

WindFree™ 4Way

Cools effectively
without direct wind,
keeps you comfortable
with less energy.



Enjoy a more effortless way to stay comfortably cool. The Samsung 4Way Cassette air conditioner's WindFree™ Cooling cools effectively and quietly without the unpleasant feeling of cold wind being blown directly onto your skin*. It also continually monitors the temperature and humidity and intelligently opti-

mizes the operating mode to maximize comfort and efficiency, so it uses significantly less energy than normal cooling.

And its 84mm big blade with an optimized shape delivers cool air up to 5 meters**, which means it will quickly cover a 10m wide space without leaving dead zones.

* Available only on the WindFree™ models.

** Based on internal testing on the WindFree™ 4Way Cassette (AC140RN4DKG/EU) with a PCNUFMAN blade. Results may vary depending on environmental factors and individual use.



Comfort

- WindFree™ Cooling
- Smart Comfort Operation
- Quiet Operation
- Big Blade & Slanted Outlet Design

Cost Saving

- Low Energy Consumption

Hygiene

- Purification System
- PM1.0 Filter
- Washable Filters
- Auto Clean
- Drain Pump with Check Valve
- Ionizer Kit

Design

- 7 Types of Panel Design

Smart Control

- Motion Detect Sensor

Maintenance

- Self-diagnosis
- Auto elevating grille panel
- Detachable and washable parts
- Built-in Remote Control Receiver

WindFree™ 4Way

■ Comfort

WindFree™ keeps you comfortable without worrying about cold drafts

The Samsung WindFree™ 4Way Cassette helps to create the ideal working or living conditions. As well as preventing cold drafts, it also works really quietly, so there's less disturbance.



15,700
Micro Air Holes*

Stay comfortably cool without feeling cold

WindFree™ Cooling

When people are directly exposed to a cold wind it can feel really unpleasant and may even make them ill if they stay cold for too long. With WindFree™ technology, the Samsung 4Way Cassette cools effectively without the unpleasant sensation of cold wind being blown directly onto your skin. Cool air is gently dispersed across the room through 15,700 micro air holes* that are just 1.4mm in diameter. It creates a "still air" environment** with a very low air speed of just 0.15m/s, so there are no drafts to disturb you. As it won't feel uncomfortable or cold, even if it is used for a long time, it's ideal for indoor spaces with air conditioning where many people are concentrated, such as offices, schools and libraries.

* The WindFree™ 4Way 600x600 model has 9,000 micro air holes. The number of micro air holes may vary based on the capacity of each model.

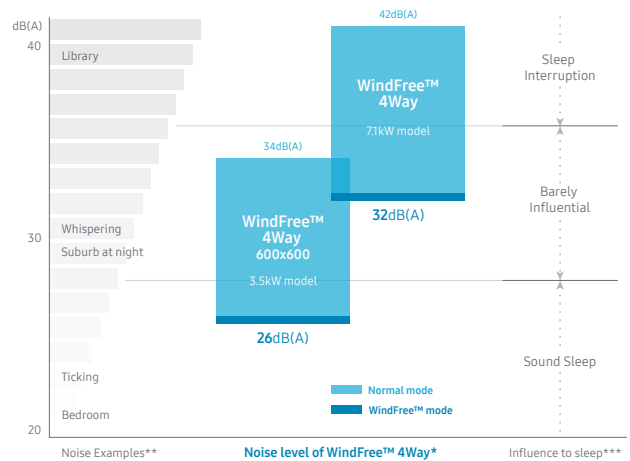
** ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) defines "still air" as when the velocity of air is below 0.15m/s, so people cannot feel any cold drafts.

Less detectable noise. Less disturbance.

Quiet Operation

During the low speed WindFree™ operation, the 4Way Cassette minimizes ambient noise while gently dispersing cool air across the room. As a result, it generates only 32dB(A) of sound, which is significantly less detectable sound than the Normal cooling mode*. So it is ideal for spaces that need a quiet environment, such as libraries and schools**.

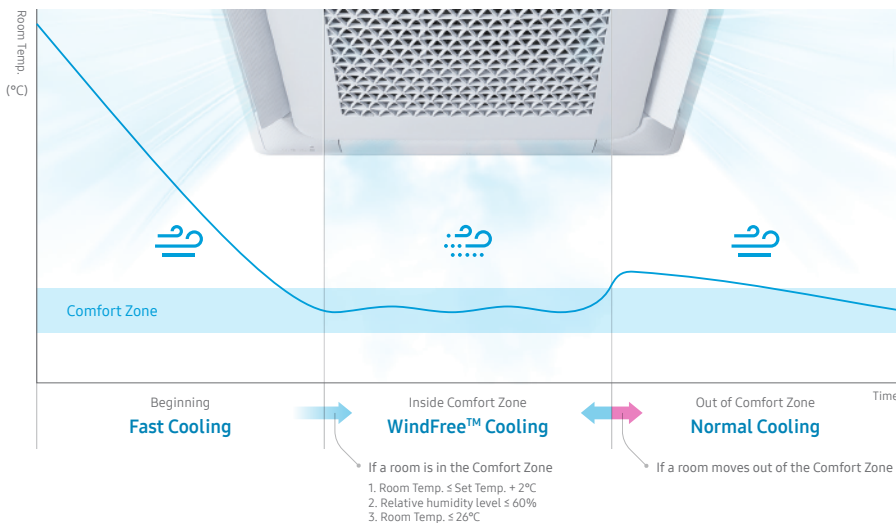
* Available only on the WindFree™ models. Based on internal testing of the WindFree™ 4Way (AC071NN4DKH/EU) and the WindFree™ 4Way 600x600 (AC035NNNDKH/EU). May vary depending on the actual usage conditions.
 ** Based on the Standard of National Noise Information System (Korea).
 *** Based on the Bedroom Standard by WHO.



Automatically keeps you comfortable

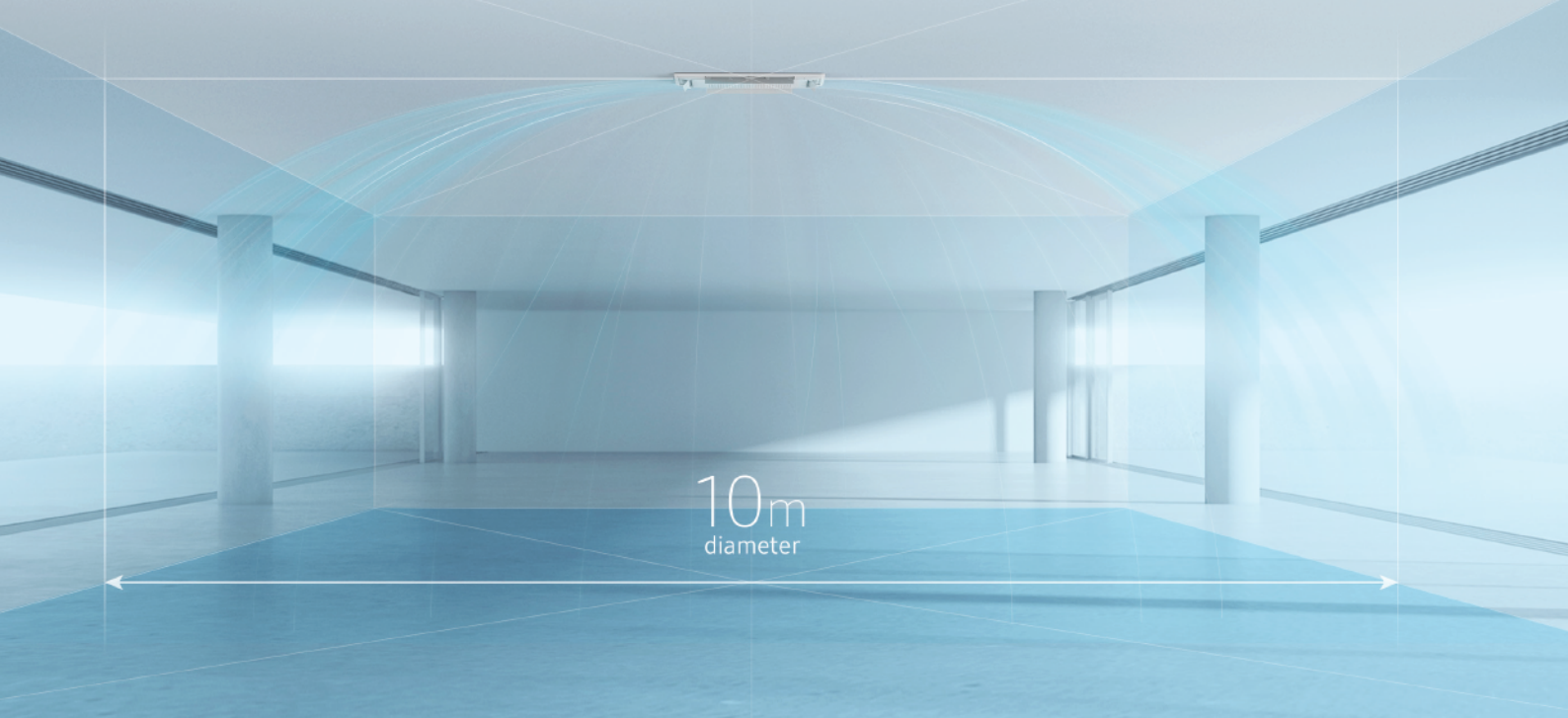
Smart Comfort Operation

Temperature and humidity are both key factor that affect how people feel. They are generally most comfortable between 23-26°C and with a humidity level of 60%. So the WindFree™ 4Way Cassette has a humidity sensor as well as a temperature sensor. It continually monitors both the temperature and relative humidity and analyzes the room conditions. It then automatically switches between operating modes to keep everyone feeling really comfortable without the need for any manual control.



WindFree™ 4Way

■ Comfort



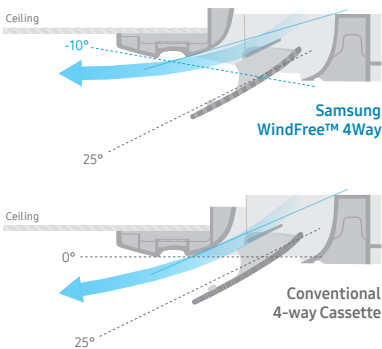
Faster & wider cooling with long wind

Big Blade & Slanted Outlet Design

4-way cassette air conditioners are generally installed in much larger spaces, such as commercial sites and offices. So the coverage of their air conditioning is one of the important factors in ensuring the comfort and productivity of everyone in the room.

As a result, the Samsung WindFree™ 4Way Cassette is designed to deliver not only the ultimate comfort in WindFree™ mode but also a superior cooling performance with its Normal cooling mode. It has an 84mm big blade that is 31% larger than normal*, which helps prevent air from dispersing, so it sends much more air directly to the chosen spots.

And the outlet is designed with a slant that opens blades at an angle of between -10° and 25° relative to the ceiling. This creates an almost horizontal air flow that can be sent further along the ceiling. So it can deliver cool air over a long distance, reaching up to 5m, which means it will quickly cover a 10m wide space without leaving dead zones.



* Based on the WindFree™ 4Way Cassette, compared to a conventional 4-way cassette air conditioner which has a 64mm blade. The WindFree™ 4Way 600x600 has a 66mm blade.

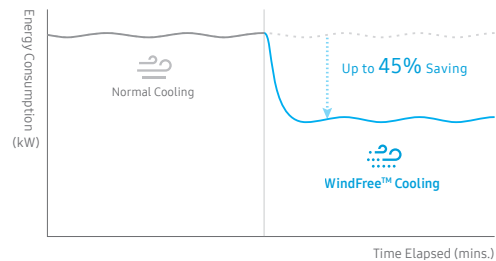
■ Cost Saving – Maintain comfort with minimum cost

The Samsung WindFree™ 4Way Casstte creates the ultimately comfortable environment and keeps it for longer with minimal energy. The highly energy-efficient WindFree™ Cooling is also proven as it effectively maintains cool air over 8 hours.

Reduces energy use by 45%*, while still keeping you comfortable**

Low Energy Consumption

Save money every day by optimizing your power usage with the 4Way Cassette's highly energy-efficient WindFree™ Cooling. When operating in WindFree™ mode, the outdoor unit consumes only minimal power – using up to 45% less electricity compared to the Normal cooling mode*. But it still keeps the room comfortably cool**, so you feel like you've entered a cave on a hot summer's day.



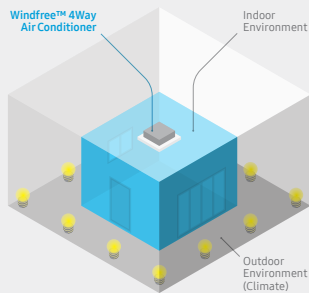
* Only applicable on the WindFree™ models. Based on internal testing of the AC140RN4DKG/EU working at 14.0kW. Operating conditions: Outdoor 35°C DB / 24°C WB, Indoor 27°C DB / 19°C WB. Results may vary depending on environmental factors and individual use.

** Based on internal testing on a WindFree™ 4Way 14.0kW model (AC140RN4DKG/EU) in a Test Lab, following the experimentation method described below.

HOW TO TEST

Proven to keep you cool indoors with WindFree™ Cooling

In order to stringently test the air conditioning systems in various climate conditions, Samsung runs a Test Lab that has a house inside it and can create and maintain simulated outdoor conditions. With the indoor and outdoor temperatures both being 35°C, a WindFree™ air conditioner installed in the house began cooling using the Normal mode. After reaching the set temperature of 25°C, it changed mode to WindFree™ and maintained a stable indoor temperature (25°C±0.5°C) for over 8 hours.

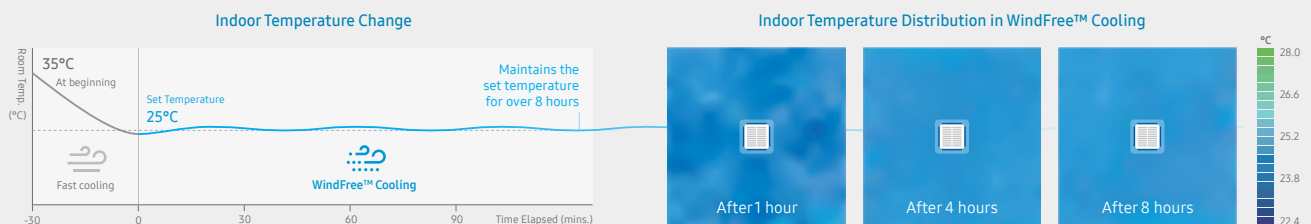


Test Condition

- Temperature: Outdoor 35°C (Sustained), Indoor 35°C (At beginning)
- Indoor Area: 40m²
- Product: WindFree™ 4Way 71kW model
- Measurement: Temperature distribution and consumed energy using Normal cooling and then WindFree™ Cooling

Test Result

- Using fast cooling, the room temperature reached the set temperature after 30 minutes.
- Mode changed to WindFree™, which maintained the indoor temperature (25°C±0.5°C) while the outdoor temperature remained constant.



WindFree™ 4Way

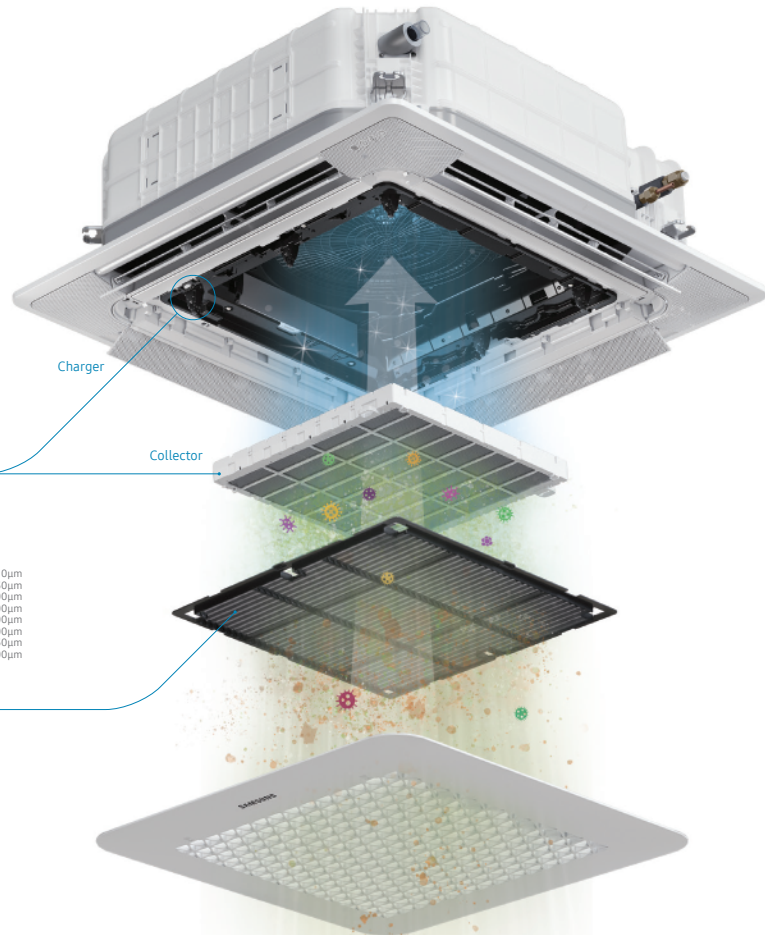
Hygiene - Even more comfort with even cleaner air

Staying cool is one thing, but to be really comfortable you also need to be breathing clean air. So the Samsung WindFree™ 4Way Cassette incorporates an air purifier that is designed to improve the air quality with its advanced filtration system.

An air conditioner and an air purifier rolled into one unit

Purification System (Optional)*

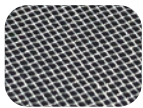
The Samsung WindFree™ 4Way Cassette not only has a general panel but can also include an optional Purifying Panel that keeps the indoor air fresh and clean. It consists of 2 types of filter – a Pre-Filter and a PM1.0 Filter, and this 2-step filtration system ensures that you can breathe in pure, fresh air all day long.



PM1.0 Filter

Has an electrostatic charger that gives ultrafine dust, up to 0.3µm in size, a negative charge, so it becomes strongly attached to the ground plates.

PM1.0	Ultrafine particles	PM2.5	Fine particles	PM10	Coarse particles
Virus	0.005 - 0.3µm	Powder	0.1 - 30µm	Red blood cells	5 - 10µm
Bacteria	0.3 - 60µm	Printer toner	0.5 - 15µm	Car emissions	1 - 150µm
Cigarette smoke	0.001 - 4µm	Atmospheric	0.001 - 40µm	Pollen	6 - 100µm
		House dust	0.05 - 100µm	Hair	5 - 200µm
		Cobweb width	2 - 3µm	Human hair	40 - 300µm
				Sand	62 - 500µm
				Fog	70 - 350µm
				Glass wool	1000µm



Pre-Filter

Blocks large particles, such as household dust, fibers, etc.



Korea Air Cleaning Association

The filtration system of the WindFree™ 4Way Cassette has been certified by the Korea Air Cleaning Association. Based on testing using the standard KACA-CAC-2011.

* This function is optional. The number and shape of filters may vary by model.

Keep using for longer with a simple wash

Washable Filters

The semi-permanent PM1.0 Filter and Pre-Filter are washable and reusable. It means you can continue enjoying clean, fresh air, while also saving on maintenance costs as you don't need to buy new filters.

STEP 01/ Wash

Pre-Filter
Remove any dust or debris on the filter with water or using a vacuum cleaner.

Soft brush
Vacuum cleaner

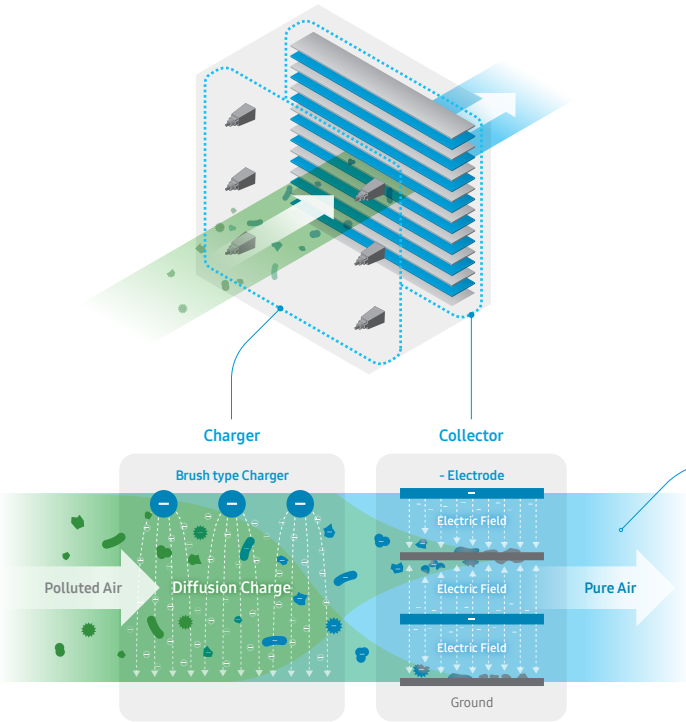
PM1.0 Filter
Soak the filter in a solution of water and mild detergent for 30 minutes.

Mild detergent
30 mins.

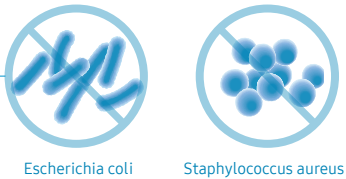
STEP 02/ Rinse and Air Dry

Rinse the filter and let it air dry for over 12 hours in a well-ventilated area that is out of direct sunlight.

Proven capability to sterilize bacteria as well as capturing ultrafine dust



The PM1.0 filter is not only effective at capturing ultrafine dust of up to 0.3µm in size, but it also sterilizes up to 99% of the bacteria trapped by the filter using an electrostatic precipitator. It has two main parts that charge and collect dust and bacteria. The brush discharger generates negative ions. And these give the dust particles and bacteria a negative charge, so they become strongly attached to the ground electrode due to the electrostatic force of the collector. Its effectiveness in sterilizing bacteria has been verified by Intertek*.



* Based on the Intertek test report. (No.: RT20E-S0025)
 * Test bacteria: Escherichia coli, Staphylococcus aureus.



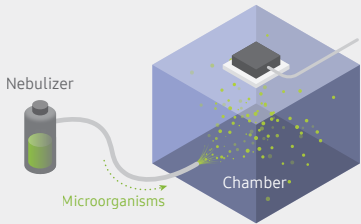
Intertek is a British multinational company specializing in product assurance, inspection, testing and certification. This test was rigorously conducted by Intertek, and the test result was reported officially.



“The PM 1.0 filter of Samsung Electronics can sterilize more than 99% of the microorganisms that are collected on the filter.”

Test method & measurement

1. Run the air conditioner while operating the PM1.0 Filter using high voltage power and a low fan speed. Spray bacteria towards the filter using a nebulizer, so that the bacteria are captured in the filter.
2. Stop spraying bacteria and keep the filter operating for an additional 10 minutes to allow the sterilization process to happen.
3. Calculate the sterilization rate by comparing the number of bacteria remaining on the filter with the number of bacteria cultivated on the source medium.



Conclusion

More than 99% of the microorganisms, such as Escherichia coli and Staphylococcus aureus, in the PM1.0 filter were destroyed by static electricity.

WindFree™ 4Way

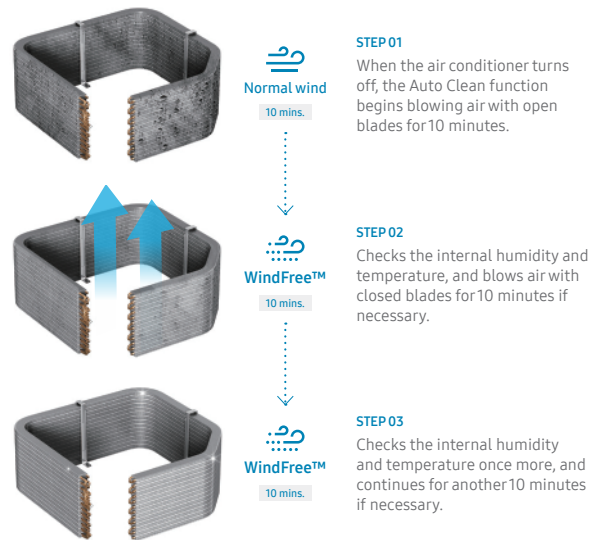
Hygiene

Stays clean & hygienic with less moisture

Auto Clean

When an air conditioner is turned off after working in cooling mode the difference in internal and external temperatures can lead to moisture condensing on the heat exchanger, enabling mold to grow that causes odors. To prevent this, the Samsung WindFree™ 4Way Cassette has a humidity sensor and features an Auto Clean function*. After it's been working, it automatically dries the heat exchanger using a 3-step process, sensing the temperature and humidity inside the air conditioner. It removes moisture by blowing air for between 10 to 30 minutes, which prevents the build-up of bacteria and odors.

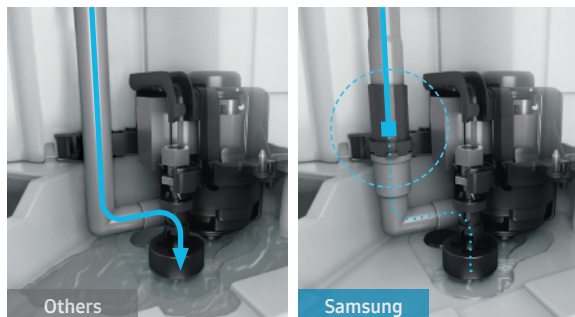
* Only available in WindFree™ models that have a humidity sensor.



No backflow, no fungi growing inside

Drain Pump with Check Valve

A built-in Drain Pump gives you much more flexibility in the installation of drainage. It also has a Check Valve as standard, which prevents condensed water from flowing back and dripping into indoor spaces. So you don't need to worry about water stagnation or the overflow of drain water. And, as less water collects in the Drain Board, it stays clean and there is less risk of bacteria and fungi growing.



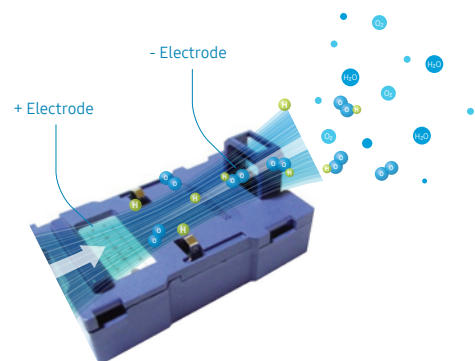
Others
When turned off, water in the pipe flows backward to the drain board, which may cause bacteria and fungi.

Samsung
When turned off, a Check Valve prevents water from flowing back, so the drain board quickly gets dry and stays clean.

Reduces certain harmful bacteria

Ionizer Kit (Optional)

With an optional Ionizer Kit, the Samsung WindFree™ 4Way Cassette can sanitize indoor air by generating active hydrogen and oxygen ions that help to reduce airborne microorganisms. The process of reducing the harmful substances is completely harmless to the human body and the environment.



Design

An extensive choice to fit every need

7 Types of Panel Design

The Samsung WindFree™ 4Way Cassette is available with a large choice of panel designs. These feature various patterns and functionalities, to suit different spaces and the specific needs of consumers, designers and architects.

All types of panels are compatible with each other's main units. For example, if you are using the WindFree™ 4Way air conditioner and want to add an air purifier you don't need to replace the entire indoor unit. Instead you can simply switch the current panel to a Super Premium type panel, which has an air purification functionality*.

Standard type

Non WindFree™ Panels

For those who prefer or don't care about direct wind.



Waffle pattern
PC4NUSKAN



Classic pattern
PC4NUSKEN



Black color
PC4NBSKAN

Premium type

WindFree™ Panels

For those who want WindFree™ comfort to stay cool without cold drafts.



WindFree™ 4Way
PC4NUFMAN



WindFree™ 4Way
600x600
PC4SUFMAN

Super Premium type

WindFree™ Purifying Panels

For those who want to keep the indoor air purer and also enjoy WindFree™ comfort.



WindFree™ 4Way
with Purification System
PC4NUCEAN



WindFree™ 4Way
with Purification System
& Auto Elevation
PC4NUCK5N

* Only available on new WindFree™ models released in 2020, except for the WindFree™ 4Way 600x600, which has a different main unit (chassis). Model names may differ depending on the country.

WindFree™ 4Way

Smart Control - Control it without taking control

The Samsung WindFree™ 4Way Casstte efficiently keeps you feeling comfortable using intelligent technologies that continuously track your movement and understand your needs.

Intelligently brings the ultimate comfort to your life

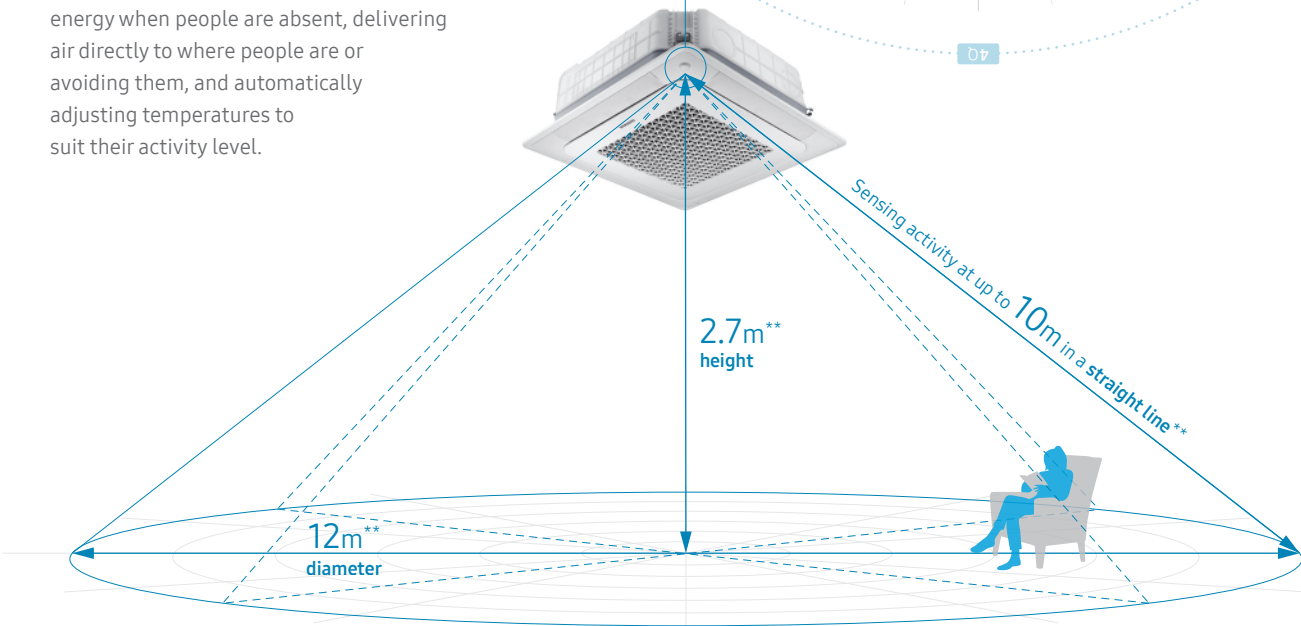
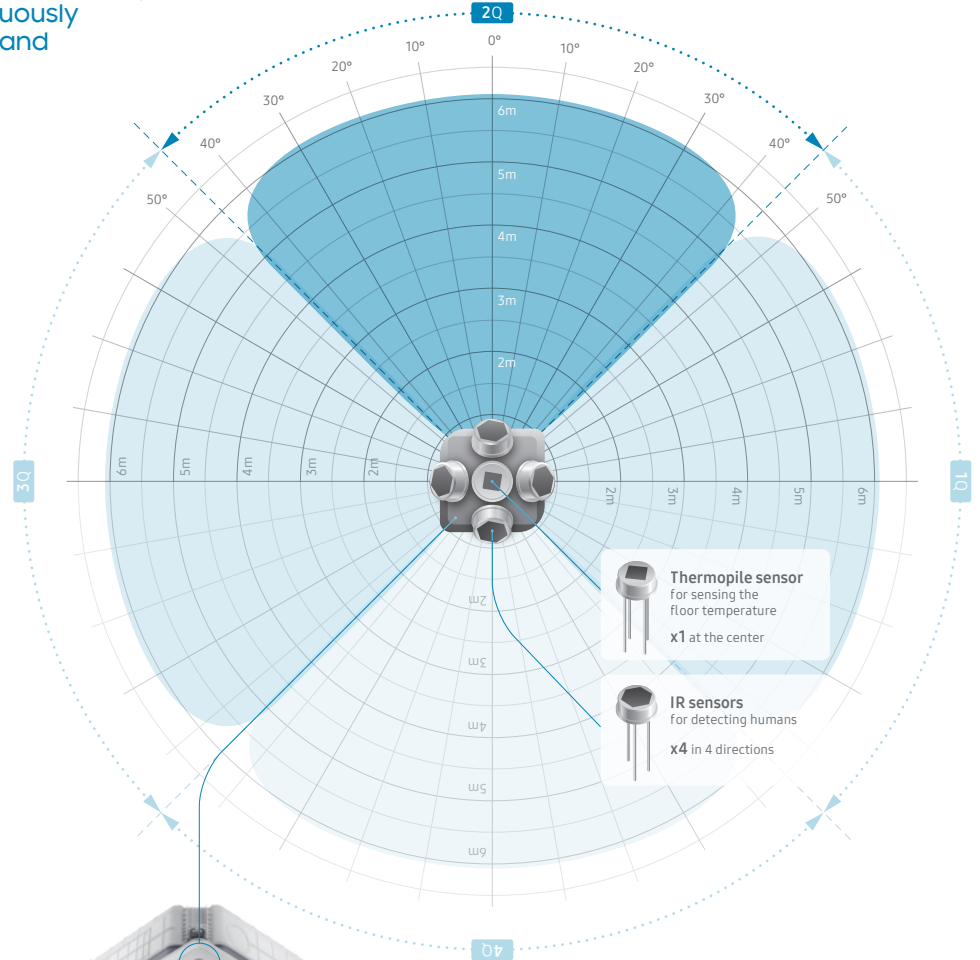
Motion Detect Sensor (MDS)*

Air conditioning has been evolving to revolve around the movement of a room's occupants, so that their presence is a very important factor in operating the air conditioners.

The early versions of the Motion Detect Sensor focused on detecting the presence or absence of people in the room.

However, the technology has now improved to the point where it can precisely detect both the activity level and location of occupants, as well as the temperature on the floor.

As a result, the Samsung WindFree™ 4Way Cassette works more intelligently – saving energy when people are absent, delivering air directly to where people are or avoiding them, and automatically adjusting temperatures to suit their activity level.

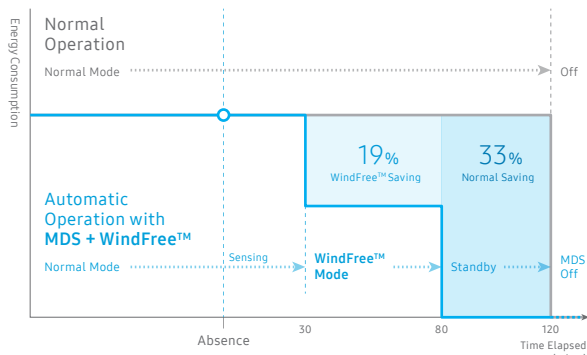


* This function is optional. An MDS Kit is required: MCR-SMC for the WindFree™ 4Way, MCR-SMD for the WindFree™ 4Way 600x600.

** Detectable range: circular area with a 12m diameter, when installed at a ceiling height of 2.7m. The detectable range increases in direct proportion to the installation height.

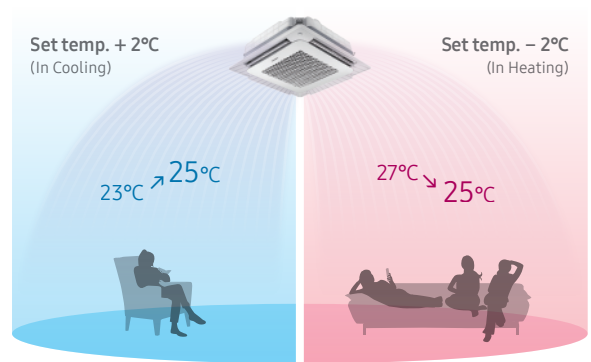
1. Absence Detecting Operation

Use less energy when rooms are empty – automatically. The 4Way Cassette’s Motion Detect Sensor* detects if there has been no movement for 30 minutes and switches to WindFree™ mode to save energy, before entering standby after 50 minutes**. If it detects any activity it returns to normal. Through this 2-step operation switching, it can reduce energy consumption by up to 52%***. So it’s ideal in places that are often unoccupied, such as offices, conference rooms and school classrooms.



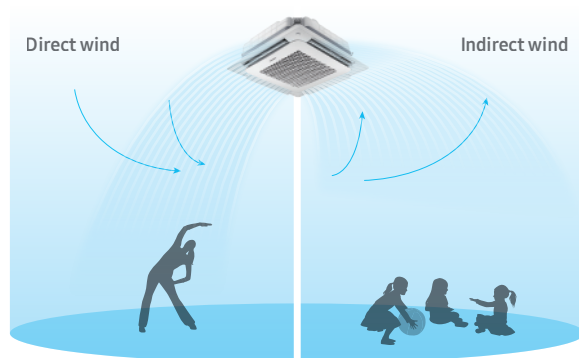
2. Activity Detecting Operation

Sensing the activity level of a room’s occupants, the WindFree™ 4Way Cassette automatically optimizes the indoor temperature to be 2°C higher or 2°C lower to keep them feeling comfortable, while reducing any unnecessary waste of energy. For example, in cooling mode, when it detects that there are only a few people in the room it runs at 2°C higher. Or, when in heating mode, if there are lots of people together it automatically runs at 2°C lower.



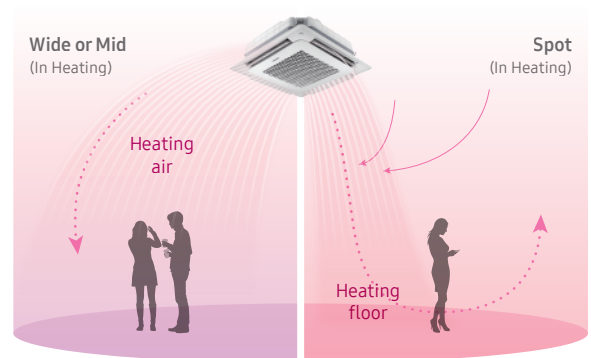
3. Direct/Indirect Wind on Demand

You can simply set your air conditioner to blow air towards you, or not. The Motion Detect Sensor* monitors your movement and automatically adjusts the vertical air direction, based on the chosen mode. So you don’t need to control it manually to ensure you always enjoy optimum comfort wherever you are.



4. Vertically Even Heating

In heating mode, the Motion Detect Sensor* senses the floor temperature and compares it with the set temperature and indoor temperature. When the temperature on the floor is 8°C or more lower than other temperatures, the WindFree™ 4Way Cassette blows warm air vertically onto the floor to create a consistently warm environment.



* This function is optional. An MDS Kit is required: MCR-SMC for the WindFree™ 4Way, MCR-SMD for the WindFree™ 4Way 600x600.

** Only available on the WindFree™ models. The non WindFree™ models enter standby after 30 minutes instead of switching to WindFree™ mode.

*** Based on internal testing on WindFree™ 4Way models, comparing Normal operation vs. Automatic operation with the Motion Detect Sensor for 2 hours. Operating conditions: outdoor unit: AC140RXADNG/EU, indoor unit: AC140RN4DKH/EU (panel: PC4NUFMAN). Standard cooling operation: outdoors (35°C DB / 24°C WB), indoors (27°C DB / 19°C WB). Results may vary depending on environmental factors and individual usage.

WindFree™ 4Way





■ Maintenance - Easily keep your air conditioner in the best condition

The Samsung WindFree™ 4Way Cassette comes with various convenient features that enable you to easily maintain it in the best possible condition. As most of them are included as standard, you can ensure that it always delivers the optimum performance without additional expense.

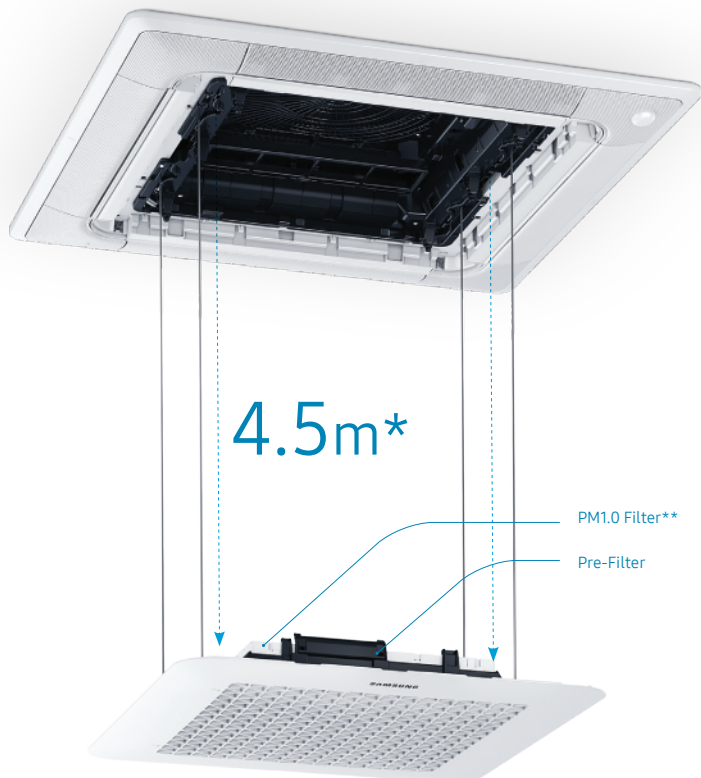
Rapidly identify errors & reduce downtime

Self-diagnosis

The WindFree™ 4Way Cassette's Self-diagnosis function alerts you to malfunctions straight away. It means that you can quickly arrange a service repair visit. And an error code and LED light enable engineers to easily identify the cause of any failure, helping to reduce the time it takes to diagnose and fix the problem.

Examples of relevant errors	LED lamp display			
	 On/Off	 Defrost	 Timer	 Filter
Error on indoor temperature sensor		●		
Error on heat exchanger sensor of the indoor unit	●	●		
Error on outdoor unit sensors	●		●	
Error on MDS (Motion Detect Sensor)	●			●

● Flickering



Conveniently maintain filters

Auto Elevating Grille Panel (Optional)

The recent emphasis on indoor hygiene has highlighted the need to keep the air conditioner filter clean. Although the parts can be easily detached and cleaned, special safety precautions are needed when using a ladder to access them as the installation location is normally quite high.

To minimize any danger or inconvenience, the auto elevating grille panel automatically lowers the grille part by up to 4.5m*. As the filters are attached to the grille you can easily and safely reach them without using a ladder.

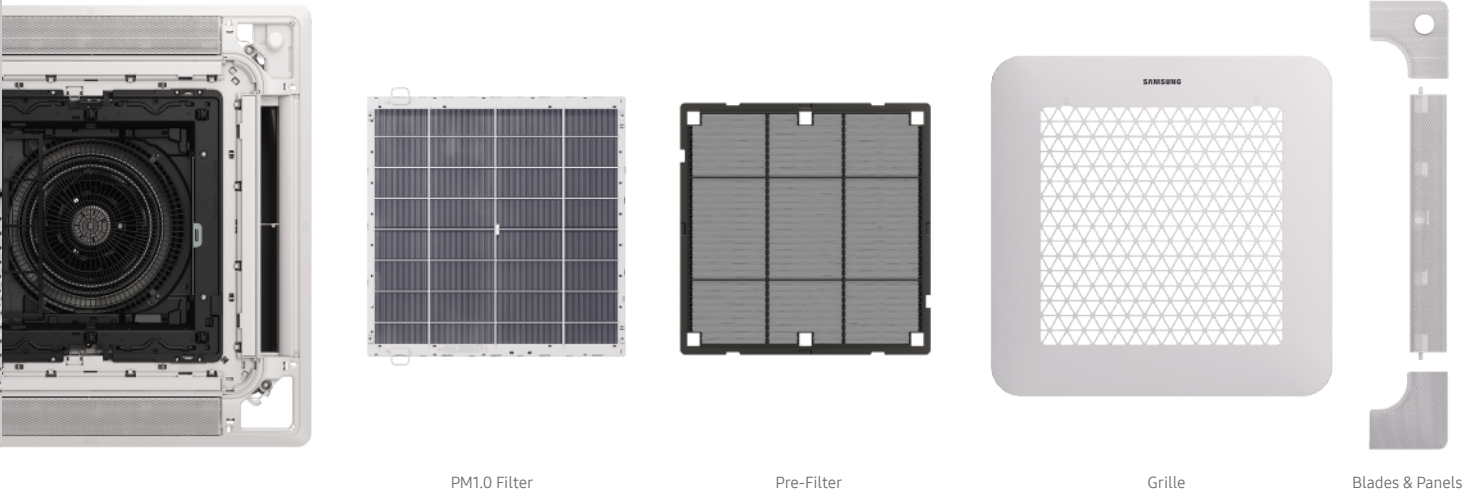
* May vary based on the actual usage conditions.

** Only available when using a Purifying Panel, PC4NUCK5N.

Easily keep the air conditioner clean

Detachable and Washable Parts

The cleanliness of the exterior, as well as the filters, is very important for 4-way cassettes that are widely used in commercial spaces. The panels and filters of the WindFree™ 4Way Cassette are very easy to remove and clean - without screws. You can simply pull the hook inside the panel grille (near the Samsung logo) to open and remove it. And the corner panels and blades can be easily separated when pulled downwards. All of the exterior parts can be cleaned with a soft brush or cloth. You can also use a vacuum or water to clean the internal filter, so you don't need to keep purchasing new filters.



PM1.0 Filter

Pre-Filter

Grille

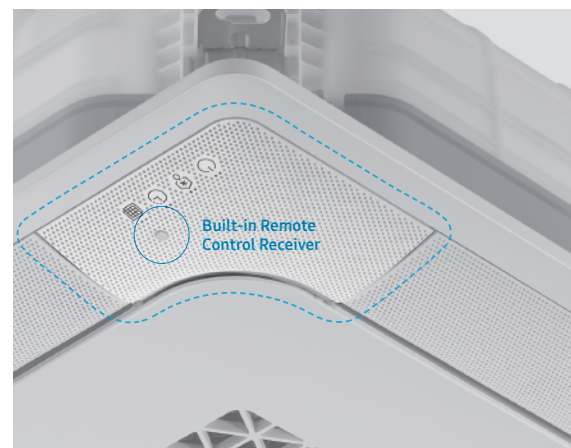
Blades & Panels

Enjoy wireless convenience without any additional installation

Built-in Remote Control Receiver

Remote controls are essential to control air conditioners. There are two choices to individually and directly control the WindFree™ 4Way Cassette, depending on the location of the installation.

- **Wired remote control (MWR-WG00N)**
Fixed to the wall, connected to the indoor unit by a wire.
- **Wireless remote control (AR-EH03E)**
Control an indoor unit using a wireless signal without having to be installed in a specific location.



Wireless remote controls are often chosen by users because of their ease of use, but this involves extra hassle installing an Optional Receiver Kit, which is usually sold separately by other brands of air conditioner. However, Samsung provides it as standard, allowing users to enjoy the added convenience of wireless control with no additional cost and effort.