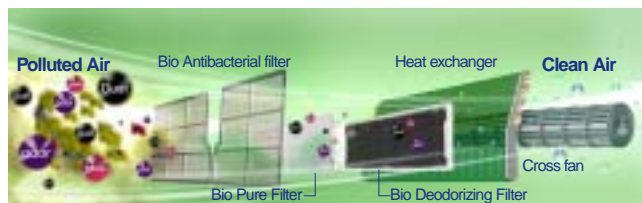
### Perfect Air control with Double Blade

With two blades of new Samsung air conditioners you can control the airflow even more effectively.



## Bio Components

Having been always concerned with the health of people, Samsung continuously enhances the quality of its anti-bacterial solutions. Enriched filters adopted in the new air conditioners will always keep your air clean and healthy.



## Auto changeover

When heating and cooling operation are needed on the same day, auto changeover provides automatic comfort control. The operating mode (cooling / heating) of your air conditioner can be automatically changed depending on the temperature of the room. There is no need now to set up mode manually.



## Easy Detachable Grille

Cleaning grille is a very irritating chore. With Samsung new air conditioners you do not have such problems. You can detach the grille from the unit for easy cleaning. Convenient and clean detachable grilles of our air conditioners will always maintain the indoor air clean.



April 25, 2003  
Serial No. 411 Volume 35, No. 4

# JARN

Japan Air Conditioning, Heating & Refrigeration News

Published by JARN Ltd.  
Hosokawa Bldg., 1-1-6, Akasaka, Minato-ku, Tokyo 1007-0052 Japan  
Tel: +81-3-3584-4704 Fax: +81-3-3584-4708  
E-mail: jarn@jarn.co.jp URL: http://www.jarn.co.jp

### CONTENTS

European Press Review.....	4
Trane 19.5 SEER Air Conditioner.....	6
RAC 2003 - UK's ACR Expo.....	12,14
Topic froe Brazil.....	16
News from India.....	18
Climatizacion Photo Report -2.....	20-23
New from Korea.....	26-27
Bitzer Expands Beijing Factory.....	31

## Sanyo and Samsung to Collaborate



Sanyo and Samsung top management during the press conference. From left: Mr. K. Kurokawa, Consumer Group President / Amenity Solutions Company-Sanyo, Mr. Y. Furuse, Executive VP & CFO-Sanyo, Mr. S.H. Shim, VP Air Conditioner R&D Team / System Appliance Division-Samsung, Mr. H.D. Kim, GM Planning Group / Management Support Team - Samsung.

Samsung Electronics Co., Ltd. and Sanyo Electric Co., Ltd. announced April 10 that they have agreed to collaborate in the joint development of household use air conditioners. This agreement will allow both companies to develop products that are strategically geared towards global sales with faster and more efficient product development and enhancement of product competitiveness. Through this agreement both companies will look to strengthen global product competitiveness, improve development speed by efficiently utilizing both companies' R&D resources and introduce competitive products to overseas markets including Korea and Japan.

# **new** New splits specially designed for installers

Samsung Electronics is committed to satisfy not only customers' needs but also to ease life of installers. In line with that we introduce the new distinguished line of wall mounted air conditioners that are aimed to please installing companies and service centers with enhanced flexibility and simplicity of installation and maintenance process.

### Flexible Installation With Two Way Drainage

Committed to ease installation process, Samsung implemented the new two way drainage system that enables installers to choose the place for the indoor unit's drain hose by themselves, therefore ensuring a greater flexibility and lower installation time and costs.



### Wall Space on Installation

Specially designed, our new split type air conditioners provide an extra 120mm of wall space for pipe work while installation. Also, thanks to an upper taper the indoor split unit can be mounted on the hanger plate with a greater degree of flexibility and with a little effort.



### R410A Refrigerant Application

The refrigerant R-22, used in many air conditioners at present, contains CFCs - ozone-depleting substances. Within the next few years, use of CFCs in new products is to be abolished in accordance with international agreements. Samsung has already adopted CFC-free new refrigerants R-410A to prevent ozone-layer depletion by CFCs.



### Easy-to-Change Cross Fan & Motor

Changing cross fan used to require removing heat exchanger along with control panel. There is no need to do so any longer. Our new split air conditioners allow changing cross fan and motor without removal of heat exchanger, therefore saving your time and easing the maintenance of air conditioner.

**Classic Series**

Cooling Only

Heat Pump



9000 Btu/h  
SH09BWH

12000 Btu/h  
SH12BWH

**R22**

9000 Btu/h  
SH09ZWH

SC09ZWH

12000 Btu/h  
SH12ZWH

SC12ZWH

- Antibacterial Bio Components
- Waterfall Heating Air Flow
- Auto changeover
- Two-way Drainage

**Classic Series**

Cooling Only

Heat Pump



**R22**

5000 Btu/h  
SH05ZZ8

SC05ZZ8

7000 Btu/h  
SH07ZZ8

- Antibacterial Bio Components



# MULTI SPLIT TYPE



# Now you can multiply your comfort and satisfaction!

## Multi cooling system

You want to have air conditioners in three rooms, but there is only enough space for one outdoor unit. Samsung's Multi system is the ideal solution. One outdoor unit can cool/heat from one to three or four rooms. So, you can pamper yourself with comfortable air conditioning in several rooms without having to be concerned about space for multiple outdoor units.

## Inverter for High Efficiency Operation

Thanks to inverter control, efficiency of operation of the outdoor unit is enhanced depending on the number of indoor units operated and the temperature setting. When only one indoor unit is used, power is saved, resulting in a smaller electricity bill. When all indoor units are used, high-power operation achieves comfort quickly in all rooms.



## Installation of indoor units on different floors is possible

With Multi system, the maximum pipe length is 20m for one unit and a total of 60m for four units (45m for three units.) The maximum difference in height is 10m. So, Multi system is ideal for three-story houses and for rooms that are relatively distant from one another.

# MULTI SPLIT TYPE | Line - up

## Premium (R410A)

Cooling Only

Heat Pump



18000 ~ 24000 Btu/h

MH18AP2 MH19AP2 MH24AP2

- Components molded with antibacterial formula
- Digital i



26000 Btu/h

MH26AP2

- Components molded with antibacterial formula
- Digital i



C&C

Cooling Only

Heat Pump



18000 ~ 24000 Btu/h

MC18AC2 MC19AC2 MC24AC2

R22

18000 ~ 24000 Btu/h

MH18ZC2 MH19ZC2 MH24C2

- Components molded with antibacterial formula
- Bio Components



26000 Btu/h

MC26AC2

R22

26000 Btu/h

MH26ZC2

- Components molded with antibacterial formula
- Bio Components





# WINDOW TYPE



# WINDOW type

*Comfortable,  
clean air flowing in through  
the window inspired us*



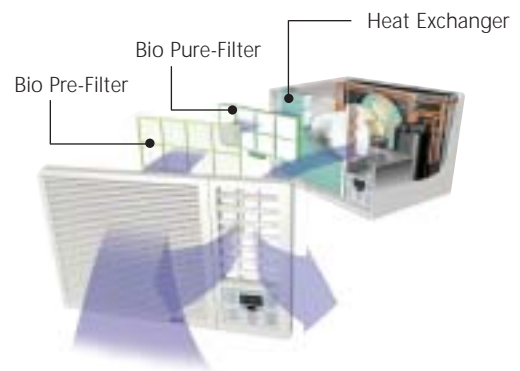
- Bio Components
- Antibacterial Air Purifying Filter and Heat Exchanger
- Slide-out Chassis
- Easy-to-access Filter
- Anti-rust Coating Formula

## Comfort and healthy air for every family

Only clean air conditioners can supply clean air. All key components inside Samsung air conditioners are antibacterial. Propagation of molds and bacteria inside air conditioners is prevented, so you and your family can always enjoy the freshest and cleanest air in your home.

### Bio Components

An air conditioner's interior is an ideal habitat for molds. If no counter-measures are taken, molds will propagate and the air conditioner produces air with an unpleasant odor. So, all key components inside Samsung air conditioners are treated with antibacterial agents. Because propagation of molds and bacteria inside air conditioners is prevented, fresh odor-free and healthy air is supplied.

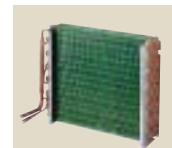


### Patent of Antibacterial Components

Any bacteria and fungi cannot propagate in air conditioner due to a heat exchanger and air filter treated with our own antibacterial formula.



Antibacterial filter



Heat exchanger

Patent No.  
P-0182555(Korea) / 5947194 (USA) /  
3048541 (Japan) / 1294250 (Italy)

### Test Result of Samsung Bio Components

Three world-renowned test organizations conducted tests by injecting and culturing bacteria in air conditioning Bio Components, and Samsung air conditioners' antibiotic Bio components proved to suppress the proliferation of bacteria, unlike components of conventional air conditioners.

Heat Exchanger Test Results

Test	Test Method	Test Organisms	Results	Standard for Pass
Antibacterial Test	Halo (Film Contact)	S.aureus	Positive (96% reduction)	Positive (Over 90%)
		E.coil S.pyogenes	Positive (99% reduction)	Positive (Over 90%)
Antifungal Test	ASTM G-21 JIS Z 2911	A.niger P.pinophilium C.globosum G.virens A.pullulans	No growth	No growth

Tested by Micro Tech. (Australia), Kyoto Biseibutu Kenkyusyo (Japan), Korea Consuming Science Research Center (Korea)



Halo



Bio Components

## Antibacterial Heat Exchanger

Samsung's exclusive heat exchanger does more than just heat or cool air. When not in operation, the heat exchanger prohibits proliferation of any molds and bacteria attached to it. So the cleanliness of the air conditioner's interior is maintained.



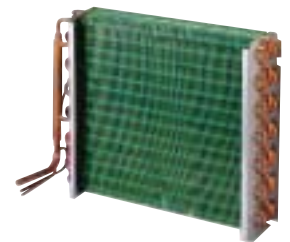
## Bio Antibacterial Filter

Samsung Bio Antibacterial filter removes small dust particles. In addition, the filter, specially treated with antibacterial and antifungal agents, prevents the proliferation of bacteria and fungi harmful to the respiratory organs, providing fresh air in your room.

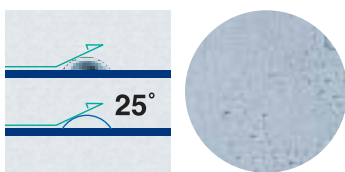
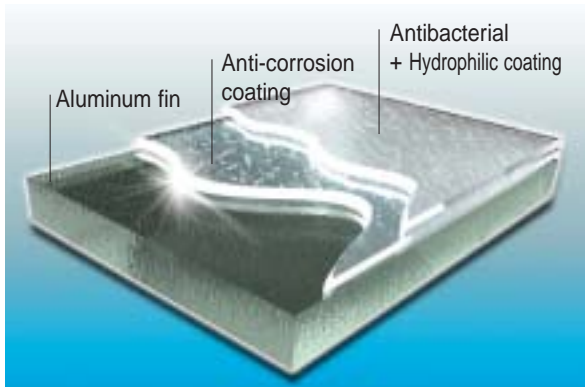


## Cluster Green (Permanent Double Coated Fin)

Cluster Green Fin is double coated to ensure anti-corrosion and efficient removal of water drops. The first layer is corrosion-proof and the second layer is hydrophilic, causing water to drain away easily. Therefore, air resistance is reduced and heat exchange efficiency during cooling and heating is greatly enhanced and noise is remarkably reduced. Also it is treated with antibacterial formula to prohibit proliferation of molds and bacteria. Samsung Heat Exchanger coated with a green anti-corrosive layer keeps the everyday performance as perfect as a initial state.

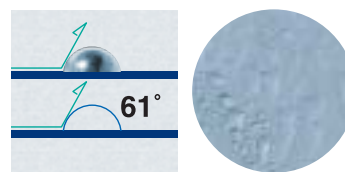
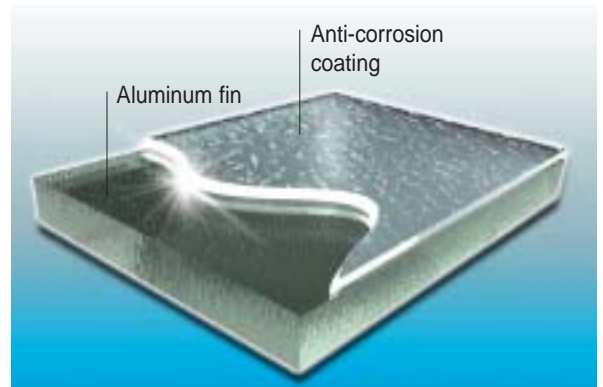


### Samsung



Water droplets do not form.

### A company



Water droplets form all of a lump.

## Natural air in each corner of the room

Samsung's window-type air conditioners create comfort throughout the room thanks to the convenient airflow control. All the family can enjoy superb comfort free of any irritation due to uneven temperature distribution or blowing wind.

### Ventilation Control

Select the Ventilation mode when you wish to ventilate your room. Close doors and windows if you wish the air to be circulated within the rooms.



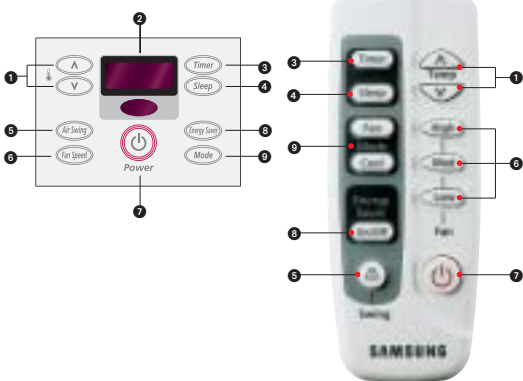
Closed position      Open position

### 4 Way Air Direction

The air can be directed in the direction you want by adjusting the horizontal louver and the vertical louver. It is possible to set the horizontal louver to swing at a constant speed or fix it to point airflow in the desired direction.



### CONVENIENT CONTROL



- 1 Temperature adjustment buttons**  
Adjusts a room temperature. The air conditioner starts cooling / heating if the room temperature is higher / lower than the selected temperature.
- 2 Display**  
Shows you operating status.
- 3 Timer button**  
Sets the 24hr On / Off timer.
- 4 Sleep timer button**  
Sets the Sleep timer. The air conditioner operates for 6 hours and turn it off automatically in Sleep mode.
- 5 Air flow direction adjustment button**

Moves inner air flow blades horizontally.

- 6 Fan speed adjustment button(s)**  
You can select fan speed in 3 steps; High, Med and Low
- 7 On / Off button**  
Turns on / off the air conditioner.
- 8 Energy saver button**  
Operates the air conditioner in Energy saving mode.
- 9 Mode selection button(s)**  
You can select Cool, Heat or Fan mode by pressing the button.



# Convenient installation and maintenance

## Slide-out Chassis

A Samsung window-type air conditioner is easy to install because the chassis can be detached by sliding it out. First install the lightweight cabinet on the wall or in a window and then insert the unit in the cabinet by sliding it in. That's all it takes to install a Samsung window-type air conditioner.



## Rust-free cabinet

Air conditioners' cabinets tend to get rusty in an area with high humidity or in an area near the sea, and rust reduces the product life. The cabinet of a Samsung air conditioner is coated with an original anti-corrosion agent to prevent rust and to ensure long durability.



Normal cabinet material  
after 600 hours



Samsung rust free cabinet  
material after 1000 hours

## Easy to Access Filter

You can slide filter in and out without removing the front grille for quick and easy cleaning. Dust, soot, pollen in the air are efficiently collected and easily removed.



## Easy-to-wash Panel & Filter

With a Samsung window-type air conditioner, the front grille, which tends to get dirty, can be detached easily from the main unit. Also, because the filter is attached to the front grille, dust is not scattered while detaching the grille. The detached grille and filter can be washed with water to keep them clean.



# WINDOW TYPE | Line - up

## Mechanical Type (R22)

Cooling Only

Heat Pump



5000 Btu/h

AW05M0YEB

6500 Btu/h

AW07M0YEA



7000 Btu/h

AW07F0NEC

9000 Btu/h

AZ09F1TEA

12000 Btu/h

AZ12F1DEA

18000 Btu/h

AZ18F1MEB

## Electronic Type (R22)

Cooling Only

Heat Pump



5000 Btu/h

AW05MDYEB

6500 Btu/h

AW07MDYEA



7000 Btu/h

AW07FANEC

9000 Btu/h

AZ09FATEA

12000 Btu/h

AZ12FADEA

18000 Btu/h

AZ18FAMEB

## FLOOR STANDING TYPE



# FLOOR STANDING type

*Best climate solution  
for offices, restaurants  
and stores*



- Convenient Installation
- Efficient Cooling
- Luxurious Design
- Bio Heat Exchanger & Air Filter
- Antibacterial Air Purifying System



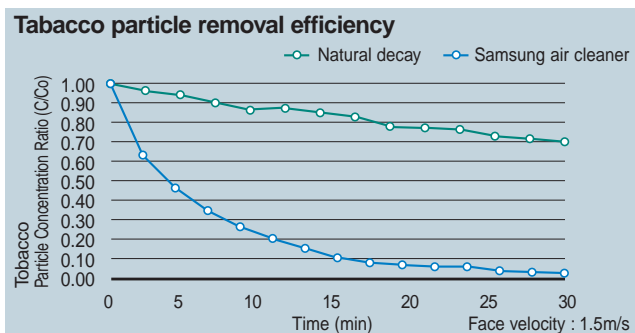


## Luxury air conditioner for those who treasure good atmosphere

Samsung is proud to introduce floor standing type prestigious air conditioners that are designed to best fit any interior and enhance the elegance of any room space. We adopted the compact and fancy design as well as the powerful air-purifying function so that it can be flexibly located securing the cleanness and freshness of the air in every corner. These air conditioners are the ideal climate solution for the office, restaurant, shop satisfying even the most demanding customers.

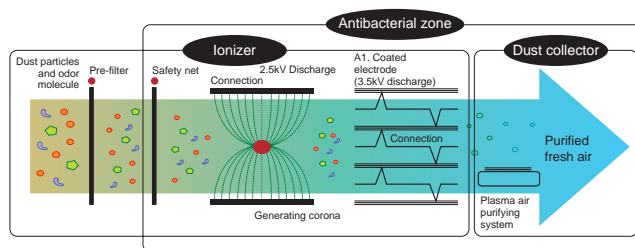
### Plasma Air Purifying System

The air in rooms is often polluted with invisible dirt and unpleasant odors. If no countermeasures are taken, dirty air can cause small children to suffer asthma or allergies. The solution is a Samsung air conditioner incorporating a Plasma Air Purifier. The plasma removes 93.4% of minute dust particles in the air. Because the Plasma Air Purifier is antibacterial, propagation of molds and bacteria is prevented and clean air that's gentle to your body is yours to enjoy.



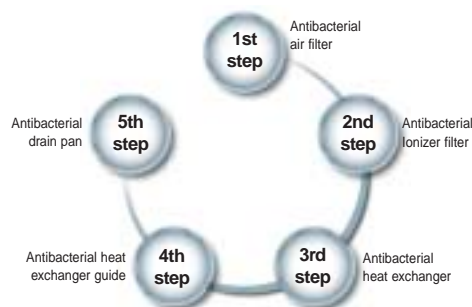
### Principle of Plasma Air Purification

Thanks to plasma generated by corona discharge, the particles that cause air contamination receive a positive charge and are adsorbed by the ionization filter.



### 5-step antibacterial system


An air conditioner's interior is an ideal place for molds. If no countermeasures are taken, molds will propagate and the air conditioner produces air with an unpleasant odor and also not healthy. So, all key components inside Samsung air conditioners are treated with antibacterial and anti-mold agents.



**Interior Series (R22)**

Cooling Only

Heat Pump



**new**

28000 Btu/h

APH289SE

Tropical Red    Satin Silver

- Ultra slim design
- Antibacterial purifying system
- Convenient installation

**Nature Inside (R22)**

Cooling Only

Heat Pump



28000 Btu/h

APH2840E



45000 Btu/h

APH450PGOK

# AIR PURIFIER



# AIR PURIFIER

*The cleanest environment  
for people and nature with  
Samsung Air Purifier*

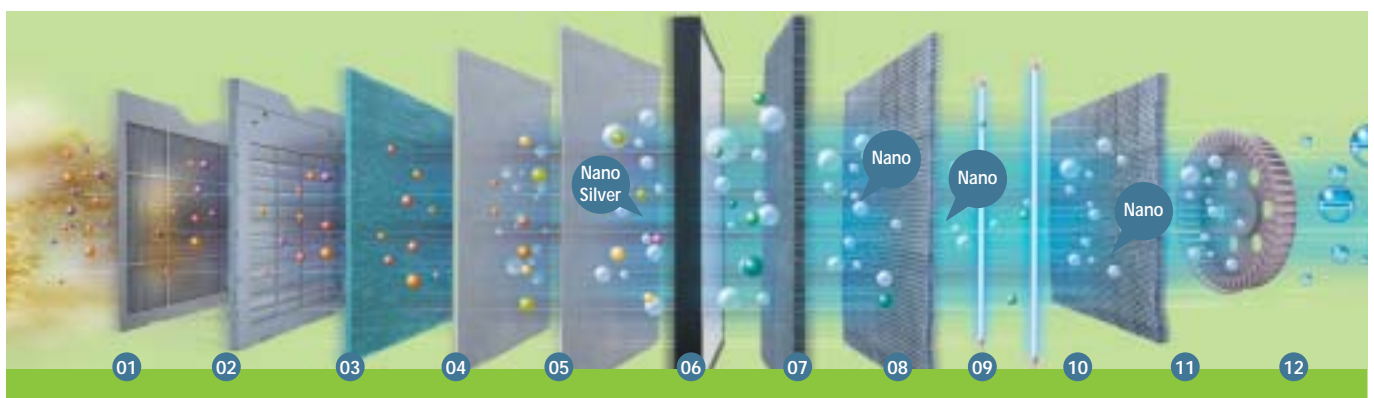


- Nano e-HEPA System
- 12-step Air Purifying System
- Anti-bacterial Filter
- Modern & Slim Design

## Best air purifier that is a reliable friend to your health

Samsung always provide people with most advanced technology and modern design. Our new air purifiers will enhance the quality of indoor air helping against asthma, allergies and other breathing diseases. Welcome to the Perfect Clean World of Samsung air purifiers!

### 12 Step Cleaning System

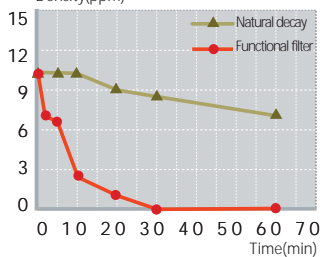


Step 01		Step 02		Washable filters		Replacement filters		Fixed filters		Step 11	Step 12
Step 01	Step 02	Step 03	Step 04	Step 05	Step 06	Step 07	Step 08	Step 09	Step 10	Step 11	Step 12
Pre-filter	Ionizer	Electrostatic Filter	Metal Filter	Nano Silver	HEPA Filter	Functional Filter	TiO <sub>2</sub> Photocatalyst Filter	UV Lamp	TiO <sub>2</sub> Photocatalyst Filter	Anti-bacterial Fan	Anion Generator
Removes big dusts.	Removes small dusts.	Removes small dusts..	Strengthens sterilization & dust collection.	Nano silver coated.	Removes fine dusts.	Removes VOCs(Smell of paints, solvents, wall coverings and carpets).	Deodorizes bad odor.	Sterilizes virus and bacteria with UV and repairs the function of the TiO <sub>2</sub> Photocatalyst filter.	Deodorizes bad odor.	Generates fresh air.	Refreshes your body and air.
Big dusts, Pet hairs, Yellow sands	Dusts, Bacteria	Bacteria, Fungi	Bacteria, Fungi	Bacteria, Fungi	Fine Particles	VOCs, NOx	Odor	Virus, Bacteria	Odor		

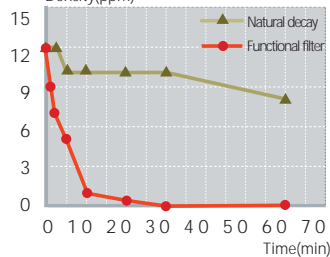
### The Best Removal Efficiency- Nano@HEPA System

- Functional Deodorization - Specialized filter for VOCs (Volatile Organic Compounds)

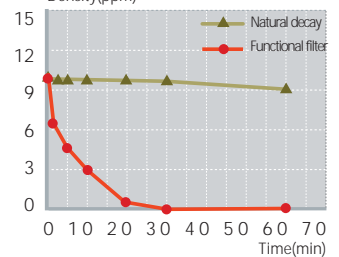
**Toluene**  
(Materials for synthetic fiber, explosive etc.)  
Density(ppm)



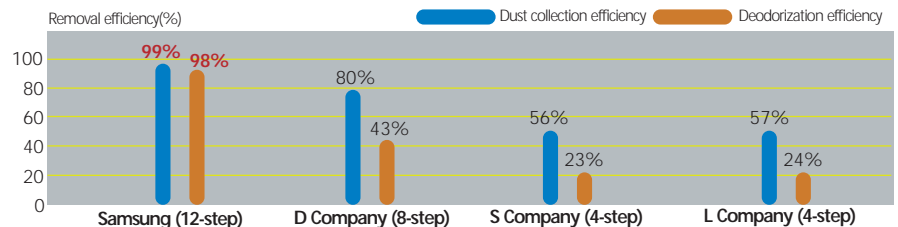
**Xylene**  
(Materials for synthetic fiber, explosive etc.)  
Density(ppm)



**Benzene**  
(Carcinogenic substance)  
Density(ppm)



- Comparison of the air cleaning efficiency





## AC402A



- Nano e-HEPA System
- 12-step Air Purifying System
- 99.9% Sterilization
- Functional Filter strengthens deodorizing
- Digital LED Display
- Washable Filters

## AC160C

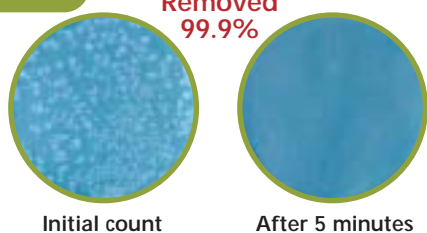


- Nano e-HEPA System
- 8-step Air Purifying System
- Slim & Tiny (Portable size)
- Wall-mountable (Option)
- Washable Filters

### • Samsung's Sterilization Technology - Nano Silver

To strengthen sterilizing power, we coated the metal filter, the functional filter and two TiO<sub>2</sub> photocatalyst filters with 8nm-silver.

#### Bacteria



† Staphylococci and colon bacilli are removed 99.9% within 5 minutes.

#### Fungi



† Aspergilli are removed 99.9% within 30 minutes.  
 \ Tested by Kyoto Biseibutu Kenkyusyo, Japan (Jan. 2003)

# SPECIFICATIONS

## Premium (R410A)



Model			SH07APG	SH09APG	SH12APG	SH18AP0	SH24AP6
Feature			Plastic Outdoor	Plastic Outdoor	Plastic Outdoor	Steel Outdoor	Steel Outdoor
<b>Performance</b>							
Capacity	Cooling	Btu/hr	8429	9214	11944	17404	23205
		Kcal/hr	2124	2322	3010	4386	5848
		KW	2.47	2.70	3.50	5.10	6.80
		Heating	8395	9896	12968	19793	23888
		Kcal/hr	2116	2494	3268	4988	6020
		KW	2.46	2.90	3.80	5.80	7.00
Energy Efficiency	Cooling	COP	3.21	3.21	3.21	2.81	2.81
		Btu/wh	10.9	11.0	11.0	9.6	9.6
	Heating	COP	3.42	3.41	3.22	3.22	2.81
		Btu/wh	11.7	11.6	11.0	11.0	9.6
Power Factor	Cooling	%	98.5	98.7	94.8	94.8	97.4
		Heating	%	94.9	99.9	98.7	96.6
Energy Grade	Cooling		A	A	A	C	C
		Heating		B	C	C	D
Moisture Removal		l/hr	0.9	1.4	1.9	2.5	3.0
Air Flow (High) (Cooling/Heating)		m <sup>3</sup> /min	6.5	7.0	8.2	13.0	14.0
Noise Level	In	dB (A)	37	40	43	48	48
			Out	50	51	53	58
<b>Electrical Data</b>							
Power Source			V/Hz/ø	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	770	840	1090	1810	2420
		Heating	W	720	850	1180	1800
Operating Current	Cooling	A	3.4	3.7	5.0	8.3	10.8
		Heating	A	3.3	3.7	5.2	8.1
<b>Dimension &amp; Weight</b>							
Net Dimension (WxHxD)	Indoor	mm	795X258X179	795X258X179	890X285X179	1080X315X205	1080X315X205
		Outdoor	mm	695X530X280	695X530X280	695X530X280	787X620X320
Shipping Dimension (WxHxD)	Indoor	mm	854X237X323	854X237X323	959X251X357	1151X286X397	1151X286X397
		Outdoor	mm	817X598X382	817X598X382	817X598X382	909X692X444
Net Weight	Indoor	kg	7.5	7.5	8.5	13.0	13.0
		Outdoor	kg	26.5	27.0	34.0	45.0
Shipping Weight	Indoor	kg	10.0	10.0	11.7	16.0	16.0
		Outdoor	kg	30.5	31.0	38.0	50.0
<b>Loading Q'ty</b>							
Loading Q'ty	W pipe	20/40 (fit)	104/218	104/218	96/200	63/136	58/122
		W/O pipe	114/239	114/239	101/220	65/142	60/129
<b>Technical Information</b>							
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m
		Gas	ODxL	ø9.52mmX5m	ø9.52mmX5m	ø12.70mmX5m	ø12.70mmX5m
Piping Length	STD	m	5	5	5	5	5
		Max	m	15	15	15	15
Piping Height	Max	m	7	7	7	8	8
		Refrigerant	G	650	590	880	1250
Add Refrigerant		g/m	20	20	30	20	30
<b>Features</b>							
Optional Feature	Anion Generator		•	•	•	•	•
		Titanium Plasma Filter					
Bio Component	Bio Antibacterial Filter		•	•	•	•	•
		(Anti-Bacterial Formula)		•	•	•	•
	Bio Pure Filter						
		Bio Dedorizing Filter	•	•	•	•	•
	Bio Cross Fan		•	•	•	•	•
		Bio Heat Exchanger	•	•	•	•	•
Automatic Clean Grille			•	•	•	•	
Digital		Green	Green	Green	Green	Green	
Washable Grille & Easy Access Filter		•	•	•	•	•	
Heat Exchanger	Diamond Cluster Fin						
		Double Coating	Cluster Green	Cluster Green	Cluster Green	Cluster Green	Cluster Green
Remote Controller		Sliding Type	Sliding Type	Sliding Type	Sliding Type	Sliding Type	
More Convenient Function	Dehumidification		•	•	•	•	•
		Turbo Mode	•	•	•	•	•
	Sleep Mode		•	•	•	•	•
		On/Off Timer	24Hr	24Hr	24Hr	24Hr	24Hr
	Energy Saving Mode		•	•	•	•	•
		Auto Restart	•	•	•	•	•
	Auto Changeover						
Air Flow Control Steps (Cool/Fan)			4/3	4/3	4/3	4/3	4/3
Air Direction Control (Up&Down)			Auto	Auto	Auto	Auto	Auto
Drain Connection			Flexible	Flexible	Flexible	Flexible	Flexible

## Premium (R410A)



Model			SC07APG	SC09APG	SC12APG	SC18AP0	SC24AP6
Feature			Plastic Outdoor	Plastic Outdoor	Plastic Outdoor	Steel Outdoor	Steel Outdoor
<b>Performance</b>							
Capacity	Cooling	Btu/hr	8429	9214	11944	17404	23205
		Kcal/hr	2124	2322	3010	4386	5848
	Heating	KW	2.47	2.70	3.50	5.10	6.80
		Btu/hr					
		Kcal/hr					
		KW					
Energy Efficiency	Cooling	COP	3.21	3.21	3.21	2.81	2.81
		Btu/wh	10.9	11.0	11.0	9.6	9.6
	Heating	COP					
		Btu/wh					
Power Factor	Cooling	%	98.5	98.7	94.8	94.8	97.4
Energy Grade	Cooling		A	A	A	C	C
		Heating					
Moisture Removal		l/hr	0.9	1.4	1.9	2.5	3.0
Air Flow (High)		m <sup>3</sup> /min	6.5	7.0	8.2	13.0	14.0
Noise Level	In	dB (A)	37	40	43	48	48
	Out	dB (A)	50	51	53	58	61
<b>Electrical Data</b>							
Power Source		V/Hz/ø	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	770	840	1090	1810	2420
		Heating					
Operating Current	Cooling	A	3.4	3.7	5.0	8.3	10.8
		Heating					
<b>Dimension &amp; Weight</b>							
Net Dimension (WxHxD)	Indoor	mm	795X258X179	795X258X179	890X285X179	1080X315X205	1080X315X205
		Outdoor	mm	695X530X280	695X530X280	695X530X280	787X620X320
Shipping Dimension (WxHxD)	Indoor	mm	854X237X323	854X237X323	959X251X357	1151X286X397	1151X286X397
		Outdoor	mm	817X598X382	817X598X382	817X598X382	909X692X444
Net Weight	Indoor	kg	7.5	7.5	8.5	13.0	13.0
		Outdoor	kg	26.0	26.5	33.5	45.0
Shipping Weight	Indoor	kg	10.0	10.0	11.7	16.0	16.0
		Outdoor	kg	30.0	30.5	37.5	50.0
<b>Loading Q'ty</b>							
Loading Q'ty	W pipe	20/40 (fit)	104/218	104/218	96/200	63/136	58/122
		W/O pipe	114/239	114/239	101/220	65/142	60/129
<b>Technical Information</b>							
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m
		Gas	ODxL	ø9.52mmX5m	ø9.52mmX5m	ø12.70mmX5m	ø12.70mmX5m
Piping Length	STD	m	5	5	5	5	5
		Max	m	15	15	15	15
Piping Height	Max	m	7	7	7	8	8
Refrigerant		G	650	590	880	1250	1500
Add Refrigerant		g/m	20	20	30	20	30
<b>Features</b>							
Optional Feature	Anion Generator		•	•	•	•	•
		Titanium Plasma Filter					
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter		•	•	•	•	•
		Bio Green Filter		•	•	•	•
	Bio Pure Filter						
	Bio Dedorizing Filter		•	•	•	•	
	Bio Cross Fan		•	•	•	•	
	Bio Heat Exchanger		•	•	•	•	
Automatic Clean Grille			•	•	•	•	
Digitall		Green	Green	Green	Green	Green	
Washable Grille & Easy Access Filter			•	•	•	•	
Heat Exchanger	Diamond Cluster Fin						
		Double Coating	Cluster Green	Cluster Green	Cluster Green	Cluster Green	Cluster Green
Remote Controller			Sliding Type	Sliding Type	Sliding Type	Sliding Type	
More Convenient Function	Dehumidification		•	•	•	•	
		Turbo Mode		•	•	•	•
	Sleep Mode		•	•	•	•	
	On/Off Timer	24Hr	24Hr	24Hr	24Hr	24Hr	
	Energy Saving Mode		•	•	•	•	
	Auto Restart		•	•	•	•	
	Auto Changeover						
Air Flow Control Steps (Cool/Fan)			4/3	4/3	4/3	4/3	
Air Direction Control (Up&Down)			Auto	Auto	Auto	Auto	
Drain Connection			Flexible	Flexible	Flexible	Flexible	

\* Specifications may change without notice.

# SPECIFICATIONS

## Premium (R22)



Model			SH07ZP2	SH09ZP2	SH12ZP4	SH18ZP0B	SH24ZP6B
Feature			Steel Outdoor	Steel Outdoor	Steel Outdoor	Steel Outdoor	Steel Outdoor
<b>Performance</b>							
Capacity	Cooling	Btu/hr	7508	8873	11944	17404	23205
		Kcal/hr	1892	2236	3010	4386	5848
		KW	2.20	2.60	3.50	5.10	6.80
	Heating	Btu/hr	7849	9896	12968	19110	23888
		Kcal/hr	1978	2494	3268	4816	6020
		KW	2.30	2.90	3.80	5.60	7.00
Energy Efficiency	Cooling	COP	3.24	2.89	3.04	2.80	2.81
		Btu/wh	11.0	9.9	10.4	9.6	9.6
		COP	3.65	3.41	3.45	3.20	2.68
	Heating	Btu/wh	12.5	11.6	11.8	10.9	9.2
		%	98.6	97.8	98.0	95.3	93.9
		%	97.8	97.3	95.7	95.1	99.5
Energy Grade	Cooling		A	C	B	C	C
	Heating		A	B	B	C	E
Moisture Removal		l/hr	0.9	1.4	1.9	2.5	3.0
Air Flow (High)		m <sup>3</sup> /min	6.2	6.8	8.0	13.0	14.0
Noise Level	In	dB (A)	36	39	43	48	48
	Out	dB (A)	50	51	53	58	61
<b>Electrical Data</b>							
Power Source		V/Hz/ø	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	680	900	1150	1820	2420
	Heating	W	630	850	1110	1750	2610
Operating Current	Cooling	A	3.0	4.0	5.1	8.3	11.2
	Heating	A	2.8	3.8	5.0	8.0	11.4
<b>Dimension &amp; Weight</b>							
Net Dimension (WxHxD)	Indoor	mm	795X258X179	795X258X179	890X285X179	1080X315X205	1080X315X205
	Outdoor	mm	660X495X235	660X495X235	720X530X260	787X620X320	880X638X310
Shipping Dimension (WxHxD)	Indoor	mm	854X237X323	854X237X323	959X251X357	1151X286X397	1151X286X397
	Outdoor	mm	770X531X323	770X531X323	837X581X346	909X692X444	1023X704X413
Net Weight	Indoor	kg	7.5	7.5	8.5	13.0	13.0
	Outdoor	kg	26.0	26.5	33.0	45.0	63.0
Shipping Weight	Indoor	kg	10.0	10.0	11.7	16.0	16.0
	Outdoor	kg	29.0	29.5	36.0	50.0	68.0
<b>Loading Q'ty</b>							
Loading Q'ty	W pipe	20/40 (fit)	128/271	128/271	98/194	63/136	58/122
	W/O pipe	20/40 (fit)	140/284	140/284	103/219	63/135	62/128
<b>Technical Information</b>							
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m
	Gas	ODxL	ø9.52mmX5m	ø9.52mmX5m	ø12.70mmX5m	ø12.70mmX5m	ø15.88mmX5m
Piping Length	STD	m	5	5	5	5	5
	Max	m	15	15	15	15	20
Piping Height	Max	m	7	7	7	8	8
Refrigerant		G	760	680	800	1150	1280
Add Refrigerant		g/m	20	20	30	30	40
<b>Features</b>							
Optional Feature	Anion Generator		•	•	•	•	•
	Titanium Plasma Filter						
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter		•	•	•	•	•
	Bio Green Filter		•	•	•	•	•
	Bio Pure Filter						
	Bio Dedorizing Filter		•	•	•	•	•
	Bio Cross Fan		•	•	•	•	•
	Bio Heat Exchanger		•	•	•	•	•
Automatic Clean Grille			•	•	•	•	
Digital		Green	Green	Green	Green	Green	
Washable Grille & Easy Access Filter			•	•	•	•	
Heat Exchanger	Diamond Cluster Fin		•	•	•	•	•
	Double Coating		•	•	•	•	•
Remote Controller		Sliding Type	Sliding Type	Sliding Type	Sliding Type	Sliding Type	
More Convenient Function	Dehumidification		•	•	•	•	•
	Turbo Mode		•	•	•	•	•
	Sleep Mode		•	•	•	•	•
	On/Off Timer		24Hr	24Hr	24Hr	24Hr	24Hr
	Energy Saving Mode		•	•	•	•	•
	Auto Restart		•	•	•	•	•
Auto Changeover							
Air Flow Control Steps (Cool/Fan)			4/3	4/3	4/3	4/3	4/3
Air Direction Control (Up&Down)			Auto	Auto	Auto	Auto	Auto
Drain Connection			Flexible	Flexible	Flexible	Flexible	Flexible

## Deluxe (R410A)



Model			SH07AS2	SH09AS2	SH12AS4	SH18AS0	SH24AS6
Feature			Steel Outdoor	Steel Outdoor	Steel Outdoor	Steel Outdoor	Steel Outdoor
<b>Performance</b>							
Capacity	Cooling	Btu/hr	7849	9214	11944	17404	23205
		Kcal/hr	1978	2322	3010	4386	5848
	Heating	KW	2.30	2.70	3.50	5.10	6.80
		Btu/hr	8190	9896	12968	19793	23888
	Heating	Kcal/hr	2064	2494	3268	4988	6020
		KW	2.40	2.90	3.80	5.80	7.00
Energy Efficiency	Cooling	COP	2.95	2.87	2.82	2.81	2.81
		Btu/wh	10.1	9.8	9.6	9.6	9.6
	Heating	COP	3.24	3.22	3.22	3.22	2.81
		Btu/wh	11.1	11.0	11.0	11.0	9.6
Power Factor	Cooling	%	99.9	97.3	99.8	94.8	97.4
		%	97.5	97.8	98.7	96.6	96.7
Energy Grade	Cooling		C	C	C	C	C
		Heating		C	C	C	D
Moisture Removal		l/hr	0.9	1.4	1.9	2.5	3.0
Air Flow (High)		m <sup>3</sup> /min	6.2	6.8	8.2	13.0	14.0
Noise Level	In	dB (A)	36	39	43	48	48
	Out	dB (A)	50	51	53	58	61
<b>Electrical Data</b>							
Power Source		V/Hz/ø	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	780	940	1240	1810	2420
		Heating	740	900	1180	1800	2490
Operating Current	Cooling	A	3.5	4.2	5.4	8.3	10.8
		Heating	3.3	4.0	5.2	8.1	11.2
<b>Dimension &amp; Weight</b>							
Net Dimension (WxHxD)	Indoor	mm	795X258X179	795X258X179	890X285X179	1080X315X205	1080X315X205
	Outdoor	mm	660X495X235	660X495X235	720X530X260	787X620X320	880X638X310
Shipping Dimension (WxHxD)	Indoor	mm	854X237X323	854X237X323	959X251X357	1151X286X397	1151X286X397
	Outdoor	mm	770X531X323	770X531X323	837X581X346	909X692X444	1023X704X413
Net Weight	Indoor	kg	7.5	7.5	8.5	13.0	13.0
	Outdoor	kg	26.0	26.5	33.0	45.0	63.0
Shipping Weight	Indoor	kg	10.0	10.0	11.7	16.0	16.0
	Outdoor	kg	29.0	29.5	36.0	50.0	68.0
<b>Loading Q'ty</b>							
Loading Q'ty	W pipe	20/40 (fit)	128/271	128/271	98/194	63/136	58/122
	W/O pipe	20/40 (fit)	140/284	140/284	103/219	65/142	60/129
<b>Technical Information</b>							
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m
	Gas	ODxL	ø9.52mmX5m	ø9.52mmX5m	ø12.70mmX5m	ø12.70mmX5m	ø15.88mmX5m
Piping Length	STD	m	5	5	5	5	5
	Max	m	15	15	15	15	20
Piping Height	Max	m	7	7	7	8	8
		G	650	590	880	1250	1500
Add Refrigerant		g/m	20	20	30	20	30
<b>Features</b>							
Optional Feature	Anion Generator						
	Titanium Plasma Filter						
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter						
	Bio Green Filter						
	Bio Pure Filter						
	Bio Dedorizing Filter						
	Bio Cross Fan						
	Bio Heat Exchanger						
Automatic Clean Grille							
Digital							
Washable Grille & Easy Access Filter	•						
Heat Exchanger	Diamond Cluster Fin						
	Double Coating	Cluster Green	Cluster Green	Cluster Green	Cluster Green	Cluster Green	
Remote Controller	•						
More Convenient Function	Dehumidification	•					
	Turbo Mode	•					
	Sleep Mode	•					
	On/Off Timer	24Hr	24Hr	24Hr	24Hr	24Hr	
	Energy Saving Mode	•					
	Auto Restart	•					
	Auto Changeover						
Air Flow Control Steps (Cool/Fan)	4/3						
Air Direction Control (Up&Down)	Auto						
Drain Connection	Flexible						

\* Specifications may change without notice.



# SPECIFICATIONS

## Deluxe (R410A)



Model			SC07AS2	SC09AS2	SC12AS4	SC18AS0	SC24AS6
Feature			Steel Outdoor	Steel Outdoor	Steel Outdoor	Steel Outdoor	Steel Outdoor
<b>Performance</b>							
Capacity	Cooling	Btu/hr	7849	9214	11944	17404	23205
		Kcal/hr	1978	2322	3010	4386	5848
		KW	2.30	2.70	3.50	5.10	6.80
	Heating	Btu/hr					
		Kcal/hr					
		KW					
Energy Efficiency	Cooling	COP	2.95	2.87	2.92	2.81	2.81
		Btu/wh	10.1	9.8	10.0	9.6	9.6
	Heating	COP					
		Btu/wh					
Power Factor	Cooling	%	99.9	97.3	98.4	94.8	97.4
	Heating	%					
Energy Grade	Cooling		C	C	C	C	C
	Heating						
Moisture Removal		l/hr	0.9	1.4	1.9	2.5	3.0
Air Flow (High)		m <sup>3</sup> /min	6.2	6.8	8.0	13.0	14.0
Noise Level	In	dB (A)	36	39	43	48	48
	Out	dB (A)	50	51	53	58	61
<b>Electrical Data</b>							
Power Source		V/Hzø	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	780	940	1200	1810	2420
	Heating	W					
Operating Current	Cooling	A	3.5	4.2	5.3	8.3	10.8
	Heating	A					
<b>Dimension &amp; Weight</b>							
Net Dimension (WxHxD)	Indoor	mm	795X258X179	795X258X179	890X285X179	1080X315X205	1080X315X205
	Outdoor	mm	660X495X235	660X495X235	720X530X260	787X620X320	880X638X310
Shipping Dimension (WxHxD)	Indoor	mm	854X237X323	854X237X323	959X251X357	1151X286X397	1151X286X397
	Outdoor	mm	770X531X323	770X531X323	837X581X346	909X692X444	1023X704X413
Net Weight	Indoor	kg	7.5	7.5	8.5	13.0	13.0
	Outdoor	kg	25.5	26.0	34.0	45.0	63.0
Shipping Weight	Indoor	kg	10.5	10.5	11.7	16.0	16.0
	Outdoor	kg	28.5	29.0	37.0	50.0	68.0
<b>Loading Q'ty</b>							
Loading Q'ty	W pipe	20/40 (fit)				63/136	58/122
	W/O pipe	20/40 (fit)				65/142	60/129
<b>Technical Information</b>							
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m
	Gas	ODxL	ø9.52mmX5m	ø9.52mmX5m	ø12.70mmX5m	ø12.70mmX5m	ø15.88mmX5m
Piping Length	STD	m	5	5	5	5	5
	Max	m	15	15	15	15	20
Piping Height	Max	m	7	7	7	8	8
Refrigerant		G				1250	1500
Add Refrigerant		g/m				20	30
<b>Features</b>							
Optional Feature	Anion Generator						
	Titanium Plasma Filter						
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter		•	•	•	•	•
	Bio Green Filter						
	Bio Pure Filter		•	•	•	•	•
	Bio Dedorizing Filter		•	•	•	•	•
	Bio Cross Fan		•	•	•	•	•
	Bio Heat Exchanger		•	•	•	•	•
Automatic Clean Grille							
Digital							
Washable Grille & Easy Access Filter	•						
Heat Exchanger	Diamond Cluster Fin						
	Double Coating		Cluster Green	Cluster Green	Cluster Green	Cluster Green	Cluster Green
Remote Controller	•						
More Convenient Function	Dehumidification		•	•	•	•	•
	Turbo Mode		•	•	•	•	•
	Sleep Mode		•	•	•	•	•
	On/Off Timer		24Hr	24Hr	24Hr	24Hr	24Hr
	Energy Saving Mode		•	•	•	•	•
	Auto Restart		•	•	•	•	•
Auto Changeover							
Air Flow Control Steps (Cool/Fan)			4/3	4/3	4/3	4/3	4/3
Air Direction Control (Up&Down)			Auto	Auto	Auto	Auto	Auto
Drain Connection			Flexible	Flexible	Flexible	Flexible	Flexible

## Deluxe (R22)



Model			SH07ZS2	SH09ZS2	SH12ZS4	SH18ZS0A	SH24ZS6A
Feature			Steel Outdoor	Steel Outdoor	Steel Outdoor	Steel Outdoor	Steel Outdoor
<b>Performance</b>							
Capacity	Cooling	Btu/hr	7508	8873	11944	17404	23205
		Kcal/hr	1892	2236	3010	4386	5848
		KW	2.20	2.60	3.50	5.10	6.80
		Btu/hr	7849	9896	12968	19110	23888
	Heating	Kcal/hr	1978	2494	3268	4816	6020
		KW	2.30	2.90	3.80	5.60	7.00
Energy Efficiency	Cooling	COP	3.24	2.89	3.04	2.80	2.81
		Btu/wh	11.0	9.9	10.4	9.6	9.6
	Heating	COP	3.65	3.41	3.45	3.20	2.68
		Btu/wh	12.5	11.6	11.8	10.9	9.2
Power Factor	Cooling	%	98.6	97.8	98.0	95.3	93.9
		%	97.8	97.3	95.7	95.1	99.5
Energy Grade	Cooling		A	C	B	C	C
		Heating	A	B	B	C	E
Moisture Removal		l/hr	0.9	1.4	1.9	2.5	3.0
Air Flow (High)		m <sup>3</sup> /min	6.2	6.8	8.0	13.0	14.0
Noise Level	In	dB (A)	36	39	43	48	48
			Out	50	51	53	58
<b>Electrical Data</b>							
Power Source		V/Hz/ø	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	680	900	1150	1820	2420
		Heating	630	850	1100	1750	2610
Operating Current	Cooling	A	3.0	4.0	5.1	8.3	11.2
		Heating	2.8	3.8	5.0	8.0	11.4
<b>Dimension &amp; Weight</b>							
Net Dimension (WxHxD)	Indoor	mm	795X258X179	795X258X179	890X285X179	1080X315X205	1080X315X205
		Outdoor	660X495X235	660X495X235	720X530X260	787X620X320	880X638X310
Shipping Dimension (WxHxD)	Indoor	mm	854X237X323	854X237X323	959X251X357	1151X286X397	1151X286X397
		Outdoor	770X531X323	770X531X323	837X581X346	909X692X444	1023X704X413
Net Weight	Indoor	kg	7.5	7.5	8.5	13.0	13.0
		Outdoor	26.0	26.5	33.0	46.0	63.0
Shipping Weight	Indoor	kg	10.0	10.0	11.7	16.0	16.0
		Outdoor	29.0	29.6	36.0	50.0	68.0
<b>Loading Q'ty</b>							
Loading Q'ty	W pipe	20/40 (fit)	128/271	128/271	98/194	63/136	58/122
		W/O pipe	140/284	140/284	103/219	63/135	62/128
<b>Technical Information</b>							
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m
		Gas	ODxL	ø9.52mmX5m	ø9.52mmX5m	ø12.70mmX5m	ø12.70mmX5m
Piping Length	STD	m	5	5	5	5	5
		Max	15	15	15	15	20
Piping Height	Max	m	7	7	7	8	8
Refrigerant		G	760	680	800	1150	1280
Add Refrigerant		g/m	20	20	30	30	40
<b>Features</b>							
Optional Feature	Anion Generator						
	Titanium Plasma Filter						
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter		•	•	•	•	•
	Bio Green Filter						
	Bio Pure Filter		•	•	•	•	•
	Bio Dedorizing Filter		•	•	•	•	•
	Bio Cross Fan		•	•	•	•	•
	Bio Heat Exchanger		•	•	•	•	•
Automatic Clean Grille							
Digital							
Washable Grille & Easy Access Filter							
Heat Exchanger	Diamond Cluster Fin		•	•	•	•	•
	Double Coating		•	•	•	•	•
Remote Controller							
More Convenient Function	Dehumidification		•	•	•	•	•
	Turbo Mode		•	•	•	•	•
	Sleep Mode		•	•	•	•	•
	On/Off Timer		24Hr	24Hr	24Hr	24Hr	24Hr
	Energy Saving Mode		•	•	•	•	•
	Auto Restart		•	•	•	•	•
	Auto Changeover						
Air Flow Control Steps (Cool/Fan)			4/3	4/3	4/3	4/3	4/3
Air Direction Control (Up&Down)			Auto	Auto	Auto	Auto	Auto
Drain Connection			Flexible	Flexible	Flexible	Flexible	Flexible

\* Specifications may change without notice.

# SPECIFICATIONS

## DC Inverter (R410A)



## Classic(R410A) AC Inverter

Model			SH09BPD	SH12BPD	SH09BWH	SH12BWH	SH09VCD	SH12VCD
Feature			DC Inverter	DC Inverter	Steel Outdoor DC Inverter	Steel Outdoor DC Inverter	AC Inverter	AC Inverter
<b>Performance</b>								
Capacity	Cooling	Btu/hr	9555	11944	9043	11944	9000(5600-10100)	12000(8000-14000)
		Kcal/hr	2408	3010	2279	3010	1410-2545	2016-3528
		KW	2.80	3.50	2.65	3.50	2.64(1.64-2.96)	3.52(2.34-4.10)
	Heating	Btu/hr	10920	13650	13309	14333	11300(6500-13600)	13000(8000-17000)
		Kcal/hr	2752	3440	3354	3612	1637-3427	2016-4284
		KW	3.20	4.00	3.90	4.20	3.31(1.90-3.99)	3.81(2.34-4.98)
Energy Efficiency	Cooling	COP	3.50	3.21	3.40	3.21	10.8-7.7	11.1-6.2
		Btu/wh	11.9	11.0	11.6	11.0	3.15-2.25	3.25-1.81
		COP	3.61	3.41	3.61	3.53	1.2	1.8
	Heating	Btu/wh	12.3	11.6	12.3	12.0	6.4	7.4
		COP	3.61	3.41	3.61	3.53		
		Btu/wh	12.3	11.6	12.3	12.0		
Power Factor	Cooling	%	96.6	98.7				
	Heating	%	95.7	97.8				
Energy Grade	Cooling		A	A	A	A		
	Heating		A	B	A	A		
Moisture Removal		l/hr	1.4	1.9				
Air Flow (High) (Cooling/Heating)		m <sup>3</sup> /min	6.6/8.0	8.2/9.0				
Noise Level	In	dB (A)	40	43	38/36/34	41/39/37	38/36/34	39/37/35
	Out	dB (A)	53	53	47	49	52	52
<b>Electrical Data</b>								
Power Source		V/Hz/ø	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	800	1090	780	1090	1040(520-1315)	1330(720-2260)
	Heating	W	880	1170	1080	1190	1152(545-1530)	1400(730-2260)
Operating Current	Cooling	A	3.6	4.8			4.6(2.5-5.8)max10A	5.95(3.25-8.2)max12A
	Heating	A	4.0	5.2			5.3(2.62-6.7)max10A	6.1(3.3-10)max12A
<b>Dimension &amp; Weight</b>								
Net Dimension (WxHxD)	Indoor	mm	795X258X179	890X285X179	825X285X189	825X285X189	790X245X165	790X245X165
	Outdoor	mm	695X530X280	695X530X280	720X548X265	720X548X265	750X530X245	750X530X245
Shipping Dimension (WxHxD)	Indoor	mm	854X237X323	959X251X357	898X347X252	898X347X252	842X236X297	842X236X297
	Outdoor	mm	817X598X382	817X598X382	852X600X355	852X600X355	835X581X307	853X581X307
Net Weight	Indoor	kg	7.5	8.5	7.8	8.4	8.0	8.0
	Outdoor	kg	27.0	34.0	30.0	33.8	39.0	42.0
Shipping Weight	Indoor	kg	10.0	11.7	9.0	10.6	9.2	9.2
	Outdoor	kg	31.0	38.0	32.5	35.6	43.0	46.0
<b>Loading Q'ty</b>								
Loading Q'ty	W pipe	20/40 (fit)	93/184	93/184	96/203	96/203	122/263	122/263
	W/O pipe	20/40 (fit)	99/210	99/210	105/222	105/222	144/293	144/293
<b>Technical Information</b>								
Connecting Pipe	Liquid	ODxL	ø6.35mmX7.5m	ø6.35mmX7.5m	ø6.35mmX7.5m	ø6.35mmX7.5m	ø6.35mmX5m	ø6.35mmX5m
	Gas	ODxL	ø9.52mmX7.5m	ø12.70mmX7.5m	ø9.52mmX7.5m	ø9.52mmX7.5m	ø9.52mmX5m	ø12.70mmX5m
Piping Length	STD	m	5	5			5	5
	Max	m	15	15			15	15
Piping Height	Max	m	7	7			7	7
Refrigerant		G	900	950			20	20
Add Refrigerant		g/m	chargeless(15m)	chargeless (15m)			20	
<b>Features</b>								
Optional Feature	Anion Generator		•	•				
	Titanium Plasma Filter							
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter		•	•	•	•	•	•
	Bio Green Filter		•	•	•	•	•	•
	Bio Pure Filter							
	Bio Dedorizing Filter		•	•	•	•	•	•
	Bio Cross Fan		•	•	•	•	•	•
	Bio Heat Exchanger		•	•	•	•	•	•
Automatic Clean Grille			•	•				
Digital			Green	Green				
Washable Grille & Easy Access Filter			•	•	•	•	•	
Heat Exchanger	Diamond Cluster Fin							
	Double Coating		Cluster Green	Cluster Green	•	•	•	•
Remote Controller			Sliding Type	Sliding Type	Sliding Type	Sliding Type	•	•
More Convenient Function	Dehumidification		•	•	•	•	•	•
	Turbo Mode		•	•	•	•	•	•
	Sleep Mode		•	•	•	•	•	•
	On/Off Timer		24Hr	24Hr	24Hr	24Hr	24Hr	24Hr
	Energy Saving Mode		•	•	•	•	•	•
	Auto Restart		•	•	•	•	•	•
	Auto Changeover				•	•		
Air Flow Control Steps (Cool/Fan)			4/3	4/3	4/3	4/3	4/3	
Air Direction Control (Up&Down)			Auto	Auto	Auto	Auto	•	
Drain Connection			Flexible	Flexible	Right/Left	Right/Left		

## Interior



Model				SH09AI8A
Feature				Plastic Outdoor
<b>Performance</b>				
Capacity	Cooling	Btu/hr	9000	
		Kcal/hr	2268	
		KW	2.60	
Heating	Btu/hr	10000		
	Kcal/hr	2520		
	KW	2.90		
Energy Efficiency	Cooling	COP	3.21	
		Btu/wh	11.1	
	Heating	COP	3.33	
		Btu/wh	11.5	
Power Factor	Cooling	%	95.2	
	Heating	%	97.0	
Energy Grade	Cooling		A	
	Heating		C	
Moisture Removal		l/hr	1.4	
Air Flow (High)		m <sup>3</sup> /min	6.6	
Noise Level	In	dB (A)	39	
	Out	dB (A)	51	
<b>Electrical Data</b>				
Power Source		V/Hz/ø	220-240/50/1	
Power Consumption	Cooling	W	810	
	Heating	W	870	
Operating Current	Cooling	A	3.7	
	Heating	A	3.9	
<b>Dimension &amp; Weight</b>				
Net Dimension (WxHxD)	Indoor	mm	729X398X125	
	Outdoor	mm	695X530X280	
Shipping Dimension (WxHxD)	Indoor	mm	798X467X207	
	Outdoor	mm	817X598X382	
Net Weight	Indoor	kg	12.0	
	Outdoor	kg	28.0	
Shipping Weight	Indoor	kg	13.5	
	Outdoor	kg	32.0	
<b>Loading Q'ty</b>				
Loading Q'ty	W pipe	20/40 (fit)		
	W/O pipe	20/40 (fit)	/222	
<b>Technical Information</b>				
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	
	Gas	ODxL	ø9.52mmX5m	
Piping Length	STD	m	5	
	Max	m	15	
Piping Height	Max	m	7	
Refrigerant		G		
Add Refrigerant		g/m		
<b>Features</b>				
Optional Feature	Anion Generator		•	
	Titanium Plasma Filter			
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter		•	
	Bio Green Filter		•	
	Bio Pure Filter		•	
	Bio Dedorizing Filter		•	
	Bio Cross Fan		•	
Automatic Clean Grille	Bio Heat Exchanger		•	
	Digitall			
Washable Grille & Easy Access Filter			•	
Heat Exchanger	Diamond Cluster Fin			
	Double Coating		•	
Remote Controller			•	
More Convenient Function	Dehumidification		•	
	Turbo Mode		•	
	Sleep Mode		•	
	On/Off Timer		•	
	Energy Saving Mode		•	
	Auto Restart		•	
	Auto Changeover			
Air Flow Control Steps (Cool/Fan)			4/3	
Air Direction Control (Up&Down)			Auto	
Drain Connection			Flexible	

## C&C



Model				SH30ZC2
Feature				Steel Outdoor
<b>Performance</b>				
Capacity	Cooling	Btu/hr	29200	
		Kcal/hr	7362	
		KW	8.56	
Heating	Btu/hr	29100		
	Kcal/hr	7334		
	KW	8.53		
Energy Efficiency	Cooling	COP	8.5/9.2	
		Btu/wh	2.50/2.70	
	Heating	COP		
		Btu/wh		
Power Factor	Cooling	%		
	Heating	%		
Energy Grade	Cooling			
	Heating			
Moisture Removal		l/hr		
Air Flow (High)		m <sup>3</sup> /min		
Noise Level	In	dB (A)	48	
	Out	dB (A)	58	
<b>Electrical Data</b>				
Power Source		V/Hz/ø	220-240/50/1	
Power Consumption	Cooling	W	3430	
	Heating	W	3160	
Operating Current	Cooling	A	16.0	
	Heating	A	17.0	
<b>Dimension &amp; Weight</b>				
Net Dimension (WxHxD)	Indoor	mm	1279X345X229	
	Outdoor	mm	880X890X310	
Shipping Dimension (WxHxD)	Indoor	mm	1352X417X313	
	Outdoor	mm	1023X413X943	
Net Weight	Indoor	kg	20.0	
	Outdoor	kg	86.5	
Shipping Weight	Indoor	kg	24.0	
	Outdoor	kg	94.5	
<b>Loading Q'ty</b>				
Loading Q'ty	W pipe	20/40 (fit)	46/96	
	W/O pipe	20/40 (fit)	-	
<b>Technical Information</b>				
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	
	Gas	ODxL	ø15.88mmX5m	
Piping Length	STD	m	5	
	Max	m	20	
Piping Height	Max	m	8	
Refrigerant		G	40	
Add Refrigerant		g/m		
<b>Features</b>				
Optional Feature	Anion Generator		•	
	Titanium Plasma Filter			
	Bio Antibacterial Filter		•	
	Bio Green Filter		•	
	Bio Pure Filter		•	
Automatic Clean Grille	Bio Dedorizing Filter		•	
	Bio Cross Fan		•	
Automatic Clean Grille	Bio Heat Exchanger		•	
	Digitall			
Washable Grille & Easy Access Filter			•	
Heat Exchanger	Diamond Cluster Fin			
	Double Coating		•	
Remote Controller			•	
More Convenient Function	Dehumidification		•	
	Turbo Mode		•	
	Sleep Mode		•	
	On/Off Timer		•	
	Energy Saving Mode		24Hr	
	Auto Restart		•	
	Auto Changeover			
Air Flow Control Steps (Cool/Fan)			4/3	
Air Direction Control (Up&Down)			•	
Drain Connection			Flexible	

\* Specifications may change without notice.

# SPECIFICATIONS

## Classic (R410A)



Model			SH09AWH	SH12AWH	SC09AWH	SC12AWH
Feature			Steel Outdoor R410A	Steel Outdoor R410A	Steel Outdoor R410A	Steel Outdoor R410A
<b>Performance</b>						
Capacity	Cooling	Btu/hr	9384	11944	9384	11944
		Kcal/hr	2365	3010	2365	3010
	Heating	KW	2.75	3.50	2.75	3.50
		Btu/hr	9896	14333	-	-
		Kcal/hr	2494	3612	-	-
		KW	2.90	4.20	-	-
Energy Efficiency	Cooling	COP	2.81	2.82	2.81	2.82
		Btu/wh	9.6	9.6	9.6	9.6
	Heating	COP	3.22	3.23	-	-
		Btu/wh	11.0	11.0	-	-
Power Factor	Cooling	%	94.7	94.6	94.7	94.6
		%	87.0	99.2	-	-
Energy Grade	Cooling		C	C	C	C
			C	C	-	-
Moisture Removal		l/hr	1.4	1.9	1.4	1.9
		m <sup>3</sup> /min	7.0/7.8(C/H)	8.3/9.0(C/H)	7.0	8.3
Air Flow (High)	In		38/36/34	41/39/37	38/36/34	41/39/37
			47	49	47	49
Noise Level	Out		47	49	47	49
			47	49	47	49
<b>Electrical Data</b>						
Power Source		V/Hz/ø	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	980	1240	980	1240
		W	900	1300	-	-
Operating Current	Cooling	A	4.5	5.7	4.5	5.7
		A	4.5	5.7	-	-
<b>Dimension &amp; Weight</b>						
Net Dimension (WxHxD)	Indoor	mm	825X285X189	825X285X189	825X285X189	825X285X189
		mm	720X548X265	720X548X265	720X548X265	720X548X265
Shipping Dimension (WxHxD)	Indoor	mm	898X347X252	898X347X252	898X347X252	898X347X252
		mm	852X600X355	852X600X355	852X600X355	852X600X355
Net Weight	Indoor	kg	7.8	8.4	7.8	8.4
		kg	30.0	33.8	30.0	33.0
Shipping Weight	Indoor	kg	9.0	10.6	9.0	10.6
		kg	32.5	35.6	32.5	35.0
<b>Loading Q'ty</b>						
Loading Q'ty	W pipe	20/40 (fit)	96/203	96/203	96/203	96/203
		W/O pipe	105/222	105/222	105/222	105/222
<b>Technical Information</b>						
Connecting Pipe	Liquid	ODxL	ø6.35mmX7.5m	ø6.35mmX7.5m	ø6.35mmX7.5m	ø6.35mmX7.5m
		ODxL	ø9.52mmX7.5m	ø9.52mmX7.5m	ø9.52mmX7.5m	ø9.52mmX7.5m
Piping Length	STD	m	7.5	7.5	7.5	7.5
		m	15	15	15	15
Piping Height	Max	m	7	7	7	7
		m	7	7	7	7
Refrigerant		G	680	1020	640	700
Add Refrigerant		g/m	15	15	15	15
<b>Features</b>						
Optional Feature	Anion Generator					
		Titanium Plasma Filter				
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter		•	•	•	•
		Bio Green Filter	•	•	•	•
	Bio Pure Filter					
		Bio Dedorizing Filter	•	•	•	•
	Bio Cross Fan		•	•	•	•
		Bio Heat Exchanger	•	•	•	•
Automatic Clean Grille						
Digitall						
Washable Grille & Easy Access Filter						
Heat Exchanger	Diamond Cluster Fin		•	•	•	•
		Double Coating	•	•	•	•
Remote Controller						
More Convenient Function	Dehumidification		•	•	•	•
		Turbo Mode	•	•	•	•
	Sleep Mode		•	•	•	•
		On/Off Timer	24Hr, 1Hr	24Hr, 1Hr	24Hr, 1Hr	24Hr, 1Hr
	Energy Saving Mode		•	•	•	•
		Auto Restart	•	•	•	•
	Auto Changeover		•	•	•	•
			•	•	•	•
Air Flow Control Steps (Cool/Fan)			4/3	4/3	4/3	4/3
Air Direction Control (Up&Down)			Auto	Auto	Auto	Auto
Drain Connection			Right/Left	Right/Left	Right/Left	Right/Left

## Classic (R22)

Model			SH09ZWH	SH12ZWH
Feature			Steel Outdoor R22	Steel Outdoor R22
<b>Performance</b>				
Capacity	Cooling	Btu/hr	9043	11944
		Kcal/hr	2279	3010
	Heating	KW	2.65	3.50
		Btu/hr	9896	13650
		Kcal/hr	2494	3440
		KW	2.90	4.00
Energy Efficiency	Cooling	COP	2.82	2.82
		Btu/wh	9.6	9.6
	Heating	COP	3.22	3.08
		Btu/wh	11.0	10.5
Power Factor	Cooling	%	88.8	87.7
		%	85.1	92.2
Energy Grade	Cooling		C	C
			C	C
Moisture Removal		l/hr	1.4	1.9
		m <sup>3</sup> /min	7.0/7.8(C/H)	7.9/9.0(C/H)
Air Flow (High)	In		38/36/34	41/39/37
			47	49
Noise Level	Out		47	49
			47	49
<b>Electrical Data</b>				
Power Source		V/Hz/ø	220-240/50/1	220-240/50/1
Power Consumption	Cooling	W	940	1240
		W	900	1300
Operating Current	Cooling	A	4.6	6.2
		A	4.6	6.0
<b>Dimension &amp; Weight</b>				
Net Dimension (WxHxD)	Indoor	mm	825X285X189	825X285X189
		mm	720X548X265	720X548X265
Shipping Dimension (WxHxD)	Indoor	mm	898X347X252	898X347X252
		mm	852X600X355	852X600X355
Net Weight	Indoor	kg	8.2	8.4
		kg	30.0	33.0
Shipping Weight	Indoor	kg	10.4	10.6
		kg	32.5	35.0
<b>Loading Q'ty</b>				
Loading Q'ty	W pipe	20/40 (fit)	96/203	96/203
		W/O pipe	105/222	105/222
<b>Technical Information</b>				
Connecting Pipe	Liquid	ODxL	ø6.35mmX7.5m	ø6.35mmX7.5m
		ODxL	ø9.52mmX7.5m	ø12.70mmX7.5m
Piping Length	STD	m	7.5	7.5
		m	15	15
Piping Height	Max	m	7	7
		m	7	7
Refrigerant		G	680	1020
Add Refrigerant		g/m	15	15
<b>Features</b>				
Optional Feature	Anion Generator			
		Titanium Plasma Filter		
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter		•	•
		Bio Green Filter	•	•
	Bio Pure Filter			
		Bio Dedorizing Filter	•	•
	Bio Cross Fan		•	•
		Bio Heat Exchanger	•	•
Automatic Clean Grille				
Digitall				
Washable Grille & Easy Access Filter				
Heat Exchanger	Diamond Cluster Fin		•	•
		Double Coating	•	•
Remote Controller				
More Convenient Function	Dehumidification		•	•
		Turbo Mode	•	•
	Sleep Mode		•	•
		On/Off Timer	24Hr, 1Hr	24Hr, 1Hr
	Energy Saving Mode		•	•
		Auto Restart	•	•
	Auto Changeover		•	•
			•	•
Air Flow Control Steps (Cool/Fan)			4/3	4/3
Air Direction Control (Up&Down)			Auto	Auto
Drain Connection			Right/Left	Right/Left

## Classic (R22)



Model			SH05ZZ8	SC05ZZ8	SH07ZZ8
Feature			Plastic Outdoor	Plastic Outdoor	Plastic Outdoor
<b>Performance</b>					
Capacity	Cooling	Btu/hr	4982	4982	7166
		Kcal/hr	1256	1256	1806
		KW	1.46	1.46	2.10
	Heating	Btu/hr	4982	-	7508
		Kcal/hr	1256	-	1892
		KW	1.46	-	2.20
Energy Efficiency	Cooling	COP	2.92	2.92	3.09
		Btu/wh	10.0	10.0	10.5
	Heating	COP	3.17	-	3.38
		Btu/wh	10.8	-	11.6
Power Factor	Cooling	%	98.8	98.6	98.6
	Heating	%	90.9		100.9
Energy Grade	Cooling		B	B	D
	Heating		C		D
Moisture Removal		l/hr	0.84	0.84	0.97
Air Flow (High)		m <sup>3</sup> /min	4.3	4.3	5.2
Noise Level	In	dB (A)	33/30	33/30	36/34
	Out	dB (A)	48	48	49
<b>Electrical Data</b>					
Power Source		V/Hz/ø	220 ~ 240/50/1	220 ~ 240/50/1	220 ~ 240/50/1
Power Consumption	Cooling	W	500	500	680
	Heating	W	450	-	650
Operating Current	Cooling	A	2.2	2.2	3.0
	Heating	A	2.2	-	2.6
<b>Dimension &amp; Weight</b>					
Net Dimension (WxHxD)	Indoor	mm	728X255X155	728X255X155	728X255X155
	Outdoor	mm	660X470X240	660X470X240	660X470X240
Shipping Dimension (WxHxD)	Indoor	mm	787X311X220	787X311X220	787X311X220
	Outdoor	mm	778X522X331	778X522X331	778X522X331
Net Weight	Indoor	kg	7.0	7.0	7.0
	Outdoor	kg	23.0	23.0	23.0
Shipping Weight	Indoor	kg	8.0	8.0	8.0
	Outdoor	kg	26.5	26.5	26.5
<b>Loading Q'ty</b>					
Loading Q'ty	W pipe	20/40 (fit)	134/286	134/286	131/286
	W/O pipe	20/40 (fit)	151/301	151/301	151/301
<b>Technical Information</b>					
Connecting Pipe	Liquid	ODxL	ø6.35mmX5m	ø6.35mmX5m	ø6.35mmX5m
	Gas	ODxL	ø9.52mmX5m	ø9.52mmX5m	ø9.52mmX5m
Piping Length	STD	m	5	5	5
	Max	m	15	15	15
Piping Height	Max	m	7	7	7
Refrigerant		G	450	440	510
Add Refrigerant		g/m	20	20	20
<b>Features</b>					
Optional Feature	Anion Generator				
	Titanium Plasma Filter				
Bio Component (Anti-Bacterial Formula)	Bio Antibacterial Filter				
	Bio Green Filter				
	Bio Pure Filter				
	Bio Dedorizing Filter				
	Bio Cross Fan				
	Bio Heat Exchanger				
Automatic Clean Grille					
Digitall					
Washable Grille & Easy Access Filter					
Heat Exchanger	Diamond Cluster Fin				
	Double Coating				
Remote Controller					
More Convenient Function	Dehumidification				
	Turbo Mode				
	Sleep Mode				
	On/Off Timer				
	Energy Saving Mode				
	Auto Restart				
	Auto Changeover				
Air Flow Control Steps (Cool/Fan)	4/3				
Air Direction Control (Up&Down)	Auto				
Drain Connection	Flexible				

\* Specifications may change without notice.



# SPECIFICATIONS

## Multi-Split (R410A)



Model				MH18AP2	MH19AP2	MH24AP2	MH26AP2	
<b>Performance</b>								
Capacity	1Unit(A)	Cooling	Btu/hr	9000/9500	7000/7700	12000/13000	12000/13000	
		/Heating	Kcal/hr	2279/2391	1763/1935	3019/3268	3019/3139	
			KW	2.65/2.78	2.05/2.25	3.51/3.80	3.51/3.65	
1Unit(B or C)		Cooling	Btu/hr	9000/9500	1200/12300	12000/13000	7000/7030	
		/Heating	Kcal/hr	2279/2391	3019/3096	3019/3268	1762/1771	
			KW	2.65/2.78	3.51/3.60	3.51/3.80	2.05/2.06	
2Unit[A+(B or C)]		Cooling	Btu/hr	18000/19000	19000/20000	24000/26000	19000/19500	
		/Heating	Kcal/hr	4558/4782	4782/5031	6037/6536	4780/4909	
			KW	5.30/5.56	5.56/5.85	7.02/7.60	5.56/5.71	
2Unit(B+C)		Cooling	Btu/hr	-	-	-	14000/14050	
		/Heating	Kcal/hr	-	-	-	3525/3542	
			KW	-	-	-	4.1/4.12	
3Unit(A+B+C)		Cooling	Btu/hr	-	-	-	26000/26500	
		/Heating	Kcal/hr	-	-	-	6543/6680	
			KW	-	-	-	7.61/7.77	
Energy Efficiency	1Unit(A)	Cooling	EER	8.87/9.68	8.04/9.84	9.36/10.13	8.74/9.51	
		/Heating	COP	2.60/2.84	2.36/2.88	2.74/2.97	2.56/2.79	
	1Unit(B or C)	Cooling	EER	8.87/9.68	9.43/8.65	9.36/10.13	4.40/4.09	
		/Heating	COP	2.60/2.84	2.76/2.54	2.74/2.97	1.29/1.20	
2Unit[A+(B or C)]		Cooling	EER	9.32/9.99	9.03/9.42	2.74/2.97	6.82/8.12	
		/Heating	COP	2.73/2.93	2.65/2.76	9.36/10.13	2.00/2.38	
2Unit(B+C)		Cooling	EER	-	-	-	8.53/9.44	
		/Heating	COP	-	-	-	2.50/2.77	
3Unit(A+B+C)		Cooling	EER	-	-	-	8.95/10.08	
		/Heating	COP	-	-	-	2.62/2.95	
Moisture Removal (A+B+C)			l/hr	2.2	2.3	2.9	3.14	
Air Flow (High)	1Unit(A) (C/H)		m <sup>3</sup> /min	5.4/6.3	5.3/5.4	8.6/9.1	7.2/8.5	
	1Unit(B or C) (C/H)		m <sup>3</sup> /min	5.4/6.3	7.2/7.6	8.6/9.1	4.1/4.8	
Noise Level	A-Unit	In	dB (A)	38	35	43	43	
		B or C-Unit	In	dB (A)	38	43	43	35
			Out	dB (A)	57	57	62	62
<b>Electrical Data</b>								
Power Source			V	220~240/50/1	220~240/50/1	220~240/50/1	220~240/50/1	
Power Consumption	1Unit(A)	Cooling	W	1020/980	870/780	1280/1280	1370/1310	
	1Unit(B or C)	/Heating	W	1020/980	1270/1420	1280/1280	1590/1720	
	2Unit[A+(B or C)]		W	1940/1900	2100/2120	2560/2560	2780/240	
	2Unit(B+C)		W	-	-	-	1640/1490	
3Unit(A+B+C)		W	-	-	-	2900/2630		
Operating Current	1Unit(A)	Cooling	A	4.5/4.4	3.9/3.5	5.7/5.7	6.0/5.8	
	1Unit(B or C)	/Heating	A	4.5/4.4	5.7/6.3	5.7/5.7	7.2/7.8	
	2Unit[A+(B or C)]		A	8.6/8.4	9.3/9.4	11.4/11.4	12.4/12.7	
	2Unit(B+C)		A	-	-	-	7.5/6.9	
	3Unit(A+B+C)		A	-	-	-	13/11.7	
<b>Dimension &amp; Weight</b>								
Net Dimension (WxHxD)	Indoor(A-Unit)		mm	795X258X179	795X258X179	890X285X179	890X285X179	
	Indoor(B or C-Unit)		mm	795X258X179	890X285X179	890X285X179	795X258X179	
	Outdoor		mm	880X638X310	880X638X310	1000X790X310	1000X790X310	
Shipping Dimension (WxHxD)	Indoor(A-Unit)		mm	854X323X237	854X323X237	959X357X251	959X357X251	
	Indoor(B or C-Unit)		mm	854X323X237	959X357X251	959X357X251	854X323X237	
	Outdoor		mm	1028X709X418	1028X709X418	1141X841X430	1141X841X430	
Net Weight	Indoor(A-Unit)		kg	7.5	7.5	8.5	8.5	
	Indoor(B or C-Unit)		kg	7.5	8.5	8.5	7.5	
	Outdoor		kg	60.0	60.0	68.0	68.0	
Shipping Weight	Indoor(A-Unit)		kg	10.5	10.5	11.7	11.7	
	Indoor(B or C-Unit)		kg	10.5	11.7	11.7	10.5	
	Outdoor		kg	64.0	64.0	72.0	72.0	
<b>Loading Q'ty</b>								
Loading Q'ty		W/O pipe	20/40 (fit)	52/107	49/98	47/100	43/93	
		W/pipe	20/40 (fit)	46/104	44/95	43/97	38/88	

## Multi-Split (R22)



Model				MC18AC2	MC19AC2	MC24AC2	MC26AC2	
Feature				Non-CFC	Non-CFC	Non-CFC	Non-CFC	
<b>Performance</b>								
Capacity	1Unit(A)	Cooling	Btu/hr	9050	7000	12000	12000	
		/Heating	Kcal/hr	2280	1764	3024	3024	
Capacity	1Unit(B or C)		KW	2.65	2.05	3.50	3.50	
			Btu/hr	9050	12000	12000	7670	
			Kcal/hr	2280	3024	3024	1934	
	2Unit[A+(B or C)]		KW	2.65	3.50	3.50	2.25	
			Btu/hr	18100	19000	24000	19000	
			Kcal/hr	4560	4788	6048	4788	
2Unit(B+C)		KW	5.30	5.55	7.00	5.55		
		Btu/hr	-	-	-	14000		
		Kcal/hr	-	-	-	3528		
3Unit(A+B+C)		KW	-	-	-	4.10		
		Btu/hr	-	-	-	26000		
		Kcal/hr	-	-	-	6534		
Energy Efficiency	1Unit(A)	Cooling	EER	9.63	8.43	10.08	9.92	
		/Heating	COP	2.82	2.47	2.94	2.89	
	1Unit(B or C)		EER	9.63	10.26	10.08	6.55	
			COP	2.82	2.99	2.94	1.92	
	2Unit[A+(B or C)]		EER	9.63	9.50	10.08	8.26	
			COP	2.82	2.78	2.94	2.41	
2Unit(B+C)		EER	-	-	-	11.20		
		COP	-	-	-	3.28		
		EER	-	-	-	10.57		
3Unit(A+B+C)		COP	-	-	-	3.09		
		COP	-	-	-	-		
Moisture Removal (A+B+(C))			l/hr	1.1+1.1	0.9+1.5	1.5+1.5	1.5+0.9+0.9	
Air Flow (High)	1Unit(A) (C/H)			m <sup>3</sup> /min	6.6	5.5	7.5	7.5
	1Unit(B or C) (C/H)			m <sup>3</sup> /min	6.6	7.5	7.5	5.5
Noise Level	A-Unit	In	dB (A)	40/38/36	35/33/31	42/40/38	42/40/38	
		B or C-Unit	In	dB (A)	40/38/36	42/40/38	42/40/38	35/33/31
		Out	dB (A)	52	52	60	60	
<b>Electrical Data</b>								
Power Source				V	220~240/50/1	220~240/50/1	220~240/50/1	220~240/50/1
Power Consumption	1Unit(A)	Cooling	W	940	830	1190	1210	
		/Heating	W	940	1170	1190	1170	
	2Unit[A+(B or C)]		W	1880	2000	2380	2300	
		2Unit(B+C)		W	-	-	-	1250
3Unit(A+B+C)		W	-	-	-	2460		
Operating Current	1Unit(A)	Cooling	A	4.2	3.7	5.2	5.4	
		/Heating	A	4.2	5.1	5.2	5.1	
	2Unit[A+(B or C)]		A	8.4	8.8	10.4	10.2	
		2Unit(B+C)		A	-	-	-	5.5
	3Unit(A+B+C)		A	-	-	-	10.9	
			A	-	-	-	-	
<b>Dimension &amp; Weight</b>								
Net Dimension (WxHxD)	Indoor(A-Unit)	mm		790X245X165	790X245X165	790X245X165	790X245X165	
	Indoor(B or C-Unit)	mm		790X245X165	790X245X165	790X245X165	790X245X165	
	Outdoor	mm		880X638X310	880X638X310	1000X790X310	1000X790X310	
Shipping Dimension (WxHxD)	Indoor(A-Unit)	mm		842X236X297	842X236X297	873X367X248	873X367X248	
	Indoor(B or C-Unit)	mm		842X236X297	842X236X297	873X367X248	873X367X248	
	Outdoor	mm		1028X709X418	1028X709X418	1141X841X430	1141X841X430	
Net Weight	Indoor(A-Unit)	kg		7.7	7.7	7.7	7.7	
	Indoor(B or C-Unit)	kg		7.7	7.7	7.7	7.7	
	Outdoor	kg		56.0	57.0	69.0	70.0	
Shipping Weight	Indoor(A-Unit)	kg		8.9	8.9	8.9	8.9	
	Indoor(B or C-Unit)	kg		8.9	8.9	8.9	8.9	
	Outdoor	kg		60.0	61.0	73.0	74.0	
<b>Loading Q'ty</b>								
Loading Q'ty	W/O pipe	20/40 (fit)		54/112	54/112	46/104	41/90	
		W/pipe	20/40 (fit)	60/122	60/122	52/107	46/96	

\* Specifications may change without notice.

# SPECIFICATIONS

## Multi-Split (R22)



Model				MH18ZC2	MH19ZC2	MH24ZC2	MH26ZC2	
<b>Performance</b>								
Capacity	1Unit(A)	Cooling	Btu/hr	9000/9500	7000/7000	12000/13000	12000/13000	
		/Heating	Kcal/hr	2268/2394	1764/1764	3024/3276	3024/3276	
			KW	2.63/2.78	2.05/2.05	3.51/3.80	3.51/3.80	
1Unit(B or C)			Btu/hr	9000/9500	12000/13000	12000/13000	8500/8000	
			Kcal/hr	2268/2394	3024/3276	3024/3276	2142/2016	
			KW	2.63/2.78	3.51/3.80	3.51/3.80	2.49/2.34	
2Unit[A+(B or C)]			Btu/hr	18000/19000	19000/20000	24000/26000	20500/21000	
			Kcal/hr	4536/4788	4788/5040	6048/6552	5166/5292	
			KW	5.26/5.56	5.56/5.85	7.02/7.60	6.00/6.15	
2Unit(B+C)			Btu/hr	-	-	-	14000/13000	
			Kcal/hr	-	-	-	3528/3276	
			KW	-	-	-	4.10/3.80	
3Unit(A+B+C)			Btu/hr	-	-	-	26000/26000	
			Kcal/hr	-	-	-	6552/6552	
			KW	-	-	-	7.61/7.61	
Energy Efficiency	1Unit(A)	Cooling	EER	10.11/10.67	10.0/10.93	9.37/9.63	9.09/9.77	
		/Heating	COP	2.92/3.12	2.93/3.20	2.74/2.81	2.66/2.86	
	1Unit(B or C)		EER	10.11/10.67	9.75/10.83	9.37/9.63	6.85/6.96	
			COP	2.92/3.12	2.85/3.16	2.74/2.81	2.0/2.03	
2Unit[A+(B or C)]			EER	10.11/10.67	9.84/10.87	9.37/9.63	8.00/8.47	
			COP	2.92/3.12	2.88/3.18	2.74/2.81	2.34/2.48	
2Unit(B+C)			EER	-	-	-	11.29/11.30	
			COP	-	-	-	3.3/3.81	
3Unit(A+B+C)			EER	-	-	-	10.16/10.48	
			COP	-	-	-	2.97/3.07	
Moisture Removal (A+B+C)			l/hr	1.2x2	0.9+1.8	1.8x2	1.8+0.9x2	
Air Flow (High)	1Unit(A) (C/H)		m <sup>3</sup> /min	7.0	5.5	8.5	8.5	
	1Unit(B or C) (C/H)		m <sup>3</sup> /min	7.0	8.5	8.5	8.5	
Noise Level	A-Unit	In	dB (A)	36/34/32	33/30/28	40/38/36	41/39/37	
		B or C-Unit	In	dB (A)	36/34/32	40/38/36	40/38/36	35/33/31
			Out	dB (A)	55	55	59	61
<b>Electrical Data</b>								
Power Source			V	220~240/50/1	220~240/50/1	220~240/50/1	220~240/50/1	
Power Consumption	1Unit(A)	Cooling	W	890/890	700/640	1280/1350	1320/1330	
	1Unit(B or C)	/Heating	W	890/890	1230/1200	1280/1350	1240/1150	
	2Unit[A+(B or C)]		W	1780/1780	1930/1840	2560/2700	2560/2480	
	2Unit(B+C)		W				1240/1150	
3Unit(A+B+C)		W				2560/2480		
Operating Current	1Unit(A)	Cooling	A	4.0/4.0	3.1/2.9	5.6/5.8	5.8/5.8	
	1Unit(B or C)	/Heating	A	4.0/4.0	5.3/5.3	5.6/5.8	5.4/5.1	
	2Unit[A+(B or C)]		A	8.0/8.0	8.4/8.2	11.2/11.6	11.2/10.9	
	2Unit(B+C)		A				5.4/5.1	
	3Unit(A+B+C)		A				11.2/10.9	
<b>Dimension &amp; Weight</b>								
Net Dimension (WxHxD)	Indoor(A-Unit)		mm	790X245X165	790X245X165	790X245X165	790X245X165	
	Indoor(B or C-Unit)		mm	790X245X165	790X245X165	790X245X165	790X245X165	
	Outdoor		mm	787X620X320	787X620X320	1000X790X310	1000X790X310	
Shipping Dimension (WxHxD)	Indoor(A-Unit)		mm	842X236X297	842X236X297	842X236X297	842X236X297	
	Indoor(B or C-Unit)		mm	842X236X297	842X236X297	842X236X297	842X236X297	
	Outdoor		mm	909X683X444	909X683X444	1141X841X430	1141X841X430	
Net Weight	Indoor(A-Unit)		kg	7.7	7.7	7.7	7.7	
	Indoor(B or C-Unit)		kg	7.7	7.7	7.7	7.7	
	Outdoor		kg	56.0	57.0	69.0	70.0	
Shipping Weight	Indoor(A-Unit)		kg	8.9	8.9	8.9	8.9	
	Indoor(B or C-Unit)		kg	8.9	8.9	8.9	8.9	
	Outdoor		kg	60.0	61.0	73.0	74.0	
<b>Loading Q'ty</b>								
Loading Q'ty		W/O pipe	20/40 (fit)	62/129	62/129	46/104	41/90	
		W/pipe	20/40 (fit)	70/145	70/145	52/107	46/96	

## Window



Model			AW05MDYEB	AW07F0NEB AW07FANEb	AZ09F1TEA AZ09FATEA	AZ12F1DEA AZ12FADEA	AZ18F1MEB AZ18FAMEB
Air Discharge			top	side			
<b>Performance</b>							
Capacity	Cooling	Btu/hr-W	5200	7100	8400	11500	17000
		kcal/hr	1310	1789	2116.9	2898.2	4280
	Heating	Kw	1.52	2.08	2.46	3.37	4.98
		Btu/hr	-	-	8400	11500	16500
		kcal/hr	-	-	2116.9	2898.2	4158
		Kw	-	-	2.46	3.40	4.84
EER		Btu/hr-W	9.0	9.3	8.3	8.5	8.3
COP		W/W	2.63	2.74	9.0	9.5	9.7
Moisture Removal		l/hr	0.7	0.8	0.9	1.5	1.8
Air Circulation		m <sup>3</sup> /min	3.8	5.9	6.5	8.5	12.3
Noise Level	In/Out	dB (A)	52/56	51/55	55/59	55/59	57/61
<b>Electrical Data</b>							
Voltage/Hz/Phase			220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1	220-240/50/1
Power Input	Cooling	Watt	580	760	1010	1350	2150
	Heating	Watt	-	-	930.0	1210	1850
Running Current	Cooling	A	2.5	3.3	4.2	5.9	11.0
	Heating	A	-	-	3.9	5.3	10.0
<b>Size</b>							
Net	Dimension	(WxHxD)	424X325X321	520X345X485	520X345X515	600X395X595	660X420X695
	Weight	Kg	18.5	29.0	34.5	46.0	58.0
Shipping	Dimension	(WxHxD)	460X355X422	571X454X546	590X468X575	715X470X655	737X476X794
	Weight	Kg	20.5	32.0	38.0	49.0	64.0
<b>Loading Q'ty</b>							
20 fit			384	200	196	132	88
40 fit			798	420	400	270	180
40 fit Jumbo			959	-			

## Floor Standing



Model			APH2840E	APH289SE	APH450PG
<b>Feature</b>					
<b>Performance</b>					
Capacity	Cooling	Btu/hr	25800	25800	45000
		Kcal/hr	6500	6500	11300
	Heating	KW	7.56	7.56	13.20
		Btu/hr	29800	29800	48800
		Kcal/hr	7500	7500	12300
		KW	8.70	8.73	14.30
Energy Efficiency		EER	9.9/10.6	2.91/9.92	9.0/10.4
		COP	2.91/3.11	3.12/10.64	2.64/3.04
Moisture Removal		l/hr	3.3	3.3	8.0
Air Fflow (High)		m <sup>3</sup> /min	16.5	16.7	30.0
Noise Level	In	dB (A)	52	48	55
	Out	dB (A)	63	63	65
<b>Electrical Data</b>					
Power Source			220-240/50/1	220-240/50/1	380/50/6
Power Consumption	Cooling	W	2600	2600	5000
	Heating	W	2800	2800	4700
Operating Current	Cooling	A	12.0	12.0	9.0
	Heating	A	12.5	12.5	8.7
<b>Dimension &amp; Weight</b>					
Net Dimension (WxHxD)	Indoor	mm	500x1830x325	575x1840x320	590x1810x400
	Outdoor	mm	880x790x310	880x798x310	930x1240x600
Shipping Dimension (WxHxD)	Indoor	mm	880x790x310	678x1910x432	704x1925x600
	Outdoor	mm	1023x851x413	1023x841x413	1200x1435x565
Net Weight	Indoor	kg	38.0	48.0	73.0
	Outdoor	kg	74.0	74.0	104.0
Shipping Weight	Indoor	kg	42.0	54.0	83.0
	Outdoor	kg	77.0	77.0	114.0
<b>Loading Q'ty</b>					
Loading Q'ty	W pipe	20/40 (fit)	28/58	-	12/24
	W/O pipe	20/40 (fit)	-	24/50	-
<b>Technical Information</b>					
Connecting Pipe	Liquid	ODxL	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")
	Gas	ODxL	15.88 (5/8")	15.88 (5/8")	19.08 (3/4")
Piping Length	STD	m	5.0	5.0	15.0
	Max	m	5.0	25.0	15.0

\* Specifications may change without notice.