



Air Filtration Unit

PuraShield Smart 500 & PuraShield Smart 1000

User Manual

The company reserves the right of final interpretation of the user manual

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Safety precautions for products

Dear users of Purafil products,

Thank you for choosing a Purafil product. In order to use the product better, please read this manual carefully before use. Even though we have done long-term safety tests on our products, please install and use the product in strict accordance with the requirements of this manual for your health and safety!

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- ⊘ Any text with this sign indicates prohibited acts that may cause damage to the machine or endanger the personal safety of the user.
 - ⚠ Any text with this sign has to do with product safety and personal safety of the user, and the user must strictly follow the warning text in their operation.
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- ⊘ Do not spray the surface of the machine with any paint, insecticide, alcohol or chemical agent. Otherwise it may cause surface cracking, electric shock or fire.
 - ⊘ When the machine is running, do not put hands or any other objects into the air inlet or outlet, as doing so may cause damage to the machine or personal injury.
 - ⊘ Keep the air inlet and outlet of the equipment unobstructed. Do not sit on the machine or place other objects on the machine. Otherwise accidental loss or injury may occur.
 - ⊘ Supervise or provide guidance to children when they operate the equipment. Do not let children use the machine alone.
 - ⊘ Do not sit or lean on the machine, which may cause equipment damage or even personal injury.
 - ⊘ Do not use the machine in a bathroom, swimming pool or other places with water around, as fire, electric shock or equipment failure may occur.
 - ⊘ Do not modify, disassemble or repair the machine, as fire, electric shock or equipment failure may occur.
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- ⚠ Do not disassemble the machine without the training provided by our technical department, or personal injury or machine damage may occur.
 - ⚠ If the power cord or plug is damaged, stop using the machine and contact Purafil Customer Care* for a solution.
 - ⚠ Change the particulate filters and filtration media regularly to ensure the optimal operation efficiency of the equipment.
 - ⚠ Always unplug the power plug when maintaining the equipment.
 - ⚠ If the machine will not be in use for a long time, unplug the power plug.
 - ⚠ Stop using the machine immediately if you detect a peculiar odor during operation, unplug the power cable, and contact Purafil Customer Care* for inspection before using it again.
 - ⚠ If foreign matter falls into the air outlet or air inlet, contact Purafil Customer Care* to assist with directions on cleaning. When cleaning, disconnect the power supply.
 - ⚠ The power socket must be equipped with a reliable grounding wire. Electric shock or fire may occur if the machine is not grounded or poorly grounded.
 - ⚠ Do not operate the machine while standing on the floor with wet hands or bare feet.
 - ⚠ Do not wet the surface of the machine or introduce water into the interior, which may cause equipment damage, personal injury or even fire.
 - ⚠ Do not use the machine in high humidity, high temperature, highly corrosive gas and other harmful environments.

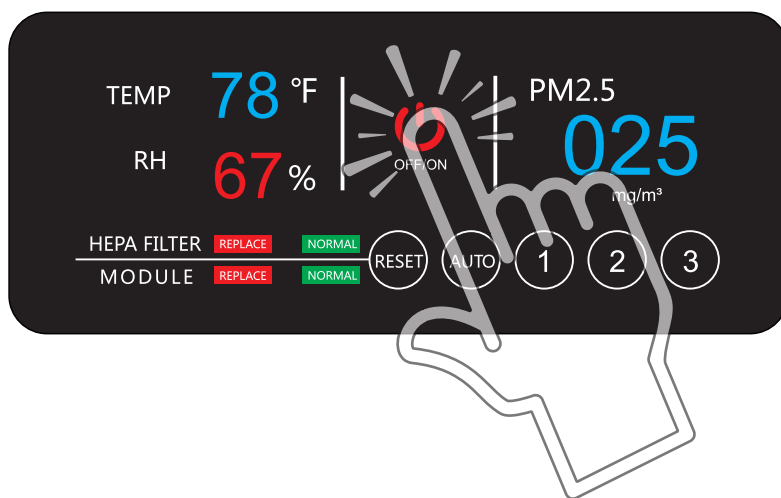
*Purafil Customer Care: +1 770.662.8545

Introduction to quick start operations

How to turn on the machine

Press the “OFF/ON” button to turn on/off the machine.

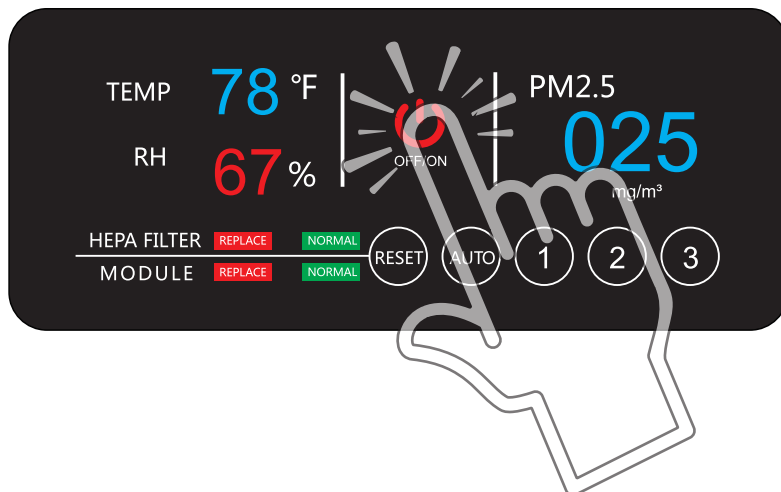
Insert the power plug of the machine into the power socket correctly, and the red “OFF/ON” indicator light on the machine's operation screen will light up, indicating that power is connected correctly. Touch the button gently to turn on the machine.



How to turn off the machine

Press the “OFF/ON” button to turn on/off the machine.

When the machine is running, gently touch the button. The red power indicator light will subsequently light up, indicating that the machine has been turned off.



Brief Description of the Product

PuraShield Smart 500 & PuraShield Smart 1000

Purafil air scrubbers are widely used in indoor environments such as schools, medical institutions, nursing homes, offices, laboratories, museums, hotels, retail locations, and agricultural grow facilities. They can be used to quickly and effectively remove many aerosols carrying harmful viruses, bacteria, mold, smoke, and odors from the air.

Purafil air scrubbers are equipped with a filter layer protected by PuraWard® technology using copper & silver ions[†], disposable PK Modules containing Purafil's patented[§] molecular filtration media, and HEPA filtration for harmful particulate matter. The LCD display with touch controls and replacement alerts also displays real-time air quality data using built-in sensors.

The PuraWard filters are high efficiency filters protected by an embedded micro-technology containing an EPA registered antimicrobial additive using copper and silver ions to combat many bacteria and viruses.

Purafil molecular filtration media is developed and manufactured in the USA. We offer a range of patented molecular filtration media designed to remove molecular contaminants from the air, safely oxidizing the molecules, while removing toxic, harmful, and unpleasant gases and odors.

PURAWARD FILTER IS PROTECTED FROM VIRUSES AND BACTERIA:

Virus	Reduction Rate	Time
H1N1	99.91%	5 Min.
H7N9	99.98%	5 Min.

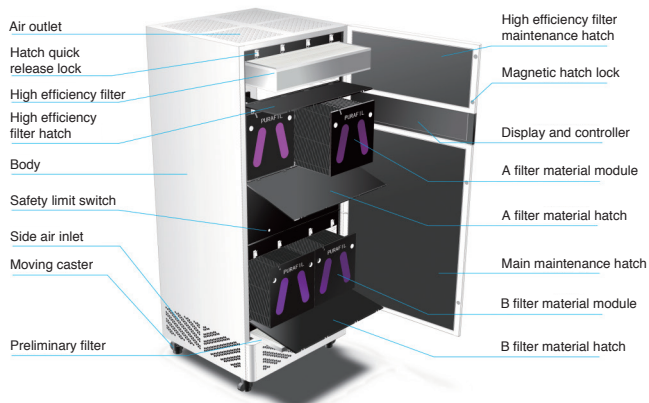
Bacteria	Reduction Rate	Time
S. Aureus	99.95%	1 Hr
E. coli	99.96%	1 Hr

*Laboratory testing demonstrated 99.99% reduction of aerosols carrying MS2. Copies of the full test reports are available upon request

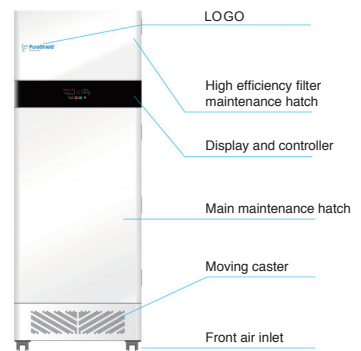
[†]Filter protected by an EPA-registered antimicrobial additive. [§]Patent number US 9,370,763 B2

Product features

- Quickly and effectively removes many aerosols carrying harmful viruses, bacteria, mold, smoke, and odors from the air
- Equipped with a filter layer protected by PuraWard® technology using copper & silver ions†
- Disposable PK Modules containing your selection of Purafil's patented§ molecular filtration media
- HEPA filtration for harmful particulate matter
- LCD display with touch controls and replacement alerts
- Built-in sensors provide real-time air quality data
- Also removes toxic and damaging gaseous pollutants

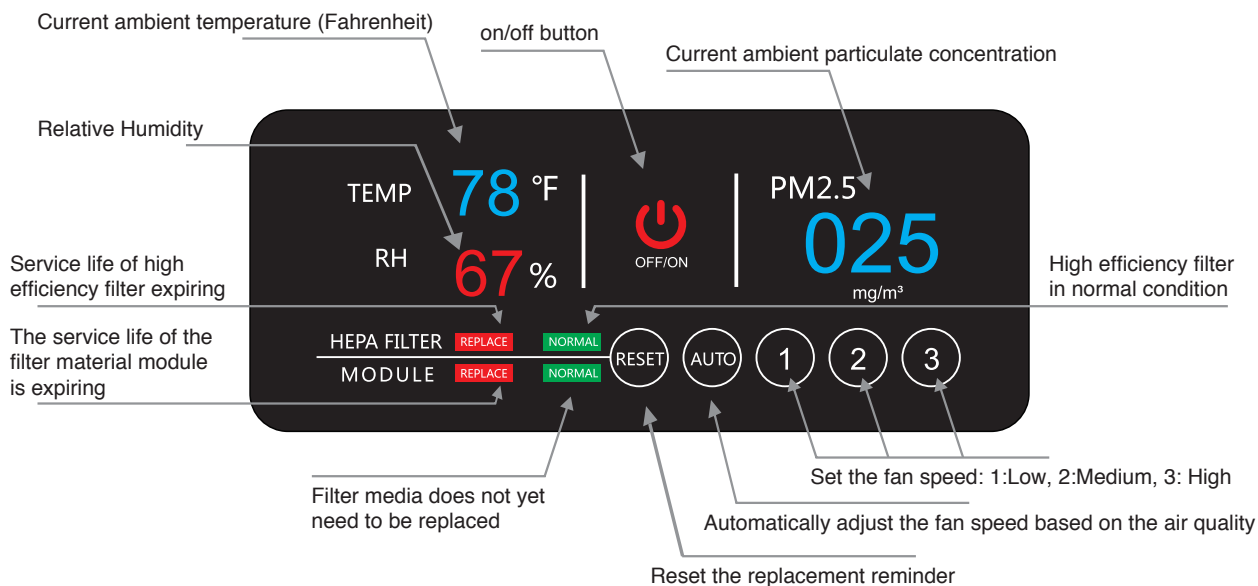


PuraShield Smart 1000



PuraShield Smart 500

Description of the operation screen and functions



Description Of Functions



OFF/ON Power button

After connecting the power supply, tap this button to turn on or off the machine



Reminder removal button

If the red indicator light for the particulate filter or filtration media is on, and you have changed the particulate filter or filtration media, press this button for 5 seconds to remove the reminder.



Auto run button

Press this button after turning on the device, and the device will automatically adjust the fan speed according to the air quality.

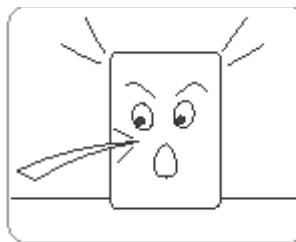


Fan speed buttons

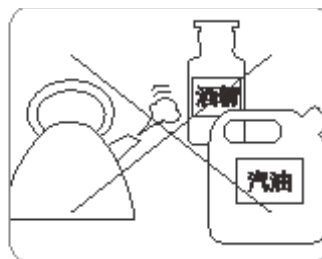
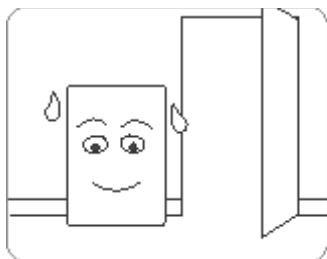
Press this button after turning on the device, and the device will operate at your chosen fan speed.
1:Low, 2:Medium, 3: High

Maintenance instructions

- ① Do not place any thin or hard objects in the machine to avoid damage to the machine.
- ② The machine should not be placed on soft or uneven ground, so as to avoid the risk of electric leakage or machine damage caused by vibration or noise generated during the operation of the machine.



- ③ When the machine is turned off or not used for a long time, remove the power cord from the socket and make sure that it is out of reach of children.
- ④ In order to ensure good purification, the air inlet and outlet of the machine should be free of obstacles, to prevent obstruction of air circulation.



- ⑤ When the machine is under maintenance, being inspected or moved, make sure to turn it off and unplug the power cord. Otherwise, electric shock and injury may result.
- ⑥ After the service life of the purification filter material (high efficiency filter, preliminary filter and filter material module) expires, you can contact an authorized reseller of Purafil to purchase replacements.

PuraShield Smart 1000 Maintenance

 Any of the following maintenance procedures should be performed with the power supply disconnected.

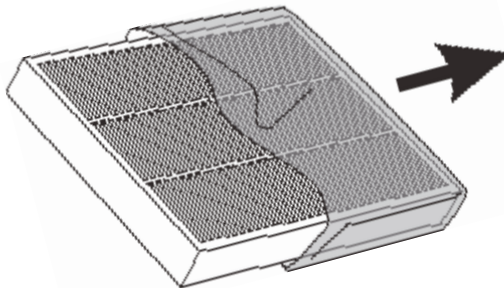
Service and maintain the air purifier regularly to improve the service life.
Before servicing and maintenance, make sure to shut down the air purifier and unplug the power cord.

① Clean the exterior

When cleaning the exterior of the air purifier, disconnect the power supply first and clean it with a soft and clean dry cloth. Do not use alcohol, gasoline, benzene or other chemical solvents for cleaning.



② Replacement and maintenance of the particulate filter



A. Remove the outer packing from particulate filters

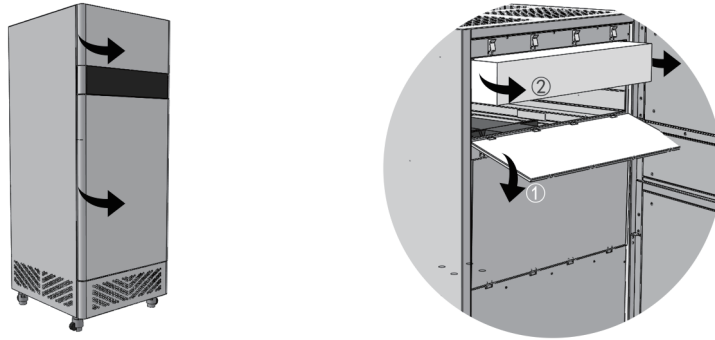
To replace the particulate filters, open the front hatch plate of the air purifier, take out the particulate filter, and make sure to remove the filter packaging material. Otherwise the product will not be able to filter the air normally.

※ Keep packaging material away from infants and children, so as to avoid accidents caused by infants and children coming into contact with them.

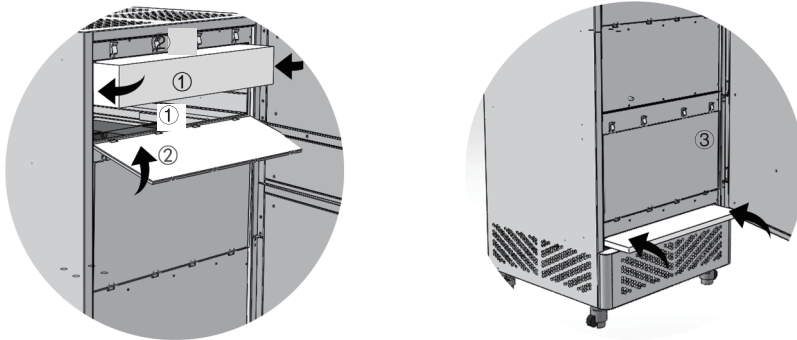
PuraShield Smart 1000 Maintenance

B. Clean or replace the high efficiency filter and the preliminary filter

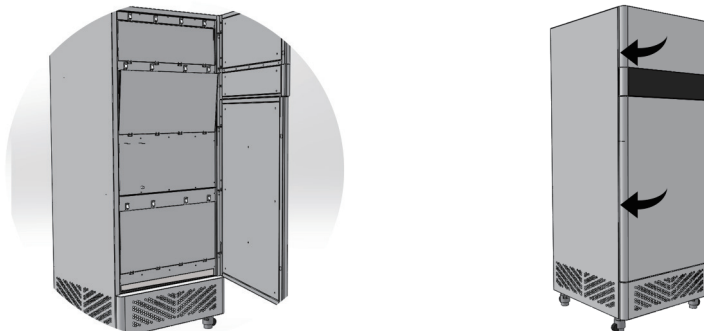
1. As shown in the figure: with both hands on the left side of the machine, pull out the upper hatch plate and lower hatch plate in the indicated direction. Next, turn the compartment cover downward in the indicated direction to open the particulate filter compartment hatch, and, following the direction indicated by the arrow, grab the filter handle to pull out the high efficiency filter ② and the preliminary filter ③.



2. As shown in the figure: install the new high efficiency filter and preliminary filter. As shown in the figure: buckle the particulate filter compartment and close the upper and lower hatches, completing particulate filter replacement.



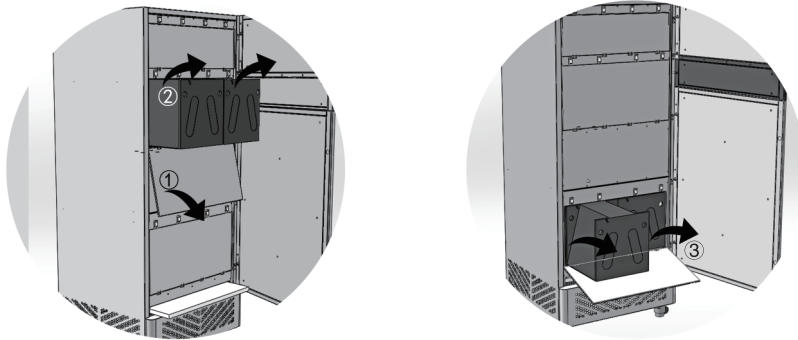
Note: Dispose of the removed particulate filters properly according to local laws and regulations. Do not discard them casually to avoid contaminating the environment.



PuraShield Smart 1000 Maintenance

C. Replace filter material

1. As shown in the figure: turn the hatch cover downwards in the direction of ① to open the filter material compartment, and pull out the filter module following the arrow's direction in ②.
Note: ② ③ there are eight filter modules in the filter material compartment.



2. As shown in the figure: put the new filter modules into the machine as instructed. After completion, fasten the buckle of ② ③ filter material compartment hatch in the direction shown in the figure to complete the replacement of the filter material.
Note: Dispose of the removed filter modules properly according to local laws and regulations. Do not discard them casually to avoid contaminating the environment.



PuraShield Smart 500 Maintenance

 Any of the following maintenance procedures should be performed with the power supply disconnected.

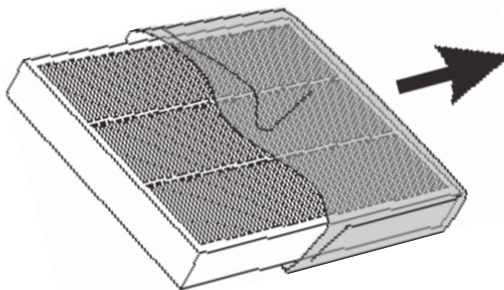
Service and maintain the air purifier regularly to improve the service life.
Before servicing and maintenance, make sure to shut down the air purifier and unplug the power cord.

① Clean the exterior

When cleaning the exterior of the air purifier, disconnect the power supply first and clean it with a soft and clean dry cloth. Do not use alcohol, gasoline, benzene or other chemical solvents for cleaning.



② Replacement and maintenance of the particulate filter



A. Remove the outer packing from particulate filters

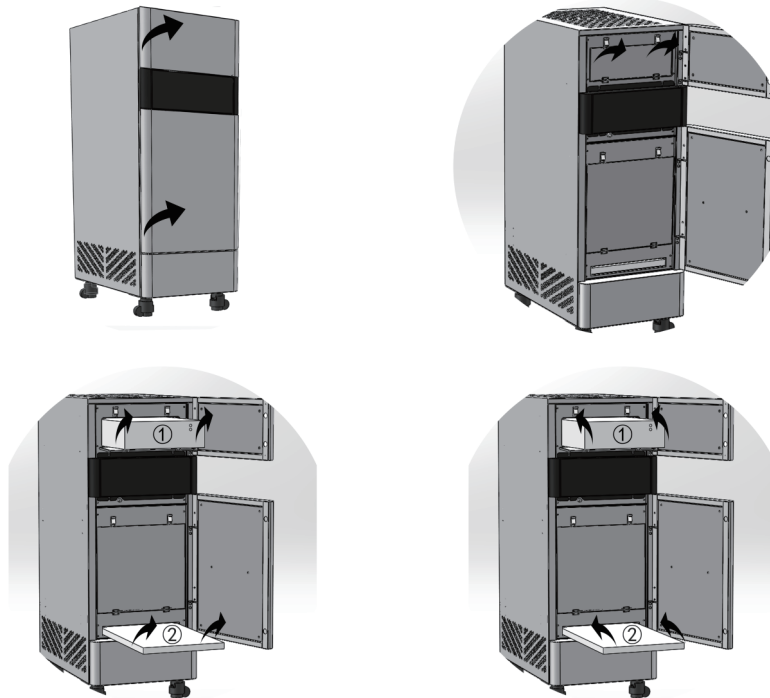
To replace the filter particulate filter, open the front hatch plate of the air purifier, take out the particulate filter, and make sure to remove the particulate filter packaging material. Otherwise the product will not be able to purify air normally.

※ Keep packaging material away from infants and children, so as to avoid accidents caused by infants and children coming into contact with them.

PuraShield Smart 500 Maintenance

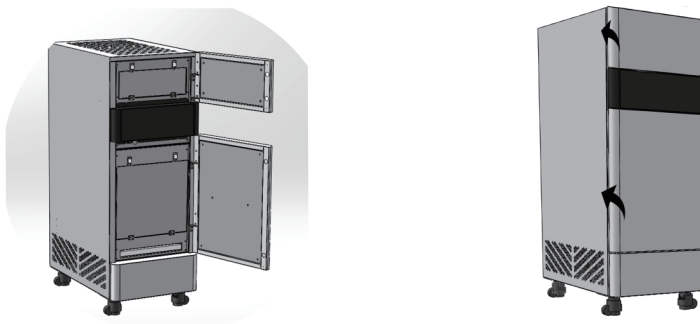
B. Clean or replace the high efficiency filter and the preliminary filter

1. As shown in the figure: with both hands on the left side of the machine, pull out the upper hatch plate and lower hatch plate. Next, turn down the hatch cover to open the ① filter compartment, and, following the direction indicated by the arrow, grab the filter handle to pull out the high efficiency filter ① and the preliminary filter ②. And install the high efficiency filter and preliminary filter as shown in the figure.



2. As shown in the figure: buckle the prefilter compartment, and close the upper and lower hatches to complete prefilter replacement.

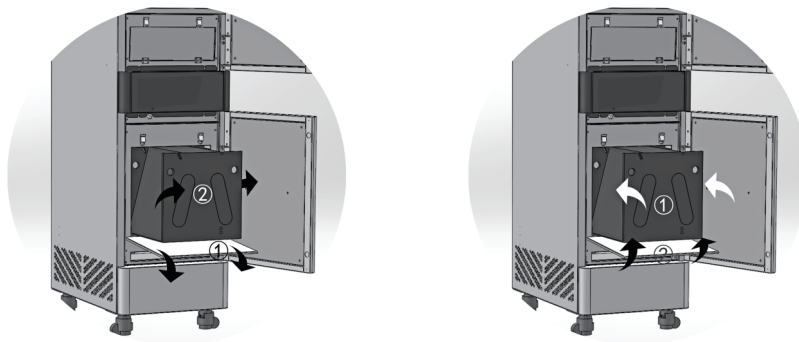
Note: Dispose of the removed prefilter properly according to local laws and regulations. Do not discard them casually to avoid contaminating the environment.



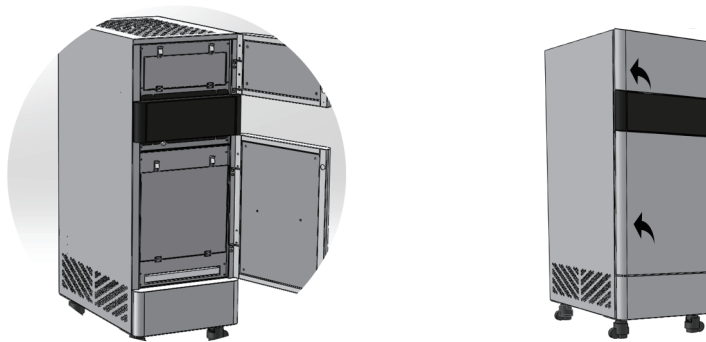
PuraShield Smart 500 Maintenance

C. Replace filter material

1. As shown in the figure: turn the hatch cover downwards in the direction of ① to open the filter material hatch, and pull out the filter module following the arrow's direction in ②. Put the new filter module into the machine following the instructions in the figure. Note: there are two filter modules in the filter material compartment.



As shown in the figure: after completion, buckle the filter material compartment hatch in the direction shown in the figure to complete the replacement of the filter material.
Note: Dispose of the removed filter modules properly according to local laws and regulations. Do not discard them casually to avoid contaminating the environment.



Special preventive measures

Waste disposal

Purafil's filter material is non-toxic, harmless and non-combustible. Purafil's filter material removes gaseous pollutants by molecular adsorption, and the retired product usually does not cause harm to the environment. Although special precautions are not usually required when waste filter material is disposed of, government regulations may require specific disposal procedures if the material is harmful to the environment. A large amount of Purafil filter material should not be discarded in the garbage can, because the weight of the filter material will make it difficult to clean the garbage can. If the pollutants removed from your environment include heavy metals and pesticides, an independent toxicity laboratory analysis may be required.

Inhalation

It is recommended to replace Purafil filter material in a well ventilated working area, because the abrasion between the particles of the filter material during the replacement will cause the new filter material to produce dust. Workers should avoid direct inhalation of a large amount of filter dust as it may cause sneezing. When replacing filter material in closed and unventilated spaces, a dust mask is recommended for protection.

Water

Avoid exposing PURAFIL filter material to water or precipitation as this will dissolve the permanganate. Purafil filter material should be stored in a dry environment with relative humidity lower than 95%. Exposing the skin to the permanganate solution will cause temporary brown staining without injury, which can be removed in a diluted water and sodium bisulfite solution.

Eye exposure

If filter dust comes into contact with eyes, rinse the eyes thoroughly with water and seek medical attention.
* Refer to Purafil material's safety data sheet for other information.

Removal of filter material stains

The following stain removal procedures are for reference only and neither Purafil nor any of its subsidiaries, nor any of Purafil's sales service providers or employees make any warranty or other representation as to the efficiency or safety of the procedures.

Removal of stains may further damage clothing, items or tools used in an attempt to remove the stains. If the dust in the PURAFIL filter material comes into contact with organic material, two dyeing problems may occur:

1. Insoluble manganese dioxide (MnO_2), characterized by a medium brown color, may be found in the consumed filter material and can usually be removed by 2 normal washing.

2. New (unused) Purafil filter material contains sodium permanganate ($NaMnO_4$), which is a strong oxidant and will react with any organic material through contact and discolor it. The stains are brown-black and can be removed from clothes in water with a sodium bisulfite solution.

However, if the fiber has been damaged by permanganate, the damage may be more conspicuous when the stain is removed.

Warnings:

The cleaning process should start with the use of the solution at a very low concentration, and the concentration of the solution should be gradually increased as required until the stains are removed. Direct use of a high concentration solution may cause additional damage to the fabric.

Note:

Use of sodium bisulfite will release sulfur dioxide (SO) gas, so it must be used in a well ventilated area.

Common troubleshooting

Problem	Check list	Troubleshooting
The air purifier cannot be turned on	Is the power on?	Turn on the power
	Is the power plug loose?	Plug in properly
	Is the hatch plate closed tightly?	Close the hatch tightly
The sound is dull and the airflow is weak after the machine is turned on	Are the filters and filter material modules installed correctly?	Check the installation of the filters and filter material modules
	Are the air inlet and outlet blocked?	Turn off the machine, remove obstruction and turn on the machine again
	Is it time to replace the filters and filter material modules?	Replace with new filters and filter material modules
Strange odor at the air outlet	Does the air inlet continuously release a large amount of peculiar odor?	Remove the source of the released odor, and turn on the machine for a while to purify
	Is it time to replace the filters and filter material modules?	Replace with new filters and filter material modules

Table of basic parameters

Air Filtration Unit Model	SMART-500-1	SMART-500-2 SMART-500-3	SMART-1000-1	SMART-1000-2 SMART-1000-3
Power supply	110V 60Hz	220V~240V 50Hz	110V 60Hz	220V~240V 50Hz
Power	262W ± 5W	262W ± 5W	670W ± 5W	670W ± 5W
Air volume	400CFM / 300CFM / 200CFM 680CMH / 510CMH / 340CMH		900CFM / 600CFM / 450CFM 1530CMH / 1020CMH / 765CMH	
Noise	65 / 55 / 48 dBA		61 / 56 / 52 dBA	
Number of filter material modules	1 group(2)		4 groups(8)	
High efficiency filter	H13			
Preliminary filter	G4			
Control method	Touch type			
Replacement of filter media and particulate filters	Quick release type			
Maintenance tools	No tools required			
Gross weight of product	81kg	81kg	165kg	159kg
Net weight of product	75kg	75kg	158kg	152kg
Product dimensions	1120x670x420mm		1780x670x690mm	
Packing dimensions	1320x810x550mm		1850x810x810mm	
Air inlet location	Both sides		Both sides and front	
Air outlet location	Top			
How to move	Casters + fixed supports			

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