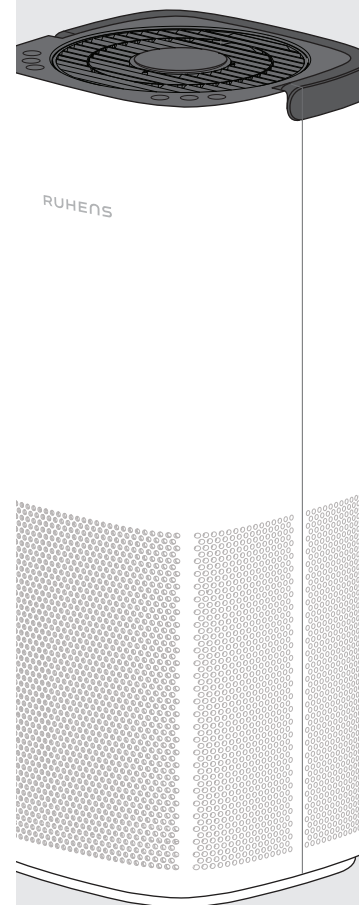


RUHENS

RUHENS

# AIR PURIFIER OPERATION MANUAL

WHA-320



## ◆ FOR YOUR SAFETY

- Precautions..... 2~10

## ◆ FOR INFORMATION

- Name of each part ..... 11
- Features ..... 12
- Operation/Indication part ..... 13~14
- How to use ..... 15~16
- Filter replacement ..... 17~18
- Cleaning method ..... 19
- Solution to common problems ..... 20
- Specifications ..... 21

for your safety and proper use of the product, please read this User's Manual before use. Warranty card included in this Manual.

  
WONBONG

# PRECAUTIONS

## ※ READ AND SAVE THESE INSTRUCTIONS

- ! Please read all precautions carefully to prevent any potential dangers and/or damages.
- ! Precautions are divided into three types depending on the degree of potential danger/damage.

- ! Danger** If not observed, serious injury, bodily harm and/or even death may occur.
- ! Warning** If not observed, serious injury, bodily harm and/or property damage may occur.
- ! Caution** If not observed, slight injury, minor bodily harm and/or property damage may occur.

! This symbol is used to notify the dangers caused by improper use.

! **RISK OF ELECTRIC SHOCK** – These servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

RISQUE DE CHOC ELECTRIQUE - Ces instructions d'entretien sont destinées à un personnel qualifié uniquement. Pour réduire le risque d'électrocution, n'effectuez aucun entretien autre que celui indiqué dans le mode d'emploi à moins d'être qualifié pour le faire.

! To reduce the risk of electric shock, this equipment has a polarized plug(one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact qualified personnel to install the proper outlet. Do not alter the plug in any way.

Pour réduire le risque de choc électrique, cet équipement dispose d'une fiche polarisée (une broche est plus large que l'autre). Cette fiche ne s'insère dans une prise polarisée que dans un seul sens. Si la fiche ne rentre pas complètement dans la prise, inversez la fiche. Cette fiche ne s'insère dans une prise polarisée que dans un seul sens. Ne modifiez en aucun cas la fiche.

## Precautions for power supply

! This product must be plugged into AC 120 outlet.  
Ce produit doit être branché sur la prise AC 120V

※ It could cause a fire or electric shock.

# PRECAUTIONS

## ※ READ AND SAVE THESE INSTRUCTIONS

! **DO NOT** let children to play with the unit.  
NE PAS laisser les enfants jouer avec l'unité.

※ This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

! **DO NOT** use when the plug is damaged or swinging.  
NE PAS utiliser quand la fiche est endommagée ou oscille.

※ Failure to do so can cause a fire and/or an electric shock. When the plug is damaged, contact the customer service center or place of purchase.

! **DO NOT** bend, coil or pull the power cord.  
NE PAS plier ou enrouler le cordon d'alimentation ni tirer dessus.

※ Failure to do so can cause a fire and/or an electric shock.

! Please do not disassemble or modify the plug.  
NE PAS démonter ou modifier la fiche.

※ Failure to do so can cause a fire and/or an electric shock.

! **DO NOT** pull the cord instead of the plug when disconnecting from the outlet.  
NE PAS tirer sur le cordon au lieu de la fiche au moment de débrancher la prise.

※ Failure to do so can cause a fire and/or an electric shock.

! Before replacing filter, please unplug the power cord.  
Avant de remplacer le filtre, s'assurer de débrancher le cordon d'alimentation.

※ Failure to do so can cause an electric shock.

! If you use a power strip, use one outlet for the unit.  
Si l'on s'est servi d'une barre d'alimentation, désigner une seule prise pour l'usage de l'unité.

※ Failure to do so can cause a fire.

! **DO NOT** plug in or unplug the power cord with wet hands.  
NE PAS brancher ou débrancher le cordon d'alimentation quand on a les mains mouillées.

※ Failure to do so can cause an electric shock.

! Before use, please wipe dust of other foreign substances off on the plug.  
Avant l'usage, essuyer la fiche afin d'en retirer toute substance étrangère.

※ Failure to do so can cause a fire and/or an electric shock.

# PRECAUTIONS

※ READ AND SAVE THESE INSTRUCTIONS

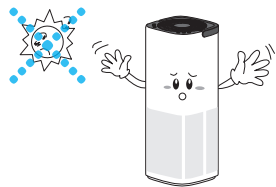
## Precautions for installation



DO NOT install the unit under direct sunlight and avoid high temperature areas.  
NE PAS installer l'unité sous la lumière directe du soleil et éviter les zones à températures élevées.

※ READ AND SAVE THESE INSTRUCTIONS

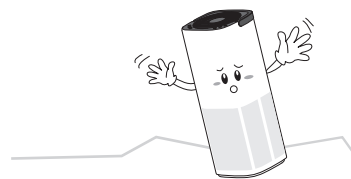
※ Failure to do so can deform the product exterior.



DO NOT place the unit on an unstable surface or a slope.  
NE PAS placer l'unité sur une surface non stable ou une pente.

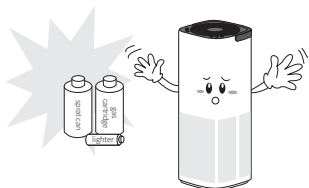
※ READ AND SAVE THESE INSTRUCTIONS

※ Failure to do so can cause malfunction.



DO NOT place the unit near inflammables.  
NE PAS placer l'unité près d'articles ou de zones inflammables.

※ Failure to do so can cause an explosion and/or a fire.



DO NOT use the unit in damp/humid surroundings such as a bathroom, shower room or swimming pool.

NE PAS se servir de l'unité dans des endroits humides comme les salles de bain, les salles de douche ou les piscines.

※ Failure to do so can cause a fire and/or an electric shock.



# PRECAUTIONS

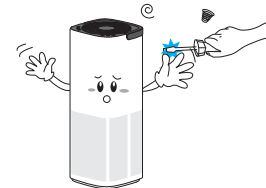
※ READ AND SAVE THESE INSTRUCTIONS

## Precautions for installation



DO NOT disassemble, repair or modify the unit by yourself.  
NE PAS démonter, réparer ou modifier soi-même l'unité.

※ Failure to do so can cause a fire and / or an electric shock.



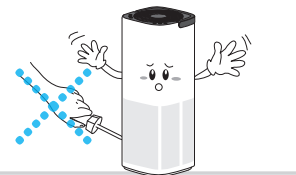
Keep distance from flammable materials. At least 40 inches (100 cms) away is recommended.  
Tenir à l'écart des matériaux inflammables, à une distance recommandée d'au moins 40 pouces (100 cm).

※ Failure to do so can cause a fire.



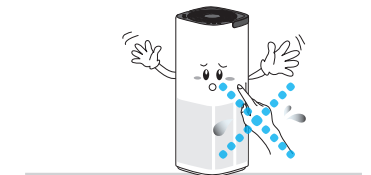
DO NOT insert sharp wires and/or screwdrivers into the unit.  
NE PAS insérer de fils pointus ou de tournevis dans l'unité.

※ Failure to do so can cause malfunction and/or an electric shock.



DO NOT touch inside of the unit with wet hands.  
NE PAS toucher à l'intérieur de l'unité quand on a les mains mouillées.

※ Failure to do so can cause an electric shock.



# PRECAUTIONS

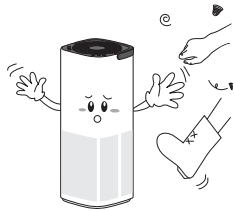
※ READ AND SAVE THESE INSTRUCTIONS

## Precautions for installation



Avoid dropping and handle the unit carefully at all times.  
Éviter de laisser échapper l'unité et la manipuler soigneusement en tout temps.

※ Failure to do so can cause malfunction, damage and/or an electronic shock.



DO NOT move the unit when it is in use.  
NE PAS déplacer l'unité quand elle est en marche.

※ READ AND SAVE THESE INSTRUCTIONS  
※ Failure to do so can cause malfunction.



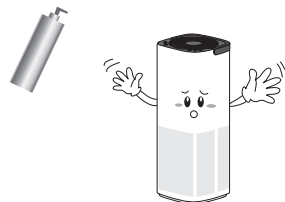
DO NOT place heavy items on the unit.  
NE PAS placer d'articles lourds sur l'unité.

※ READ AND SAVE THESE INSTRUCTIONS  
※ Failure to do so can damage the product.



DO NOT spray pesticides or flammable liquids on or near the unit.  
NE PAS vaporiser de pesticides ou de liquides inflammables sur l'unité ou près d'elle.

※ Failure to do so can cause malfunction.



# PRECAUTIONS

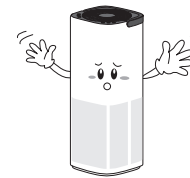
※ READ AND SAVE THESE INSTRUCTIONS

## Precautions for installation



DO NOT operate the unit without filters.  
NE PAS faire fonctionner l'unité sans filtre.

※ READ AND SAVE THESE INSTRUCTIONS  
※ Failure to do so can cause an electric shock and shorten the life cycle of the unit.



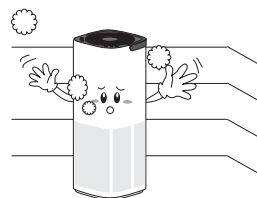
Cover the unit when it is not in use for a long time.  
Couvrir l'unité quand elle n'est pas en usage pendant une longue période.

※ READ AND SAVE THESE INSTRUCTIONS  
※ Failure to do so can cause malfunction.



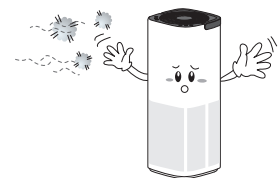
DO NOT use the unit in greasy or dusty surroundings such as restaurants, kitchens or construction sites.  
NE PAS utiliser l'unité dans des endroits où il y a présence de graisse ou de poussière, comme les cuisines de restaurants ou les chantiers de construction.

※ READ AND SAVE THESE INSTRUCTIONS  
※ Failure to do so can contaminate the dust sensor and shorten the life cycle of the filter.



DO NOT use the product in environments which contain toxic gas.  
NE PAS utiliser le produit dans des environnements où se trouvent des gaz toxiques.

※ READ AND SAVE THESE INSTRUCTIONS  
※ Failure to do so can cause malfunction.





# PRECAUTIONS

※ READ AND SAVE THESE INSTRUCTIONS

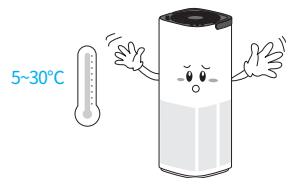
## Precautions for installation



DO NOT use the unit in surroundings with too high or low ambient temperatures.  
NE PAS utiliser l'unité dans des endroits dont les températures ambiantes sont trop élevées ou trop basses.

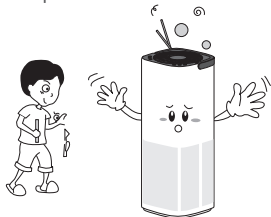
※ READ AND SAVE THESE INSTRUCTIONS

※ Recommended temperature for use is from 5°C to 30°C.  
Failure to do so can deform and discolor of the unit and/or shorten the filter life cycle.



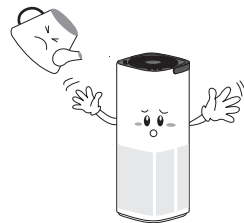
DO NOT insert any objects like cards, coins, or forks into the air outlet or inlet.  
NE PAS insérer d'objet comme des cartes, des pièces de monnaie ou des fourchettes dans l'entrée ou la sortie d'air.

※ Keep away from young children to prevent physical injury or malfunctioning of the product.



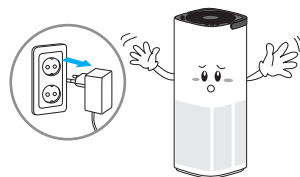
DO NOT let water or any other liquid enter the unit.  
NE PAS laisser entrer d'eau ou d'autre liquide dans l'unité.

※ Failure to do so can cause an electric shock or malfunction.



Stop using the product if it makes any irregular noise, smoke and/or smells.  
Cesser l'utilisation du produit s'il fait un bruit irrégulier, s'il en sort de la fumée ou s'il produit des odeurs.

※ Unplug the power cord and contact the customer service center.



# PRECAUTIONS

※ READ AND SAVE THESE INSTRUCTIONS

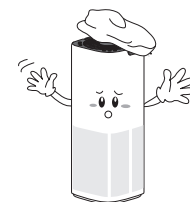
## Precautions for installation



DO NOT block the air inlet and outlet.  
NE PAS bloquer l'entrée ou la sortie d'air.

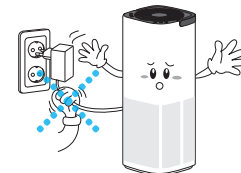
※ READ AND SAVE THESE INSTRUCTIONS

※ Failure to do so can cause malfunction.



DO NOT unplug or move the unit while the product is operating.  
NE PAS débrancher ou déplacer l'unité quand elle est en marche.

※ Failure to do so can cause a physical injury or malfunctioning of the product.



DO NOT use the unit for any other purpose than indoor air purification.  
NE PAS utiliser l'unité à toute autre fin que pour la purification de l'air intérieur.

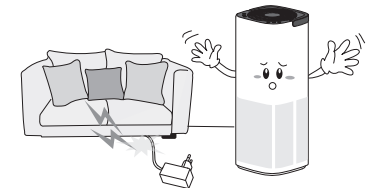
※ READ AND SAVE THESE INSTRUCTIONS

※ If the unit is used in the kitchen as a ventilator, the filter replacement cycle will be shortened.



DO NOT forcibly bend the power cord or place heavy objects on the power cord.  
NE PAS plier avec force le cordon d'alimentation ou placer des objets lourds sur le cordon d'alimentation.

※ Failure to do so can cause a fire and/or damage the unit.



## PRECAUTIONS

### SAFE PLACE FOR INSTALLATION

Indoor space protected from direct sunlight

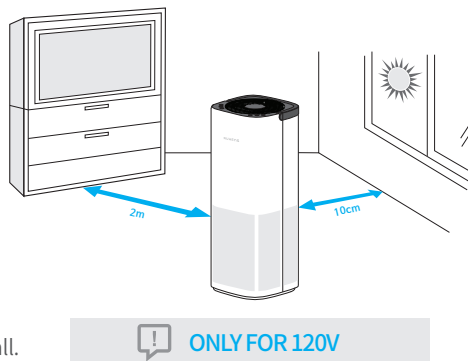
- ▶ Direct sunlight may cause a malfunction of the product

Dry and well-ventilated place

- ▶ Avoid humid and windtight place

Install the product on the hard and flat area

- ▶ If the product is installed on the inclined and weak place, it could make noise and vibration. It should be installed at a space of 10cm far from wall.



### Information

Tighten the filter before using and replace it if there is an abnormal odor from the product.

- ▶ The best quality of air-cleaning could not be expected if the filter is not connected to the product.
- ▶ The quality of cleaning air could be less if the filter is dirty. If the filter gets dirty or makes an abnormal odor and a weak air-flow, it must be replaced.

Reduce the use of the air purifier when cooking foods that occurs much odor such as fish.

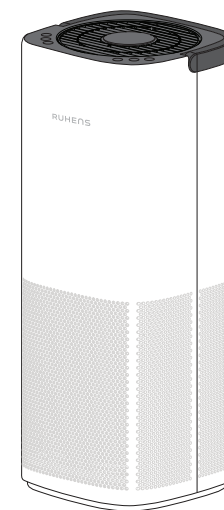
- ▶ If you use the product while cooking a food with bad odor, the life of the deodorant filter could be shortened. In severe cases, the product could make an odor when you use it after ventilating with a filter permeated with odor.
- ▶ If the product makes an odor from the permeated HEPA and deodorant filter, replace the filter with new one.

Close the door and window while using the product

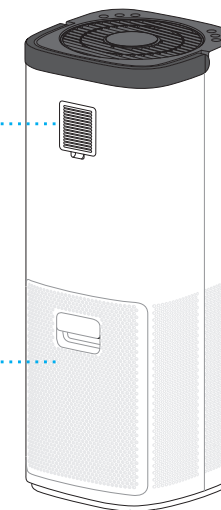
- ▶ The quality of air-cleaning could be less if window or door is opened.
- ▶ Unremovable poisonous gas : carbon monoxide (CO)

## NAME OF EACH PART

### Model No. WHA-320



<FRONT SIDE>



<BACK SIDE>



<TOP SIDE >

## Features

### ◆ Convenient handle

With the ergonomic handle, you can easily move the product.

### ◆ Grill rotate feature

It improves air circulation by rotating air ventilation grill.

### ◆ Dust sensor

It displays the number of the air pollution level with the dust sensor which is able to detect PM 2.5 (ultrafine particles) You can easily check the air pollution level of PM2.5(Ultra fine particles) categorized by colors.

### ◆ Various modes of operation

Manual/Automatic/Sleep modes are available. It always make fresh the indoor air by adjusting air-flow automatically according to the air pollution level of PM2.5(Ultra fine article)  
In the sleep mode, the purifier operates with the lowest air-flow and the light of the indicator gets dark not to disturb your sleep.

### ◆ Lock mode

With the lock mode, you can prevent the use caused by children or other reasons.

### ◆ 3 Stage of Filter

- PRE filter : It filters contaminants such as dust, fur, pollen etc. in the air.
- HEPA filter : It removes fine contaminants such as dust, bacteria, mold, smoke and etc. in the air.
- Deodorant filter : It keeps fresh room air by removing formaldehyde and various odors that cause Sick House Syndrome.

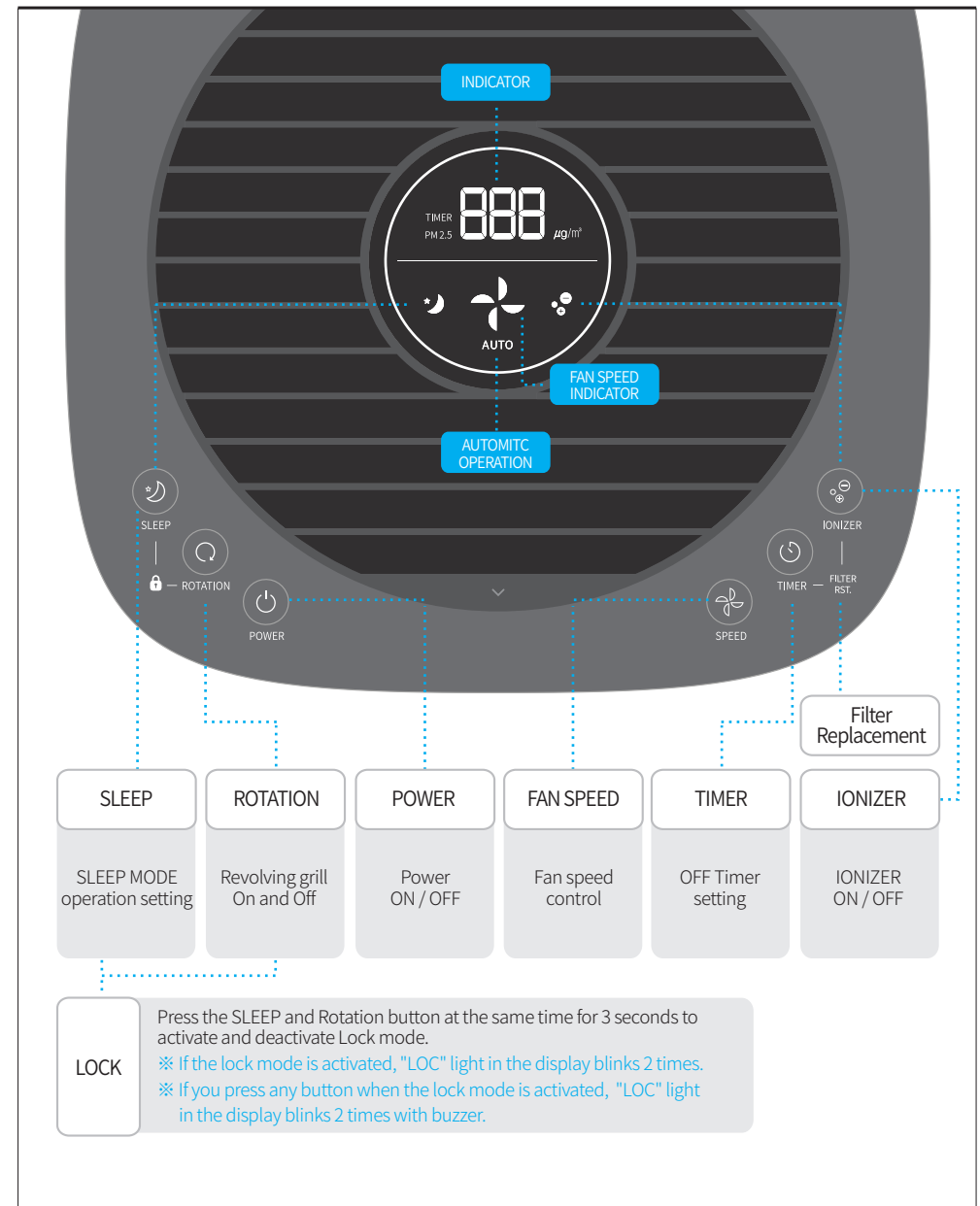
### ◆ Generation of Cluster ion

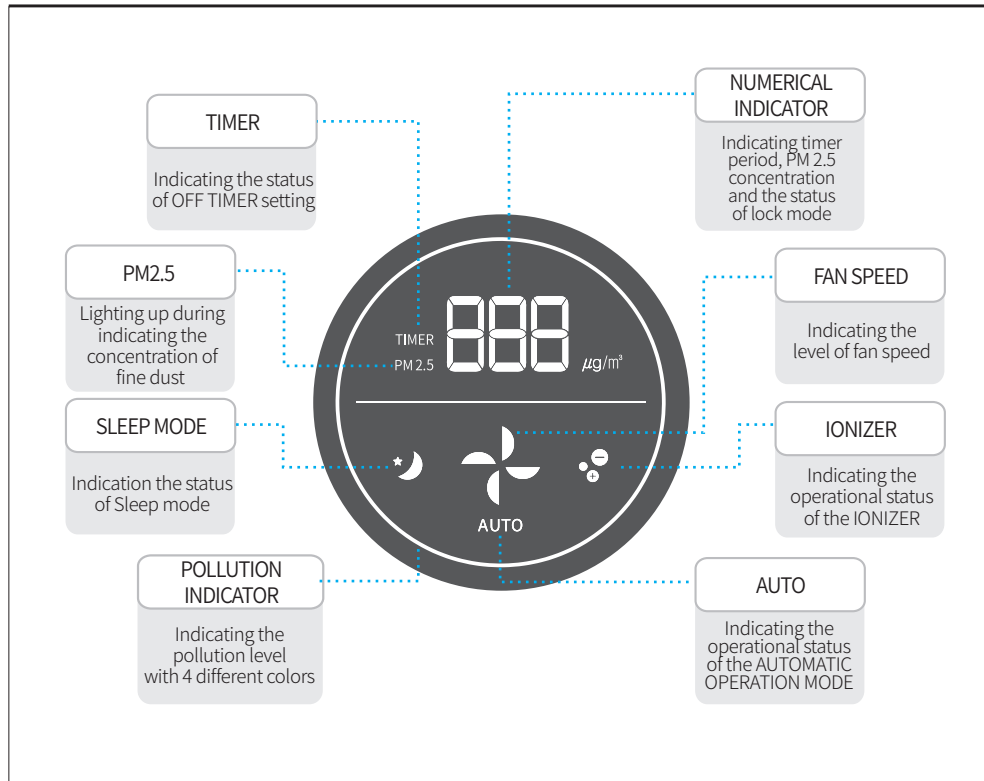
Hydrogen ion(H<sup>+</sup>) and oxygen ion(O<sub>2</sub><sup>-</sup>) released from the purifier and combined with water makes Cluster ion makes OH radical by sticking at contaminants.  
As OH radical is oxidative, it removes contaminants.

### ◆ The alarm for filter replacement

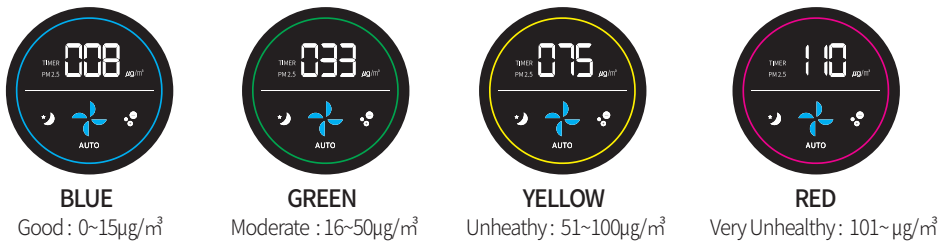
When the filter replacement cycle has reached its end, the display shows "CHG" to notify that the filter must be replaced.

## Operation/Indication part





## PM 2.5 COLOR INDEX



※ PM2.5(초미세먼지) 농도에 따른 색상은 환경부의 PM2.5(초미세먼지) 등급을 따릅니다

※ For your safety and proper use of the product, please read and understand the following before use.

## 1. POWER BOTTON

Press the POWER ON/OFF button to turn the air purifier on or off.

※ At first, the fan speed is set to AUTO mode.

※ For 30 seconds after operation, the dust sensor is initialized.

During initialization, NUMERICAL INDICATOR does not state the PM2.5 level and the round pollution indicator changes color continuously. After 30 seconds, NUMERICAL INDICATOR and round pollution indicator will show the pollution level.

## 2. FAN SPEED

① Use this button to adjust the fan speed.

Repeated pressing of the Speed button while the air purifier is operating changes the fan speed, Auto step at a time, to the next speed in sequence. (Auto ▶ 1 ▶ 2 ▶ 3 ▶ 4 ▶ Auto...)

② The fan speed is shown by the number of blue lighted fan in the display.

③ Even if you press the speed button in step 4, the grill does not stop revolving to maximize performance of air purification.



## 3. ROTATION BOTTON

Use this button to turn the grill rotate function on or off. improve performance of air purification

The grill rotation improves performance of air purification.

It is normal that the grill may not revolve smoothly due to a high volume of air.

## 4. TIMER BUTTON

① The Timer feature instructs the air purifier to automatically power off a pre-determined time ranging from 1 hour to 12 hours.

Repeated pressing of the TIMER button while the air purifier is operating changes the timer setting, one step at a time, to next setting in the sequence: 1 hr., 2 hrs., 4 hrs., 8 hrs., 12 hrs., OFF.

② If the timer is set, "TIMER" LED in the display lights up and the timer setting you select is shown in the numerical indicator of the display.

10 seconds after the timer is set, the numerical indicator will change to indicate the fine dust concentration. But, "TIMER" LED in the display keeps lighting up while the timer is set.

## How to use

### 5. Sleep button

- ① Set the sleep mode for the lowest air-flow and the minimum brightness of the display.  
Button doesn't sound during the sleep mode.
- ② Press sleep button again to turn off the sleep mode.
- ③ In the sleep mode, the grill stops and the rotation button doesn't work.
- ④ In the sleep mode, you can set auto power-off for sleep by pressing the time button.

### 6. Ion button

Press this button to turn on the cluster ion generator. then the ion indicator illuminates.

### 7. Lock button

- ① To set the lock mode, press the rotation and sleep buttons simultaneously for 3 seconds.  
The word "LOCK" in the display blinks 2 times with buzzer sound.
- ② The other buttons do not work when the lock mode is on. If you press the other buttons in the mode, the word "Loc" on the indicator illuminates with buzzer sound.

## Level of the ultra-fine particles

#### What's the Fine dust

The size of the fine dust is lower than 10 $\mu$ m.

#### What's Ultra-fine particles

The size of the ultra-fine particles is lower than 2.5 $\mu$ m. And a study founded that smaller particles are more harmful to the body. Therefore, the advanced countries have introduced the standard of the ultra-fine particles since the late 1990s.

- Dust level is shown in number from 5 to 500.
- Dust level is established with reference to the data provided by a manufacturer of sensor.
- Ultra-fine particle level (colored) is made with reference to the ultra-fine particle level provided by the Ministry of Environment.
- Ultra-fine particle level shown on the product may differ from the announcements of the Ministry of Environment.
- The Ministry of Environment estimates the ultra-fine particle level using gravimetric method and beta-ray method. But Ruhens air-purifier estimates.  
the amount of dust and changes it into concentration. Therefore, the results could be different.
- Ultra-fine particle level may vary indoor and outdoor.

## How to replace the filter

## Precautions on using filter

### 1. Precautions for using filters

- Make sure to use Wonbong genuine filters.
- Contact service center to purchase filter.
- Refer to the opposite page for replacing filter.

### 2. Precautions for replacing filter.

- Make sure to disconnect the power cord before replacement.
- Make sure to remove vinyl of the new filter. If you use the air purifier with the filter covered by vinyl, a warpage or a fire could happen due to the unusual sound and overheating of the motor.
- No returns are allowed if you remove the packing of the set of the new filter.
- Please be careful when replacing filter and excuse the return policy.

## Features of filter

### 1. Pre filter

Traps large particles in the air such as dust, fur, pollen, and so on.

### 2. HEPA filter

Removes fine contaminants larger than 0.3 $\mu$ m such as dust, bacteria, mold, smoke and etc. in the air.

### 3. Carbon filter

Keeps fresh room air by removing formaldehyde and various odors that cause Sick House Syndrome.

## filter replacement cycle

	1st step	2nd step	3rd step
Filter	Pre-filter	HEPA filter	Deodorant filter
Period	About 4months	About one year	About one year
Cleaning method	Vacuum the filter once a month	Not cleanable	Not cleanable

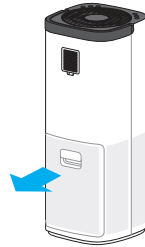
※ Filter replacement cycle depends on the operating time.  
12months when operating 12 hours everyday / 6months when operating 24 hours everyday

## How to replace filter

1. When 'CHG' displays on the screen, the filter must be replaced.



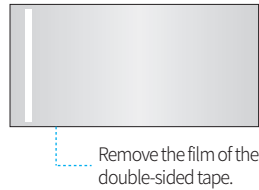
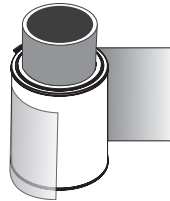
2. Disconnect the power plug and pull out the filter cover at the rear of the product.



3. Pull out the whole cylindrical filter.

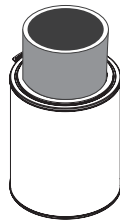
### 1) Pre filter

- ① Remove the pre filter attached by double-sided tape at the exterior of the filter
- ② Remove the film of the double-sided tape at the ends of the new pre filter and attach the new one to the HEPA filter.

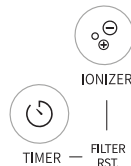


### 2) Carbon filter and HEPA filter

- ① Pull out the carbon filter and replace HEPA filter and carbon filter with new ones.  
The replacement period for HEPA and carbon filter is one year.
- ② As the pre filter is attached, it is replaced together with carbon and HEPA filter.
- ③ Reassemble in reverse order of disassembly



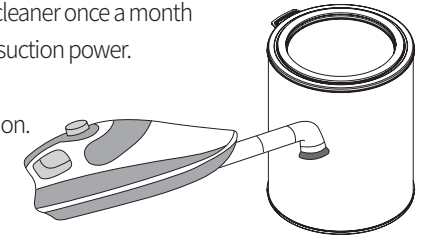
4. Press and hold the 'TIMER' and 'IONIZER' buttons at the same time for 3 seconds to reset the filter replacement cycle.



## How to clean filter

### Cleaning method for Pre-filter

- Clean the pre-filter with a soft cleaning brush or vacuum cleaner once a month
- When using vacuum cleaner, clean softly with the lowest suction power.
- Do not use benzene, alcohol, volatile detergents and hot water (over 40°C) that cause damages and discoloration.
- Adjust the cleaning cycle depending on the amount of the air purifier used or air pollution around.



### How to clean the purifier

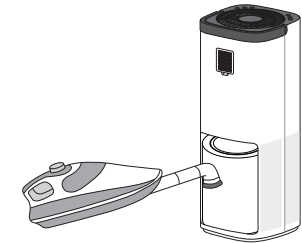
#### 1. OUTSIDE

Clean the purifier with a cloth soaked with water or neutral detergent. And wipe it with a dry cloth.



#### 2. INSIDE

Open the cover filter on the rear and vacuum inside.



### How to clean the dust sensor.

- Disconnect the power cord before cleaning.
- Open the cover of the dust sensor on the rear and wipe the lense carefully with a cotton swab.
- Clean the dust sensor once every 6 months.
- You can adjust the cleaning cycle depending on the amount of the purifier used or air pollution around.



## Troubleshooting

※ Read the following troubleshooting carefully before requesting customer service.  
If problems is persistent, please contact Service Center.

Problem	Likely causes	Actions
<b>The air purifier doesn't work</b>	Check if the power cord is connected well.	Connect the cord to the product well.
	Check if it is power outage.	Check if it has electricity and turn on the purifier again.
<b>AUTO mode doesn't work.</b>	Check if the power cord is connected well.	Disconnect and connect the cord again and press the button to control
	Check if you selected the automatic mode	Press the fan speed button to select the AUTO mode (Check the illumination on AUTO mode indicator)
<b>Red light on the indicator of the cleanliness Level</b>	Have you cleaned the sensor? Check if the sensor is blocked.	Clean the dust sensor. Contact service center if the indicator is still on red after cleaning.
<b>Massive vibration and loud noise.</b>	Check if the purifier is on the uneven place.	Place the purifier on the flat surface.
<b>Power cord and concent getting hot</b>	Check if the power cord is connected well.	Connect the cord to the product well.
<b>Unusual smell from the purifier.</b>	Do you use the purifier in the smoky place with lots of smells.	Clean the air inlet and pre-filter. Replace the filter.
<b>Weak air flow Air purification doesn't work.</b>	Check if the grill is covered with lots of dust or is blocked by some stuff.	Remove the stuff on the grill and replace the filter.
<b>Unusual display on the indicator</b>	The lamp of the fan speed keeps blinking with ring sounds.	The air purifier has a problem. Please contact service center.
<b>Unusual sound</b>	Crackle sound from the air purifier	The clust ionizer may make the sound during operation.

※ Please contact service center for After Service or filter replacement if you have problems of the air purifie  
 ※ Wonbong shall not be liable for any loss or accidents from repairs/modification or filter replacement done by someone else who is not Himaster or Rudi.

## Specifications.

<b>Model</b>	WHA-320
<b>Power Rating</b>	AC 120V/60Hz
<b>Size</b>	275(W)*278(D)*710(H)mm
<b>Weight</b>	7.3kg
<b>Power Consumption</b>	37W

MEMO

MEMO