

4-indoor units with AE-XM24HR

Operating status	Indoor unit combination				Cooling capacity (kW)					Heating capacity (kW)					Power consumption (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	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	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)
	7	7	7	*	1.97	1.97	1.97	*	5.9 (2.7–7.3)	2.40	2.40	2.40	*	7.1 (2.4–8.8)	1,750 (530–2,760)	2,180 (520–2,650)
2-indoor unit operation	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)
	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)
1-indoor unit operation	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)
	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)

*Connected but not operated

4-indoor units with AE-XM30GR

Operating status	Indoor unit combination				Cooling capacity (kW)					Heating capacity (kW)					Power consumption (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	9	9	7	3.52	1.76	1.76	1.37	8.40 (4.30–9.00)	3.77	1.88	1.88	1.47	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	18	9	7	7	3.69	1.84	1.43	1.43	8.40 (4.30–9.00)	3.95	1.98	1.54	1.54	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	18	7	7	7	3.88	1.51	1.51	1.51	8.40 (4.30–9.00)	4.15	1.62	1.62	1.62	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	12	12	7	7	2.65	2.65	1.55	1.55	8.40 (4.30–9.00)	2.84	2.84	1.66	1.66	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	12	9	9	7	2.73	2.04	2.04	1.59	8.40 (4.30–9.00)	2.92	2.19	2.19	1.70	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	12	9	7	7	2.88	2.16	1.68	1.68	8.40 (4.30–9.00)	3.09	2.31	1.80	1.80	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	12	7	7	7	3.06	1.78	1.78	1.78	8.40 (4.30–9.00)	3.27	1.91	1.91	1.91	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	9	9	9	9	2.10	2.10	2.10	2.10	8.40 (4.30–9.00)	2.25	2.25	2.25	2.25	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	9	9	9	7	2.22	2.22	2.22	1.74	8.40 (4.30–9.00)	2.38	2.38	2.38	1.85	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	9	9	7	7	2.36	2.36	1.84	1.84	8.40 (4.30–9.00)	2.53	2.53	1.97	1.97	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	9	7	7	7	2.52	1.96	1.96	1.96	8.40 (4.30–9.00)	2.70	2.10	2.10	2.10	9.00 (4.40–10.60)	2,990 (1,070–3,490)	2,400 (940–3,060)
	7	7	7	7	2.00	2.00	2.00	2.00	8.00 (4.30–9.00)	2.13	2.13	2.13	2.13	8.50 (4.40–9.80)	2,780 (1,070–3,490)	2,230 (940–2,850)
3-indoor unit operation	18	12	7	*	4.04	2.69	1.57	*	8.30 (4.30–8.90)	4.33	2.89	1.68	*	8.90 (4.40–10.50)	2,990 (1,070–3,490)	2,400 (940–3,060)
	18	9	9	*	4.15	2.08	2.08	*	8.30 (4.30–8.90)	4.45	2.33	2.33	*	8.90 (4.40–10.50)	2,990 (1,070–3,490)	2,400 (940–3,060)
	18	9	7	*	4.39	2.20	1.71	*	8.30 (4.30–8.90)	4.71	2.36	1.83	*	8.90 (4.40–10.50)	2,990 (1,070–3,490)	2,400 (940–3,060)
	18	7	7	*	4.67	1.82	1.80	*	8.30 (4.30–8.90)	5.01	1.95	1.95	*	8.90 (4.40–10.50)	2,990 (1,070–3,490)	2,400 (940–3,060)
	12	12	7	*	3.00	3.00	1.80	*	7.80 (3.60–8.40)	3.40	3.40	2.00	*	8.80 (3.60–10.00)	2,990 (880–3,300)	2,650 (830–3,150)
	12	9	9	*	3.20	2.30	2.30	*	7.80 (3.60–8.40)	3.60	2.60	2.60	*	8.80 (3.60–10.00)	2,990 (880–3,300)	2,650 (830–3,150)
	12	9	7	*	3.30	2.40	1.90	*	7.60 (3.60–8.40)	3.80	2.80	2.20	*	8.80 (3.60–10.00)	2,800 (880–3,300)	2,650 (830–3,150)
	12	7	7	*	3.40	1.90	1.90	*	7.20 (3.60–8.40)	3.90	2.30	2.30	*	8.50 (3.60–10.00)	2,550 (880–3,300)	2,500 (830–3,150)
	9	9	9	*	2.50	2.50	2.50	*	7.40 (3.60–8.40)	2.90	2.90	2.90	*	8.80 (3.60–10.00)	2,650 (880–3,300)	2,650 (830–3,150)
	9	9	7	*	2.50	2.50	2.00	*	7.00 (3.60–8.40)	3.00	3.00	2.20	*	8.20 (3.60–10.00)	2,400 (880–3,300)	2,400 (830–3,150)
	9	7	7	*	2.60	2.00	2.00	*	6.60 (3.60–8.20)	3.00	2.40	2.40	*	7.80 (3.60–9.40)	2,160 (880–3,200)	2,150 (830–2,990)
	7	7	7	*	2.00	2.00	2.00	*	6.00 (3.60–7.80)	2.40	2.40	2.40	*	7.10 (3.60–8.80)	1,920 (880–3,100)	1,870 (830–2,660)
2-indoor unit operation	18	12	*	*	4.56	3.04	*	*	7.60 (3.60–8.00)	4.86	3.24	*	*	8.10 (3.60–9.00)	2,990 (880–3,400)	2,450 (830–3,300)
	18	9	*	*	4.80	2.40	*	*	7.20 (3.60–8.00)	5.40	2.70	*	*	8.10 (3.60–9.00)	2,600 (880–3,400)	2,450 (830–3,300)
	18	7	*	*	4.90	1.90	*	*	6.80 (3.60–8.00)	5.54	2.16	*	*	7.70 (3.60–9.00)	2,350 (880–3,400)	2,200 (830–3,300)
	12	12	*	*	3.10	3.10	*	*	6.20 (2.60–7.50)	3.80	3.80	*	*	7.60 (2.60–8.00)	2,250 (700–3,700)	2,600 (730–2,900)
	12	9	*	*	3.20	2.40	*	*	5.60 (2.60–7.10)	3.80	2.90	*	*	6.70 (2.60–8.00)	1,950 (700–3,200)	2,250 (730–2,900)
	12	7	*	*	3.30	2.00	*	*	5.30 (2.60–6.80)	3.90	2.20	*	*	6.10 (2.60–8.00)	1,720 (700–2,770)	1,900 (730–2,900)
	9	9	*	*	2.50	2.50	*	*	5.00 (2.60–6.30)	2.90	2.90	*	*	5.80 (2.60–8.00)	1,630 (700–2,600)	1,850 (730–2,900)
	9	7	*	*	2.60	2.00	*	*	4.60 (2.60–5.90)	3.00	2.30	*	*	5.30 (2.60–7.30)	1,400 (700–2,250)	1,510 (730–2,400)
	7	7	*	*	2.00	2.00	*	*	4.00 (2.60–5.30)	2.40	2.40	*	*	4.80 (2.60–6.40)	1,200 (700–1,900)	1,350 (730–2,000)
1-indoor unit operation	18	*	*	*	5.00	*	*	*	5.00 (2.60–5.70)	6.20	*	*	*	6.20 (2.60–7.40)	1,600 (700–2,400)	2,200 (730–3,000)
	12	*	*	*	3.40	*	*	*	3.40 (1.80–4.00)	3.80	*	*	*	3.80 (1.80–5.20)	1,100 (630–1,450)	1,600 (640–2,200)
	9	*	*	*	2.60	*	*	*	2.60 (1.80–3.30)	2.90	*	*	*	2.90 (1.80–4.00)	790 (630–1,080)	1,130 (640–1,750)
	7	*	*	*	2.00	*	*	*	2.00 (1.80–2.70)	2.40	*	*	*	2.40 (1.80–3.40)	750 (630–850)	870 (640–1,350)

* Connected but not operated

*1 Rating Conditions
Standard: EN 14511; 230 V, 50 Hz (Except portable air conditioners)
Inside Air Temperature: 27°C D.B. 19°C W.B. (Cooling)
20°C D.B. (Heating)
* Heating capacity is lowered with a decrease in outdoor temperature.
* Maximum data are measured under the test conditions listed right according to EN60335-2-40

Indoor units
7: AY-XPC7JHR, AY-XPC7JR, AY-XPM7FR, GS-XPM7FR
9: AY-XPC9JHR, AY-XPC9JR, AY-XPM9FR, GS-XPM9FR
12: AY-XPC12JHR, AY-XPC12JR, AY-XPM12FR, GS-XPM12FR, GS-XPM12FGR
18: AY-XPM18HR, GS-XPM18FGR

* Design and specifications are current as of March 2008, but are subject to change without prior notice.
* Actual colors may differ slightly from colors in this catalog.



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Air Conditioners 2008



Air Conditioners
Wall mounted
Floor Standing
Floor/Ceiling
Portable

Sharp's technologies
make you smile.



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Showing concern for the environment while providing you comfort and wellness.

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Today's product development and manufacture must be carried out with a commitment to the environment. No matter how convenient the products, they are of no use if they harm the environment and human health.

Since 1998, Sharp has done its utmost to improve the environmental performance of products, efforts that the company has further expanded into the area of devices since 2004. In fiscal 2006, Sharp started full-scale operation of a system to assess the environmental impact over the life cycle of products and devices. This system works hand-in-hand with the incorporation of environmentally conscious design into the product-making process.

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Sharp puts a high priority on increasing consumer convenience as well. We devote our efforts toward making sure that our products bring the most value to our customers in terms of health and comfort. This is what drove us to develop Plasmacluster technology—our unceasing drive to create products that improve the lives of those who buy them. This, combined with our efforts toward environmentally sustainable lifestyles, enables us to create a number of products and solutions for all of your lifestyle needs.

Sharp's air conditioner and air purifier lineup

Wall mounted



Floor standing



Floor/Ceiling



Portable



Air Purifiers



So what is Sharp Plasmacluster technology?

Plasmacluster Ions

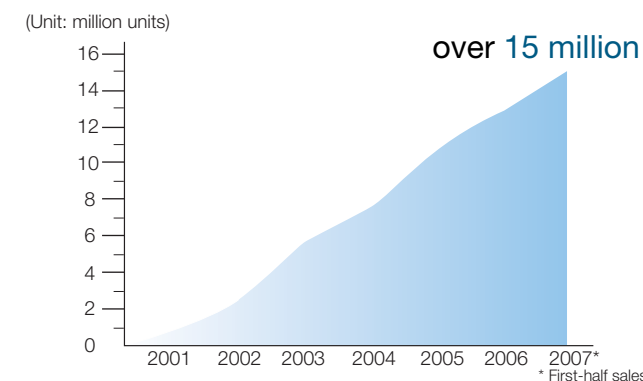
Positive and negative ions inactivate harmful airborne mold spores, allergens (mite, pollen), and viruses. The effects have been proven at academic institutions around the world. Incorporated not only in a variety of Sharp's own products, from air conditioners to refrigerators, the Plasmacluster Ion technology has also been adopted by many other industries in a variety of products, from automobiles to elevators and toilets.



Plasmacluster Ion generator

Used in over 15 million products in 7 years

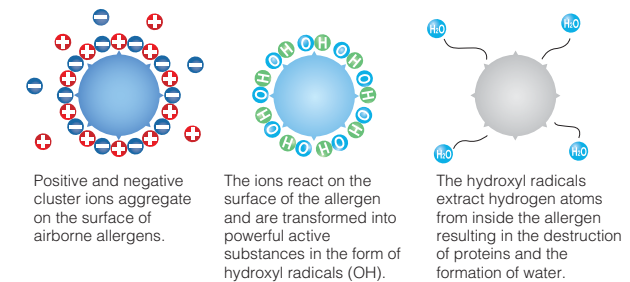
In the seven years since its release, Plasmacluster Ion-equipped products have exceeded the 15-million-unit mark. Sharp aims to bring the benefits of Plasmacluster Ions to every air space.



Third-party Verifications for Plasmacluster Ion Technology



Schematic Illustration of the Effects of Plasmacluster Ions against Airborne Allergens



* Prevents an allergic reaction from occurring by stopping the allergen (antigen) from combining with the IgE antibody.

■ Test method: A Plasmacluster Ion generator is placed in a 1 m³ box. Mite powder is then suspended in the air inside the box followed by the release of Plasmacluster Ions. The action of the allergens in the air is then measured. ■ Test performed by the Graduate School of Advanced Sciences of Matter at Hiroshima University in 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:



- 2000 Effectiveness proven against **airborne molds**
Ishikawa Health Service Association
- 2002 Effectiveness proven against **airborne viruses**
Kitasato Research Center of Environmental Sciences
- 2003 Effectiveness proven against **airborne allergens (mite, pollen)**
Graduate School of Advanced Sciences of Matter, Hiroshima University
- 2004 Explanation of bacteria suppression mechanism
Professor G. Artmann, Aachen University of Applied Sciences
- 2005 Explanation of virus suppression mechanism
Professor G. Artmann, Aachen University of Applied Sciences
- 2006 Explanation of allergen suppression mechanism
Graduate School of Advanced Sciences of Matter, Hiroshima University
- 2007 Effectiveness proven against **airborne bacteria**
Dr. Melvin First, Professor Emeritus of the Harvard School of Public Health



Delivering Comfort

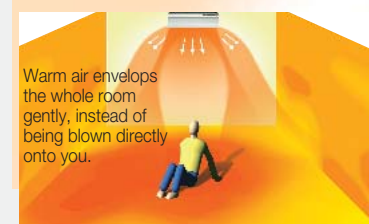
To a greater effective area, using precision technology

An increased effective area and precise airflow control envelop you in comfortable air, when you need it



Wider effective delivery angle

With an ultra-wide airflow that is enabled by a new airflow guide and a longer panel, more air can be sent to the walls so that everyone in the room can enjoy a comfortably warmed or cooled living environment.



In the wintertime
Warm air, sent down toward the floor and outward to the walls, warms the entire room evenly.



In the summertime
Cool air, sent up toward the ceiling and outward to the walls, cools the entire room gently.




A new airflow guide creates a smoother flow of air, minimizing losses in air volume.

A longer panel means a larger amount of air can be sent toward the walls, keeping the air from pooling near the panel and becoming inactive.



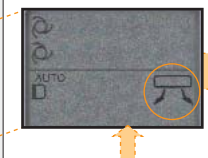
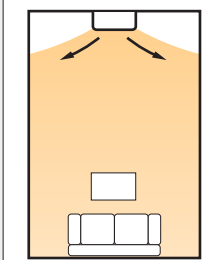
Air flows are easily recognized and controlled

Airflow patterns can be changed to offer precise control over any type of living space.

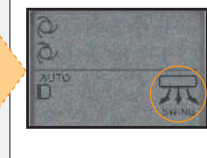
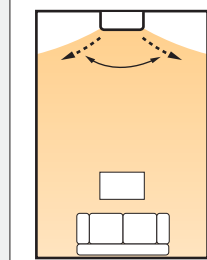


You can switch between modes by pressing this button.

Ultra-wide

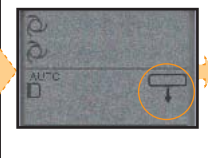
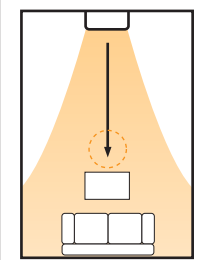



Swing

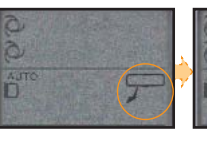
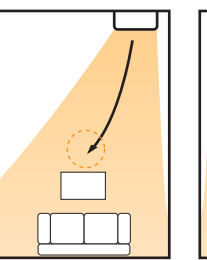



Air conditioner location settings

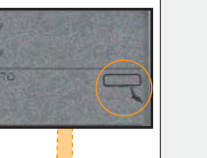
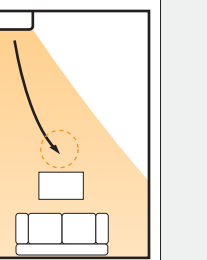
Center

Right

Left

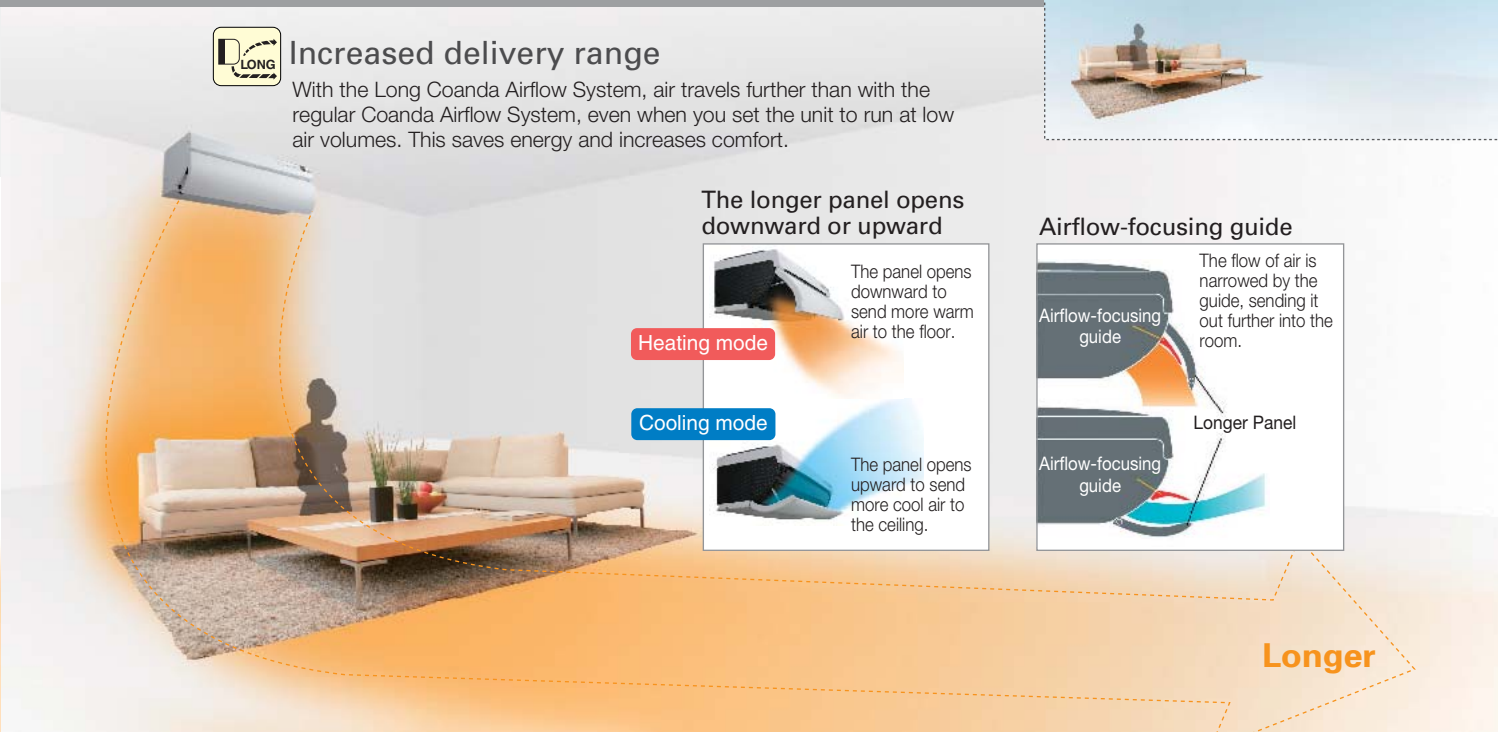



Regardless of the location of the air conditioner, air is sent to the center of the room for efficient air conditioning.



Increased delivery range

With the Long Coanda Airflow System, air travels further than with the regular Coanda Airflow System, even when you set the unit to run at low air volumes. This saves energy and increases comfort.



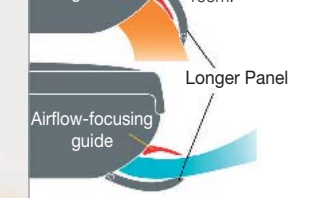
The longer panel opens downward or upward

Heating mode
The panel opens downward to send more warm air to the floor.

Cooling mode
The panel opens upward to send more cool air to the ceiling.

Airflow-focusing guide

The flow of air is narrowed by the guide, sending it out further into the room.



The Coanda Effect: Creating the most comfortable living space possible

Sharp's air conditioners take advantage of a tendency in nature that has been termed the "Coanda effect" 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.

* The Coanda effect was discovered in 1930 by the world-famous aerodynamicist H. M. Coanda, born in Romania in 1885.

Cooling mode

1 Reaches the ceiling

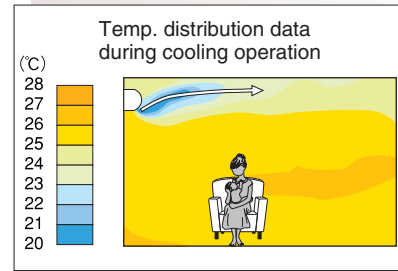
2 Travels across the ceiling

3 Cool air gently fills the room

Refreshing Cool Air

While in cooling mode, cold air reaches the ceiling and travels across it. No cold air blows directly on you, so you will not experience any chilling, which is especially good for babies and elderly people.

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 ■ Air flow: low ■ A western-style room of size 13 m² (Sharp laboratory)

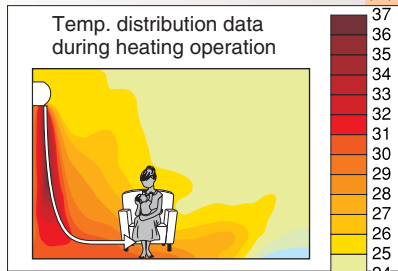
Heating mode

Travels down the wall and across the floor

Balmy Warm Air

While in heating mode, warm air reaches the wall, travels down it, and then moves across the floor. It will warm you from the feet up and you will not feel any direct warm air.

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 ■ Air flow: low ■ A western-style room of size 13 m² (Sharp laboratory)

* The above data was obtained from tests made on an AY-R28XC, a Japan domestic model that employs the Coanda effect.



Plasmacluster Ion Technology

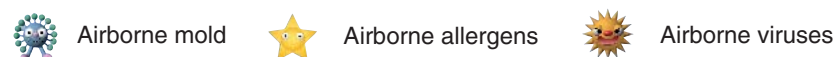
Making the air you breathe safer and healthier, for you and your family



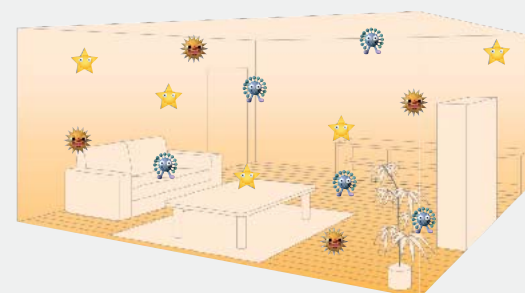
Plasmacluster Ions remove airborne contaminants and mold.

Sharp's Plasmacluster Ion system produces positive and negative ions, which are remarkably effective against a variety of airborne contaminants and impurities such as mold, viruses and allergens. In pursuit of cleanness and comfort, this outstanding system offers you the finest air quality for your living environment.

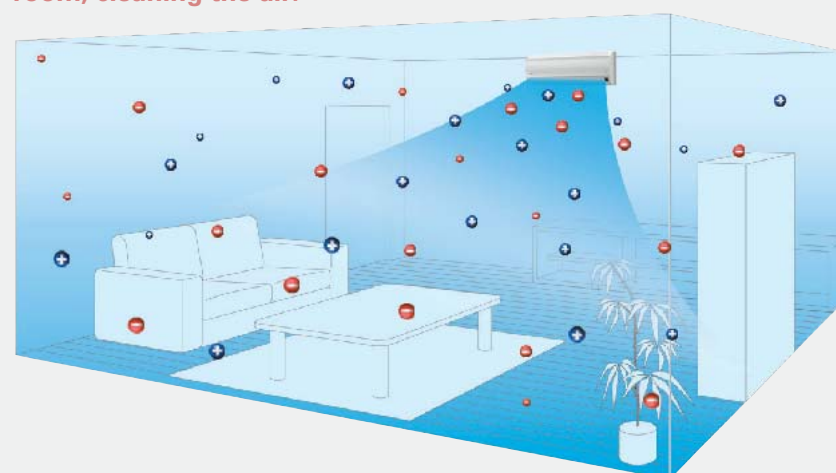
Airborne contaminants and mold removed by Plasmacluster Ions



The air inside a typical home contains a lot of mold and viruses.



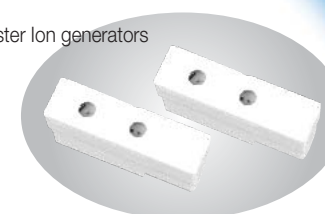
Plasmacluster Ions spread throughout the whole room, cleaning the air.



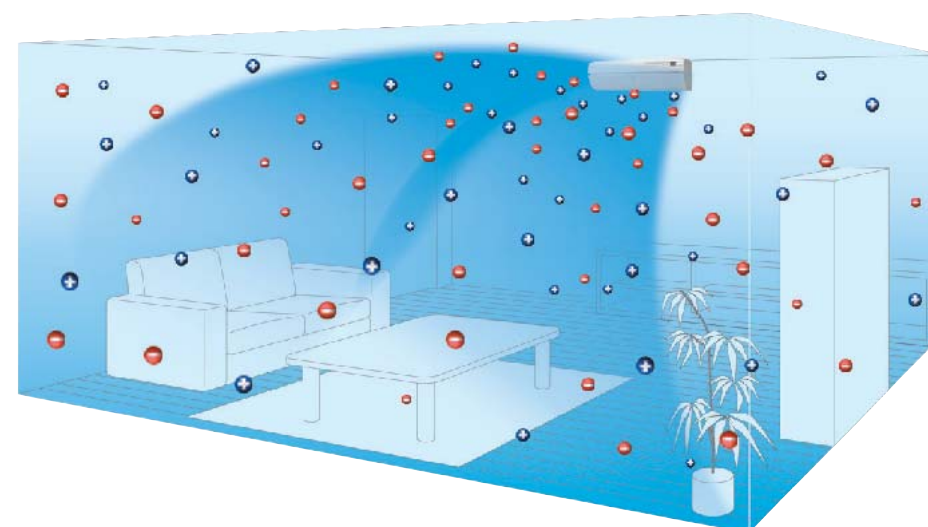
Twin Plasmacluster generators deliver twice the power! (AY-XPC7/9/12JHR only)

Two generators produce a much higher volume of Plasmacluster Ions than one alone. The ions spread out through the room, absorbing and deactivating odors, viruses, and mold to create a healthier living environment.

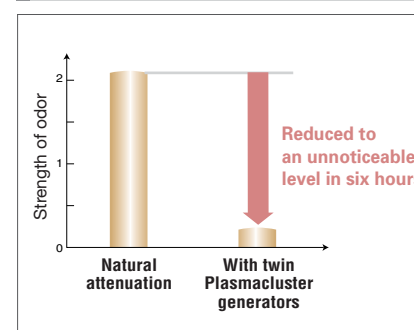
Twin Plasmacluster Ion generators



More Plasmacluster Ions fill the room!



Reduction in clinging room odors using twin Plasmacluster generators

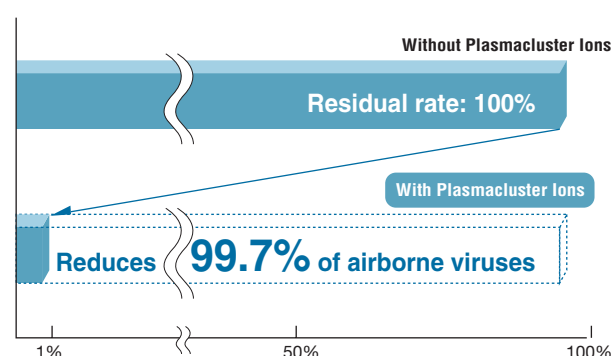


■Test method: Using a six-level odor intensity indication method, the effectiveness of deodorizing a piece of fabric impregnated with tobacco smoke odor was evaluated in an approx. 20 m² test chamber. ■Test performed by Japan Spinners Inspecting Foundation. ■Test report No.: 070356-2

Effective against Airborne Viruses

Effects on Airborne Viruses

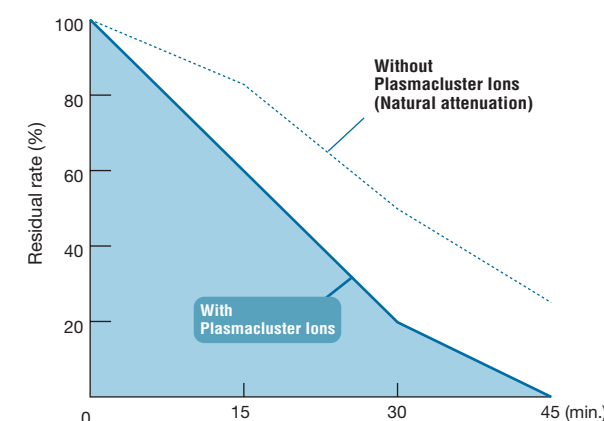
(Actual reduction rate may differ according to room conditions and the model in use)



■Test method: A Plasmacluster Ion generator is placed in a 1 m³ 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

Effective against Airborne Mold

Effects on Airborne Mold



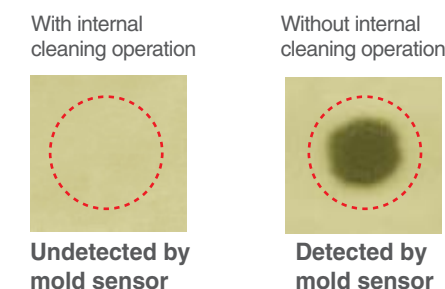
■Mode of operation: Plasmacluster Ion generator single operation in an experimental room of approximately 13.0 square meters. ■Temperature inside the room: 21°C, Humidity: 53% RH. ■Method of measurement: Air samples measuring the quantity of mold were taken from the center inside the room. ■Reduction method: Without filter, generate Plasmacluster Ions in the air. ■Test performed by the Ishikawa Health Service Association in Japan. ■Test report No.: 1503691

Self-cleaning Function

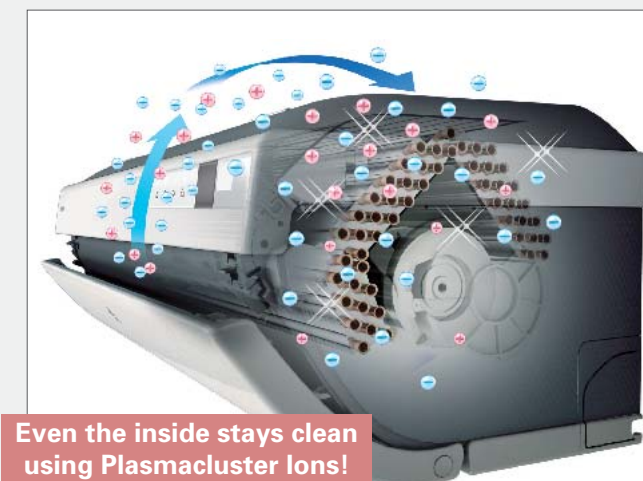
Plasmacluster Ions block the growth of mold inside the air conditioner.

While air blow and heating (dry) operations are performed for about 40 minutes, Plasmacluster Ions are blown through the interior of indoor equipment. This prevents odor-causing mold from growing on the surface of the heat exchanger. (Note: Mold already formed cannot be removed.)

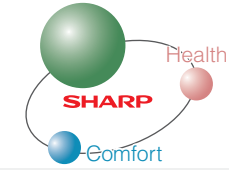
Test results using a visual mold sensor



Test method: Measurements taken at Sharp's laboratory. At an outdoor/room temp. of 27°C and humidity of 70%, a cycle consisting of one hour of cooling operation, 40 minutes of internal cleaning, and 20 minutes off was conducted for 14 days (40 cycles). Visual mold sensor manufactured by the Institute of Environmental Biology.



Even the inside stays clean using Plasmacluster Ions!



Quiet, Environmentally Friendly Operation

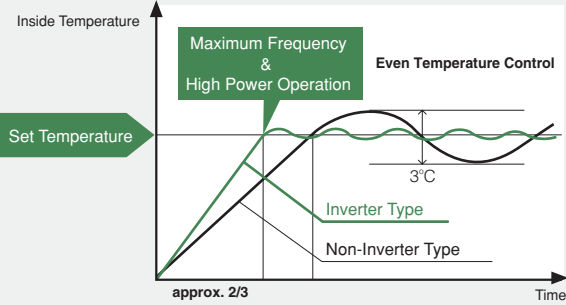
Increased efficiency and reduced power consumption put Sharp products in the industry's top class

Sharp's unsurpassed efforts resulted in the development of advanced technologies that contribute to highly efficient operation and drastically reduced energy consumption.



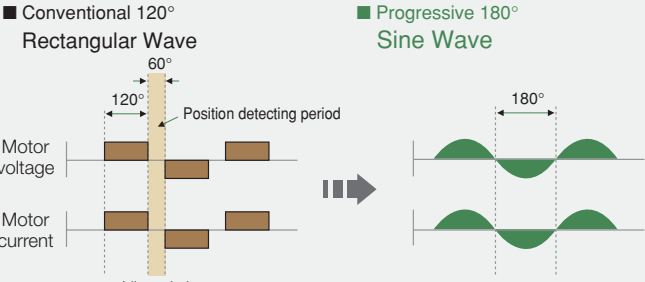
Inverter control for greater comfort and efficiency

- Reduces power consumption by approx. **30%**
(Compared to Non-Inverter models)
- Reaches preset temperatures in approx. **2/3** the time
(Chart below)



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.



* For AE-X7JR, AE-X9JR, AE-X12JR, AE-X7HR, AE-X9HR, GU-X9FGR, AE-X3M18JR, AE-XM24HR models.

Electronic digital control

Employs DC motors for the compressor and outdoor fans. Achieves high-precision, high-power, energy-saving operation by combining these motors with our unique digital control.



* Except for the AE-X24GR model.

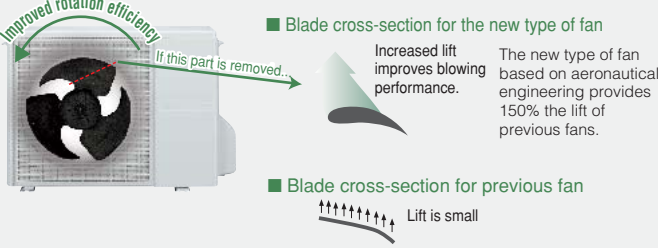
Pulse linear expansion valve

Uses a stepping motor to precisely control coolant pressure, providing more efficient heat exchange.



Employs a new type of outdoor fan

The outdoor fan employs a new shape based on the aeronautical theories of NASA. The fan blade cross-section has been designed with an ideal streamline to greatly increase "lift" (the principle by which airplanes fly), thereby achieving a high rotation efficiency of 120–170% compared to our previous fans.



Energy	
Manufacturer	SHARP
Outside unit	***
Inside unit	***
More efficient	
A	
B	
C	
D	
E	
F	
G	
Less efficient	
Annual energy consumption, kWh in cooling mode	

Cooling output	
Energy efficiency ratio	***
Full load (the higher the better)	***
Type	Cooling only
	Cooling + Heating
	Air cooled
	Water cooled
Heat output	
Heating performance	***
A: higher	A
G: lower	
Noise	
(dB(A) re 1 pW)	***
Further information is contained in product brochures	
Norm EN 1414	
Air-conditioning	
Energy Label Directive 2002/31/EC	

Product	
Model number	***
COPEER class	A
Energy efficiency class in seven steps, from A to G.	
Annual energy consumption	***
Annual energy consumption is determined by taking an average of 500 hours of use per year in cooling mode at full load and multiplying by the total power input.	
Energy Efficiency Ratio	***
A higher EER value indicates greater energy efficiency.	
Type of air conditioner	***
Sound power levels	***
Outdoor	***
Indoor	***

Efficiency Classifications

Of the seven classification of energy efficiency from A to G, "A" is the most efficient level and "G" the least efficient.

COOLING mode energy efficiency class for the unit	HEATING mode energy efficiency class for the unit
A 3.20 < EER	A 3.60 < COP
B 3.20 ≥ EER > 3.00	B 3.60 ≥ COP > 3.40
C 3.00 ≥ EER > 2.80	C 3.40 ≥ COP > 3.20
D 2.80 ≥ EER > 2.60	D 3.20 ≥ COP > 2.80
E 2.60 ≥ EER > 2.40	E 2.80 ≥ COP > 2.60
F 2.40 ≥ EER > 2.20	F 2.60 ≥ COP > 2.40
G 2.20 ≥ EER	G 2.40 ≥ COP

These classifications apply to split and multi-split air-cooled air conditioners.



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 3-room and 4-room multi-split air conditioners are not in the scope of the EUROVENT certification.

Sharp's single-type air conditioning models offer the power and functionality you need. Choose the best fit for your home from wall-mounted, floor-standing, floor/ceiling, and portable models.



Single Split Type

Wall mounted
Floor standing
Floor/Ceiling
Portable

Wall mounted

Super Deluxe Inverter

AY-XPC7/9/12JHR



Model	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
AY-XPC7JHR	2.10 (0.90-2.50)	4.04 A	2.40 (0.90-3.50)	4.85 A
AY-XPC9JHR	2.50 (0.90-3.00)	4.00 A	3.20 (0.90-5.00)	4.21 A
AY-XPC12JHR	3.50 (0.90-3.80)	3.21 A	4.00 (0.90-5.50)	3.92 A

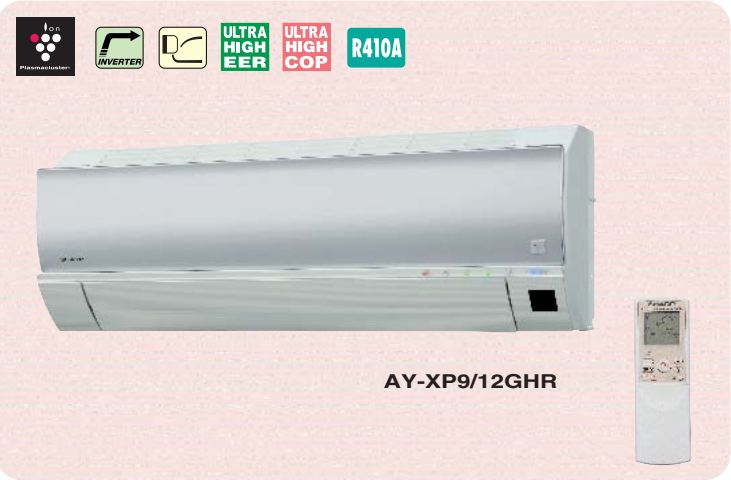
- Twin Plasmacluster Ion
- Ultra-wide Airflow
- Long Coanda Airflow System
- Can be used singly or in a multi split system
- Self Cleaning Function with Plasmacluster Ions
- Anti-bacterial Air Purifying Filter
- 24-Hour ON/OFF Programmable Timer



AE-X7JR
AE-X9JR
AE-X12JR

Super Deluxe Inverter (Top Class EER/COP)

AY-XP9/12GHR



Model	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
AY-XP9GHR	2.50 (0.90-3.00)	4.63 A	3.20 (0.90-5.00)	4.57 A
AY-XP12GHR	3.50 (0.90-4.00)	3.89 A	4.20 (0.90-6.00)	4.33 A

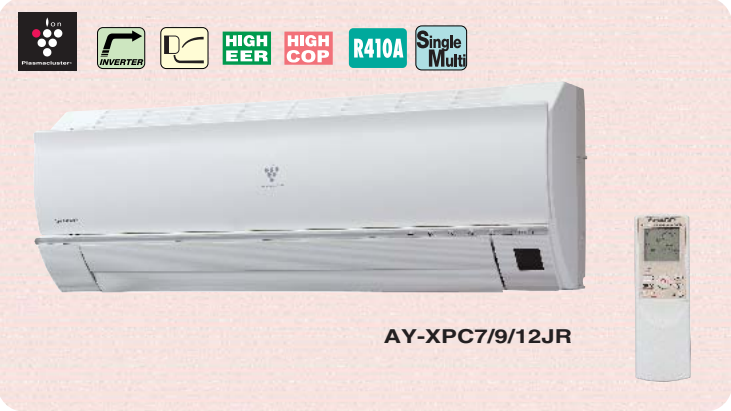
- Plasmacluster Ion
- Top Class EER/COP in Cooling and Heating Operation
- Deluxe Silver Panel
- Coanda Airflow System
- Self Cleaning Function with Plasmacluster Ions
- Washable Deodorizing Filter
- 24-Hour ON/OFF Programmable Timer



AE-X9GHR
AE-X12GHR

Deluxe Inverter

AY-XPC7/9/12JR



Model	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
AY-XPC7JR	2.10 (0.90-2.50)	4.04 A	2.40 (0.90-3.50)	4.85 A
AY-XPC9JR	2.50 (0.90-3.00)	4.00 A	3.20 (0.90-5.00)	4.21 A
AY-XPC12JR	3.50 (0.90-3.80)	3.21 A	4.00 (0.90-5.50)	3.92 A

- Plasmacluster Ion
- Coanda Airflow System
- Can be used singly or in a multi split system
- Self Cleaning Function with Plasmacluster Ions
- Deodorizing Filter
- 24-Hour ON/OFF Programmable Timer



AE-X7JR
AE-X9JR
AE-X12JR

Single Split Type

Wall mounted
Floor standing
Floor/Ceiling
Portable

Wall mounted

Deluxe Inverter

AY-XP7/9/12HR



AY-XP7/9/12HR

* For the AY-XP7/9HR models only.

Cool/Dry/Heat

Model	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
AY-XP7HR	2.10 (0.90-2.50)	4.04 A	2.40 (0.90-3.40)	4.53 A
AY-XP9HR	2.50 (0.90-3.00)	4.00 A	3.20 (0.90-5.00)	4.21 A
AY-XP12HR	3.50 (0.90-4.00)	3.50 A	4.00 (0.90-6.00)	3.92 A

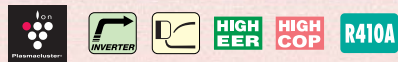
- Plasmacluster Ion
- Powerful Jet
- Coanda Airflow System
- Self Cleaning Function with Plasmacluster Ions
- Anti-bacterial Air Purifying Filter
- 24-Hour ON/OFF Programmable Timer
- 4-way Auto Air Swing



AY-X7HR
AY-X9HR
AY-X12HR

Deluxe Inverter

AY-XP7/9/12FR



AY-XP7/9/12FR

Cool/Dry/Heat

Model	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
AY-XP7FR	2.10 (0.90-2.50)	3.96 A	2.40 (0.90-3.40)	4.71 A
AY-XP9FR	2.64 (0.90-3.00)	3.38 A	3.10 (0.90-4.80)	4.25 A
AY-XP12FR	3.50 (0.90-3.80)	3.21 A	4.00 (0.90-6.00)	3.88 A

- Plasmacluster Ion
- Coanda Airflow System
- Self Cleaning Function with Plasmacluster Ions
- Deodorizing Filter
- 24-Hour ON/OFF Programmable Timer



AY-X7FR
AY-X9FR
AY-X12FR

Deluxe Inverter

AY-XP18/24GR



AY-XP18/24GR

Cool/Dry/Heat

Model	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
AY-XP18GR	5.00 (0.90-5.70)	3.01	5.70 (0.90-7.70)	3.61 A
AY-XP24GR	7.00 (1.60-7.70)	2.81	7.50 (1.80-9.50)	3.22

- Plasmacluster Ion
- Coanda Airflow System
- Self Cleaning Function with Plasmacluster Ions
- Air Purifying Filter
- 24-Hour ON/OFF Programmable Timer



AY-X18GR



AY-X24GR

Wall mounted

Deluxe

AY-AP7/9/12FHR, AY-AP18/24GR



AY-AP7/9FHR



AY-AP12FHR

Cool/Dry/Heat

Model	Cooling Operation		Heating Operation	
	Capacity (kW)	EER	Capacity (kW)	COP
AY-AP7FHR	2.05	3.21 A	2.40	3.61 A
AY-AP9FHR	2.64	3.21 A	3.10	3.61 A
AY-AP12FHR	3.50	3.21 A	4.00	3.64 A
AY-AP18GR	5.15	2.51	5.65	2.97
AY-AP24GR	6.60	2.49	8.10	2.87

- Plasmacluster Ion
- Turbo Cooling & Heating Operation



AE-A7FHR
AE-A9FHR
AE-A12FHR



AY-AP18/24GR



AE-A18GR
AE-A24GR

Standard

AY-A9/12GR



AY-A9GR



AY-A12GR

Cool/Dry/Heat

Model	Cooling Operation		Heating Operation	
	Capacity (kW)	EER	Capacity (kW)	COP
AY-A9GR	2.64	3.21 A	3.10	3.61 A
AY-A12GR	3.50	3.21 A	4.00	3.64 A

- Turbo Cooling & Heating Operation



AE-A9GR
AE-A12GR

Single Split Type

Wall mounted
Floor standing
Floor/Ceiling
Portable

Floor standing

Inverter

GS-XP9/12/18FGR



GS-XP9/12/18FGR

* For the GS-XP9FGR model only.

Cool/Dry/Heat

Model	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
GS-XP9FGR	2.50 (0.90-3.00)	4.07 A	3.40 (0.90-5.00)	4.36 A
GS-XP12FGR	3.50 (0.90-4.00)	3.26 A	4.50 (0.90-6.00)	3.66 A
GS-XP18FGR	5.00 (0.90-5.70)	3.01	5.70 (0.90-7.70)	3.61 A

- Plasmacluster Ion
- Washable Deodorizing Filter
- 24-Hour ON/OFF Programmable Timer

GU-X9FGR
GU-X12FGR

AE-X18GR

Floor/Ceiling

Inverter

GS-XP07/09/12FR, GS-XP18/24/27FR



GS-XP07/09/12FR, GS-XP18/24/27FR

Cool/Dry/Heat

Model	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
GS-XP07FR	2.10 (0.90-2.90)	3.75 A	2.40 (0.90-3.80)	4.71 A
GS-XP09FR	2.64 (0.90-3.40)	3.38 A	3.10 (0.90-4.50)	4.25 A
GS-XP12FR	3.50 (0.90-4.00)	3.21 A	4.00 (0.90-5.80)	3.88 A
GS-XP18FR	5.00 (1.70-6.10)	3.21 A	6.20 (1.70-7.50)	3.65 A
GS-XP24FR	7.00 (2.40-8.00)	3.21 A	8.00 (2.80-9.00)	3.62 A
GS-XP27FR	8.00 (2.40-8.50)	2.61	9.00 (2.80-10.00)	3.42

- Plasmacluster Ion
- 24-Hour ON/OFF Programmable Timer

AE-X7FR
AE-X9FR
AE-X12FRGU-XR18FR
GU-XR24FR
GU-XR27FR

Portable

CV-P09FR



CV-P09FR

Cool/Dry

Model	Cooling Operation	
	Cooling Capacity (kW)	COP
CV-P09FR	2.12	2.41

(Standard: EN 14511)

- Turbo Cooling Operation: Powerful Airflow 8 m³/min
- Industrial Top Class Quietness: 36 dB (low mode)
- Incorporates Plasmacluster Ion Technology
- Automatic Swinging Louvers
- Effective Dehumidification System: 28 L/day
- LCD Wireless Remote Control for All Operations
- 12-hour ON/OFF Timer and 1-hour Quick Set Timer
- Exhaust Only Mode

Multi Split Type

Connectable 2 indoor units
Connectable 3 indoor units
Connectable 4 indoor units



A wide variety of choices for indoor units

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

You can combine 16 types of indoor units.

These models can be used singly or in a multi split system.

Indoor unit	Capacity class	(Wall mounted type)			(Floor standing type)	(Floor/Ceiling type)
7	2.1 kW	AY-XPM7FR	AY-XPC7JHR	AY-XPC7JR	—	GS-XPM7FR
9	2.6 kW	AY-XPM9FR	AY-XPC9JHR	AY-XPC9JR	GS-XPM9FGR	GS-XPM9FR
12	3.5 kW	AY-XPM12FR	AY-XPC12JHR	AY-XPC12JR	GS-XPM12FGR	GS-XPM12FR
18	5.0 kW	AY-XPM18HR	—	—	GS-XPM18FGR	—

2 indoor units with AE-XM18FR

Inverter



Outdoor unit: System 2



AE-XM18FR

You can choose any combination of 2 indoor units from those shown on the right. See the capacity table on page 20 for permissible combinations.

* Two indoor units must be connected.

Indoor units (2 units)

AY-XPC7JHR
AY-XPC9JHR
AY-XPC12JHRAY-XPC7JR
AY-XPC9JR
AY-XPC12JRAY-XPM7FR
AY-XPM9FR
AY-XPM12FRGS-XPM9FGR
GS-XPM12FGRGS-XPM7FR
GS-XPM9FR
GS-XPM12FR

Cool/Dry/Heat

Example of indoor unit combinations

AE-XM18FR

Indoor unit	Cooling Operation		Heating Operation	
	Capacity (kW) (Min. - Max.)	EER	Capacity (kW) (Min. - Max.)	COP
12 + 7	5.40 (1.40-7.10)	3.31 ^{*1}	6.40 (1.40-8.30)	3.38 ^{*1}
9 + 9	5.20 (1.40-5.60)		5.80 (1.40-8.10)	
9 + 7	4.60 (1.40-5.50)		5.60 (1.40-8.10)	

^{*1} Representative connection (9 + 9)

For AY-XPC7/9/12JHR

For GS-XPM9/12FGR,
GS-XPM7/9/12FRFor AY-XPM7/9/12FR,
AY-XPC7/9/12JR

Multi Split Type

Connectable 2 indoor units
Connectable 3 indoor units
Connectable 4 indoor units

These models can be used singly or in a multi split system.

Indoor unit	Capacity class	(Wall mounted type)	(Floor standing type)		(Floor/Ceiling type)
7	2.1 kW	AY-XPM7FR	AY-XPC7JHR	AY-XPC7JR	GS-XPM7FR
9	2.6 kW	AY-XPM9FR	AY-XPC9JHR	AY-XPC9JR	GS-XPM9FGR
12	3.5 kW	AY-XPM12FR	AY-XPC12JHR	AY-XPC12JR	GS-XPM12FGR
18	5.0 kW	AY-XPM18HR	—	—	GS-XPM18FGR

3 indoor units with AE-X3M18JR

Inverter

Outdoor unit: System 3

AE-X3M18JR

You can choose any combination of 3 indoor units from those shown on the right. See the capacity table on page 20 for permissible combinations.

Indoor units (3 units)

AY-XPC7JHR
AY-XPC9JHR
AY-XPC12JHR

AY-XPC7JR
AY-XPC9JR
AY-XPC12JR

AY-XPM7FR
AY-XPM9FR
AY-XPM12FR

GS-XPM9FGR
GS-XPM12FGR

GS-XPM7FR
GS-XPM9FR
GS-XPM12FR

* At least two indoor units must be connected.

AE-X3M18JR Cool/Dry/Heat
 Example of indoor unit combinations

Indoor unit	Cooling Operation		Heating Operation	
	Capacity (kW) (Min.-Max.)	EER	Capacity (kW) (Min.-Max.)	COP
12 + 7 + 7	5.2 (2.2-7.2)	3.69 ^{*1}	6.8 (2.2-8.4)	4.10 ^{*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)	

*1 Representative connection (7 + 7 + 7)

For AY-XPC7/9/12JHR

For GS-XPM9/12FGR,
GS-XPM7/9/12FRFor AY-XPM7/9/12FR,
AY-XPC7/9/12JR

4 indoor units with AE-XM24HR

Inverter

Outdoor unit: System 4

AE-XM24HR

You can choose any combination of 4 indoor units from those shown on the right. See the capacity table on back page for permissible combinations.

Indoor units (4 units)

AY-XPC7JHR
AY-XPC9JHR
AY-XPC12JHR

AY-XPC7JR
AY-XPC9JR
AY-XPC12JR

AY-XPM7FR
AY-XPM9FR
AY-XPM12FR

GS-XPM9FGR
GS-XPM12FGR

GS-XPM7FR
GS-XPM9FR
GS-XPM12FR

* At least three indoor units must be connected.

AE-XM24HR Cool/Dry/Heat
 Example of indoor unit combinations

Indoor unit	Cooling Operation		Heating Operation	
	Capacity (kW) (Min.-Max.)	EER	Capacity (kW) (Min.-Max.)	COP
12 + 7 + 7 + 7	7.00 (3.00-8.20)	3.21 ^{*1}	8.00 (3.00-9.20)	4.00 ^{*1}
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)	

*1 Representative connection (7 + 7 + 7 + 7)

For AY-XPC7/9/12JHR

For GS-XPM9/12FGR,
GS-XPM7/9/12FRFor AY-XPM7/9/12FR,
AY-XPC7/9/12JR

3 indoor units with AE-XM24FR

Inverter

Outdoor unit: System 3

AE-XM24FR

You can choose any combination of 3 indoor units from those shown on the right. See the capacity table on page 20 for permissible combinations.

Indoor units (3 units)

AY-XPC7JHR
AY-XPC9JHR
AY-XPC12JHR

AY-XPC7JR
AY-XPC9JR
AY-XPC12JR

AY-XPM7FR
AY-XPM9FR
AY-XPM12FR

GS-XPM9FGR
GS-XPM12FGR

GS-XPM7FR
GS-XPM9FR
GS-XPM12FR

* For GS-XPM9FGR/12FGR models, only one unit can be connected to this system. * At least two indoor units must be connected.

AE-XM24FR Cool/Dry/Heat
 Example of indoor unit combinations

Indoor unit	Cooling Operation		Heating Operation	
	Capacity (kW) (Min.-Max.)	EER	Capacity (kW) (Min.-Max.)	COP
12 + 7 + 7	7.00 (1.70-7.30)	2.88 ^{*2}	7.80 (1.70-8.20)	3.15 ^{*2}
9 + 9 + 7	7.00 (1.70-7.30)		7.80 (1.70-8.20)	
9 + 7 + 7	6.90 (1.70-7.30)		7.80 (1.70-8.20)	
7 + 7 + 7	6.10 (1.70-7.30)		7.10 (1.70-8.20)	

*2 Representative connection (9 + 9 + 7)

For AY-XPC7/9/12JHR

For GS-XPM9/12FGR,
GS-XPM7/9/12FRFor AY-XPM7/9/12FR,
AY-XPC7/9/12JR

4 indoor units with AE-XM30GR

Inverter

Outdoor unit: System 4

AE-XM30GR

You can choose any combination of 4 indoor units from those shown on the right. See the capacity table on back page for permissible combinations.

Indoor units (4 units)

AY-XPC7JHR
AY-XPC9JHR
AY-XPC12JHR

AY-XPC7JR
AY-XPC9JR
AY-XPC12JR

AY-XPM7FR
AY-XPM9FR
AY-XPM12FR

AY-XPM18HR

GS-XPM9FGR
GS-XPM12FGR
GS-XPM18FGR

GS-XPM7FR
GS-XPM9FR
GS-XPM12FR

* When using GS-XPM18FGR or AY-XPM18HR models, only one such 5.0 kW class unit can be used within the system.
* At least three indoor units must be connected.

AE-XM30GR Cool/Dry/Heat
 Example of indoor unit combinations

Indoor unit	Cooling Operation		Heating Operation	
	Capacity (kW) (Min.-Max.)	EER	Capacity (kW) (Min.-Max.)	COP
18 + 7 + 7 + 7	8.40 (4.30-9.00)	2.81 ^{*2}	9.00 (4.40-10.60)	3.75 ^{*2}
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	8.00 (4.30-9.00)		8.50 (4.40-9.80)	

*2 Representative connection (9 + 7 + 7 + 7)


















For AY-XPC7/9/12JHR






























For GS-XPM9/12/18FGR,
GS-XPM7/9/12FRFor AY-XPM7/9/12FR,
AY-XPC7/9/12JR,
AY-XPM18HR

Single Split Type

			TENTATIVE						TENTATIVE											
Model	Indoor		AY-XPCT7JHR	AY-XPCT9JHR	AY-XPCT12JHR	AY-XP9GHR	AY-XP12GHR	AY-XPCT7JR	AY-XPCT9JR	AY-XPCT12JR	AY-XP7HR	AY-XP9HR	AY-XP12HR	AY-XP7FR	AY-XP9FR	AY-XP12FR	AY-XP18GR	AY-XP24GR	AY-AP7FHR	
	Outdoor		AE-X7JR	AE-X9JR	AE-X12JR	AE-X9GHR	AE-X12GHR	AE-X7JR	AE-X9JR	AE-X12JR	AE-X7HR	AE-X9HR	AE-X12HR	AE-X7FR	AE-X9FR	AE-X12FR	AE-X18GR	AE-X24GR	AE-A7FHR	
Capacity *1	Cool (Min. - Max.)	kW	2.10 0.90-2.50	2.50 0.90-3.00	3.50 0.90-3.80	2.50 0.90-3.00	3.50 0.90-4.00	2.10 0.90-2.50	2.50 0.90-3.00	3.50 0.90-3.80	2.10 0.90-2.50	2.50 0.90-3.00	3.50 0.90-4.00	2.10 0.90-2.50	2.64 0.90-3.00	3.50 0.90-3.80	5.00 0.90-5.70	7.00 1.60-7.70	2.05	
	Heat (Min. - Max.)	kW	2.40 0.90-3.50	3.20 0.90-5.00	4.00 0.90-5.50	3.20 0.90-5.00	4.20 0.90-6.00	2.40 0.90-3.50	3.20 0.90-5.00	4.00 0.90-5.50	2.40 0.90-3.40	3.20 0.90-5.00	4.00 0.90-6.00	2.40 0.90-3.40	3.10 0.90-4.80	4.00 0.90-6.00	5.70 0.90-7.70	7.50 1.80-9.50	2.40	
Power supply		V-ph-Hz	220-240-1ø-50			220-240-1ø-50		220-240-1ø-50			220-240-1ø-50			220-240-1ø-50			220-240-1ø-50		220-240-1ø-50	
Running current *1	Cool	A	2.7	3.1	4.9	2.8	4.3	2.7	3.1	4.9	2.7	3.2	5.0	2.5	3.7	5.0	7.4	11.0	3.0	
	Heat	A	2.6	3.7	4.6	3.4	4.5	2.6	3.7	4.6	2.8	4.0	5.1	2.4	3.5	4.8	7.0	10.3	3.0	
Power input *1	Cool (Min. - Max.)	W	520 200-720	625 200-900	1,090 200-1,300	540 150-750	900 150-1,300	520 200-720	625 200-900	1,090 200-1,300	520 200-700	625 200-900	1,000 200-1,350	530 200-760	780 200-960	1,090 210-1,300	1,660 330-2,190	2,490 500-2,900	635	
	Heat (Min. - Max.)	W	495 180-890	760 180-1,450	1,020 180-1,620	700 130-1,300	970 130-1,700	495 180-890	760 180-1,450	1,020 180-1,620	530 200-920	760 200-1,450	1,020 220-1,750	510 160-1,100	730 180-1,900	1,030 330-2,400	1,580 330-2,400	2,330 500-3,170	660	
EER *1	Cool		4.04	4.00	3.21	4.63	3.89	4.04	4.00	3.21	4.04	4.00	3.50	3.96	3.38	3.21	3.01	2.81	3.21	
COP *1	Heat		4.85	4.21	3.92	4.57	4.33	4.85	4.21	3.92	4.53	4.21	3.92	4.71	4.25	3.88	3.61	3.22	3.61	
Energy efficiency class *1	Cool		A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	C	A	
	Annual Energy Consumption	kWh	260	313	545	270	450	260	313	545	260	313	500	265	390	545	830	1,245	318	
	Heat		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	C	A	
Sound pressure level (Cool) *2	Indoor (Hi/Lo)	dB(A)	36/26	37/26	40/27	42/26	43/27	36/26	37/26	40/27	35/24	37/24	38/26	37/28	39/28	40/29	43/33	47/36	37/28	
	Outdoor	dB(A)	45	45	48	46	49	45	45	48	45	45	46	45	45	48	49	55	44	
Sound power level (Cool)	Indoor (Hi)	dB(A)	51	52	56	56	57	51	52	56	51	52	54	52	54	56	57	62	53	
	Outdoor	dB(A)	58	58	61	59	62	58	58	61	59	59	60	58	59	60	65	69	59	
Airflow volume	Indoor (Hi, Cool)	m³/min.	8.0	8.4	9.7	10.3	10.7	8.9	9.1	10.5	8.6	9.1	10.9	8.0	8.6	9.8	15.4	18.3	7.3	
Dimensions	Indoor	W	798	798	798	790	790	790	790	790	860	860	860	790	790	790	1,040	1,040	810	
		H	260	260	260	278	278	278	278	278	292	292	292	278	278	278	325	325	270	
		D	290	290	290	198	198	198	198	198	198	198	198	198	198	198	198	229	229	184
	Outdoor	W	730	730	730	780	780	730	730	730	730	730	730	730	730	730	730	780	890	730
		H	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	800	800	540
		D	250	250	250	265	265	250	250	250	250	250	250	250	250	250	250	265	320	250
Net weight	Indoor	kg	11	11	11	10	10	10	10	10	8.5	8.5	9	10	10	10	16	16	9	
	Outdoor	kg	31	33	33	37	37	31	33	33	33	34	34	33	33	37	37	61	28	
Pipe diameter	Liquid side	inch	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	3/8	1/4	
	Gas side	inch	3/8	3/8	3/8	3/8	1/2	3/8	3/8	3/8	3/8	3/8	1/2	3/8	3/8	3/8	1/2	5/8	3/8	
Min-Max pipe length		m	1-15	1-15	1-15	1-15	1-15	1-15	1-15	1-15	1-15	1-15	1-15	1-15	1-15	1-15	1-20	1-30	1-10	
Maximum chargeless length		m	10	10	10	10	10	10	10	10	10	10	10	10	10	10	20	20	7.5	
Maximum height difference		m	7	7	7	7	7	7	7	7	7	7	7	7	7	7	10	10	5	
Refrigerant			R410A			R410A		R410A			R410A			R410A			R410A		R410A	
Operating Range (Outdoor)	Cool	°C	-10-46			-10-46		-10-46			-10-46			-10-46			-10-46		21-46	21-46
	Heat	°C	-15-24			-15-24		-15-24			-15-24			-15-24			-15-24		-7-24	-7-24

Floor standing										Floor/Ceiling									
Model	Indoor		AY-AP9FHR	AY-AP12FHR	AY-AP18GR	AY-AP24GR	AY-ASGR	AY-A12GR	GS-XP9FGR	GS-XP12FGR	GS-XP18FGR	GS-XP07FR	GS-XP09FR	GS-XP12FR	GS-XP18FR	GS-XP24FR	GS-XP27FR		
	Outdoor		AE-AP9FHR	AE-A12FHR	AE-A18GR	AE-A24GR	AE-ASGR	AE-A12GR	GU-X9FGR	GU-X12FGR	AE-X18GR	AE-X07FR	AE-X9FR	AE-X12FR	GU-XR18FR	GU-XR24FR	GU-XR27FR		
Capacity *1	Cool (Min. - Max.)	kW	2.64	3.50	5.15	6.60	2.64	3.50	2.50 0.90-3.00	3.50 0.90-4.00	5.00 0.90-5.70	2.10 0.90-2.90	2.64 0.90-3.40	3.50 0.90-4.00	5.00 1.70-6.10	7.00 2.40-8.00	8.00 2.40-8.50		
	Heat (Min. - Max.)	kW	3.10	4.00	5.65	8.10	3.10	4.00	3.40 0.90-5.00	4.50 0.90-6.00	5.70 0.90-7.70	2.40 0.90-3.80	3.10 0.90-4.50	4.00 0.90-5.80	6.20 1.70-7.50	8.00 2.80-9.00	9.00 2.80-10.00		
Power supply		V-ph-Hz	220-240-1Ø-50			220-240-1Ø-50			220-240-1Ø-50			220-240-1Ø-50			220-240-1Ø-50				
Running current *1	Cool	A	3.8	5.0	9.1	12.5	3.8	5.0	2.9	5.0	7.4	2.7	3.6	5.0	7.2	10.0	14.0		
	Heat	A	3.8	5.0	8.5	13.2	3.8	5.0	3.6	5.7	7.0	2.4	3.5	4.7	7.8	10.1	12.1		
Power input *1	Cool (Min. - Max.)	W	820	1,090	2,050	2,650	820	1,090	615 200-890	1,075 230-1,320	1,660 260-2,190	560 230-760	780 230-960	1,090 230-1,300	1,560 370-2,650	2,180 630-3,120	3,065 630-3,750		
	Heat (Min. - Max.)	W	855	1,100	1,900	2,820	855	1,100	780 200-1,400	1,230 230-1,730	1,580 260-2,400	510 250-860	730 250-1,120	1,030 250-1,560	1,700 370-2,200	2,210 730-2,800	2,630 730-3,400		
EER *1	Cool		3.21	3.21	2.51	2.49	3.21	3.21	4.07	3.26	3.01	3.75	3.38	3.21	3.21	3.21	2.61		
COP *1	Heat		3.61	3.64	2.97	2.87	3.61	3.64	4.36	3.66	3.61	4.71	4.25	3.88	3.65	3.62	3.42		
Energy efficiency class *1	Cool		A	A	E	E	A	A	A	A	B	A	A	A	A	A	D		
	Annual Energy Consumption	kWh	410	545	1,025	1,325	410	545	308	538	830	280	390	545	780	1,090	1,530		
	Heat		A	A	D	D	A	A	A	A	A	A	A	A	A	A	B		
Sound pressure level (Cool) *2	Indoor (Hi/Lo)	dB(A)	38/28	40/29	41/34	45/37	38/28	40/29	37/22	38/23	44/33	37/28	39/28	41/29	43/34	46/34	47/34		
	Outdoor	dB(A)	45	48	52	54	45	48	45	46	49	45	45	48	54	55	56		
Sound power level (Cool)	Indoor (Hi)	dB	55	56	57	61	55	56	53	53	60	51	52	54	57	60	61		
	Outdoor	dB	61	62	68	69	61	62	61	62	65	58	59	60	67	69	69		
Airflow volume	Indoor (Hi, Cool)	m³/min.	7.8	10.2	15.2	17.8	7.8	10.2	9.9	10.5	14.2	11.0	11.0	12.0	17.0	19.0	20.0		
Dimensions	Indoor	W	mm	810	790	1,040	1,040	810	790	750	750	1,025	1,025	1,025	1,300	1,300	1,300		
				270	278	325	325	270	278	670	670	670	680	680	680	680	680		
		D		184	198	229	229	184	198	235	235	235	212	212	212	212	212		
				730	730	890	890	730	730	730	730	780	730	730	890	890	890		
	Outdoor	W	mm	540	540	645	645	540	540	540	540	540	540	540	800	800	800		
				250	250	327	327	250	250	250	250	265	250	250	320	320	320		
		H		mm	9	10	16	16	9	10	17	17	17	31	31	31	34	36	
					32	37	54	62	32	37	33	33	37	33	33	37	57	65	65
Pipe diameter	Liquid side	inch	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	3/8	3/8		
	Gas side	inch	3/8	1/2	1/2	1/2	3/8	1/2	3/8	3/8	1/2	3/8	3/8	3/8	1/2	5/8	5/8		
Min-Max pipe length		m	1-10	1-15	1-15	1-15	1-10	1-15	1-20	1-20	1-30	1-15	1-15	1-15	1-30	1-30	1-30		
Maximum chargeless length		m	7.5	7.5	7.5	7.5	7.5	7.5	15	15	30	10	10	10	30	30	30		
Maximum height difference		m	5	7	10	10	5	7	7	7	10	7	7	7	20	20	20		
Refrigerant			R410A			R410A			R410A			R410A			R410A				
Operating Range (Outdoor)	Cool	°C	21-46			21-46			21-46			21-46			21-46				
	Heat	°C	-7-24			-7-24			-7-24			-15-24			-15-24				

		Single Type								Single Type			Multi Type							
		Inverter								Non Inverter			Inverter							
		Wall mounted						Floor standing	Floor/Ceiling	Wall mounted			Wall mounted				Floor standing	Floor/Ceiling		
		Super Deluxe	Super Deluxe	Deluxe	Deluxe	Deluxe	Deluxe			Deluxe	Deluxe	Standard	Super Deluxe	Deluxe	Deluxe	Deluxe				
Capacity class																				
	2.1 kW	AY-XPC7JHR		AY-XPC7JR	AY-XP7HR	AY-XP7FR			GS-XP07FR	AY-AP7FHR			AY-XPC7JHR	AY-XPC7JR	AY-XPM7FR			GS-XPM7FR		
	2.6 kW	AY-XPC9JHR	AY-XP9GHR	AY-XPC9JR	AY-XP9HR	AY-XP9FR		GS-XP9FGR	GS-XP09FR	AY-AP9FHR		AY-A9GR	AY-XPC9JHR	AY-XPC9JR	AY-XPM9FR		GS-XPM9FGR	GS-XPM9FR		
	3.5 kW	AY-XPC12JHR	AY-XP12GHR	AY-XPC12JR	AY-XP12HR	AY-XP12FR		GS-XP12FGR	GS-XP12FR	AY-AP12FHR		AY-A12GR	AY-XPC12JHR	AY-XPC12JR	AY-XPM12FR		GS-XPM12FGR	GS-XPM12FR		
	5.0 kW						AY-XP18GR	GS-XP18FGR	GS-XP18FR		AY-AP18GR					AY-XPM18HR	GS-XPM18FGR			
Air Quality	7.0 kW						AY-XP24GR		GS-XP24FR		AY-AP24GR									
Additional Features	8.0 kW								GS-XP27FR											
		p.8	p.8	p.8	p.9	p.9	p.9	p.11	p.11	p.10	p.10	p.10	p.12-14							

 Powerful Jet																							
 Full Power Mode																							
 Turbo Cooling & Heating Operation																							
 Lower Room Temperature Setting (from 18°C)																							
 Computerized Dry Mode Operation																							
 Auto Operation Mode																							
 Auto & 3-Step Fan Speed Settings																							
 Auto Restart Function																							
 Auto Changeover																							
 Winter Cool Function																							
 Ultra-wide Airflow																							
 Long Coanda Airflow System																							
 Coanda Airflow System																							
 4-way Auto Air Swing																							
 Auto Swing Louver																							
 Dual (Upper & Lower) Airflow System																							
 Microcomputer Control																							
 LCD Wireless Remote Control																							
  Timer Programmable 24-Hour ON/OFF or 12-Hour ON/OFF																							
 1-Hour OFF Timer																							
 “Awakening” Function																							
 “Auto Sleep” Function																							
 Plasmacluster Ion																							
 Anti-Mold, Detachable & Washable Air Filter																							
 Air Purifying Filter																							
 Quiet Operation																							
 Self Cleaning Function																							
 Dual Drain Setting																							

Operation



Inverter Controlled Operation

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



Powerful Jet

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



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 (from 18°C)

In cooling operation, room temperature can be set from 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.

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-bacterial Air Purifying Filter



Anti-Mold, Detachable & Washable Air Filter

Airflow



Ultra-wide Airflow

This function provides much wider airflows to deliver Plasmacluster ions and cold or warm air to every corner of the room.



Long Coanda Airflow System

This function provides much longer airflows to deliver Plasmacluster ions and cold or warm air farther from the unit.



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 air flow.



4-way Auto Air Swing

Automatic Vertical & Horizontal Air Flow is available in order to make the room uniformly cool or warm.



Auto Swing Louver

Automatic Vertical Air Flow 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 or stop operation (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.

Additional Features



Quiet Operation



Self Cleaning Function

SELF CLEAN operation provides the effect of reducing the growth of mold fungus, and dries the inside of 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.

Performance of Multi Inverter Type 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-XPC7JHR, AY-XPC7JR, AY-XPM7FR, GS-XPM7FR
- 9: AY-XPC9JHR, AY-XPC9JR, AY-XPM9FR, GS-XPM9FR, GS-XPM9FGR
- 12: AY-XPC12JHR, AY-XPC12JR, AY-XPM12FR, GS-XPM12FR
- GS-XPM12FGR
- 18: AY-XPM18HR, GS-XPM18FGR

2-indoor units with AE-XM18FR

Operating status	Indoor unit combination		Cooling capacity (kW)			Heating capacity (kW)			Power consumption (W) Rating (Min.–Max.)	
	A	B	A	B	Rating (Min.–Max.)	A	B	Rating (Min.–Max.)	Cool	Heat
2-indoor unit operation	12	12	2.70	2.70	5.40 (1.40–7.10)	3.20	3.20	6.40 (1.40–8.30)	1,670 (590–2,635)	1,885 (595–2,865)
	12	9	3.10	2.30	5.40 (1.40–7.10)	3.65	2.75	6.40 (1.40–8.30)	1,670 (590–2,635)	1,885 (595–2,865)
	12	7	3.40	2.00	5.40 (1.40–7.10)	3.90	2.50	6.40 (1.40–8.30)	1,670 (590–2,635)	1,885 (595–2,865)
	9	9	2.60	2.60	5.20 (1.40–5.60)	2.90	2.90	5.80 (1.40–8.10)	1,570 (590–1,800)	1,715 (595–2,740)
	9	7	2.60	2.00	4.60 (1.40–5.50)	3.10	2.50	5.60 (1.40–8.10)	1,340 (590–1,670)	1,535 (595–2,740)
	7	7	2.00	2.00	4.00 (1.40–5.20)	2.45	2.45	4.90 (1.40–6.90)	1,180 (590–1,545)	1,225 (595–2,040)
1-indoor unit operation	12	*	3.40	*	3.40 (1.10–4.00)	4.30	*	4.30 (1.10–5.20)	1,045 (500–1,480)	1,435 (540–2,330)
	9	*	2.60	*	2.60 (1.10–3.30)	3.40	*	3.40 (1.10–4.00)	770 (470–1,095)	1,155 (570–1,775)
	7	*	2.00	*	2.00 (1.10–2.70)	3.00	*	3.00 (1.10–3.40)	675 (440–895)	975 (540–1,455)

* Connected but not operated

3-indoor units with AE-X3M18JR

Operating status	Indoor unit combination			Cooling capacity (kW)				Heating capacity (kW)				Power consumption (W) Rating (Min.–Max.)	
	A	B	C	A	B	C	Rating (Min.–Max.)	A	B	C	Rating (Min.–Max.)	Cool	Heat
3-indoor unit operation	12	9	7	2.2	1.7	1.3	5.2 (2.2–7.2)	2.9	2.2	1.7	6.8 (2.2–8.4)	1,410 (430–2,560)	1,660 (420–2,480)
	12	7	7	2.4	1.4	1.4	5.2 (2.2–7.2)	3.1	1.8	1.8	6.8 (2.2–8.4)	1,410 (430–2,560)	1,660 (420–2,480)
	9	9	9	1.7	1.7	1.7	5.2 (2.2–7.2)	2.3	2.3	2.3	6.8 (2.2–8.4)	1,410 (430–2,560)	1,660 (420–2,480)
	9	9	7	1.9	1.9	1.5	5.2 (2.2–7.2)	2.4	2.4	1.9	6.8 (2.2–8.4)	1,410 (430–2,560)	1,660 (420–2,480)
	9	7	7	2.0	1.6	1.6	5.2 (2.2–7.2)	2.7	2.1	2.1	6.8 (2.2–8.4)	1,410 (430–2,560)	1,660 (420–2,480)
	7	7	7	1.7	1.7	1.7	5.2 (2.2–7.0)	2.3	2.3	2.3	6.8 (2.2–8.4)	1,410 (430–2,460)	1,660 (420–2,480)
2-indoor unit operation	12	9	*	2.9	2.1	*	5.0 (1.9–6.5)	3.8	2.9	*	6.7 (1.6–8.0)	1,400 (350–2,400)	1,970 (380–2,670)
	12	7	*	3.2	1.8	*	5.0 (1.9–6.4)	4.2	2.4	*	6.6 (1.6–8.0)	1,400 (350–2,380)	1,970 (380–2,670)
	9	9	*	2.5	2.5	*	4.9 (1.9–6.2)	3.1	3.1	*	6.2 (1.6–8.0)	1,380 (350–2,200)	1,800 (380–2,670)
	9	7	*	2.5	2.0	*	4.5 (1.9–5.7)	3.2	2.5	*	5.6 (1.6–7.3)	1,190 (350–1,870)	1,550 (380–2,310)
	7	7	*	2.0	2.0	*	4.0 (1.9–5.2)	2.5	2.5	*	5.0 (1.6–6.4)	1,000 (350–1,550)	1,320 (380–1,910)
1-indoor unit operation	12	*	*	3.4	*	*	3.4 (1.4–4.0)	4.0	*	*	4.0 (1.1–5.2)	950 (320–1,350)	1,400 (330–2,150)
	9	*	*	2.6	*	*	2.6 (1.4–3.3)	3.0	*	*	3.0 (1.1–4.2)	680 (320–950)	970 (330–1,570)
	7	*	*	2.0	*	*	2.0 (1.4–2.7)	2.4	*	*	2.4 (1.1–3.3)	520 (320–710)	720 (330–1,130)

* Connected but not operated

3-indoor units with AE-XM24FR

Operating status	Indoor unit combination			Cooling capacity (kW)				Heating capacity (kW)				Power consumption (W) Rating (Min.–Max.)	
	A	B	C	A	B	C	Rating (Min.–Max.)	A	B	C	Rating (Min.–Max.)	Cool	Heat
3-indoor unit operation	12	12	9	2.55	2.55	1.91	7.00 (1.70–7.30)	2.84	2.84	2.13	7.80 (1.70–8.20)	2,430 (700–2,775)	2,475 (685–2,710)
	12	12	7	2.71	2.71	1.58	7.00 (1.70–7.30)	3.02	3.02	1.76	7.80 (1.70–8.20)	2,430 (700–2,775)	2,475 (685–2,710)
	12	9	9	2.80	2.10	2.10	7.00 (1.70–7.30)	3.09	2.36	2.36	7.80 (1.70–8.20)	2,430 (700–2,775)	2,475 (685–2,710)
	12	9	7	2.98	2.28	1.75	7.00 (1.70–7.30)	3.30	2.50	2.10	7.80 (1.70–8.20)	2,430 (700–2,775)	2,475 (685–2,710)
	12	7	7	3.20	1.90	1.90	7.00 (1.70–7.30)	3.40	2.20	2.20	7.80 (1.70–8.20)	2,430 (700–2,775)	2,475 (685–2,710)
	9	9	9	2.33	2.33	2.33	7.00 (1.70–7.30)	2.60	2.60	2.60	7.80 (1.70–8.20)	2,430 (700–2,775)	2,475 (685–2,710)
	9	9	7	2.53	2.53	1.94	7.00 (1.70–7.30)	2.76	2.76	2.28	7.80 (1.70–8.20)	2,430 (700–2,775)	2,475 (685–2,710)
	9	7	7	2.70	2.10	2.10	6.90 (1.70–7.30)	3.00	2.40	2.40	7.80 (1.70–8.20)	2,400 (700–2,775)	2,475 (685–2,710)
	7	7	7	2.03	2.03	2.03	6.10 (1.70–7.30)	2.36	2.36	2.36	7.10 (1.70–8.20)	1,920 (700–2,775)	2,050 (685–2,710)
2-indoor unit operation	12	9	*	3.40	2.60	*	6.00 (1.40–7.10)	3.80	2.90	*	6.50 (1.40–8.10)	2,065 (590–2,635)	2,010 (580–2,890)
	12	7	*	3.40	2.00	*	5.40 (1.40–7.10)	3.70	2.30	*	6.00 (1.40–7.80)	1,670 (590–2,635)	1,760 (580–2,700)
	9	9	*	2.60	2.60	*	5.20 (1.40–5.60)	2.90	2.90	*	5.80 (1.40–7.20)	1,570 (590–1,800)	1,665 (580–2,580)
	9	7	*	2.60	2.00	*	4.60 (1.40–5.50)	2.90	2.40	*	5.30 (1.40–7.20)	1,340 (590–1,670)	1,440 (580–2,580)
	7	7	*	2.00	2.00	*	4.00 (1.40–5.20)	2.40	2.40	*	4.80 (1.40–6.40)	1,180 (590–1,545)	1,150 (580–1,910)
1-indoor unit operation	12	*	*	3.40	*	*	3.40 (1.10–4.00)	3.80	*	*	3.80 (1.10–5.20)	1,045 (500–1,480)	1,355 (515–2,305)
	9	*	*	2.60	*	*	2.60 (1.10–3.30)	2.90	*	*	2.90 (1.10–4.00)	770 (470–1,095)	1,070 (520–1,735)
	7	*	*	2.00	*	*	2.00 (1.10–2.70)	2.40	*	*	2.40 (1.10–3.40)	675 (440–895)	910 (540–1,385)

* Connected but not operated