

# SHARP

Air Conditioners 2013



The purity of nature in your home

# Connecting with the world around us



Sharp studies nature to receive important hints for its air conditioner development. It uses the power of ions, just as they're generated in nature, to improve the air quality. Its gentle and efficient airflow control is guided by the shape of a bird's wings. And its ecology-conscious design strives to reduce the impact on the global environment. If you're looking for a truly comfortable living environment, the logical - and natural - choice is Sharp.

## Plasmacluster ions clean the air

The same positive and negative ions that occur in nature clean the air inside rooms, as well as break down and remove unpleasant odors.



## Precise airflow control

Sharp's air conditioners take advantage of a tendency in nature that has been termed as „Coanda effect“ to heat and cool air evenly.





## Unique „Nature Wing” fan blades

By modeling fan blades after the wings of birds and insects, Sharp's air conditioners increase circulation efficiency.



## New energy regulation compliant

All Sharp air conditioners are accurately measured and labeled according to new seasonal energy efficiency legislation.

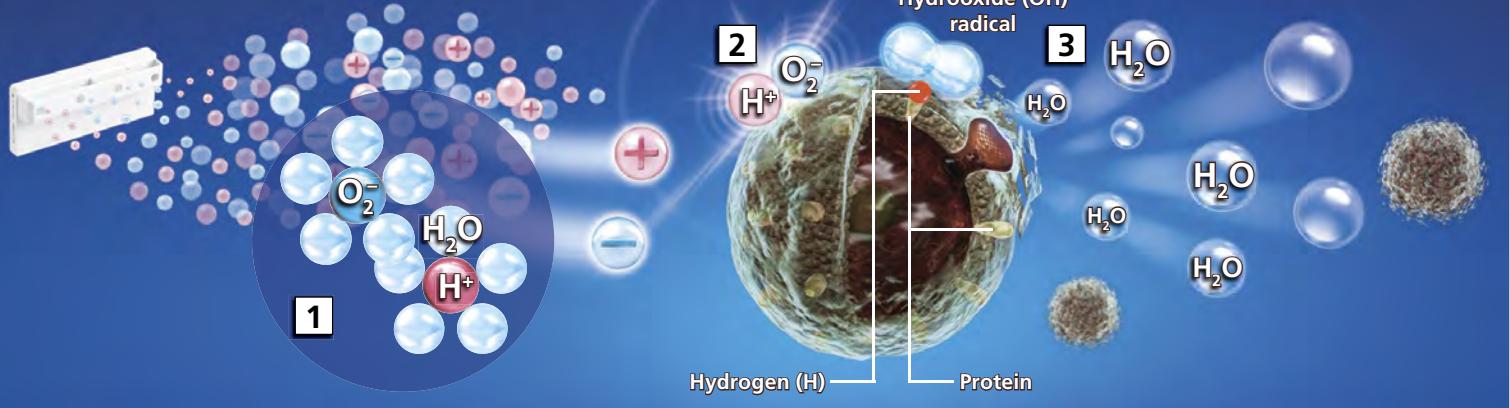


# Plasmacluster technology purifies air

## Plasmacluster Ions clean the room air.



The air inside ordinary houses contains invisible, harmful organisms such as bacteria and viruses. Sharp's unique Plasmacluster technology, installed in your air conditioner, uses the actions of positive and negative ions to clean up these airborne contaminants and create a pleasant living space.



## Plasmacluster Ions clean the room air.

### 1 Ions are released.

Plasmacluster Ions, the same positive and negative ions found in nature, are generated by plasma discharge and released into the air.

The ions are long-lasting<sup>\*3</sup> because they are surrounded by water molecules.

### 2 The ions act on airborne microbes.

The ions form hydroxide (OH) radicals that are highly oxidizing only when they adhere to the surfaces of mold and viruses. They instantly remove the hydrogen from the surface proteins, breaking them down.

### 3 The broken-down components return to the air as water.

The hydroxide (OH) radicals combine with hydrogen (H) to form water (H<sub>2</sub>O), which returns to the air.

## Count on Sharp for clean and healthy air.

### Proven at 22 institutions in Japan and around the world

#### Viruses

- Kitasato Research Center of Environmental Sciences, Japan
- Seoul National University, Korea
- Shanghai Municipal Center for Disease Control and Prevention, China
- Kitasato Institute Medical Center Hospital, Japan
- Retroscreen Virology, Ltd., UK
- Shokukanken Inc., Japan
- Hanoi College of Technology, Vietnam
- National University, Vietnam
- Public Health Research Foundation, Graduate School of Medicine, Tokyo University

#### Allergens

- Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan
- Department of Biochemistry and Molecular Pathology, Graduate School of Medicine, Osaka City University, Japan
- Soiken Inc., Japan

#### Mold fungi

- Ishikawa Health Service Association, Japan
- University of Lübeck, Germany
- Professor Gerhard Artmann, Aachen University of Applied Sciences, Germany
- Japan Food Research Laboratories, Japan

#### Bacteria

- Ishikawa Health Service Association, Japan
- Shanghai Municipal Center for Disease Control and Prevention, China
- Kitasato Research Center of Environmental Sciences, Japan
- Kitasato Institute Medical Center Hospital, Japan
- Dr. Melvin W. First, Professor Emeritus, Harvard School of Public Health, US
- Animal Clinical Research Foundation, Japan
- University of Lübeck, Germany
- Professor Gerhard Artmann, Aachen University of Applied Sciences, Germany
- Japan Food Research Laboratories, Japan
- Shokukanken Inc., Japan

#### Odors, pet smells

- Boken Quality Evaluation Institute, Japan
- Animal Clinical Research Foundation, Japan

#### Skin beautifying effects

- Soiken Inc., Japan

#### Hair beautifying effects

- Saticine Medical Co., Ltd.
- C.T.C Japan Ltd.

### Efficacy Analysis

#### Inhibitory effects on viruses, mold fungi and bacteria

- Professor Gerhard Artmann, Aachen University of Applied Sciences, Germany

#### Inhibitory effects on allergens

- Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan

#### Skin moisturizing (water molecule coating) effect

- Research Institute of Electrical Communication, Tohoku University, Japan

### Used in a variety of industries

Plasmacluster Ion technology is recognized and used across a wide range of industries. In collaboration with a number of companies, Sharp has expanded the Plasmacluster Ion technology to the following industries:



### Used in over 40 million products in 12 years

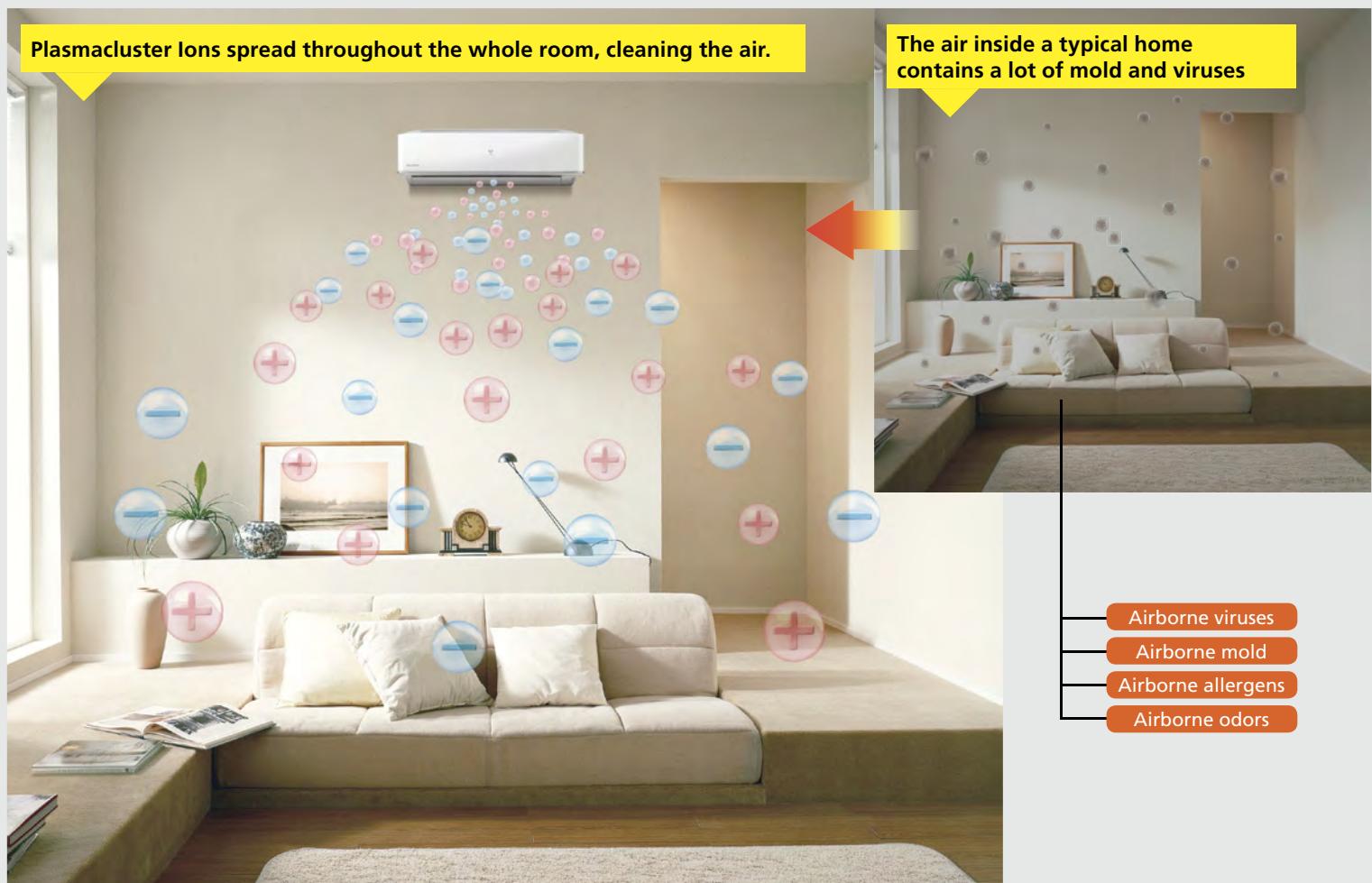
In the 12 years since its release, Plasmacluster Ion-equipped products have exceeded the 40-million-unit mark. Sharp aims to bring the benefits of Plasmacluster Ions to every air space.

over  
40  
millions

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012

\*1 Airborne viruses are suspended in a 1m<sup>3</sup> box, and the percentages of the viruses removed after 10 minutes are measured.  
\*2 The actual number of ions and effectiveness of microbe removing<sup>\*1</sup> and purifying<sup>\*2</sup> depend on the room conditions and the operation methods, including room size or shape, whether air conditioning or ventilation is used, product placement, direction of ion discharge, and operation mode.

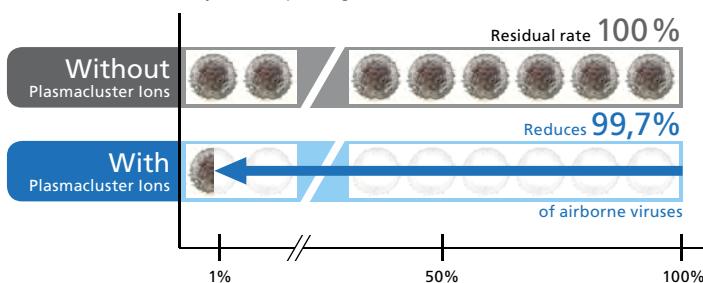
# with the same ions as in nature.



## Effective against airborne viruses

### Effects on Airborne Viruses

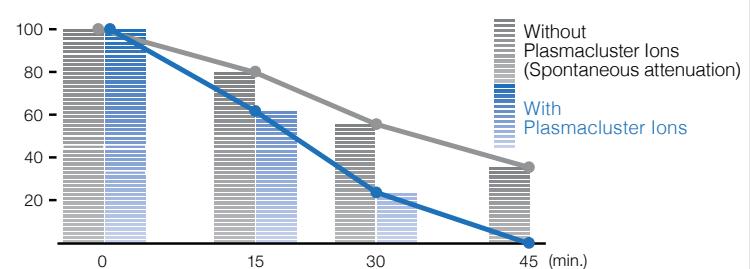
(Actual reduction rate may differ depending on room conditions and the model in use)



- Test method : A Plasmacluster Ion generator is placed in a 1 m<sup>3</sup> box. Airborne viruses are suspended in the air inside the box followed by the release of Plasmacluster ions.
- Reduction method: Generate Plasmacluster Ions in the air.
- Test performed by the Kitasato Institute Medical Center Hospital and Kitasato Research Center of Environmental Sciences in Japan.
- Test report No.: 00313
- The results of these experiments do not ensure the same effects in actual room conditions.

## Effective against airborne mold spores

### Effects on Airborne Mold Spores



- Mode of operation: Plasmacluster Ion generator single operation in an experimental room of approximately 13.0 square meters.
- Temperature inside the room: 21°C, Humidity: 53% RH.
- Method of measurement: Air samples measuring the quantity of mold were taken from the center inside the room.
- Reduction method: Without filter, generate Plasmacluster Ions in the air.
- Test performed by the Ishikawa Health Service Association in Japan.
- Test report No.: 1503691
- The results of these experiments do not ensure the same effects in actual room conditions.

## Plasmacluster key benefits

- Suppresses the activity of airborne viruses
- Suppresses the activity of airborne microbes
- Acts on both airborne and adhering mold
- Inactivates and removes airborne allergens like dust mite feces and dead dust mites

- Inactivates and removes adhering odors (like tobacco smoke)
- Removes static electricity which attracts airborne particles
- Plasmacluster is effective all year round

New Standard for Clean Air  
Plasmacluster – Only from SHARP

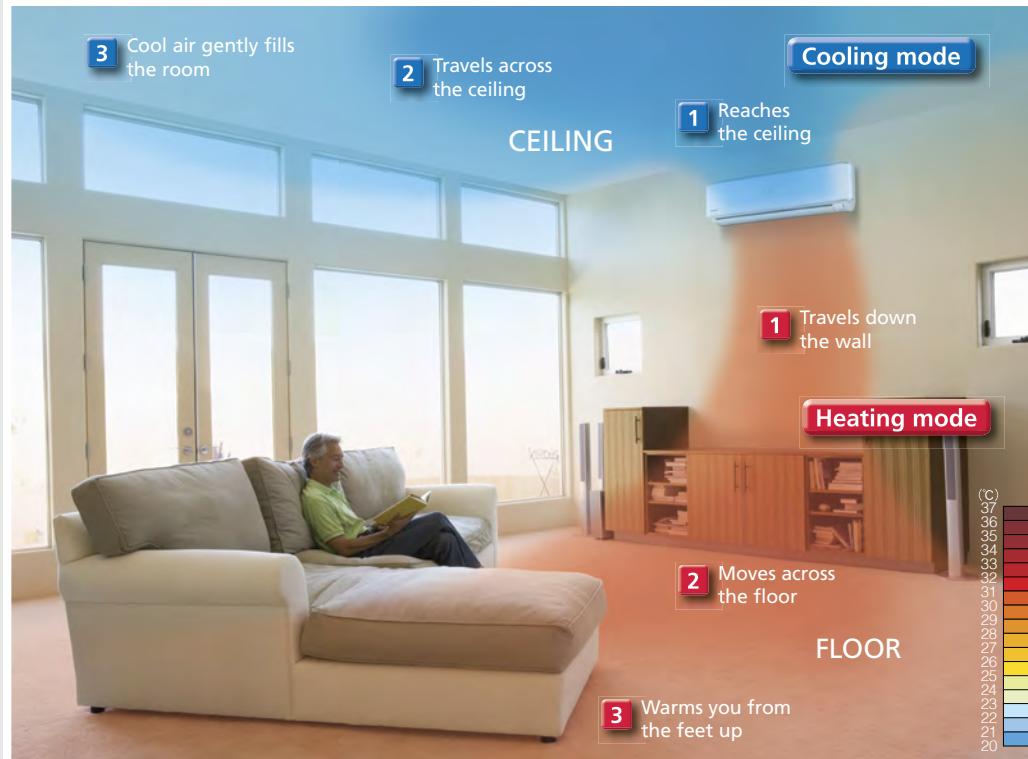


Plasmacluster Ion Device

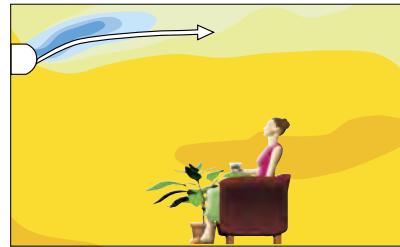
Suspended microbes subjected to Plasmacluster air purification are measured after 38 minutes in a testing room of about 40 m<sup>3</sup>. Test results may differ from results in actual room conditions (e.g., temperature, humidity and airflow), usage time and method. \*2 The effectiveness depends on the surrounding conditions

# Precise control to match any situation or mood

## The Coanda effect – creating the most comfortable living space possible

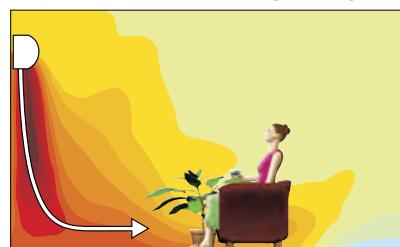


Temp. distribution data during cooling operation



- Outdoor/room temp. at startup: 35°C
- Cross-section of room temp. distribution one hour after startup
- Preset temp.: 26°C • Airflow: low
- A western-style room of size 13 m<sup>2</sup> (Sharp laboratory\*)

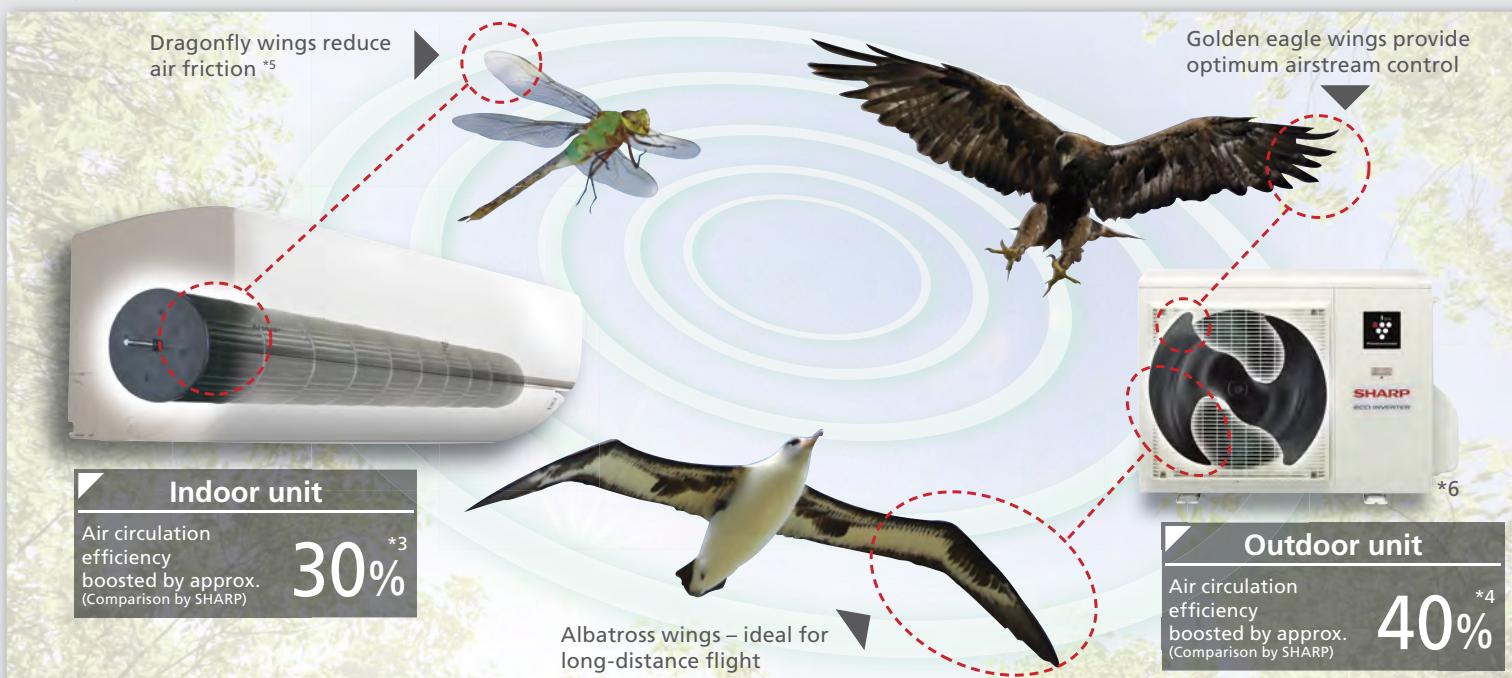
Temp. distribution data during heating operation



- Outdoor/room temp. at startup: 2°C
- Cross-section of room temp. distribution one hour after startup
- Preset temp.: 23°C • Airflow: low
- A western-style room of size 13 m<sup>2</sup> (Sharp laboratory\*)

Sharp's air conditioners take advantage of a tendency in nature that has been termed the "Coanda effect"<sup>\*2</sup> to heat and cool air evenly. The Coanda effect is the observed tendency of moving gas or fluid leaving a nozzle of some kind to cling to and follow nearby surfaces. Sharp air conditioners utilize this tendency by aiming the airflow at room surfaces, such as walls or ceilings, to more precisely control and direct the flow of air.

## Sharp's unique Nature Wing fan blades modeled after nature



## Nature Wing

Usually, aircraft wing designs are used for airflow control and improved its products based on aerodynamics. However, while aerodynamics is effective for moving large objects, it was discovered that the wings of birds and insects are more effective examples for objects with the size of our products. This forms the basis of Nature Wing.

<sup>\*1</sup> The data from tests made on AY-R28XC, a Japan domestic model that employs the Coanda effect. <sup>\*2</sup> The Coanda effect was discovered in 1930 by the world-famous aerodynamicist H. M. Coanda, born in Romania in 1885. <sup>\*3</sup> Comparison of electricity used to blow the same airflow volume with the conventional model and the new model with dragonfly wing design. <sup>\*4</sup> Comparison of electricity used to blow the same airflow volume with the conventional model and the new model with dragonfly wing design. <sup>\*5</sup> The new dragonfly-wing-shaped fan is currently employed only in models for the Asian region and is scheduled to be installed on European models in the future. <sup>\*6</sup> The AE-A18KR, AE-A24KR, AE-X2M18KR, AE-X18LR, AE-X24LR, AE-X2M14LR, AE-X9PHR and AE-X12PHR.

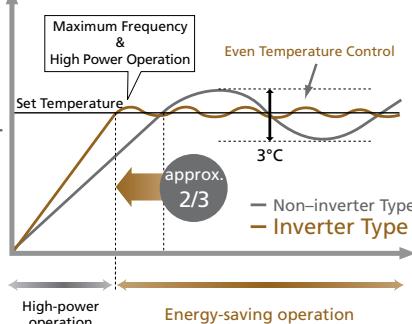
# Eco-friendliness and convenience

## Inverter technology



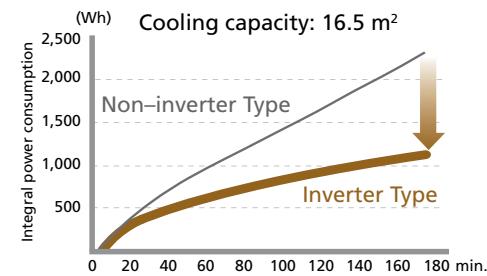
### Reaches preset temperatures in approx. 2/3 the time

Inverter air conditioners have a full-output operation mode to reach the preset temperatures in about 2/3 the time of non-inverter models. Once the preset time is reached, the inverter models switch to energy-saving operation mode, in which the inverter circuitry regulates and maintains room temperature by switching the compressor between high and low operation modes.



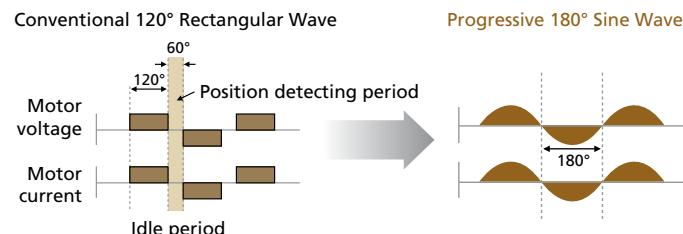
### Reaches preset temperatures in approx. 2/3 the time

Inverter air conditioners go into energy-saving operation mode immediately once the set temperature is achieved. Sharp's inverter air conditioners increase performance efficiency by using high-power DC motors for the compressor and outdoor fan, and a pulse linear expansion valve.



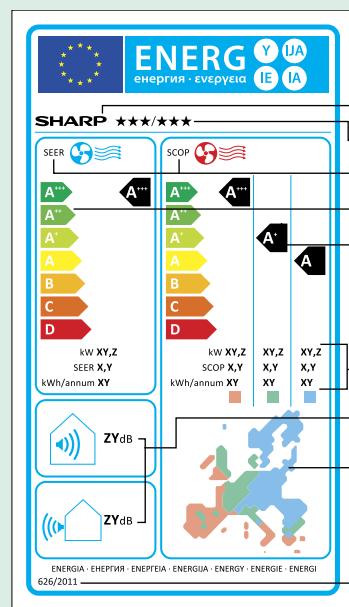
### Sine wave drive compressor control system

Uses the improved compressor control technology, which adopts a 180° conductance sine wave instead of the conventional 120° conductance waveform, resulting in a smoothing of motor rotation. This greatly reduces energy loss, contributing to higher efficiency, and thus higher energy savings.



### Meeting new European energy efficiency standards

Starting in January 2013, the previous EER and COP energy efficiency ratings for air conditioners will be replaced by SEER and SCOP ratings. The new ratings will provide assessments that come closer to actual use by considering seasonal and climatic variations in Europe and performance in several modes. All Sharp air conditioners will be accurately measured in accordance with the new legislation, and properly labeled prior to shipment.



- Supplier's name or trademark
- Model identifier: Indoor/Outdoor
- SEER and SCOP indication
- A+++~G scale
- Energy efficiency class
- Design load capacity for cooling and heating in kW
- SCOP and SEER values
- Annual electricity consumption
- Sound power level
- European map and color squares
- Registration number

#### Energy efficiency classes for air conditioners, except double ducts and single ducts

Energy Efficiency Class	SEER	SCOP
A+++	SEER $\geq$ 8.50	SCOP $\geq$ 5.10
A++	6.10 $\leq$ SEER < 8.50	4.60 $\leq$ SCOP < 5.10
A+	5.60 $\leq$ SEER < 6.10	4.00 $\leq$ SCOP < 4.60
A	5.10 $\leq$ SEER < 5.60	3.40 $\leq$ SCOP < 4.00
B	4.60 $\leq$ SEER < 5.10	3.10 $\leq$ SCOP < 3.40
C	4.10 $\leq$ SEER < 4.60	2.80 $\leq$ SCOP < 3.10
D	3.60 $\leq$ SEER < 4.10	2.50 $\leq$ SCOP < 2.80
E	3.10 $\leq$ SEER < 3.60	2.20 $\leq$ SCOP < 2.50
F	2.60 $\leq$ SEER < 3.10	1.90 $\leq$ SCOP < 2.20
G	SEER < 2.60	SCOP < 1.90

Sharp's units for Europe comply with European regulations that guarantee the safety of the product.



Sharp Corporation is participating in the EUROVENT Certification Programme with the products listed in the EUROVENT Directory of Certified Products. Note that Multi-split air conditioners with 3 or more indoor units are not in the scope of the EUROVENT certification.

**Refrigerant GWP** - Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.

**Annual electricity consumption** - Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.

SINGLE / MULTI TYPE INVERTER





SEER A++

SCOP A+

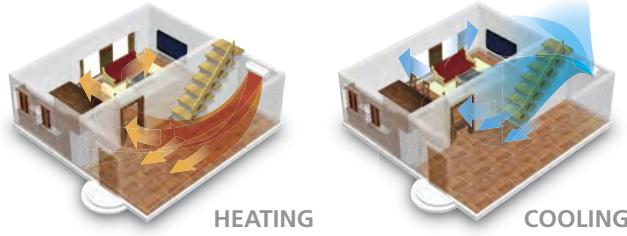
## Super Deluxe

# NEW AY-XPC9/12PHR



Multi Space function controls the airflow for quick, constant conditioning

Pressing Multi Space button will keep several rooms comfortable. By placing an indoor unit in the living room, stairwell, or wherever you wish, this function will quickly heat or cool a number of rooms to the set temperature. Then, the fan speed and the louver angle are automatically controlled to circulate warm or cool air gently and uniformly to every corner.



Only 21 dB



21 dB  
Quiet

Pressing the Silent button switches to an extra low fan speed with 21-dB silence. This combines with high-density Plasmacluster ions to provide good, sound sleep.

## Features



## Cool/Dry/Heat

Model	Cooling operation		Heating operation	
	Capacity (kW) (Min. – Max.)	SEER	Capacity (kW) (Min. – Max.)	SCOP
AY-XPC9PHR	2.50 (0.90 – 3.00)	6.3 <span style="background-color: #e0f2e0;">A++</span>	3.20 (0.90 – 4.70)	4.0 <span style="background-color: #e0f2e0;">A+</span>
AY-XPC12PHR	3.50 (0.90 – 3.80)	6.3 <span style="background-color: #e0f2e0;">A++</span>	4.00 (0.90 – 5.00)	4.0 <span style="background-color: #e0f2e0;">A+</span>

- Plasmacluster ion device
- Coanda Airflow System
- Can be used singly or in a multi split system (except for the AY-XPM7PHR)

## Outdoor unit

R410A



AE-X9PHR AE-X12PHR

## Specification

Model	Indoor		AY-XPC9PHR	AY-XPC12PHR
	Outdoor	AE-X9PHR		
Preformance* <sup>1</sup>	Cooling	Energy Efficiency Class	A++	A++
		SEER	6.3	6.3
		Pdesign	2.5	3.5
		Capacity (Min. – Max.)	2.50 (0.90 – 3.00)	3.50 (0.90 – 3.80)
		Input (Min. – Max.)	580 (200 – 800)	1,000 (200 – 1,250)
		Annual electricity consumption* <sup>2</sup>	138	193
	Heating (Average Climate)	Energy Efficiency Class	A+	A+
		SCOP	4.0	4.0
		Pdesign	3.2	3.4
		Capacity (Min. – Max.)	3.20 (0.90 – 4.70)	4.00 (0.90 – 5.00)
		Input (Min. – Max.)	800 (170 – 1,380)	1,080 (170 – 1,420)
		Annual electricity consumption* <sup>2</sup>	1,100	1,180
Nominal Efficiency* <sup>3</sup>	EER		4.31	3.50
	COP		4.00	3.70
Nominal Current* <sup>3</sup>	Cooling	A	3.2	4.6
	Heating	A	3.8	5.0
Sound Pressure Level* <sup>4</sup> (Cool)	Indoor (Hi/Lo)	dB(A)	39/26	42/27
	Outdoor	dB(A)	48	49
Sound Power Level (Cool)	Indoor (Hi)		54	56
	Outdoor		62	64
Airflow Volume (Hi, Cool)		m <sup>3</sup> /min	9.7	10.8
Operation Range (Outdooor)		Coolong	°C	-10 – 46
Heating			°C	-15 – 24
				-15 – 24

Model	Indoor		AY-XPC9PHR	AY-XPC12PHR
	Outdoor	AE-X9PHR		
Power Supply	Outdoor	V/Phase/Hz	220 – 240/single/50	220 – 240/single/50
Dimensions	Indoor (WxHxD)	mm	920x290x240	920x290x240
	Outdoor (WxHxD)	mm	780x540x269	780x540x269
Weight	Indoor	kg	10	10
	Outdoor	kg	36	38
Min. – Max. Pipe Lenght		m	3 – 20	3 – 20
Max. Height Difference		m	10	10
Max. Chargless Lenght		m	10	10
Pipe Diameter	Liquid Side	inch	1/4	1/4
	Gas Side	inch	3/8	3/8
Refrigerant (GWP* <sup>5</sup> )		kgCO <sub>2</sub> eq.	R410A (1975)	R410A (1975)

\*1 According to EN14825

\*2 Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.

\*3 According to EN14511

\*4 Sound pressure level is measured according to JIS C 9612.

\*5 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub> over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.

# SINGLE / MULTI TYPE INVERTER



## Deluxe AY-XPC9/12JR

### Features



### Outdoor unit

R410A



AE-X9JR AE-X12JR

### Cool/Dry/Heat

Model	Cooling operation		Heating operation	
	Capacity (kW) (Min. - Max.)	SEER	Capacity (kW) (Min. - Max.)	SCOP
AY-XPC9JR	2.50 (0.90 - 3.00)	5.1	3.20 (0.90 - 5.00)	3.9
AY-XPC12JR	3.50 (0.90 - 3.80)	5.1	4.00 (0.90 - 5.70)	4.0

- Can be used singly or in a multi split system
- Coanda Airflow System

### Specification

Model	Indoor		AY-XPC9JR	AY-XPC12JR
	Outdoor		AE-X9JR	AE-X12JR
Preformance *1	Cooling	Energy Efficiency Class	A	A
		SEER	5.1	5.1
		Pdesign	kW	2.5
		Capacity (Min. - Max.)	kW	2.50 (0.90 - 3.00)
		Input (Min. - Max.)	W	625 (200 - 900)
		Annual electricity consumption *2	kWh/a	171
	Heating (Average Climate)	Energy Efficiency Class	A	A+
		SCOP	3.9	4.0
		Pdesign	kW	3.2
		Capacity (Min. - Max.)	kW	3.20 (0.90 - 5.00)
		Input (Min. - Max.)	W	760 (180 - 1,450)
		Annual electricity consumption *2	kWh/a	1,126
Nominal Efficiency *3	EER		4.00	3.21
	COP		4.21	3.92
	Cooling	A	3.1	4.9
	Heating	A	3.7	4.6
Sound Pressure Level *4 (Cool)	Indoor (Hi/Lo)	dB(A)	37/26	40/27
	Outdoor	db(A)	45	48
Sound Power Level (Cool)	Indoor (Hi)		52	56
	Outdoor		58	61
Airflow Volume (Hi, Cool)		m³/min	9.1	10.5
Operation Range (Outdoor)		Cooling	°C	-10 - 46
		Heating	°C	-15 - 24

Model	Indoor		AY-XPC9JR	AY-XPC12JR
	Outdoor	V/Phase/Hz	220 - 240/single/50	220 - 240/single/50
Power Supply	Outdoor	mm	790x278x198	790x278x198
Dimensions	Indoor (WxHxD)	mm	730x540x250	730x540x250
Weight	Indoor	kg	10	10
	Outdoor	kg	33	33
Min. - Max. Pipe Length		m	1 - 15	1 - 15
Max. Height Difference		m	7	7
Max. Chargeless Length		m	10	10
Pipe Diameter	Liquid Side	inch	1/4	1/4
	Gas Side	inch	3/8	3/8
Refrigerant (GWP*5)		kgCO <sub>2</sub> eq.	R410A (1975)	R410A (1975)

\*1 According to EN14825

\*2 Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.

\*3 According to EN14511

\*4 Sound pressure level is measured according to JIS C 9612.

\*5 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub> over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.



## Standard NEW AY-X9/12PSR

### Features



### Cool/Dry/Heat

Model	Cooling operation		Heating operation	
	Capacity (kW) (Min. - Max.)	SEER	Capacity (kW) (Min. - Max.)	SCOP
AY-X9PSR	2.60 (1.00 – 3.10)	5.7	2.60 (1.00 – 3.80)	3.8
AY-X12PSR	3.50 (1.05 – 3.70)	5.7	4.00 (1.05 – 4.50)	3.8

### Outdoor unit

R410A



AE-X9PSR      AE-X12PSR

- Brand-New Design
- High SEER
- Full Power Mode

### Specification

Model	Indoor		AY-X9PSR	AY-X12PSR
	Outdoor		AE-X9PSR	AE-X12PSR
Preformance *1	Cooling	Energy Efficiency Class	A+	A+
		SEER	5.7	5.7
		Pdesign	kW	2.6
		Capacity (Min. – Max.)	kW	2.60 (1.00 – 3.10)
		Input (Min. – Max.)	W	760 (290 – 1,100)
		Annual electricity consumption *2	kWh/a	161
	Heating (Average Climate)	Energy Efficiency Class	A	A
		SCOP	3.8	3.8
		Pdesign	kW	2.6
		Capacity (Min. – Max.)	kW	2.60 (1.00 – 3.80)
		Input (Min. – Max.)	W	680 (290 – 1,400)
		Annual electricity consumption *2	kWh/a	959
Nominal Efficiency *3	EER		3.42	3.40
	COP		3.82	3.47
	Nominal Current *3	Cooling	A	3.5
		Heating	A	3.1
Sound Pressure Level *4 (Cool)	Indoor (Hi/Lo)	dB(A)	38/26	38/26
	Outdoor	db(A)	50	52
Sound Power Level (Cool)	Indoor (Hi)		54	57
	Outdoor		60	62
Airflow Volume (Hi, Cool)		m³/min	10.0	10.0
Operation Range (Outdoor)		Coolong	°C	18 – 46
		Heating	°C	-7 – 24

Model	Indoor		AY-X9PSR	AY-X12PSR
	Outdoor		AE-X9PSR	AE-X12PSR
Power Supply	Outdoor	V/Phase/Hz	220 – 240/single/50	220 – 240/single/50
Dimensions	Indoor (WxHxD)	mm	800x280x183	800x280x183
	Outdoor (WxHxD)	mm	700x551x256	700x551x256
Weight	Indoor	kg	10	10
	Outdoor	kg	24	26
Min. – Max. Pipe Length		m	1 – 15	1 – 15
Max. Height Difference		m	5	5
Max. Chargeless Length		m	5	5
Pipe Diameter	Liquid Side	inch	1/4	1/4
	Gas Side	inch	3/8	1/2
Refrigerant (GWP*5)		kgCO <sub>2</sub> eq.	R410A (1975)	R410A (1975)

\*1 According to EN14825

\*2 Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.

\*3 According to EN14511

\*4 Sound pressure level is measured according to JIS C 9612.

\*5 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub> over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.

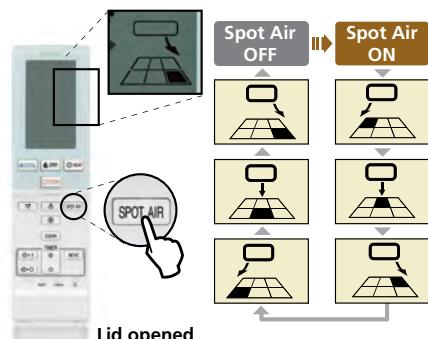


## Deluxe AY-XPC18/XP24LR



### Spot Air Area-specific comfort

Push the button to cycle through and choose from six areas.



### Features



\* For the AY-XPC18LR model only.

### Cool/Dry/Heat

Model	Cooling operation		Heating operation	
	Capacity (kW) (Min. - Max.)	SEER	Capacity (kW) (Min. - Max.)	SCOP
AY-XPC18LR	5.00 (1.40 - 5.70)	6.6 <span style="color: green;">A++</span>	5.70 (1.10 - 8.00)	3.8 <span style="color: yellow;">A</span>
AY-XP24LR	7.00 (1.50 - 8.00)	5.9 <span style="color: green;">A+</span>	7.50 (1.10 - 9.50)	4.0 <span style="color: green;">A+</span>

- Spot Air function
- Coanda Airflow System
- Can be used singly or in a multi split system (for AY-XPC18LR)

### Outdoor unit

R410A



AE-X18LR AE-X24LR

### Specification

Model	Indoor		AY-XPC18LR	AY-XP24LR
	Outdoor	AE-X18LR	AE-X24LR	
Performance *1	Cooling	Energy Efficiency Class	A++	A+
		SEER	6.6	5.9
		Pdesign	kW	5.0
		Capacity (Min. - Max.)	kW	5.00 (1.40 - 5.70)
		Input (Min. - Max.)	W	1,470 (260 - 1,890)
		Annual electricity consumption*2	kWh/a	264
	Heating (Average Climate)	Energy Efficiency Class	A	A+
		SCOP		3.8
		Pdesign	kW	5.7
		Capacity (Min. - Max.)	kW	5.70 (1.10 - 8.00)
		Input (Min. - Max.)	W	1,510 (240 - 2,380)
		Annual electricity consumption*2	kWh/a	2,064
Nominal Efficiency *3	EER		3.40	3.24
	COP		3.77	3.72
	Cooling	A	6.6	9.6
	Heating	A	6.8	8.9
Sound Pressure Level*4 (Cool)	Indoor (Hi/Lo)	dB(A)	43/33	47/35
	Outdoor	dB(A)	49	53
Sound Power Level (Cool)	Indoor (Hi)		58	63
	Outdoor		62	66
Airflow Volume (Hi, Cool)		m³/min	14.4	18.4
Operation Range (Outdoor)		°C	-10 - 46	-10 - 46
Heating		°C	-15 - 24	-15 - 24

Model	Indoor		AY-XPC18LR	AY-XP24LR
	Outdoor	AE-X18LR	AE-X24LR	
Power Supply	Outdoor	V/Phase/Hz	220 - 240/single/50	220 - 240/single/50
Dimensions	Indoor (WxHxD)	mm	1,040x325x222	1,040x325x222
	Outdoor (WxHxD)	mm	850x710x330	850x710x330
Weight	Indoor	kg	12	13
	Outdoor	kg	49	53
Min. - Max. Pipe Length		m	1 - 20	1 - 30
Max. Height Difference		m	10	10
Max. Chargeless Length		m	10	10
Pipe Diameter	Liquid Side	inch	1/4	1/4
	Gas Side	inch	1/2	5/8
Refrigerant (GWP*5)		kgCO <sub>2</sub> eq.	R410A (1975)	R410A (1975)

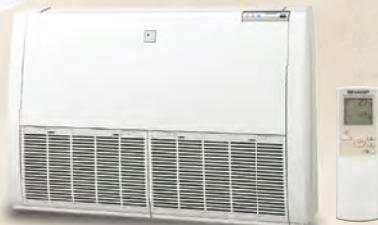
\*1 According to EN14825

\*2 Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.

\*3 According to EN14511

\*4 Sound pressure level is measured according to JIS C 9612.

\*5 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.



Floor/Ceiling  
**GS-XP18/24FR**

### Features



**Outdoor unit R410A**



GU-XR18FR GU-XR24FR

Floor Standing  
**GS-XP9/12/18FGR**

### Features



**Outdoor unit R410A**



GU-X9FGR GU-X12FGR



AE-X18GR

### Cool/Dry/Heat

Model	Cooling operation		Heating operation	
	Capacity (kW) (Min. – Max.)	SEER	Capacity (kW) (Min. – Max.)	SCOP
GS-XP18FR	5.00 (1.70 – 6.10)	5.6 <span style="background-color: yellow;">A+</span>	6.20 (1.70 – 7.50)	3.9 <span style="background-color: yellow;">A</span>
GS-XP24FR	7.00 (2.40 – 8.00)	5.2 <span style="background-color: yellow;">A</span>	8.00 (2.80 – 9.00)	3.7 <span style="background-color: yellow;">A</span>

### Cool/Dry/Heat

Model	Cooling operation		Heating operation	
	Capacity (kW) (Min. – Max.)	SEER	Capacity (kW) (Min. – Max.)	SCOP
GS-XP9FGR	2.50 (0.90 – 3.00)	6.7 <span style="background-color: yellow;">A++</span>	3.40 (0.90 – 5.00)	3.9 <span style="background-color: yellow;">A</span>
GS-XP12FGR	3.50 (0.90 – 4.00)	5.8 <span style="background-color: yellow;">A+</span>	4.50 (0.90 – 6.00)	3.9 <span style="background-color: yellow;">A</span>
GS-XP18FGR	5.00 (0.90 – 5.70)	5.4 <span style="background-color: yellow;">A</span>	5.70 (0.90 – 7.70)	3.8 <span style="background-color: yellow;">A</span>

### Specification

Model	Indoor		GS-XP18FR	GS-XP24FR
	Outdoor		GU-XR18FR	GU-XR24FR
Preformance <sup>*1</sup>	Cooling	Energy Efficiency Class	A+	A
		SEER	5.6	5.2
		Pdesign	kW	5.0
		Capacity (Min. – Max.)	kW	5.00 (1.70 – 6.10) 7.00 (2.40 – 8.00)
		Input (Min. – Max.)	W	1,560 (370 – 2,650) 2,180 (630 – 3,120)
		Annual electricity consumption <sup>*2</sup>	kWh/a	312 470
		Energy Efficiency Class	A	A
		SCOP		3.9 3.7
		Pdesign	kW	5.0 6.2
		Capacity (Min. – Max.)	kW	6.20 (1.70 – 7.50) 8.00 (2.80 – 9.00)
		Input (Min. – Max.)	W	1,700 (370 – 2,200) 2,210 (730 – 2,800)
		Annual electricity consumption <sup>*2</sup>	kWh/a	1,786 2,333
Nominal Efficiency <sup>*3</sup>	EER		3.21	3.21
	COP		3.65	3.62
Nominal Current <sup>*3</sup>	Cooling	A	7.2	10.0
	Heating	A	7.8	10.1
Sound Pressure Level <sup>*4</sup> (Cool)	Indoor (Hi/Lo)	dB(A)	43/34	46/34
	Outdoor	dB(A)	54	55
Sound Power Level (Cool)	Indoor (Hi)		57	60
	Outdoor		65	69
Airflow Volume (Hi, Cool)		m <sup>3</sup> /min	17.0	19.0
Operation Range (Outdooro)	Coolong	°C	-10 – 46	-10 – 46
	Heating	°C	-15 – 24	-15 – 24
Power Supply	Outdoor	V/Phase/Hz	220 – 240/single/50	220 – 240/single/50
Dimensions	Indoor (WxHxD)	mm	1,300x680x212	1,300x680x212
	Outdoor (WxHxD)	mm	890x800x320	890x800x320
Weight	Indoor	kg	34	36
	Outdoor	kg	57	65
Min. – Max. Pipe Lenght		m	1 – 30	1 – 30
Max. Height Difference		m	20	20
Max. Chargless Lenght		m	30	30
Pipe Diameter	Liquid Side	inch	1/4	3/8
	Gas Side	inch	1/2	5/8
Refrigerant (GWP <sup>*5</sup> )		kgCO <sub>2</sub> eq.	R410A (1975)	R410A (1975)

\*1 According to EN14825; \*2 Energy consumption "XYZ" kWh per year, based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located; \*3 According to EN14511; \*4 Sound pressure level is measured according to JIS C 9612; \*5 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains

### Specification

Model	Indoor		GS-XP9FGR	GS-XP12FGR	GS-XP18FGR
	Outdoor		GS-X9FGR	GS-X12FGR	GS-X18FGR
Preformance <sup>*1</sup>	Cooling	Energy Efficiency Class	A++	A+	A
		SEER	6.7	5.8	5.4
		Pdesign	kW	2.5	3.5
		Capacity (Min. – Max.)	kW	2.50 (0.90 – 3.00) 3.50 (0.90 – 4.00)	5.00 (0.90 – 5.70)
		Input (Min. – Max.)	W	615 (200 – 890) 1,075 (230 – 1,320)	1,660 (260 – 2,190)
		Annual electricity consumption <sup>*2</sup>	kWh/a	130 211	324
		Energy Efficiency Class	A	A	A
		SCOP		3.9 3.8	3.8
		Pdesign	kW	3.4 3.6	4.5
		Capacity (Min. – Max.)	kW	3.40 (0.90 – 5.00) 4.50 (0.90 – 6.00)	5.70 (0.90 – 7.70)
		Input (Min. – Max.)	W	780 (200 – 1,400) 1,230 (230 – 1,730)	1,580 (260 – 2,400)
		Annual electricity consumption <sup>*2</sup>	kWh/a	1,207 1,300	1,655
Nominal Efficiency <sup>*3</sup>	EER		4.07	3.26	3.01
	COP		4.36	3.66	3.61
Nominal Current <sup>*3</sup>	Cooling	A	2.9	5.0	7.4
	Heating	A	3.6	5.7	7.0
Sound Pressure Level <sup>*4</sup> (Cool)	Indoor (Hi/Lo)	dB(A)	37/22	38/23	44/33
	Outdoor	dB(A)	45	46	49
Sound Power Level (Cool)	Indoor (Hi)		53	53	60
	Outdoor		61	62	65
Airflow Volume (Hi, Cool)		m <sup>3</sup> /min	9.9	10.5	14.2
Operation Range (Outdooro)	Coolong	°C	-10 – 46	-10 – 46	-10 – 46
	Heating	°C	-15 – 24	-15 – 24	-15 – 24
Power Supply	Outdoor	V/Phase/Hz	220-240/single/50	220-240/single/50	220-240/single/50
Dimensions	Indoor (WxHxD)	mm	750x670x235	750x670x235	750x670x235
	Outdoor (WxHxD)	mm	750x540x250	750x540x250	750x540x265
Weight	Indoor	kg	17	17	17
	Outdoor	kg	33	33	37
Min. – Max. Pipe Lenght		m	1 – 20	1 – 20	1 – 30
Max. Height Difference		m	7	7	10
Max. Chargless Lenght		m	15	15	30
Pipe Diameter	Liquid Side	inch	1/4	1/4	1/4
	Gas Side	inch	3/8	3/8	1/2
Refrigerant (GWP <sup>*5</sup> )		kgCO <sub>2</sub> eq.	R410A (1975)	R410A (1975)	R410A (1975)

a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub> over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.

# LOCAL TYPE ON / OFF



Local Air Conditioner

**NEW CV-P10PR**  **R410A**



Air conditioner and ion generator in one portable cabinet, „2 in 1”

This Local Air Conditioner can be used year around by either pressing the A/C button on the remote control to operate in cooling mode, or by pressing the ION button to operate the Ion Generator function to continue to have cleaner air in the room.

## Year-Round Use



## Features



## Cool/Dry

Model	Cooling operation	
	Capacity (kW)	EER
CV-P10PR	2.5	2.6 

(Standard: EN 14511)

- Selectable operating modes: Cool, Fan, Dry and Ventilation
- Auto-Swing Louvers
- 3-step fan speed and Turbo Cool function

Model	Indoor	CV-P10PR
Capacity	Cooling	kW
Power Supply	V/Phase/Hz	220 – 240-single/50
Running Current	A	4.2
Power Input	W	960
EER*1		2.6
Energy Efficiency Class		A
Hourly Electricity Consumption *2	kWh/60	1.0
Stand-by Power Consumption	„ON Timer“ Off	W
	„ON Timer“ On	W
		< 0.5
		< 1.0

Model	Indoor	CV-P10PR
Sound Pressure Level*3 (Hi/Lo)	dB(A)	52/48
Sound Power Level (Hi)	dB(A)	65
Airflow Volume (Hi)	m³/min	5.8
Moisture Removal	litter/day	24
Dimensions (WxHxD)	mm	500x830x450
Weight	kg	42
Refrigerant (GWP*4)	kgCO <sub>2</sub> eq.	R410A (1975)
Operation Range	°C	18 – 40

\*1 According to EN14511

\*2 Energy consumption "X,Y" kWh per 60 minutes,based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.

\*3 Sound pressure level is measured according to JIS C 9612.

\*4 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere.

This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.

# SINGLE TYPE ON / OFF



Deluxe  
AY-AP9/12NR

## Features



## Outdoor unit

R410A



AE-A9NR AE-A12NR

- Turbo Cooling and Heating Operation
- Plasmacluster Ion
- Coanda Airflow System



Deluxe  
AY-AP18/24KR

## Features



## Outdoor unit

R410A



AE-A18KR AE-A24KR

- Turbo Cooling and Heating Operation
- Plasmacluster Ion
- Coanda Airflow System

## Cool/Dry/Heat

Model	Cooling operation		Heating operation	
	Capacity (kW)	EER	Capacity (kW)	COP
AY-AP9NR	2.64	3.22	2.90	3.63
AY-AP12NR	3.50	3.21	3.80	3.62

## Cool/Dry/Heat

Model	Cooling operation		Heating operation	
	Capacity (kW)	EER	Capacity (kW)	COP
AY-AP18KR	5.00	3.01	5.60	3.41
AY-AP24KR	6.50	3.01	7.70	3.41

## Specification

Model	Indoor		AY-AP9NR	AY-AP12NR
	Outdoor		AE-A9NR	AE-A12NR
Capacity*1	Cooling	kW	2.64	3.50
	Heating	kW	2.9	3.80
Power Input*1	Cooling	W	820	1,090
	Heating	W	800	1,050
Nominal Efficiency*1	EER		3.22	3.21
	COP		3.63	3.62
Annual Energy Consumption*1		kWh	410	545
Nominal Current*1	Cooling	A	3.7	4.9
	Heating	A	3.6	4.7
Sound Pressure Level*2 (Cool)	Indoor (Hi/Lo)	dB(A)	38/28	40/29
	Outdoor	dB(A)	45	48
Sound Power Level (Cool)	Indoor (Hi)		54	55
	Outdoor		59	62
Airflow Volume (Hi, Cool)		m³/min	8.0	9.5
Operation Range (Outdooor)	Coolong	°C	21 – 43	21 – 43
	Heating	°C	-7 – 24	-7 – 24
Power Supply	Outdoor	V/Phase/Hz	220 – 240/single/50	220 – 240/single/50
Dimensions	Indoor (WxHxD)	mm	860x292x223	860x292x223
	Outdoor (WxHxD)	mm	762x540x257	762x540x257
Weight	Indoor	kg	10	10
	Outdoor	kg	29	36
Min. – Max. Pipe Lenght		m	1 – 10	1 – 15
Max. Height Difference		m	5	7
Max. Chargeless Lenght		m	7.5	7.5
Pipe Diameter	Liquid Side	inch	1/4	1/4
	Gas Side	inch	3/8	1/2
Refrigerant (GWP*5)		kgCO <sub>2</sub> eq.	R410A	R410A

\*1 According to EN14511

\*2 Sound pressure level is measured according to JIS C 9612.

## Specification

Model	Indoor		AY-AP18KR	AY-AP24KR
	Outdoor		AE-A18KR	AE-A24KR
Capacity*1	Cooling	kW	5.00	6.50
	Heating	kW	5.60	7.70
Power Input*1	Cooling	W	1,660	2,160
	Heating	W	1,640	2,260
Nominal Efficiency*1	EER		3.01	3.01
	COP		3.41	3.41
Annual Energy Consumption*1		kWh	830	1,080
Nominal Current*1	Cooling	A	7.6	10.0
	Heating	A	7.5	10.5
Sound Pressure Level*2 (Cool)	Indoor (Hi/Lo)	dB(A)	41/34	45/37
	Outdoor	dB(A)	52	54
Sound Power Level (Cool)	Indoor (Hi)		57	61
	Outdoor		68	69
Airflow Volume (Hi, Cool)		m³/min	14.1	16.4
Operation Range (Outdooor)	Coolong	°C	21 – 46	21 – 46
	Heating	°C	-7 – 24	-7 – 24
Power Supply	Outdoor	V/Phase/Hz	220 – 240/single/50	220 – 240/single/50
Dimensions	Indoor (WxHxD)	mm	1,040x325x222	1,040x325x222
	Outdoor (WxHxD)	mm	890x645x327	890x645x327
Weight	Indoor	kg	14	14
	Outdoor	kg	43	53
Min. – Max. Pipe Lenght		m	1 – 15	1 – 15
Max. Height Difference		m	10	10
Max. Chargeless Lenght		m	7.5	7.5
Pipe Diameter	Liquid Side	inch	1/4	1/4
	Gas Side	inch	1/2	1/2
Refrigerant (GWP*5)		kgCO <sub>2</sub> eq.	R410A	R410A

\*1 According to EN14511

\*2 Sound pressure level is measured according to JIS C 9612.

# MULTI TYPE INVERTER



Cassette

**NEW GX-XPC18PR**



AE-XM30GR



## Features

- Compact design for easy installation
- Low noise level
- Wireless remote control
- Energy save setting
- Automatic swing louvers

Model	Indoor	GX-XPC18PR*	
	Panel frame	AZ-XP18PR	
	Outdoor	AE-XM30GR	
Capacity*1	Cool (Max. - Min.)	kW	8.4 (4.3 - 9.0)
	Heat (Max. - Min.)	kW	9.0 (4.4 - 10.6)
Power Supply	Outdoor	V/Phase/Hz	230/single/50
Sound Pressure Level*2	Indoor (Hi/Lo)	dB(A)	42/40
Sound Power Level	Indoor (Hi)		55
Dimensions	Indoor (WxHxD)	mm	840x265x840
	Outdoor (WxHxD)	mm	950x60x950
Weight	Indoor	kg	20
Pipe Diameter	Liquid Side	inch	1/4
	Gas Side	inch	1/2
Min. - Max. Pipe Length (per Indoor Unit)		m	3 - 20
Maximum Length (total)		m	40
Max. Height Difference		m	10
Max. Chargeless Length (total)		m	40
Refrigerant (GWP*3)	kgCO <sub>2</sub> eq.	R410A (1975)	

\*1 According to EN14511/ tested 2 units of GX-XPC8PR with AE-XM30GR.

\*2 Sound pressure level is measured according to JIS C 9612.

\*3 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.

\* This product is designed to have two cassette units connecting to AE-XM30GR only.

## A wide variety of choices

Sharp's multi-split air conditioning systems allow you to units with a single outdoor unit. The indoor units can be wall or floor standing types. This wide-ranging choice of indoor coordination for each room.

\* See the specification table for multi type indoor and outdoor units on page 17.

### Outdoor unit lineup

#### 2 ROOMS



R410A



AE-X2M14LR

AE-X2M18KR



\* Two indoor units must be connected.

\* See the capacity table on page 17 for permissible combinations.

#### Example of indoor unit combinations

Outdoor Unit	Indoor Unit	Cooling Operation		Heating Operation	
		Capacity (kW) (Min. - Max.)	SEER	Capacity (kW) (Min. - Max.)	SCOP
AE-X2M14LR Cool/Heat/Dry	12 + 7	3.8 (1.8 - 4.3)	6.4*1	4.4 (1.9 - 5.4)	4.4*1
	9 + 9	3.8 (1.8 - 4.3)		4.4 (1.9 - 5.4)	
	7 + 7	3.8 (1.8 - 4.3)		4.4 (1.9 - 5.4)	
AE-X2M18KR Cool/Heat/Dry	12 + 7	5.2 (1.8 - 6.0)	6.2*2	5.8 (1.9 - 7.3)	4.2*2
	9 + 9	5.2 (1.8 - 6.0)		5.8 (1.9 - 7.3)	
	9 + 7	4.7 (1.8 - 5.6)		5.4 (1.9 - 7.0)	

\*1 AE-X2M14LR Representative connection (7+7)

\*2 AE-X2M18KR Representative connection (9+9)

#### 2 indoor units

### Connection indoor units

7

Wall mounted  
AY-XPM7FR



9

Wall mounted  
AY-XPM9FR

Wall mounted  
AY-XPC7JR



Wall mounted  
AY-XPC9JR

Wall mounted  
AY-XPM7PHR



**NEW**  
Wall mounted  
AY-XPC9PHR

Floor standing  
GS-XPM9FGR

Floor/ceiling  
GS-XPM7FR



Floor/ceiling  
GS-XPM9FR

# for indoor units

combine up to four indoor mounted types, floor/ceiling types, units offers you more flexible



## 3 ROOMS



**AE-X3M18JR**

- \* At least two indoor units must be connected.
- \* See the capacity table on page 17 for permissible combinations.

### Example of indoor unit combinations

Outdoor Unit	Indoor Unit	Cooling Operation		Heating Operation	
		Capacity (kW) (Min. – Max.)	SEER	Capacity (kW) (Min. – Max.)	SCOP
AE-X3M18JR Cool/Heat/Dry	12 + 7 + 7	5.2 (2.2 – 7.2)	6.0*	6.8 (2.2 – 8.4)	4.1*
	9 + 9 + 7	5.2 (2.2 – 7.2)		6.8 (2.2 – 8.4)	
	9 + 7 + 7	5.2 (2.2 – 7.2)		6.8 (2.2 – 8.4)	
	7 + 7 + 7	5.2 (2.2 – 7.0)		6.8 (2.2 – 8.4)	

\* Representative connection (7+7+7)

3 indoor units



## 4 ROOMS



**AE-XM24HR**

**AE-XM30GR**

- \* At least three indoor units must be connected.
- \* See the capacity table on page 18 for permissible combinations.

### Example of indoor unit combinations

Outdoor Unit	Indoor Unit	Cooling Operation		Heating Operation	
		Capacity (kW) (Min. – Max.)	SEER	Capacity (kW) (Min. – Max.)	SCOP
AE-XM24HR Cool/Heat/Dry	12 + 7 + 7 + 7	7.00 (3.00 – 8.20)	6.2 <sup>1</sup>	8.00 (3.00 – 9.20)	4.3 <sup>1</sup>
	9 + 9 + 7 + 7	7.00 (3.00 – 8.20)		8.00 (3.00 – 9.20)	
	9 + 7 + 7 + 7	7.00 (3.00 – 8.20)		8.00 (3.00 – 9.20)	
	7 + 7 + 7 + 7	7.00 (3.00 – 8.20)		8.00 (3.00 – 9.20)	
AE-XM30GR Cool/Heat/Dry	18 + 7 + 7 + 7	8.40 (4.30 – 9.00)	5.2 <sup>2</sup>	9.00 (4.40 – 10.60)	3.9 <sup>2</sup>
	12 + 7 + 7 + 7	8.40 (4.30 – 9.00)		9.00 (4.40 – 10.60)	
	9 + 9 + 7 + 7	8.40 (4.30 – 9.00)		9.00 (4.40 – 10.60)	
	9 + 7 + 7 + 7	8.40 (4.30 – 9.00)		9.00 (4.40 – 10.60)	
	7 + 7 + 7 + 7	8.40 (4.30 – 9.00)		8.50 (4.40 – 9.80)	

\*1 AE-XM24HR Representative connection (7+7+7+7)

\*2 AE-XM30GR Representative connection (9+7+7+7)

4 indoor units



12



Wall mounted  
**AY-XPM12FR**



Wall mounted  
**AY-XPC12JR**



**NEW**  
Wall mounted  
**AY-XPC12PHR**

18

Wall mounted  
**AY-XPC18LR**



Floor standing  
**GS-XPM12FGR**



Floor standing  
**GS-XPM18FGR**  
For AE-XM30GR only\*



Floor/ceiling  
**GS-XPM12FR**



**NEW**  
**GS-XPC18PR**



# MULTI TYPE INVERTER

## Specification

Outdoor Units	System	2-indoor operation	2-indoor operation	3-indoor operation	4-indoor operation	4-indoor operation
Model	Outdoor	AE-X2M14LR	AE-X2M18KR	AE-X3M18JR	AE-XM24HR	AE-XM30GR
Indoor Unit Combination <sup>*4</sup>		7+7	9+9	7+7+7	7+7+7+7	9+7+7+7
Cool (Min. - Max.)	kW	3.80 (1.80 - 4.30)	5.20 (1.80 - 6.00)	5.20 (2.20 - 7.00)	7.00 (3.00 - 8.20)	8.40 (4.30 - 9.00)
Heat (Min. - Max.)	kW	4.40 (1.90 - 5.40)	5.80 (1.90 - 7.30)	6.8 (2.20 - 8.40)	8.00 (3.00 - 9.20)	9.00 (4.40 - 10.60)
Power Supply	V/Phase/Hz	230/1φ/50	230/1φ/50	230/1φ/50	230/1φ/50	230/1φ/50
Running Current <sup>*1</sup>	Cool	A	4.1	7.0 (1.6 - 9.4)	6.5 (2.2 - 11.3)	10.0 (2.7 - 13.6)
	Heat	A	4.4	6.7 (1.7 - 9.6)	7.6 (1.9 - 11.4)	9.2 (2.6 - 11.7)
Power Input <sup>*1</sup>	Cool (Min. - Max.)	W	900 (350 - 1,160)	1,530 (350 - 2,050)	1,410 (430 - 2,460)	2,180 (600 - 2,980)
	Heat (Min. - Max.)	W	950 (370 - 1,300)	1,450 (370 - 2,100)	1,660 (420 - 2,480)	2,000 (560 - 2,560)
Cooling Mde <sup>*2</sup> (Average)	SEER		6.4	6.2	6.0	6.2
	Energy Efficiency Class		A++	A++	A+	A++
Annual Electricity Consumption <sup>*5</sup>	kWh/a	207	292	301	393	564
P Design	kW	3.8	5.2	5.2	7.0	8.4
Heating Mode <sup>*2</sup> (Average)	SCOP		4.4	4.2	4.1	4.3
	Energy Efficiency Class		A+	A+	A+	A+
Annual Electricity Consumption <sup>*5</sup>	kWh/a	1109	1469	1851	2062	2636
P Design	kW	3.5	4.4	5.4	6.3	7.3
Declared Capacity	dB(A)	2.8	3.5	4.8	5.4	5.9
Back Up Heating Capacity	dB(A)	0.7	0.9	0.6	0.9	1.4
EER <sup>*2</sup>	Cool		4.22	3.40	3.69	3.21
COP <sup>*2</sup>	Heat		4.63	4.00	4.10	4.00
Sound Preassure Level <sup>*3</sup> (Cool)	dB(A)	45	46	46	49	57
Sound Power Level (Cool)	dB	62	62	62	65	68
Dimensions (WxHxD)	mm	890x645x290	890x645x290	890x645x290	890x800x320	890x800x320
Net Weight	kg	51	51	53	64	70
Pipe Diameter	Liquid Side	inch	1/4 x 2	1/4 x 2	1/4 x 3	1/4 x 4
	Gas Side	inch	3/8 x 2	3/8 x 2	3/8 x 3	3/8 x 4
Min. - Max. Pipe Length (per indoor unit)	m	3 - 25	3 - 25	3 - 25	3 - 20	3 - 20
Maximum Length (total)	m	40	40	50	50	50
Maximum Chargeless Length (total)	m	25	25	30	40	50
Maximum Height Difference	m	10	10	10	10	10
Refrigerant/GWP <sup>b</sup>	kgCO <sub>2</sub> eq.	R410A (1975)	R410A (1975)	R410A (1975)	R410A (1975)	R410A (1975)
Operating Range (Outdoor)	Cool	°C	-10 - 43	-10 - 43	21 - 43	21 - 43
	Heat	°C	-15 - 24	-15 - 24	-15 - 24	-15 - 24

Indoor Units		Wall Mounted				Floor Standing		Floor/Ceiling	
Model		AY-XPM7/XPC9/XPC12PHR	AY-XPC7/9/12JR	AY-XPM7/9/12FR	AY-XPC18LR	GS-XPM9/12/18FGR		GS-XPM7/9/12FR	
Sound Pressure Level (Hi/Lo) <sup>*3</sup> (Cool)	dB(A)	7PHR:3/26, 9PHR:39/26, 12PHR:42/27	7JR: 36/26, 9JR: 37/26, 12JR: 40/27	7FR: 37/28, 9FR: 39/28, 12FR: 40/29	43/39	9FGR: 38/25, 12FGR: 40/26, 18FGR: 44/35	7FR: 34/27, 9FR: 38/29, 12FR: 39/30		
Sound Power Level (Cool) (Hi)	dB	7PHR:53, 9PHR:54, 12PHR:56	7JR: 51, 9JR: 52, 12JR: 56	7FR: 52, 9FR: 54, 12FR: 56	58	9FGR: 53, 12FGR: 54, 18FGR: 60	7FR: 47, 9FR: 52, 12FR: 52		
Airflow Volume (Cool) (Hi)	m <sup>3</sup> /min	7PHR:9.4, 9PHR:9.7, 12PHR:10.8	7JR: 8.9, 9JR: 9.1, 12JR: 10.5	7FR: 8.0, 9FR: 8.6, 12FR: 9.8	14.4	9FGR: 9.3, 12FGR: 10.6, 18FGR: 14.2	7FR: 7.5, 9FR: 8.7, 12FR: 10.4		
Dimensions	W H D	mm	920 290 240	790 278 198	790 278 198	1,040 325 222	750 670 235	1,025 680 212	
Net Weight	kg	10	10	10	10	12	17	31	

\*1 According to EN14511. \*2 According to EN14825. \*3 Sound pressure level is measured according to JIS C 9612.

\*4 7: AY-XPM7PHR, AY-XPC7JR, AY-XPM7FR, GS-XPM7FR; 9: AY-XPC9PHR, AY-XPC9JR, AY-XPM9FR, GS-XPM9FR

\*5 Energy consumption "XYZ" kWh per year, based on standardtest results. Actual energy consumption will depend on how theappliance is used and where it is located.

\*6 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leakedto the atmosphere.

This appliance contains a refrigerant fluid with a GWP equal to 1975. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 1975 times higher than 1 kg of CO<sub>2</sub>, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional.

## Capacity Table

\* When the Multi inverter type is used to operate two or more indoor units simultaneously, the capacity of each indoor unit may be lower than that when operating only one indoor unit. Be sure to refer to the capacity table to select the appropriate models.

### Indoor units

- 7 AY-XPM7PHR, AY-XPC7JR, AY-XPM7FR, GS-XPM7FR
- 9 AY-XPC9PHR, AY-XPC9JR, AY-XPM9FR, GS-XPM9FR, GS-XPM9FGR
- 12 AY-XPC12PHR, AY-XPC12JR, AY-XPM12FR, GS-XPM12FR, GS-XPM12FGR
- 18 AY-XPC18LR, GS-XPM18FGR

## 2-indoor units with AE-X2M14LR

Operating status	Indoor unit combination		Cooling capacity (kW)			Heating capacity (kW)			Power input (W) Rating (Min. - Max.)		
	A	B	A	B	Rating (Min. - Max.)	A	B	Rating (Min. - Max.)	Cool	Heat	
2-indoor unit operation	12	9	2.17	1.63	3.8 (1.8 - 4.3)	2.51	1.89	4.4 (1.9 - 5.4)	900 (350 - 1,160)	950 (370 - 1,300)	
	12	7	2.40	1.40	3.8 (1.8 - 4.3)	2.78	1.62	4.4 (1.9 - 5.4)	900 (350 - 1,160)	950 (370 - 1,300)	
	9	9	1.90	1.90	3.8 (1.8 - 4.3)	2.20	2.20	4.4 (1.9 - 5.4)	900 (350 - 1,160)	950 (370 - 1,300)	
	9	7	2.14	1.66	3.8 (1.8 - 4.3)	2.48	1.93	4.4 (1.9 - 5.4)	900 (350 - 1,160)	950 (370 - 1,300)	

## 2-indoor units with AE-X2M18KR

Operating status	Indoor unit combination		Cooling capacity (kW)			Heating capacity (kW)			Power input (W) Rating (Min. - Max.)		
	A	B	A	B	Rating (Min. - Max.)	A	B	Rating (Min. - Max.)	Cool	Heat	
2-indoor unit operation	12	12	2.60	2.60	5.2 (1.8 - 6.0)	2.90	2.90	5.8 (1.9 - 7.3)	1,530 (350 - 2,050)	1,450 (370 - 2,100)	
	12	9	2.97	2.23	5.2 (1.8 - 6.0)	3.31	2.49	5.8 (1.9 - 7.3)	1,530 (350 - 2,050)	1,450 (370 - 2,100)	
	12	7	3.28	1.92	5.2 (1.8 - 6.0)	3.66	2.14	5.8 (1.9 - 7.3)	1,530 (350 - 2,050)	1,450 (370 - 2,100)	
	9	9	2.60	2.60	5.2 (1.8 - 6.0)	2.90	2.90	5.8 (1.9 - 7.3)	1,530 (350 - 2,050)	1,450 (370 - 2,100)	

## 2-indoor units with AE-X2M18KR

Operating status	Indoor unit combination		Cooling capacity (kW)			Heating capacity (kW)			Power input (W) Rating (Min. - Max.)			
	A	B	C	A	B	C	A	B	C	Rating (Min. - Max.)	Cool	Heat
3-indoor unit operation	12	9	9	2.08	1.56	1.56	5.2 (2.2 - 7.2)	2.72	2.04	6.8 (2.2 - 8.4)	1,410 (430 - 2,560)	1,660 (420 - 2,480)
	12	9	7	2.23	1.67	1.30	5.2 (2.2 - 7.2)	2.91	2.19	6.8 (2.2 - 8.4)	1,410 (430 - 2,560)	1,660 (420 - 2,480)
	12	7	7	2.40	1.40	1.40	5.2 (2.2 - 7.2)	3.14	1.83	6.8 (2.2 - 8.4)	1,410 (430 - 2,560)	1,660 (420 - 2,480)
	9	9	9	1.73	1.73	1.73	5.2 (2.2 - 7.2)	2.27	2.27	6.8 (2.2 - 8.4)	1,410 (430 - 2,560)	1,660 (420 - 2,480)
2-indoor unit operation	9	9	7	1.87	1.87	1.46	5.2 (2.2 - 7.2)	2.45	1.90	6.8 (2.2 - 8.4)	1,410 (430 - 2,560)	1,660 (420 - 2,480)
	9	7	7	2.03	1.58	1.58	5.2 (2.2 - 7.2)	2.66	2.07	6.8 (2.2 - 8.4)	1,410 (430 - 2,560)	1,660 (420 - 2,480)
2-indoor unit operation	7	7	7	1.73	1.73	1.73	5.2 (2.2 - 7.0)	2.27	2.27	6.8 (2.2 - 8.4)	1,410 (430 - 2,560)	1,660 (420 - 2,480)
	12	12	-	2.50	2.50	-	5.0 (1.9 - 6.5)	3.35	3.35	-	6.7 (1.6 - 8.0)	1,400 (350 - 2,400)
2-indoor unit operation	12	9	*	2.86	2.14	*	5.0 (1.9 - 6.5)	3.83	2.87	*	6.7 (1.6 - 8.0)	1,400 (350 - 2,400)
	12	9	*	2.86	2.14	*	5.0 (1.9 - 6.5)	3.83	2.87	*	6.7 (1.6 - 8.0)	1,970 (380 - 2,670)

\* When connected indoor unit is not in operation.

Operating status	Indoor unit combination		Cooling capacity (kW)			Heating capacity (kW)			Power input (W) Rating (Min. - Max.)			
	A	B	C	A	B	C	A	B	C	Rating (Min. - Max.)	Cool	Heat
2-indoor unit operation	12	7	*	3.16	1.84	*	5.0 (1.9 - 6.4)	4.17	2.43	*	6.6 (1.6 - 8.0)	1,400 (350 - 2,380)
	9	9	*	2.45	2.45	*	4.9 (1.9 - 6.2)	3.10	3.10	*	6.2 (1.6 - 8.0)	1,380 (350 - 2,200)
	9	7	*	2.53	1.97	*	4.5 (1.9 - 5.7)	3.15	2.45	*	5.6 (1.6 - 7.3)	1,190 (350 - 1,870)
	7	7	*	2.00	2.00	*	4.0 (1.9 - 5.2)	2.50	2.50	*	5.0 (1.6 - 6.4)	1,000 (350 - 1,550)
1-indoor unit operation	12	*	*	3.40	*	*	3.4 (1.4 - 4.0)	4.00	*	*	4.0 (1.2 - 5.2)	950 (320 - 1,350)
	9	*	*	2.60	*	*	2.6 (1.4 - 3.3)	3.00	*	*	3.0 (1.2 - 4.	

## 4-indoor units with AE-XM24HR

Operating status	Indoor unit combination				Cooling capacity (kW)					Heating capacity (kW)					Power input (W) Rating (Min. - Max.)	
	A	B	C	D	A	B	C	D	Rating (Min. - Max.)	A	B	C	D	Rating (Min. - Max.)	Cool	Heat
4-indoor unit operation	12	12	7	7	2.21	2.21	1.29	1.29	7.0 (3.0 - 8.2)	2.53	2.53	1.47	1.47	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	12	9	9	9	2.15	1.62	1.62	1.62	7.0 (3.0 - 8.2)	2.46	1.85	1.85	1.85	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	12	9	9	7	2.27	1.70	1.70	1.32	7.0 (3.0 - 8.2)	2.59	1.95	1.95	1.51	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	12	9	7	7	2.40	1.80	1.40	1.40	7.0 (3.0 - 8.2)	2.74	2.06	1.60	1.60	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	12	7	7	7	2.55	1.48	1.48	1.48	7.0 (3.0 - 8.2)	2.91	1.70	1.70	1.70	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	9	9	9	9	1.75	1.75	1.75	1.75	7.0 (3.0 - 8.2)	2.00	2.00	2.00	2.00	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	9	9	9	7	1.85	1.85	1.85	1.44	7.0 (3.0 - 8.2)	2.12	2.12	2.12	1.65	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	9	9	7	7	1.97	1.97	1.53	1.53	7.0 (3.0 - 8.2)	2.25	2.25	1.75	1.75	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	9	7	7	7	2.10	1.63	1.63	1.63	7.0 (3.0 - 8.2)	2.40	1.87	1.87	1.87	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
	7	7	7	7	1.75	1.75	1.75	1.75	7.0 (3.0 - 8.2)	2.00	2.00	2.00	2.00	8.0 (3.0 - 9.2)	2,180 (600 - 2,980)	2,000 (560 - 2,560)
3-indoor unit operation	12	12	12	-	2.27	2.27	2.27	-	6.8 (2.7 - 7.4)	2.60	2.60	2.60	-	7.8 (2.4 - 8.8)	2,200 (530 - 2,900)	2,500 (520 - 2,650)
	12	12	9	-	2.47	2.47	1.85	-	6.8 (2.7 - 7.4)	2.84	2.84	2.13	-	7.8 (2.4 - 8.8)	2,200 (530 - 2,900)	2,500 (520 - 2,650)
	12	9	9	*	2.72	2.04	2.04	*	6.8 (2.7 - 7.4)	3.12	2.34	2.34	*	7.8 (2.4 - 8.8)	2,200 (530 - 2,900)	2,500 (520 - 2,650)
	12	9	7	*	2.91	2.19	1.70	*	6.8 (2.7 - 7.4)	3.30	2.50	2.00	*	7.8 (2.4 - 8.8)	2,200 (530 - 2,900)	2,500 (520 - 2,650)
	12	7	7	*	3.14	1.83	1.83	*	6.8 (2.7 - 7.4)	3.60	2.10	2.10	*	7.8 (2.4 - 8.8)	2,200 (530 - 2,900)	2,500 (520 - 2,650)
	9	9	9	*	2.27	2.27	2.27	*	6.8 (2.7 - 7.4)	2.60	2.60	2.60	*	7.8 (2.4 - 8.8)	2,200 (530 - 2,900)	2,500 (520 - 2,650)
	9	9	7	*	2.45	2.45	1.90	*	6.8 (2.7 - 7.4)	2.80	2.80	2.20	*	7.8 (2.4 - 8.8)	2,200 (530 - 2,900)	2,500 (520 - 2,650)
	9	7	7	*	2.50	1.95	1.95	*	6.8 (2.7 - 7.4)	3.10	2.40	2.40	*	7.8 (2.4 - 8.8)	2,200 (530 - 2,900)	2,500 (520 - 2,650)
2-indoor unit operation	12	12	*	-	2.80	2.80	*	-	5.6 (2.0 - 6.8)	3.65	3.65	*	-	7.3 (1.8 - 7.5)	1,820 (430 - 2,700)	2,400 (450 - 2,600)
	12	9	*	*	3.20	2.40	*	*	5.6 (2.0 - 6.8)	4.20	3.10	*	*	7.3 (1.8 - 7.5)	1,820 (430 - 2,700)	2,400 (450 - 2,600)
	12	7	*	*	3.35	1.95	*	*	5.3 (2.0 - 6.7)	4.50	2.60	*	*	7.1 (1.8 - 7.5)	1,590 (430 - 2,630)	2,380 (450 - 2,600)
	9	9	*	*	2.50	2.50	*	*	5.0 (2.0 - 6.3)	3.20	3.20	*	*	6.4 (1.8 - 7.5)	1,400 (430 - 2,400)	2,050 (450 - 2,600)
1-indoor unit operation	9	7	*	*	2.59	2.01	*	*	4.6 (2.6 - 5.9)	3.40	2.70	*	*	6.1 (1.8 - 7.5)	1,230 (430 - 2,000)	1,900 (450 - 2,600)
	7	7	*	*	2.00	2.00	*	*	4.0 (2.6 - 5.3)	2.70	2.70	*	*	5.3 (1.8 - 7.3)	1,040 (430 - 1,700)	1,580 (450 - 2,300)
	12	*	*	*	3.40	*	*	*	3.4 (1.6 - 4.0)	3.80	*	*	*	3.8 (1.1 - 5.2)	900 (400 - 1,320)	1,750 (400 - 2,400)
1-indoor unit operation	9	*	*	*	2.60	*	*	*	2.6 (1.6 - 3.3)	2.90	*	*	*	2.9 (1.1 - 4.0)	650 (400 - 930)	1,130 (400 - 2,050)
	7	*	*	*	2.00	*	*	*	2.0 (1.6 - 2.7)	2.40	*	*	*	2.4 (1.1 - 3.4)	500 (400 - 700)	800 (400 - 1,450)

\* When connected indoor unit is not in operation.

## 4-indoor units with AE-XM30GR

Operating status	Indoor unit combination				Cooling capacity (kW)					Heating capacity (kW)					Power input (W) Rating (Min. - Max.)	
	A	B	C	D	A	B	C	D	Rating (Min. - Max.)	A	B	C	D	Rating (Min. - Max.)	Cool	Heat
4-indoor unit operation	18	12	9	9	3.15	2.10	1.58	1.58	8.4 (4.3 - 9.0)	3.38	2.25	1.69	1.69	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	12	9	7	3.29	2.19	1.64	1.28	8.4 (4.3 - 9.0)	3.52	2.35	1.76	1.37	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	12	7	7	3.44	2.29	1.34	1.34	8.4 (4.3 - 9.0)	3.68	2.45	1.43	1.43	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	9	9	9	3.36	1.68	1.68	1.68	8.4 (4.3 - 9.0)	3.60	1.80	1.80	1.80	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	9	9	7	3.52	1.76	1.76	1.37	8.4 (4.3 - 9.0)	3.77	1.88	1.88	1.47	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	9	7	7	3.69	1.84	1.43	1.43	8.4 (4.3 - 9.0)	3.95	1.98	1.54	1.54	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	7	7	7	3.88	1.51	1.51	1.51	8.4 (4.3 - 9.0)	4.15	1.62	1.62	1.62	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	12	12	12	2.10	2.10	2.10	2.10	8.4 (4.3 - 9.0)	2.25	2.25	2.25	2.25	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	12	12	9	2.24	2.24	2.24	1.68	8.4 (4.3 - 9.0)	2.40	2.40	2.40	1.80	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	12	9	9	2.40	2.40	1.80	1.80	8.4 (4.3 - 9.0)	2.57	2.57	1.93	1.93	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
3-indoor unit operation	12	12	9	7	2.52	2.52	1.89	1.47	8.4 (4.3 - 9.0)	2.70	2.70	2.03	1.58	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	12	7	7	2.65	2.65	1.55	1.55	8.4 (4.3 - 9.0)	2.84	2.84	1.66	1.66	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	9	9	9	2.58	1.94	1.94	1.94	8.4 (4.3 - 9.0)	2.77	2.08	2.08	2.08	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	9	9	7	2.73	2.04	2.04	1.59	8.4 (4.3 - 9.0)	2.92	2.19	2.19	1.70	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	9	7	7	2.88	2.16	1.68	1.68	8.4 (4.3 - 9.0)	3.09	2.31	1.80	1.80	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	7	7	7	3.06	1.78	1.78	1.78	8.4 (4.3 - 9.0)	3.27	1.91	1.91	1.91	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	9	9	9	9	2.10	2.10	2.10	2.10	8.4 (4.3 - 9.0)	2.25	2.25	2.25	2.25	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	9	9	9	7	2.22	2.22	2.22	1.74	8.4 (4.3 - 9.0)	2.38	2.38	2.38	1.85	9.0 (4.4 - 10.6)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
2-indoor unit operation	18	12	*	*	3.56	2.37	2.37	-	8.3 (4.3 - 8.7)	3.81	2.54	2.54	-	8.9 (4.4 - 10.5)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	12	9	*	3.83	2.55	1.92	*	8.3 (4.3 - 8.8)	4.11	2.74	2.05	*	8.9 (4.4 - 10.5)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	12	7	*	4.04	2.69	1.57	*	8.3 (4.3 - 8.9)	4.33	2.89	1.68	*	8.9 (4.4 - 10.5)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	18	9	9	*	4.15	2.08	2.08	*	8.3 (4.3 - 8.9)	4.45	2.33	2.33	*	8.9 (4.4 - 10.5)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
1-indoor unit operation	18	9	7	*	4.39	2.20	1.71	*	8.3 (4.3 - 8.9)	4.71	2.36	1.83	*	8.9 (4.4 - 10.5)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	7	7	*	4.67	1.82	1.80	*	8.3 (4.3 - 8.9)	5.01	1.95	1.95	*	8.9 (4.4 - 10.5)	2,990 (1,070 - 3,490)	2,400 (940 - 3,060)
	12	9	9	*	3.00	3.00	1.80	*	7.8 (3.6 - 8.4)	3.40	3.40	2.00	*	8.8 (3.6 - 10.0)	2,990 (880 - 3,300)	2,650 (830 - 3,150)
	12	9	7	*	3.20	2.30	2.30	*	7.8 (3.6 - 8.4)	3.60	2.60	2.60	*	8.8 (3.6 - 10.0)	2,990 (880 - 3,300)	2,650 (830 - 3,150)
2-indoor unit operation	12	9														

Model lineup		SINGLE / MULTI TYPE INVERTER						LOCAL TYPE	
		Super Deluxe	Deluxe	Standard	Deluxe	Floor/Ceiling	Floor Standing	Local Air Conditioner	
Capacity Class	2.1 kW								
	2.6 kW	AY-XPC9PHR	AY-XPC9JR	AY-X9PSR			GS-XP9FGR	CV-P10PR	
	3.5 kW	AY-XPC12PHR	AY-XPC12JR	AY-X12PSR			GS-XP12FGR		
	5.0 kW				AY-XPC18LR	GS-XP18FR	GS-XP18FGR		
	7.0 kW				AY-XP24LR	GS-XP24FR			
Location (page)		8	9	10	11	12	12	13	
Operation									
	Inverter Controlled Operation	*	*	*	*	*	*		
	Energy Saving	*			*				
	Full Power Mode	*	*	*	*	*	*		
	Turbo Cooling & Heating Operation							*	
	Lower Room Temperature Setting	(from 16°C)	(from 18°C)	(from 18°C)	(from 18°C)	(from 18°C)	(from 18°C)	(from 18°C)	
	Computerized Dry Mode Operation	*	*	*	*	*	*	*	
	Auto Operating Mode	*	*	*	*	*	*		
	Auto & 3-step Fan Speed Settings	*	*	*	*	*	*	*	
	Auto Restart Function	*	*	*	*	*	*	*	
	Auto Changeover	*				*	*		
	Winter Cool Function	*	*		*	*	*		
	Vacancy Function	*							
Airflow									
	Multi Space Function	*							
	Spot Air				*				
	Coanda Airflow System	*	*		*				
	4-way Auto Air Swing				*				
	2-way Auto Air Swing	*	*	*		*	*	*	
	Dual (Upper & Lower) Airflow System						*		
Control Convenience									
	Microcomputer Control	*	*	*	*	*	*	*	
	LCD Wireless Remote Control	*	*	*	*	*	*	*	
	Timer	Programmable 24-hour ON/OFF	Programmable 24-hour ON/OFF	12-hour ON/OFF	Programmable 24-hour ON/OFF	Programmable 24-hour ON/OFF	Programmable 24-hour ON/OFF	12-hour ON/OFF	
	1-hour OFF Timer	(1/2/3/5 hr)	*		(1/2/3/5 hr)	*	*		
	„Awakening“ Function	*	*	*	*	*	*		
	„Auto Sleep“ Function	*	*		*	*	*		
Air Quality									
Plasmacluster Ion		*	*		*	*	*	*	
	Anti-Mold, Detachable & Washable Air Filter	*	*	*	*	*	*	*	
Filter			Deodoraizing Filter			Air Purifying Filter			Washable Deodoraizing Filter
Additional Features									
	Quiet Operation	*	*	*	*	*	*	*	
	Self Cleaning Function	*	*		*				
	Dual Drain Setting	*	*			*	*		
	Single/Multi Unit	*	*		* 18LR only				



**VRF SYSTEM\***

# Powerful, Flexible Combinations

Sharp's inverter VRF (Variable Refrigerant Flow) System is designed with a flexible modular concept. Up to four outdoor units can be combined to achieve a maximum capacity of 64 hp. A wealth of indoor unit types are also available. This versatile system matches the designer's intent based on the building and space for installation, while preserving the beauty of the interior.

Something to Match Every Location – Offices, Hotels, Shopping Malls, and Homes



## Indoor unit lineup\*

Cassette type Smooth 4-way airflow



Remote control

Duct type Powerful airflow supply



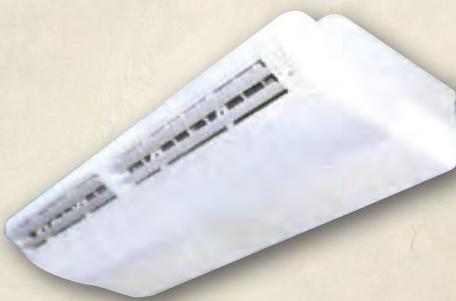
Remote control

Wall-mount type Supplies air smoothly



Remote control

Floor/ceiling type Saves valuable floor space



Remote control

## Outdoor unit lineup\*

Linking Provides a Wide Power Range – From 8 to 64 hp

R410A

8 – 16 hp



16 – 32 hp



34 – 48 hp



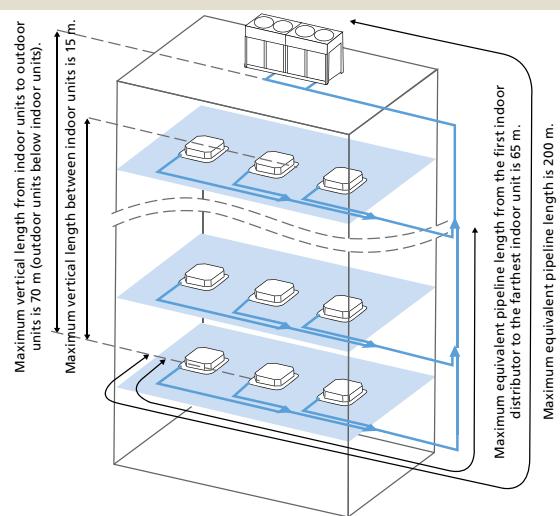
50 – 64 hp

- Max. 4-unit combination, capacity up to 64 hp
- A wide variety of indoor units
- Reduces installation cost
- Adjustable external static pressure for the outdoor fan
- Bidirectional wired controller with diagnosis function
- Automatic/manual addressing
- Capable of a pipe length up to 200 m and a height difference up to 70 m

### Note:

When outdoor units are placed below indoor units, the maximum vertical length from indoor to outdoor units is 70 m.

When outdoor units are placed above indoor units, the maximum vertical length from indoor to outdoor units is 50 m.



# Feature Descriptions

## Operation



### Inverter Controlled Operation

This function features a quick cooling and heating operation and decreases fluctuation in temperature and reduces power consumption.



### Energy Saving

This function enables units to operate efficiently by automatically controlling the setting temperature without changing sensible temperature.



### Full Power Mode

In this operation, the air conditioner works at the maximum power to rapidly cool or heat the room.



### Turbo Operation

In this operation, the air conditioner fan works at „Extra-high” fan speed with a setting temperature of 15°C in COOL & DRY and 32°C in HEAT mode to rapidly cool or heat the room.



### Lower Room Temperature Setting

In cooling operation, room temperature can be set from 16°C to 18°C.



### Computerized Dry Mode Operation

The indoor fan motor and the compressor are controlled by the microcomputer to maintain room humidity without dropping the room temperature.



### Auto Operation Mode

In the AUTO mode, the temperature setting and mode are automatically selected according to the room temperature.



### Auto & 3-Step Fan Speed Settings

Auto fan speed and 3-step (HIGH/LOW/SOFT) manual fan speed are available.



### Auto Restart Function

When power failure occurs and after power recovery, the unit will automatically restart in the same setting which was active before the power failure.



### Auto Changeover

During AUTO MODE operation, the mode will automatically switch between HEAT and COOL mode to maintain a comfortable room temperature.



### Winter Cool Function

Cooling operation is available during winter season down to -10°C outside temperature.



### Vacancy Function

Heating operation with set temperature of 10°C during winter time

## Airflow



### Multi Space Function

This function adjusts the airflow and air direction to reach the set temperature quickly in several rooms, and then circulates the air to maintain the temperature.



### Spot Air

This function divides the room into six areas and concentrates air conditioning on one area at a time.



### Coanda Airflow System

This function provides warm air traveling down the wall to the floor during heating operation and cold air traveling up the ceiling during cooling operation in order to avoid direct airflow.



### 4-way Auto Air Swing

Automatic vertical & horizontal airflow is available in order to make the room uniformly cool or warm.



### 2-way Auto Air Swing

Automatic vertical airflow is available in order to make the room uniformly cool or warm.



### Dual (Upper & Lower) Airflow System

Dual (Upper & Lower) Airflow System is for maintaining a comfortable room; the air outlet is selected automatically according to room conditions, such as cold or hot.

## Control Convenience



### Microcomputer Control



### LCD Wireless Remote Control



### 24-Hour ON/OFF Programmable Timer

The start and stop operations (hour and minute) can be set at same time.



### 12-Hour ON/OFF Timer



### 1-Hour OFF Timer

When the ONE-HOUR OFF TIMER is set, the unit will automatically turn off after one hour.



### „Awakening” Function

When the ON Timer is set, the unit will turn on prior to the set time to allow the room to reach the desired temperature by the programmed time.



### „Auto Sleep” Function

When the OFF Timer is set, the temperature setting is automatically adjusted to prevent the room from becoming excessively hot or cold while you sleep.

## Air Quality



### Plasmacluster Ion

Plasmacluster Ion generator inside the indoor unit releases positive and negative Plasmacluster Ions into the room and reduces some airborne mold and viruses.



### Air Purifying Filter



### Deodorizing Filter



### Washable Deodorizing Filter



### Anti-Mold, Detachable & Washable Air Filter

## Additional Features



### Quiet Operation



### Self Cleaning Function

SELF CLEAN operation provides the air conditioner unit with Plasmacluster ions.



### Dual Drain Setting

Rightward and Leftward Drain hose setting is available for easy installation.



### Single/Multi Unit

Units with this feature can be used singly or in a multi split system.

# This is Why

\* Design and specifications are current as of March 2013, but are subject to change without prior notice.  
\* Actual colors may differ slightly from colors in this catalog.