

# WindFree™ 1Way

Save  
space and money.  
Feel more  
comfortable.



Reduce the cost and increase the flexibility of installing air conditioning using the space-saving Samsung WindFree™ 1Way Cassette. As it's only 135mm high and 950mm wide, it fits into a limited ceiling space and can be installed almost anywhere, instead of using ducted air conditioners. In addition, its Wind-

Free™ Cooling provides added comfort without the unpleasant feeling of a direct cold wind, while also consuming less energy. And it keeps your environment more hygienic with an optional PM1.0 filtration system that removes 99% of bacteria\* and an easy to clean filter, which also reduces maintenance costs.

\* Based on the Intertek test report. (No.: RT20E-S0010-R) \* Test bacteria: Escherichia coli, Staphylococcus aureus.



Comfort

- WindFree™ Cooling
- Quiet Operation
- Smart Comfort Operation
- 4-way Auto Swing

Cost Saving

- 135mm Slim Height
- Low Energy Consumption
- Big Blade
- Built-in Remote Control Receiver
- Compact Design with 950mm Width
- Downward Air Flow

Hygiene

- Purification System
- PM1.0 Filter
- Pre-Filter
- No Ductwork
- Washable Filters
- Auto Clean
- Drain Pump with Check Valve
- Ionizer Kit

Maintenance

- Easy Service Access
- Self-diagnosis

Design

- 3 Types of Panel Design

# WindFree™ 1Way

## ■ Comfort

WindFree™ provides all day comfort that ensures you're always relaxed and refreshed

The Samsung 1Way Cassette air conditioner delivers a unique level of comfort by cooling optimally, without the unpleasant feeling of cold air on your skin.



10,000  
Micro Air Holes\*

## Sleep comfortably with less worrying about getting 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. This is particularly true when sleeping, as it's not that easy to fall asleep or to sleep deeply and comfortably when you feel cold. With WindFree™ technology, the Samsung WindFree™ 1Way 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 10,000 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. And it helps you and your family to sleep soundly in the summer.



No cold air flow directly reaches your sleeping children, who usually kick their blankets off just 30 minutes after falling asleep.

\* 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 can't feel any cold drafts.



## Less detectable noise. Less disturbance.

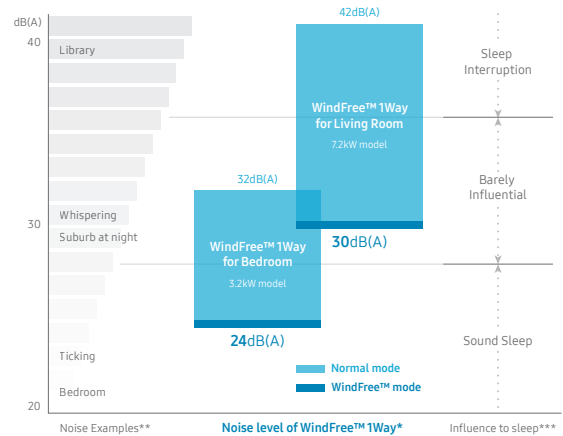
### Quiet Operation

The WindFree™ 1Way Cassette minimizes ambient noise while gently dispersing cool air across the room. And it requires no duct that may cause additional noise, so it ensures a quite operation regardless of the installation conditions. Using the WindFree™ mode it generates only 24dB(A) of sound\*, which is quieter than whispering\*\*. So it won't disturb your sound sleep\*\*\* on a summer night.

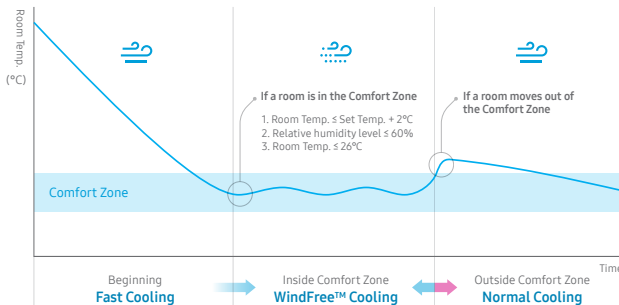
\* Based on internal testing on a WindFree™ 1Way 3.2kW model (AM032MN1DBH1), which is usually installed in a bedroom, and a 7.2kW model (AM072MN1DBH1), which is usually installed in a living room. May vary by model and depending on the actual usage conditions.

\*\* 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™ 1Way 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.

## Heats or cools evenly in every corner

### 4-way Auto Swing\*

Create a comfortable environment with an even temperature in every corner of a room. The WindFree™ 1Way Cassette features an Auto Swing function\* that automatically expels cool air in every direction. As well as the auto up-down swing function it also has an auto left-right swing function, so air is evenly distributed across the room.



\* Only available on certain models.



# WindFree™ 1Way

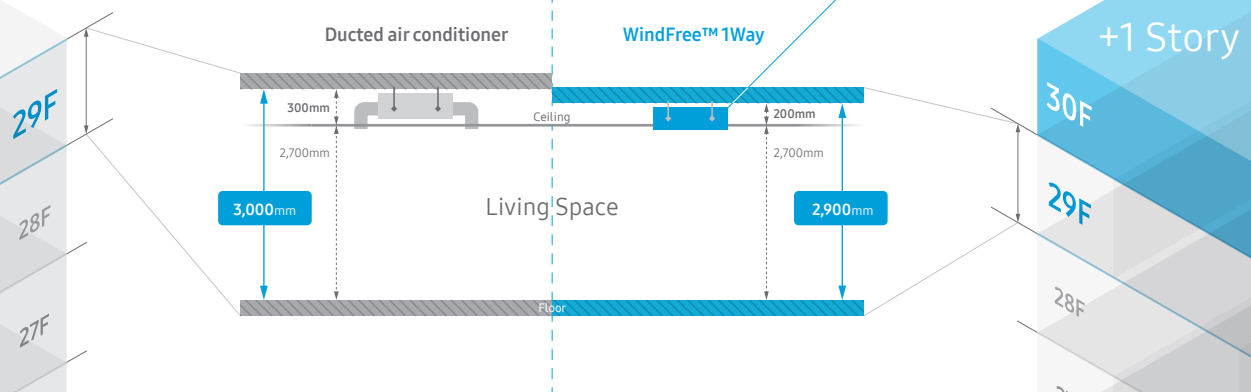
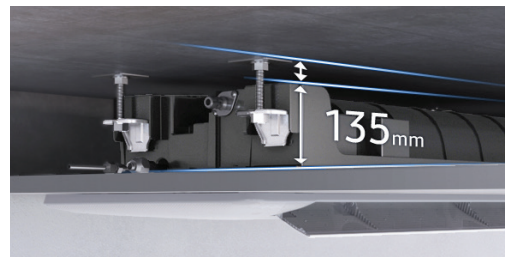
## ■ Cost Saving - Save on installation, save when using

The Samsung 1Way Cassette's compact design and downward air flow reduce installation costs by enabling a more flexible choice of locations. And its WindFree™ Cooling consumes much less energy than Normal cooling, while ensuring that you stay comfortably cool.

## Frees up extra space to create an extra story for free

### 135mm Slim Height

Ducted type air conditioners generally require approx. 300mm of ceiling space to be installed properly. But the slimline Samsung WindFree™ 1Way Cassette has a height of only 135mm – or 200mm at the very most. So it provides a suitable and effective solution for cooling and heating a wide range of locations where space is limited.



Most of all, its slim design helps to create additional stories in high-rise residential buildings at no additional cost\*, as it can reduce the amount of wasted ceiling spaces to free up extra living space. So, for example, you could fit 1 more story into a 30 or more story residential building without compromising the living space of residents\*\*.

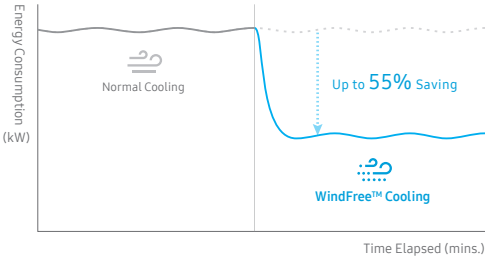
\* Excludes the construction costs for the extra floors, ceiling and collateral equipment of additional stories.

\*\* Based on the assumption that the height of a story between the supporting ceiling and the floor is 3m, excluding the gaps between stories. May vary depending on the height of any ducted air conditioners and the ceiling conditions.

# Reduces energy use by 55%\*, while still keeping you comfortable\*\*

## Low Energy Consumption

Save money every day by optimizing your power usage with the highly energy-efficient WindFree™ Cooling. When operating in WindFree™ mode, the outdoor unit consumes only minimal power – using up to 55% 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.



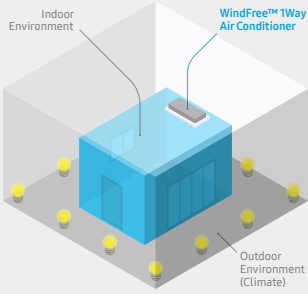
\* Based on internal testing: Outdoor unit AM050FXMDEH running simultaneously with Indoor units AM056NN1DEH, AM036NN1DEH, AM022NN1DEH. Temperature conditions: Outdoor 35°C DB / 24°C WB, Indoor 27°C DB / 19°C WB. Results may vary depending on environmental factors and individual use.

\*\* Based on internal testing on a WindFree™ 1Way 7.2kW model 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.

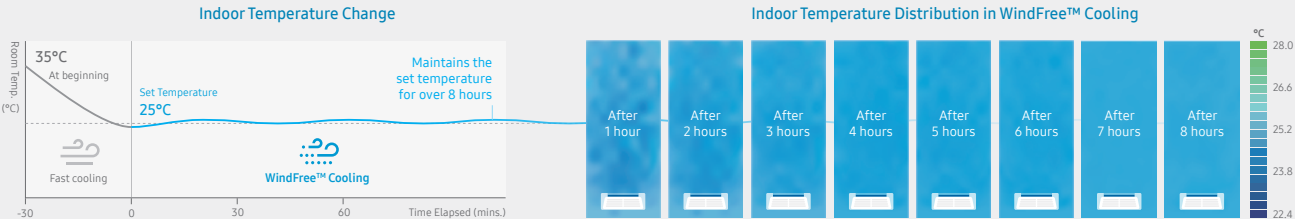


#### Test Condition

- Temperature: Outdoor 35°C (Sustained), Indoor 35°C (At beginning)
- Indoor Area: 40m<sup>2</sup>
- Product: WindFree™ 1Way 7.2kW 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™, and it maintained the indoor temperature (25°C±0.5°C) while the outdoor temperature remained constant.



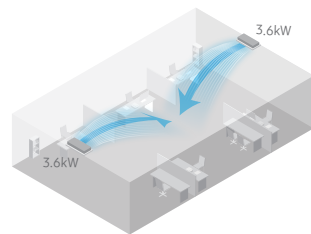
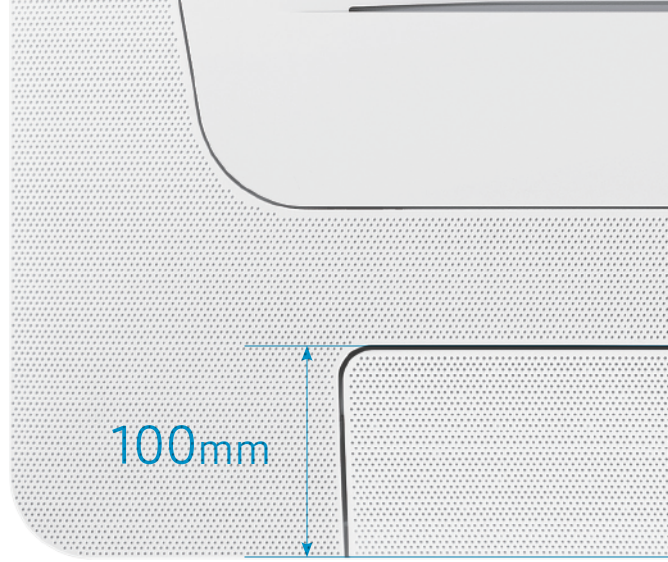
# WindFree™ 1Way

## Cost Saving

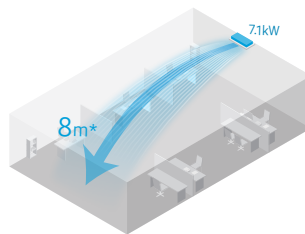
One covers as much as two with a long wind

### Big Blade

Cool your room quickly from corner to corner. The WindFree™ 1Way Cassette has a 100mm big blade that can deliver cool air over a long distance, reaching up to 8 meters\*. It also has a wider operating angle, as the blade can move between 30 to 80 degrees. So it can cool a whole room rapidly and evenly by dispersing cool air farther and into every corner, without leaving any “dead zones”. Its long wind means you can replace two conventional 1-way cassettes with one WindFree™ 1Way air conditioner, especially in long rectangular spaces. So you can reduce the installation and maintenance costs of your air conditioning.



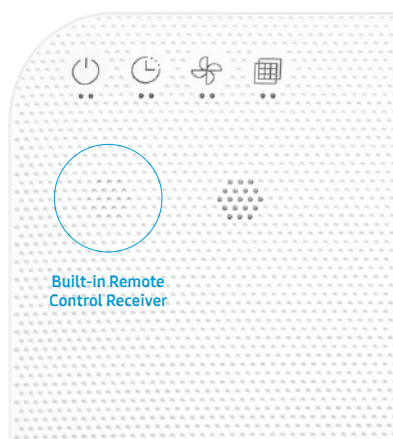
Conventional 1-way cassette



Samsung WindFree™ 1Way



\* Based on internal testing on a 7.1kW model. Results may vary depending on environmental factors and individual use.



## Enjoy wireless convenience without any additional installation

### Built-in Remote Control Receiver

Remote controls are essential to control air conditioners. There are two choices, 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.





## Even fits into a 1.1m wide aisle of an entrance door

### Compact Design with 950mm Width

Compared to a ducted air conditioner, the cassette type air conditioner has the benefit of reducing the installation cost as it can be simply installed with a single hole and no duct work. However, conventional 1-way cassettes have a width of at least 1,200mm, which makes them difficult to fit into the narrow aisle of an entrance door. So many hotels and residential sites have not been able to benefit from using 1-way cassettes, without changing their interior design or the installation location.

As it is only 950mm wide, the Samsung WindFree™ 1Way Cassette can be installed even in the narrow space above an entrance door, instead of a ducted air conditioner. In addition, it is often a good solution to replace old ducted air conditioners in hotel rooms or bedrooms, because it can be easily installed in the same position as the existing systems, which minimizes any additional costs.

\* Only available on certain models, with the specific capacities of 2.5kW, 2.8kW, 3.2kW, 3.6kW, 4.0kW and 4.5kW.

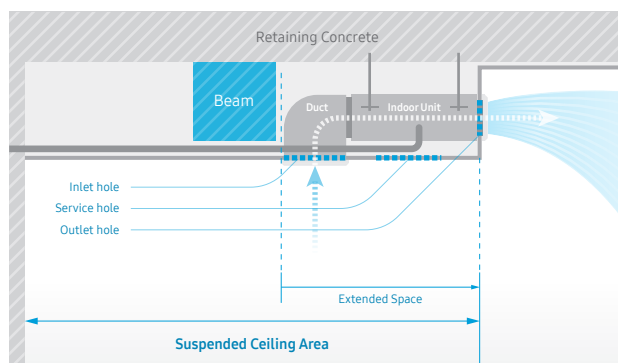


## A greater choice of location whatever the position of beams

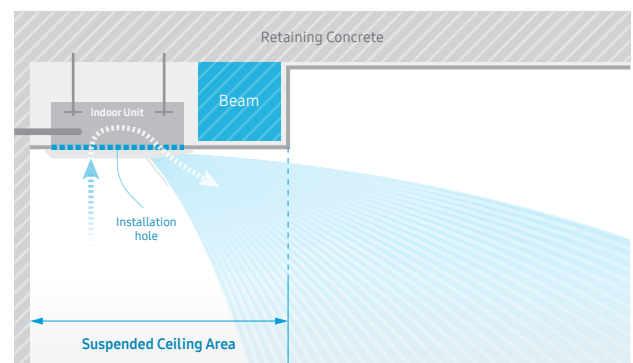
### Downward Air Flow

In the case of a ducted air conditioner, which has an inlet and an outlet at the front and the rear, the choice of where it is installed is strongly affected by the position of the beams in the ceiling. If there is a beam at the preferred installation location, it would have to be fitted in front of the beam. This may result in a complicated ductwork structure and entail an additional cost to extend the ceiling space, and the ceiling interior may also look cramped.

With the Samsung WindFree™ 1Way Cassette both the inlet and outlet are on the bottom, so it can be flexibly installed almost anywhere regardless of the location of the beams – either in front of or behind them. This saves the cost of creating extra ceiling space or ductwork, while giving you more freedom of choice for its location and the direction of discharge.



Ducted air conditioner



Samsung WindFree™ 1Way

# WindFree™ 1Way

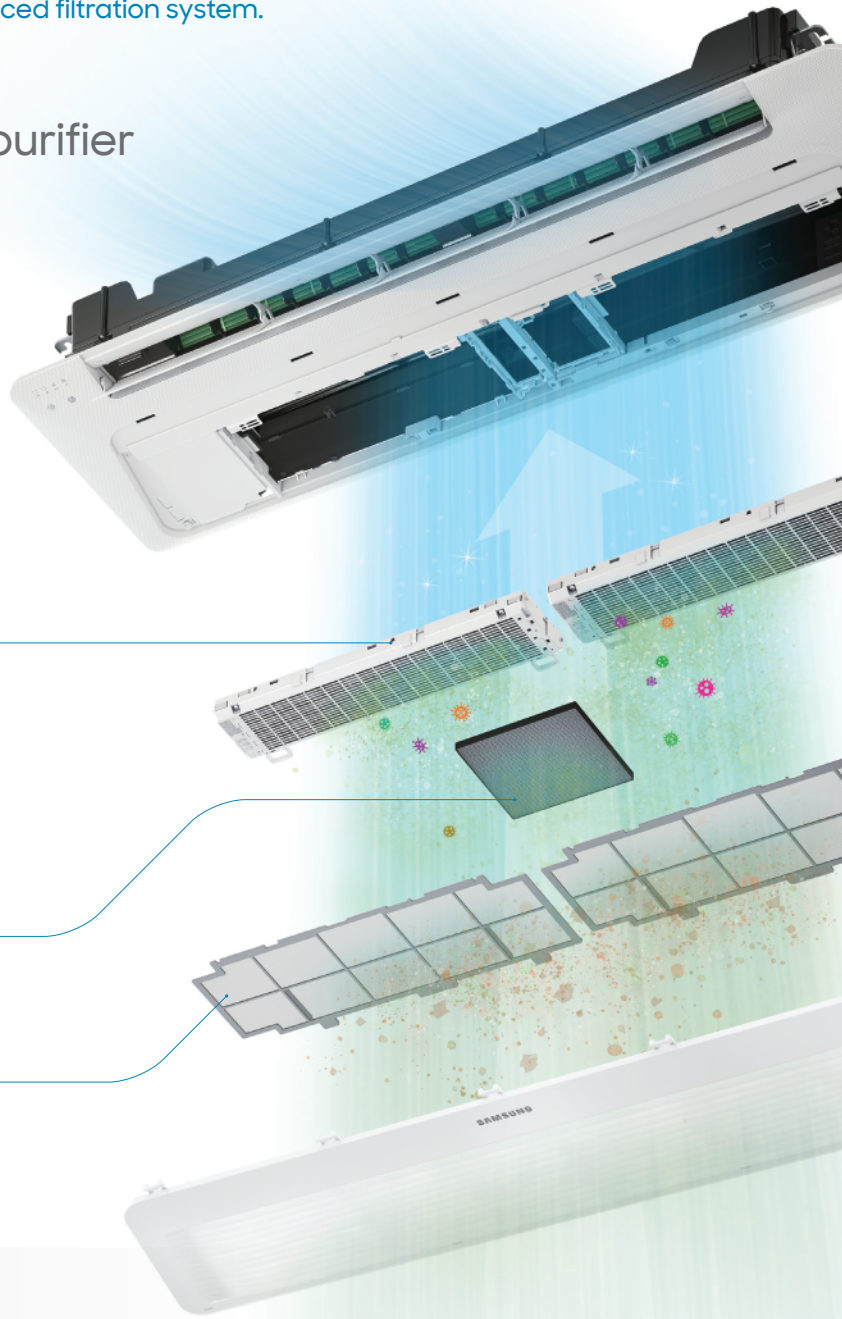
## Hygiene - Even more comfort with even cleaner air

Staying cool is one thing, but to be really comfortable you also need to be breathing clean air. So the Samsung WindFree™ 1Way 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)\*

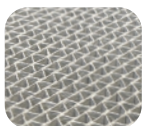
The Samsung WindFree™ 1Way Cassette not only has a general panel but can also include an optional Purifying Panel that keeps the indoor air fresh and clean. The Purifying Panel consists of 3 types of filter – a Pre-Filter, Deodorization Filter and a PM1.0 Filter. This 3-step filtration system ensures 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 positive charge, so it becomes strongly attached to the ground plates.

<b>PM1.0</b> 1µm Ultrafine particles	<b>PM2.5</b> 2.5µm Fine particles	<b>PM10</b> 10µm 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 60 - 500µm
		Fog 70 - 350µm
		Glass wool 1000µm



#### Deodorization Filter

Captures unpleasant odors.



#### Pre-Filter

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



#### Korea Air Cleaning Association

The filtration system of the WindFree™ 1Way has been certified by Korea Air Cleaning Association. Based on testing using the standard KACA-CAC-2011.

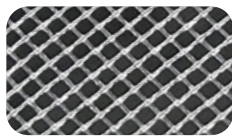
\* This function is optional. The number and shape of filters may vary by model.

## 20% denser to capture more

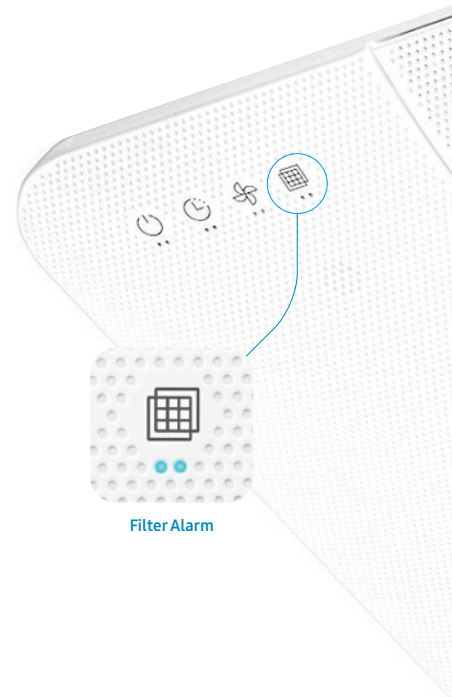
### Pre-Filter

The Pre-Filter of the WindFree™ 1Way Cassette is 50 mesh (about 0.5 mm), which is 20% denser than general vinyl chloride filters. So it can capture much finer dust particles, ensuring less dust in the indoor space and better air quality. The cleaning alarm indicator on the decoration panel lights up to inform you when it's time to clean the filter, and you can easily remove it by opening the return grille.

**Vinyl Chloride Mesh Filter**  
Commonly used in general ducted air conditioners



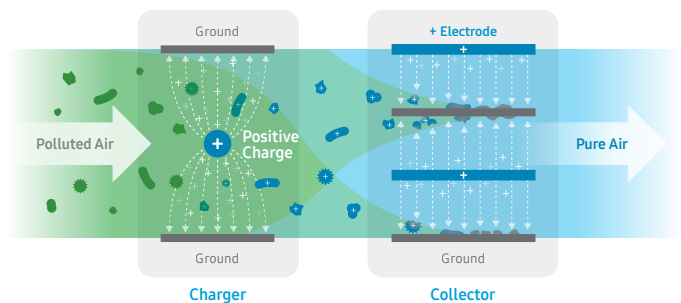
**Samsung's 50 Mesh Filter**  
Used in Samsung WindFree™ 1Way air conditioners



## Proven capability to sterilize bacteria as well as capturing ultrafine dust

### PM1.0 Filter

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. Its effectiveness in sterilizing bacteria has been verified by Intertek\*.



\* Based on the Intertek test report. (No.: RT20E-S0010-R)  
\* Test bacteria: Escherichia coli, Staphylococcus aureus.



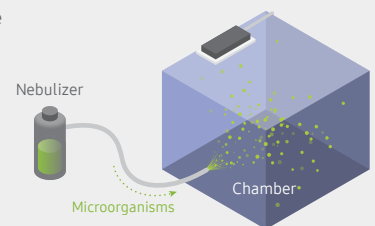
Intertek is a British multinational company specializing in product assurance, inspection, testing and certification. This test was rigorously conducted by Intertek, and the test result was reported officially.



**"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™ 1Way

## Hygiene

### Simple to keep clean, without needing a service provider

#### No Ductwork

Over time dust and debris will accumulate in the ductwork needed for ducted air conditioners. To keep it clean, you need to regularly hire a professional cleaning service provider. The Samsung WindFree™ 1Way Cassette requires no duct work, so there is no such hassle. You simply need to regularly clean the built-in filter with water, after removing it from your air conditioner.

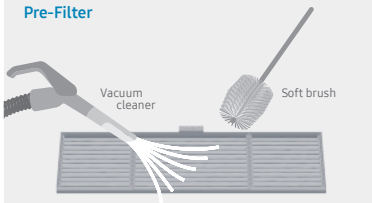

	Ducted air conditioner	Samsung WindFree™ 1Way	
<b>Ductwork required</b> Dust particles accumulate in both filters and ductwork			<b>No Ductwork required</b> Only the filter needs to be cleaned.
<b>Professional cleaning service or tool required</b> It is difficult to clean inside ductwork, so you need to hire a professional cleaner			<b>Anyone can clean it with water</b> You can easily remove and clean the filter yourself

### Keep using for longer with a simple wash

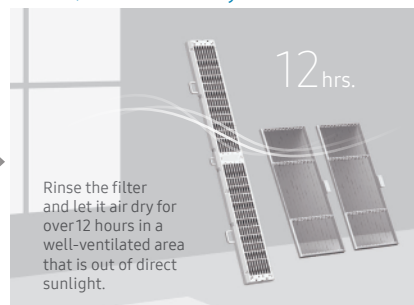
#### Washable Filters

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

<b>Pre-Filter</b>  Remove any dust or debris on the filter with water or using a vacuum cleaner.	<b>PM1.0 Filter</b>  Soak the filter in a solution of water and mild detergent for 30 minutes.
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#### STEP 02/ Rinse and Air Dry



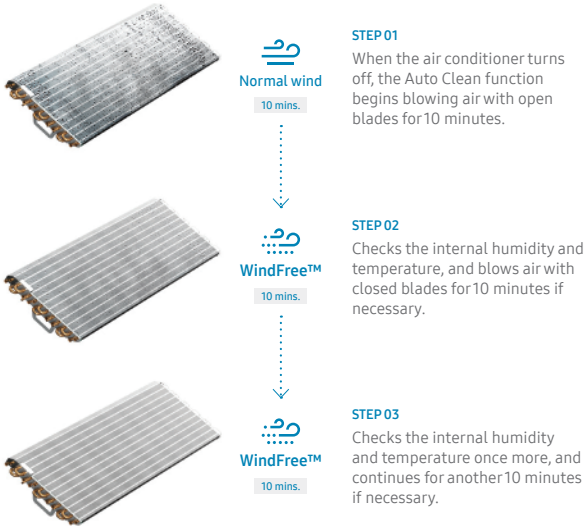
Rinse the filter and let it air dry for over 12 hours in a well-ventilated area that is out of direct sunlight.

# 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™ 1Way 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.

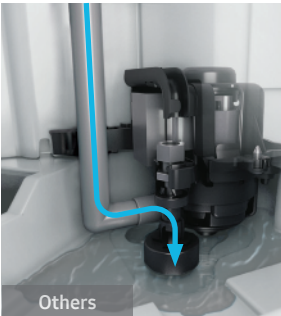
\* Only available in WindFree™ models that have a humidity sensor.



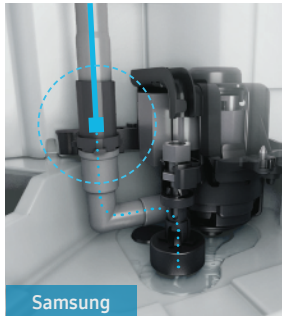
# No backflow, no fungi growing inside

## 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.

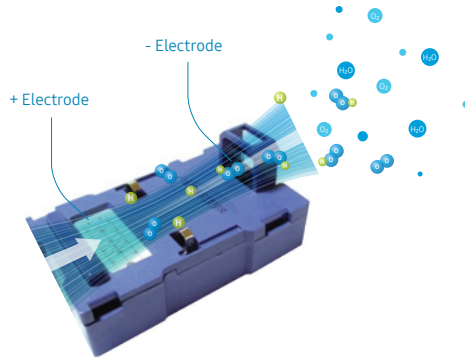


Samsung  
When turned off, a Check Valve prevents water from flowing back, so the drain board quickly gets dry and stays clean.

# Reduces certain harmful bacteria

## Ionizer Kit (Optional)

With an optional Ionizer Kit, the Samsung WindFree™ 1Way 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.



# WindFree™ 1Way

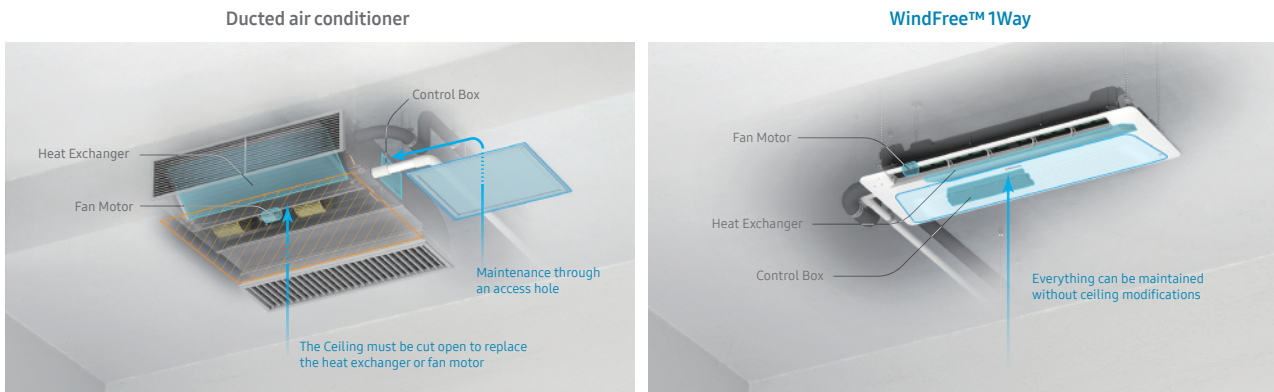
## Maintenance - Easily keep your air conditioner in the best condition

The Samsung WindFree™ 1Way 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.

## Simpler to service, without ceiling interior

### Easy Service Access

An access hole is essential to maintain ducted air conditioners, as the internal parts, such as the fan motor or heat exchanger, may need to be inspected or replaced. However, with the Samsung WindFree™ 1Way Cassette you can easily maintain and service such parts by simply removing the decorative panel. So there's no need for an access hole\*, which may harm your ceiling interior.



\* Rarely required, depending on the installation conditions.

## Rapidly identify errors & reduce downtime

### Self-diagnosis

Minimize the inconvenience of a broken air conditioner. The WindFree™ 1Way 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	Timer	Fan	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





## Design

### A wide choice to fit many needs

#### 3 Types of Panel Design

The Samsung WindFree™ 1Way Cassette is available with a wide choice of panel designs. These feature various patterns and functionalities, including WindFree™ and air purification, to suit different spaces and the specific needs of consumers, designers and architects.

All of the panels are compatible with each other's main units. For example, if you are using a Standard type panel and want to add the WindFree™ function for any reason, maybe for the birth of a child, you don't need to replace the entire indoor unit. Instead you can simply switch the current panel to a Premium type panel to enjoy WindFree™ comfort\*.



PC1BWSMAN\*\*

#### Standard type

Non WindFree™ Panels

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



PC1NWFMAN\*\*

#### Premium type

WindFree™ Panels

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



PC1NWFMAN\*\*

#### Super Premium type

WindFree™ Purifying Panels

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

\* Only available on new WindFree™ models released in 2019.

\*\* Model names may differ depending on the country.

