



REPAIR MANUAL



SEB INTERNATIONAL SERVICE

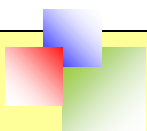
PU40.... / PU60....

Intense pure air
Air purifier



Rowenta Tefal

Edition September 2015



SUMMARY

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TECHNICAL FEATURES

Range

BEDROOM SIZE



PU4010..
PU4015..
PU4020..
PU4025..

XL SIZE ROOM



PU6010..
PU6015..
PU6020..
PU6025..



TECHNICAL FEATURES

General datas

BEDROOM SIZE

PU4010..
PU4015..
PU4020..
PU4025..



➡ Voltage : 110 - 120 V or 220 - 240V

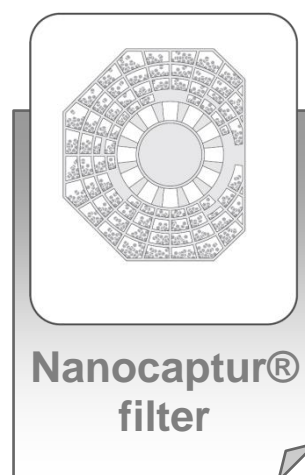
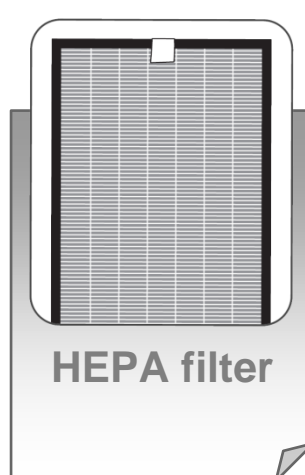
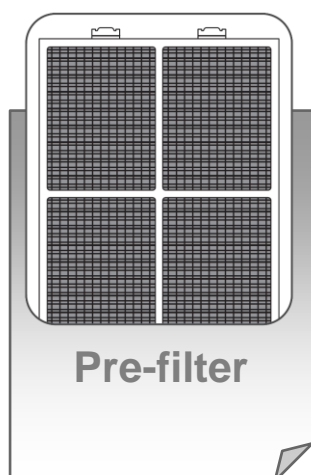
➡ Frequency : 50/60 Hz

➡ Power : 30W

➡ Air flow rate : 160m³/h



➡ Steps of filtration : 4





TECHNICAL FEATURES

General datas

XL SIZE ROOM

PU6010..
PU6015..
PU6020..
PU6025..



➔ Voltage : 110 - 120 V or 220 - 240V

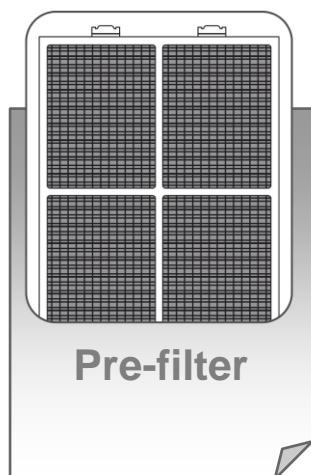
➔ Frequency : 50/60 Hz

➔ Power : 80W

➔ Air flow rate : 325m³/h



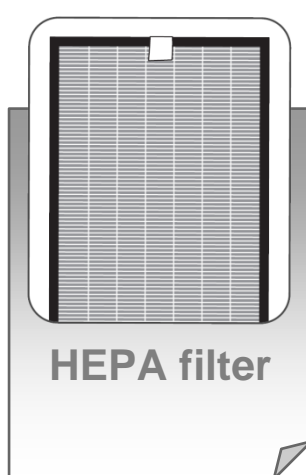
➔ Steps of filtration : 4



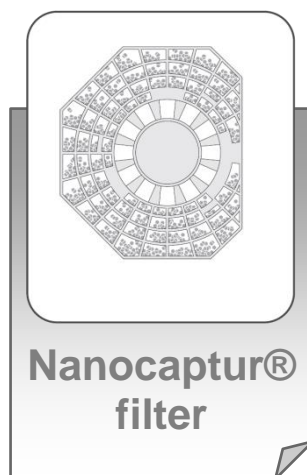
Pre-filter



Active carbon
filter



HEPA filter



Nanocaptur®
filter



TECHNICAL FEATURES

General datas

BEDROOM and XL SIZE ROOM



Air outlet

Control panel

Air inlet



*Particles and gas sensors **

Air inlet

** according to model*



TECHNICAL FEATURES

Specific datas

BEDROOM and XL SIZE ROOM

PU4010.. and PU6010..

Filter replacement indicator

Filtration speed

Timer or delayed start



Light

Filter reset

Start

*Filtration
speed
selection*

*Timer and
delayed
start
setting*



Manual control panel

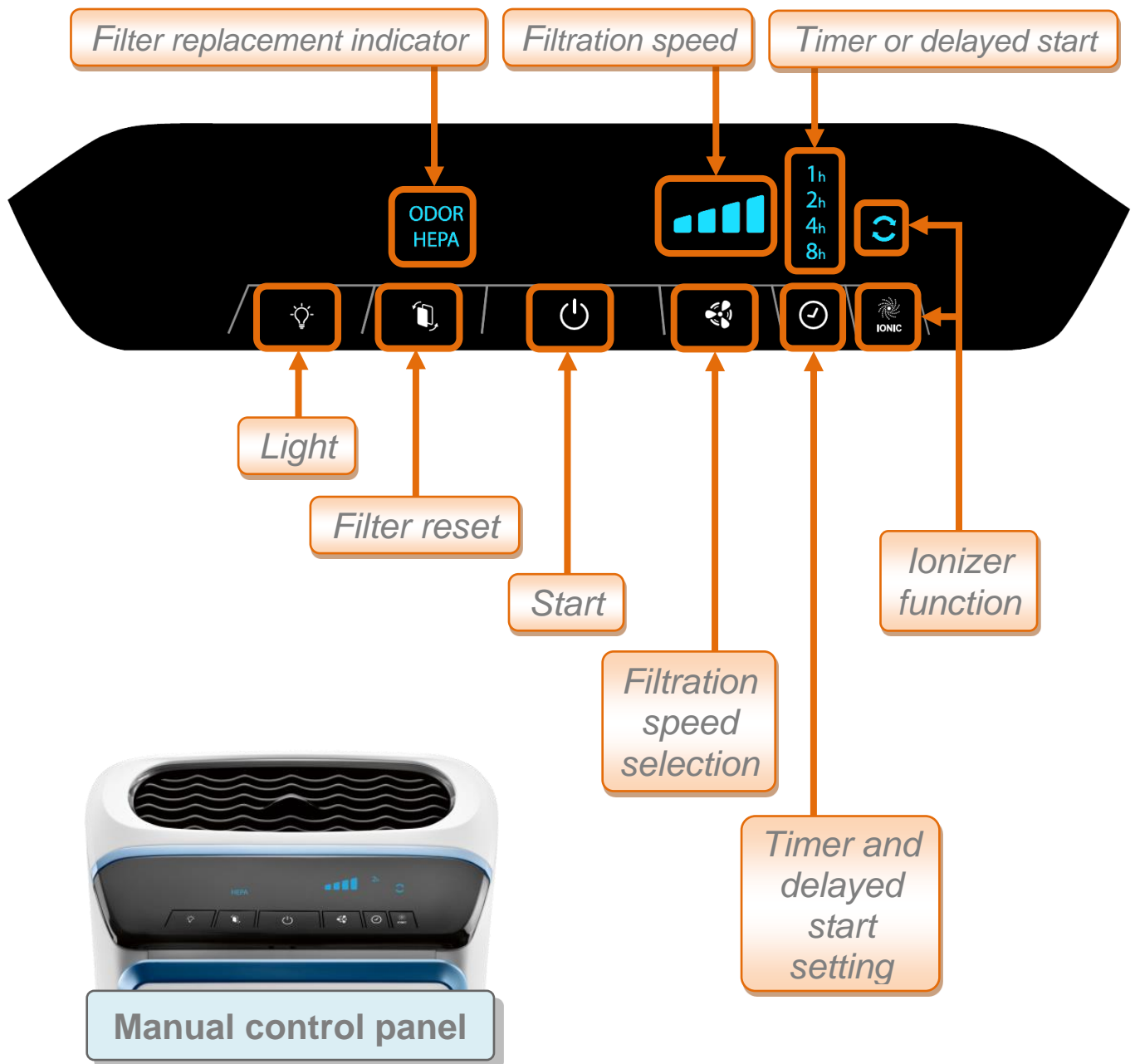


TECHNICAL FEATURES

Specific datas

BEDROOM and XL SIZE ROOM

PU4015.. and PU6015..





TECHNICAL FEATURES

Specific datas

BEDROOM and XL SIZE ROOM

Manual control panel

**PU4010.. and PU6010..
PU4015.. and PU6015..**



To change the light intensity of the appliance.



When a filter has been replaced, hold down the reset button for 2 seconds.



Briefly press this button to switch the air purifier ON or OFF.



To select one of the 4 filtration speeds.

- Speed 1 is specially adapted for nighttime operation – for whisper-quiet air purification.
- Speed 2 is the optimum operating speed, combining performance and quietness.
- Speeds 3 and 4 purify the air faster, for times when pollution levels are high.



If the appliance is ON: use this button to define the operating duration. Briefly press the button to select the number of operating hours desired (1, 2, 4 or 8) and the appliance will automatically turn off at the end of the selected period.

If the appliance is OFF: briefly press the button to set the appliance to turn on in a certain number of hours (1,2, 4 or 8).



The ionizer function releases negative ions into the air.

This function is switched off by default. To activate it, press the button.



TECHNICAL FEATURES

Specific datas

BEDROOM and XL SIZE ROOM

PU4020.. and PU6020..



Air quality indicator

Filter replacement indicator

Mode and filtration speed



Light

Filter reset

Start

*Mode and
filtration
speed
selection*

*Timer or
delayed
start*

*Timer and
delayed
start
setting*



Auto control panel



TECHNICAL FEATURES

Specific datas

BEDROOM and XL SIZE ROOM

PU4025.. and PU6025..



Air quality indicator

Filter replacement indicator

Mode and filtration speed



Light

Filter reset

Start

*Mode and
filtration
speed
selection*

*Ionizer
function*

*Timer or
delayed
start*

*Timer and
delayed
start
setting*



Auto control panel



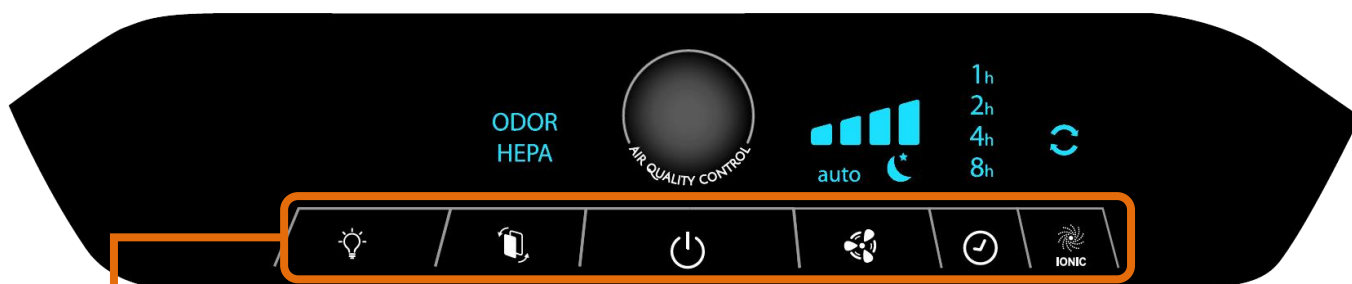
TECHNICAL FEATURES

Specific datas

BEDROOM and XL SIZE ROOM

Auto control panel

PU4020.. and PU6020..
PU4025.. and PU6025..



To change the light intensity of the appliance.



When a filter has been replaced, hold down the reset button for 2 seconds.



Briefly press this button to switch the air purifier ON or OFF.



auto

Automatic : In this operating mode, the filtration speed automatically adjusts according to the air quality detected by the particles sensor and the gas sensor (according to model).



Night : The filtration speed of the appliance is adjusted for a whisper quiet air flow during the night. The light intensity of the appliance is also reduced. If pollution is detected, the filtration speed increases slightly to purify the air but remains quiet to avoid disturbing the sleep.



Manual : To select one of the 4 filtration speeds.

- Speed 1 is specially adapted for nighttime operation – for whisper-quiet air purification.
- Speed 2 is the optimum operating speed, combining performance and quietness.
- Speeds 3 and 4 purify the air faster, for times when pollution levels are high.



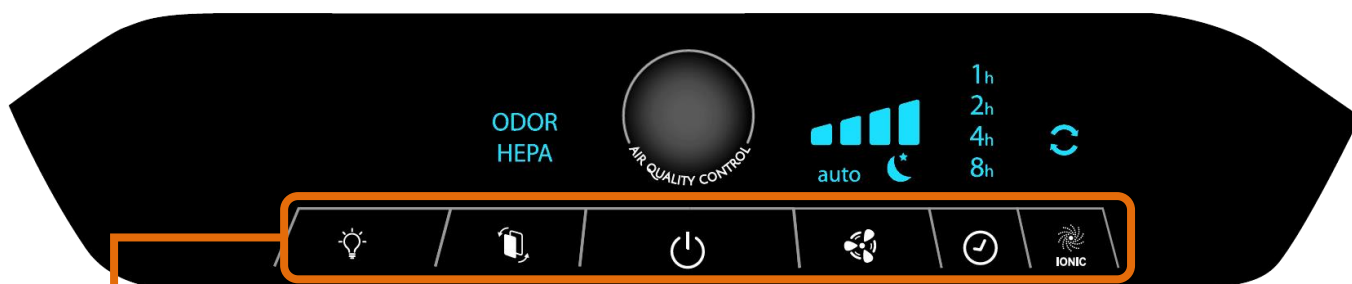
TECHNICAL FEATURES

Specific datas

BEDROOM and XL SIZE ROOM

Auto control panel

**PU4020.. and PU6020..
PU4025.. and PU6025..**



If the appliance is ON: use this button to define the operating duration. Briefly press the button to select the number of operating hours desired (1, 2, 4 or 8) and the appliance will automatically turn off at the end of the selected period.

If the appliance is OFF: briefly press the button to set the appliance to turn on in a certain number of hours (1, 2, 4 or 8).

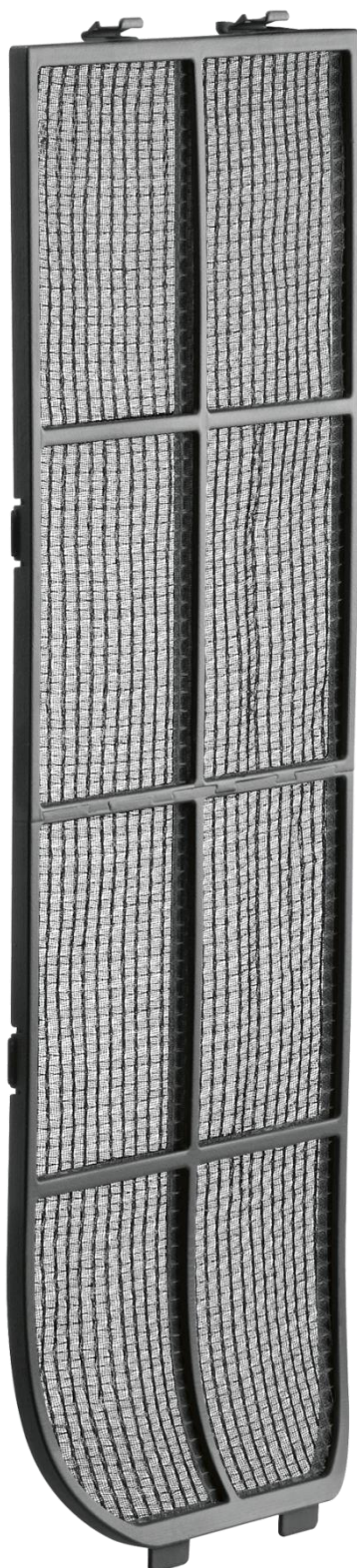


The ionizer function releases negative ions into the air.
This function is switched off by default. To activate it, press the button.



TECHNICAL FEATURES

Pre-filter



Dust



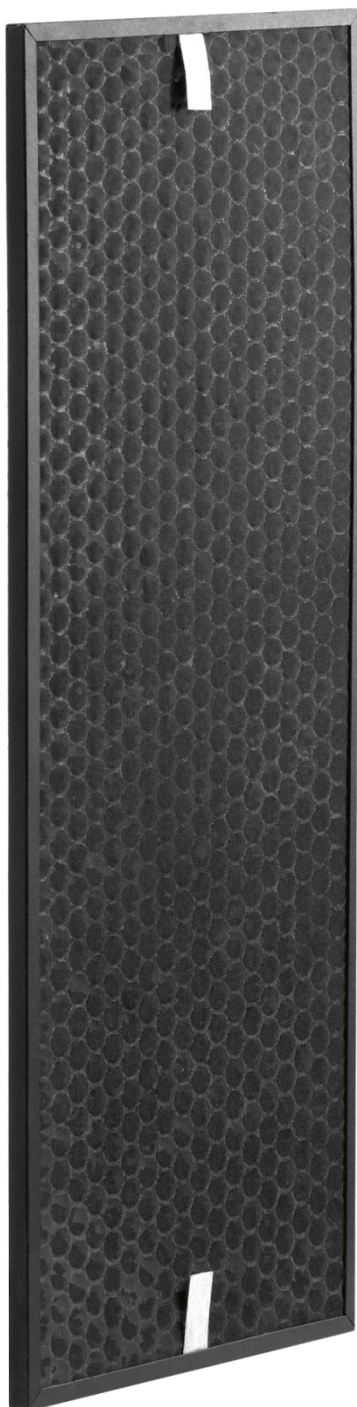
Pet / Human hair





TECHNICAL FEATURES

Active carbon-filter



Chemical pollutants



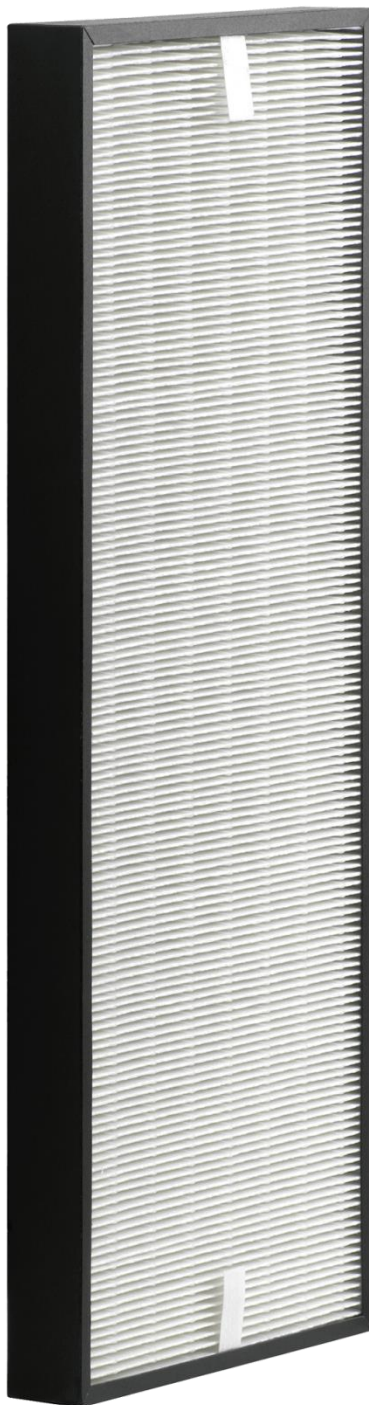
Smokes / Odors





TECHNICAL FEATURES

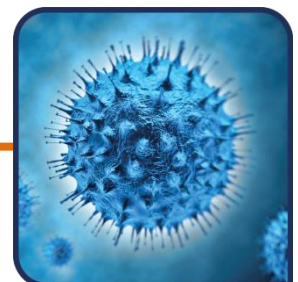
HEPA-filter



Fine particles (2,5µm) – Pollens – Animal allergens



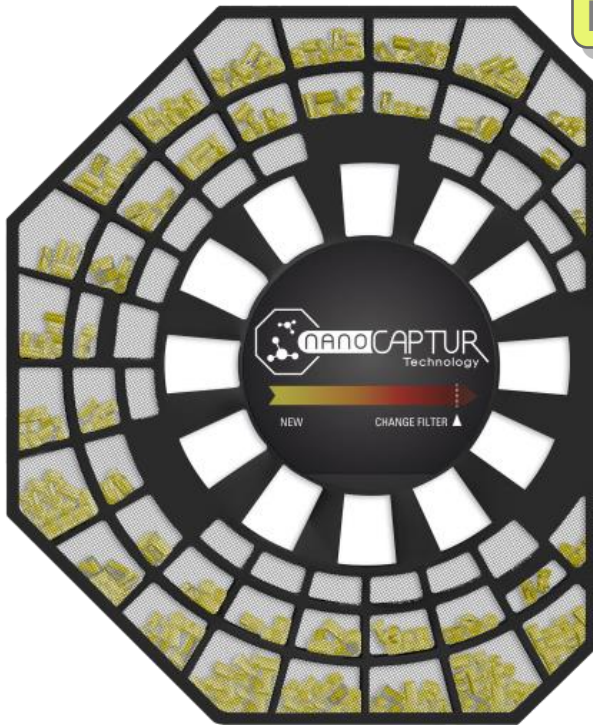
Dust mites – Moldiness – Bacteria + Virus



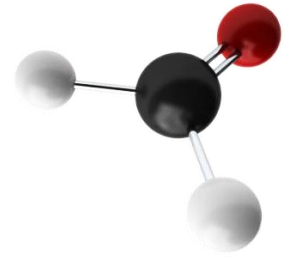
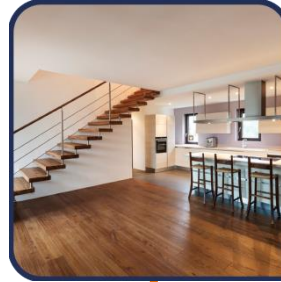


TECHNICAL FEATURES

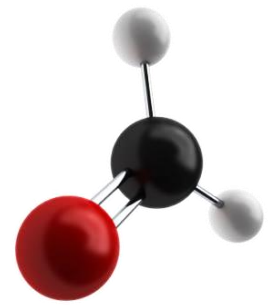
Nanocaptur® filter



Permanently destroys formaldehyde



Pressed wood / Building materials



Paintings – Varnish – Glue – Scented candles – Cleaning products – ...

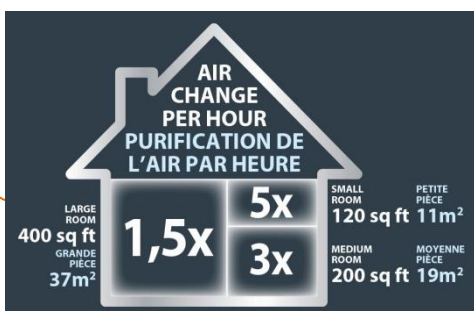




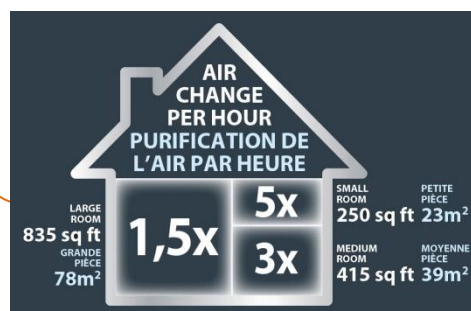
TECHNICAL FEATURES

Filtration data

BEDROOM SIZE



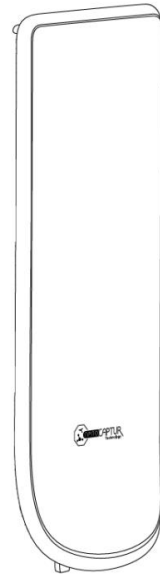
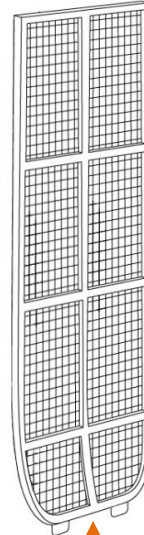
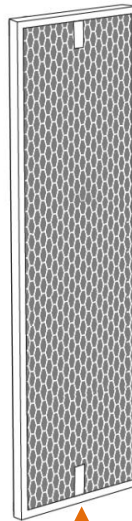
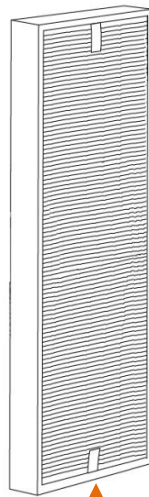
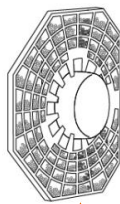
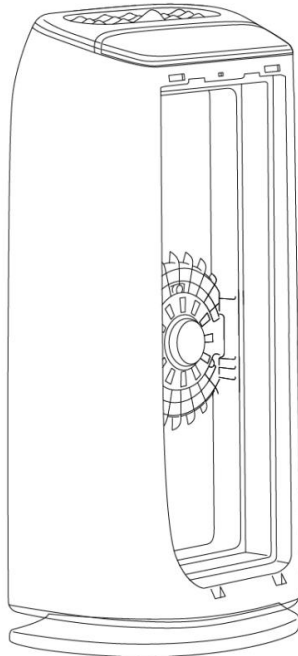
XL SIZE ROOM





FUNCTIONAL PRINCIPLE

Air flow



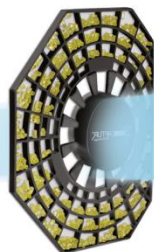
Pre-filter

Active carbon filter

HEPA filter



NanoCAPTUR Technology filter





FUNCTIONAL PRINCIPLE

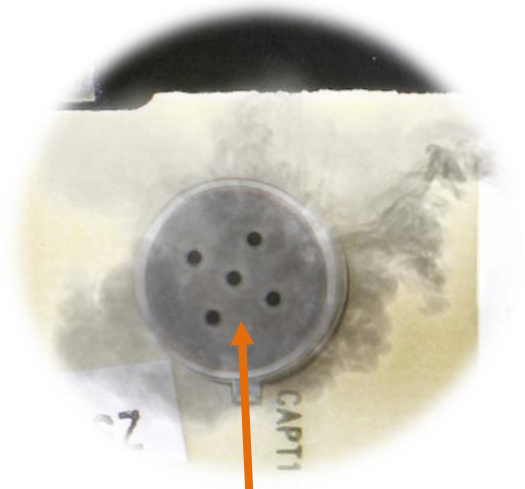
Pollution sensors



According to model

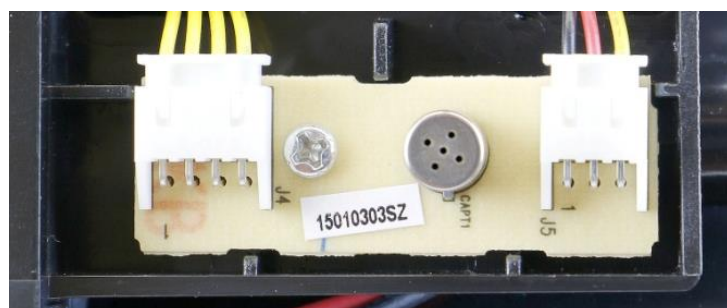
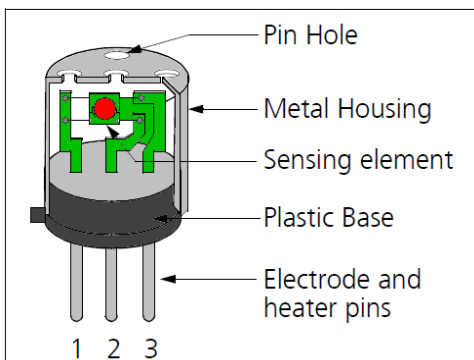


Gas sensor



The sensor detects the kind of gas and concentration. The informations are transformed into an electrical signal.

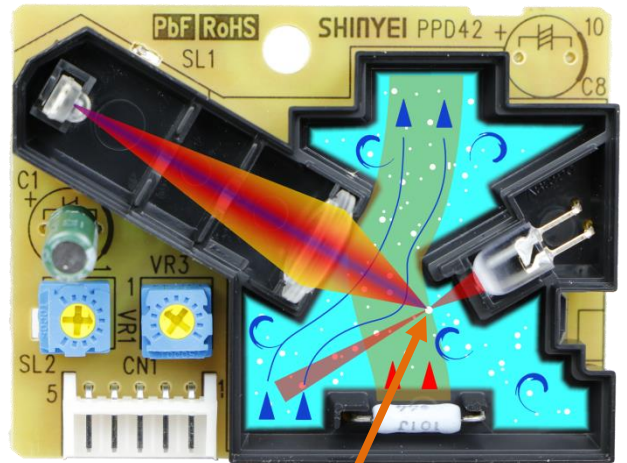
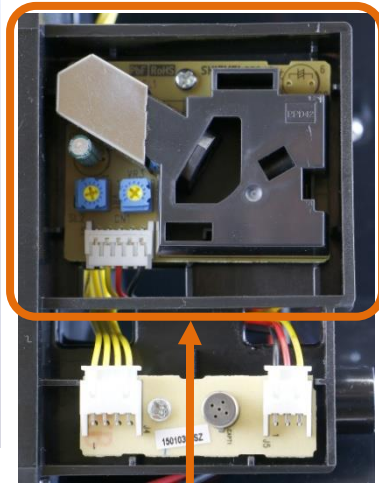
Gas sensor





FUNCTIONAL PRINCIPLE

Particles sensor



Particles sensor

The sensor detects particles of 1 μ m mini.

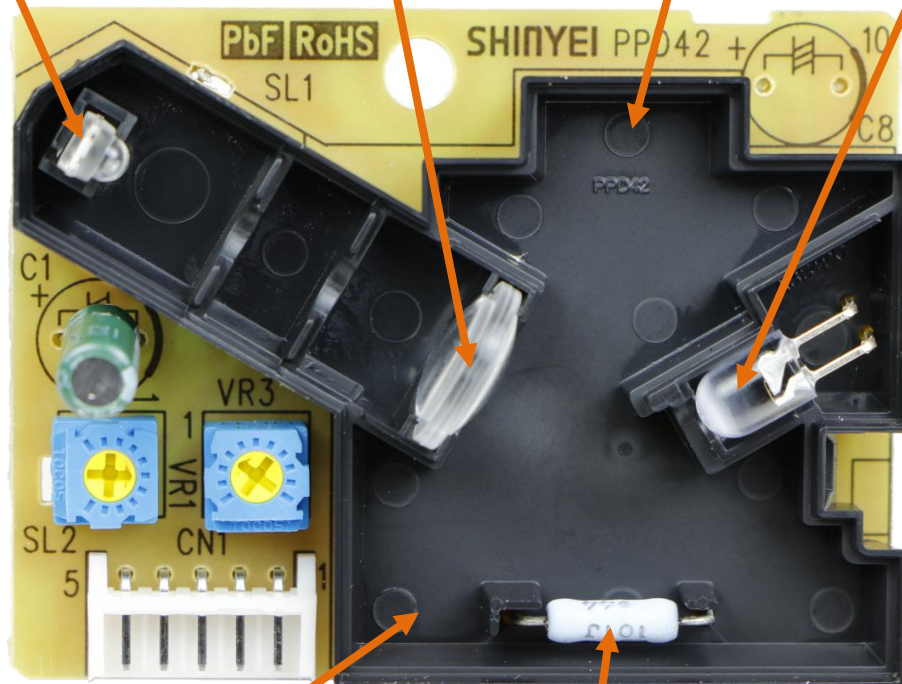
Detail :

Photodiode detector

Focusing lens

Air outlet

Infrared LED



Air inlet

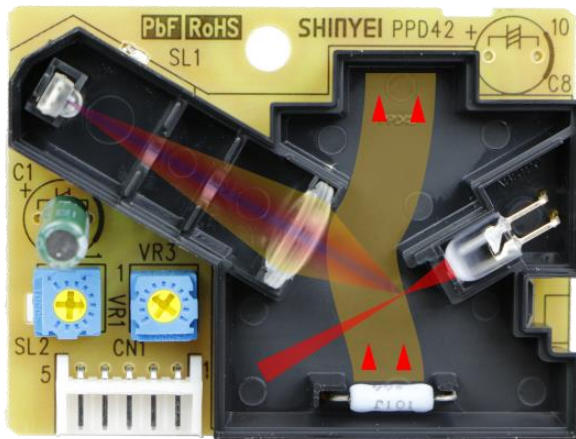
Resistor (heater)



FUNCTIONAL PRINCIPLE

Particles sensor

Principle :



The heating resistor generates an updraft.
The infrared light beam from LED has been focused with focusing lens to sensing point at the center.



Airborne particles have been taken into the sensor box with the updraft.



Particle passing through sensing point scatters light, and receptor receive scattered light through the lens and transformed into pulse signal.
The pulse per unit time is proportional to the particle concentration.
The pulse signals are converted into voltage output.

Voltage output

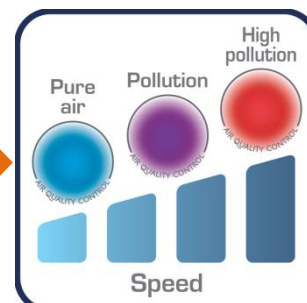
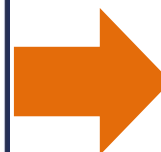
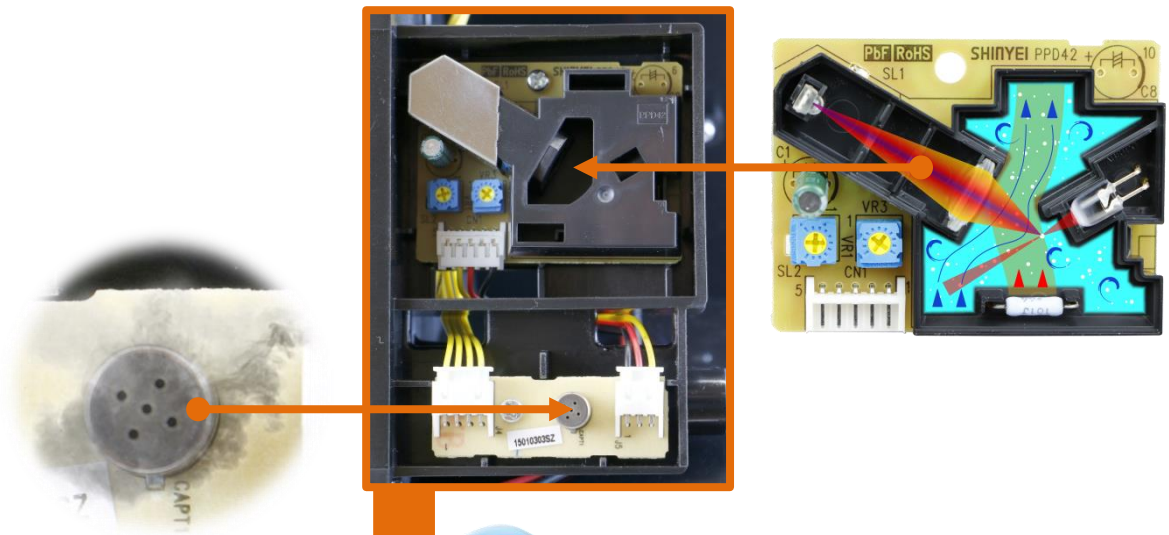


FUNCTIONAL PRINCIPLE

Pollution sensors

Gas sensor

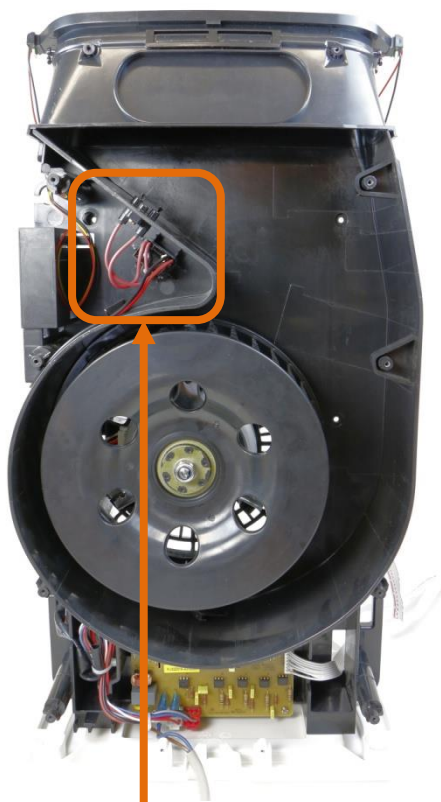
Particles sensor



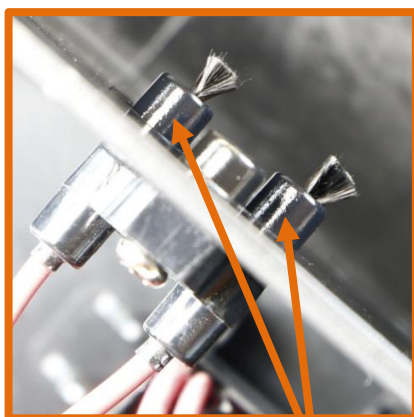


FUNCTIONAL PRINCIPLE

Ionizer



Ionizer



The ionizer function releases negative ions into the air.



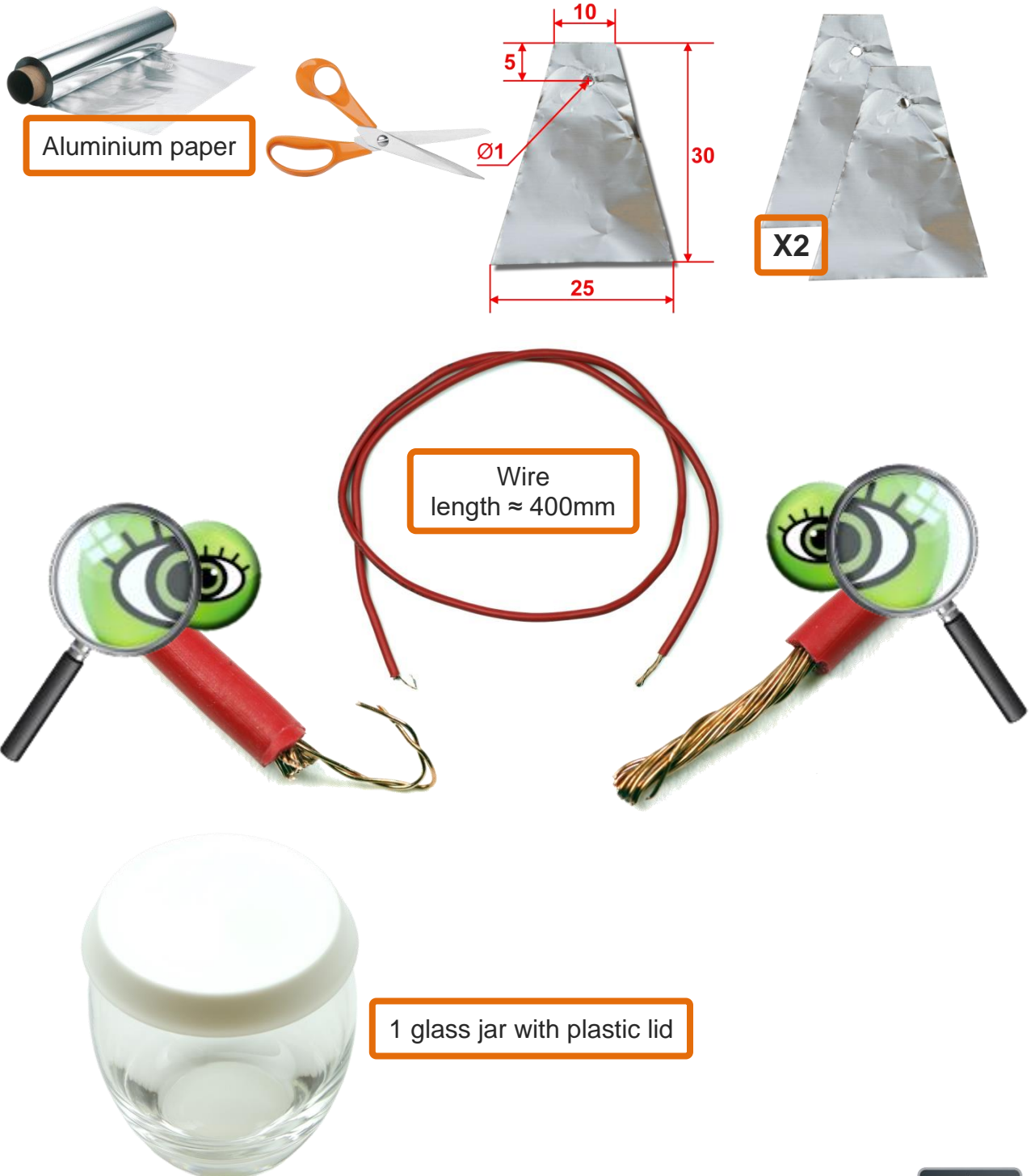


FUNCTIONAL PRINCIPLE

Ionizer

How to verify that the ionizer releases negative ions into the air ?

1/ Realize the test instrument – *necessary equipment –*



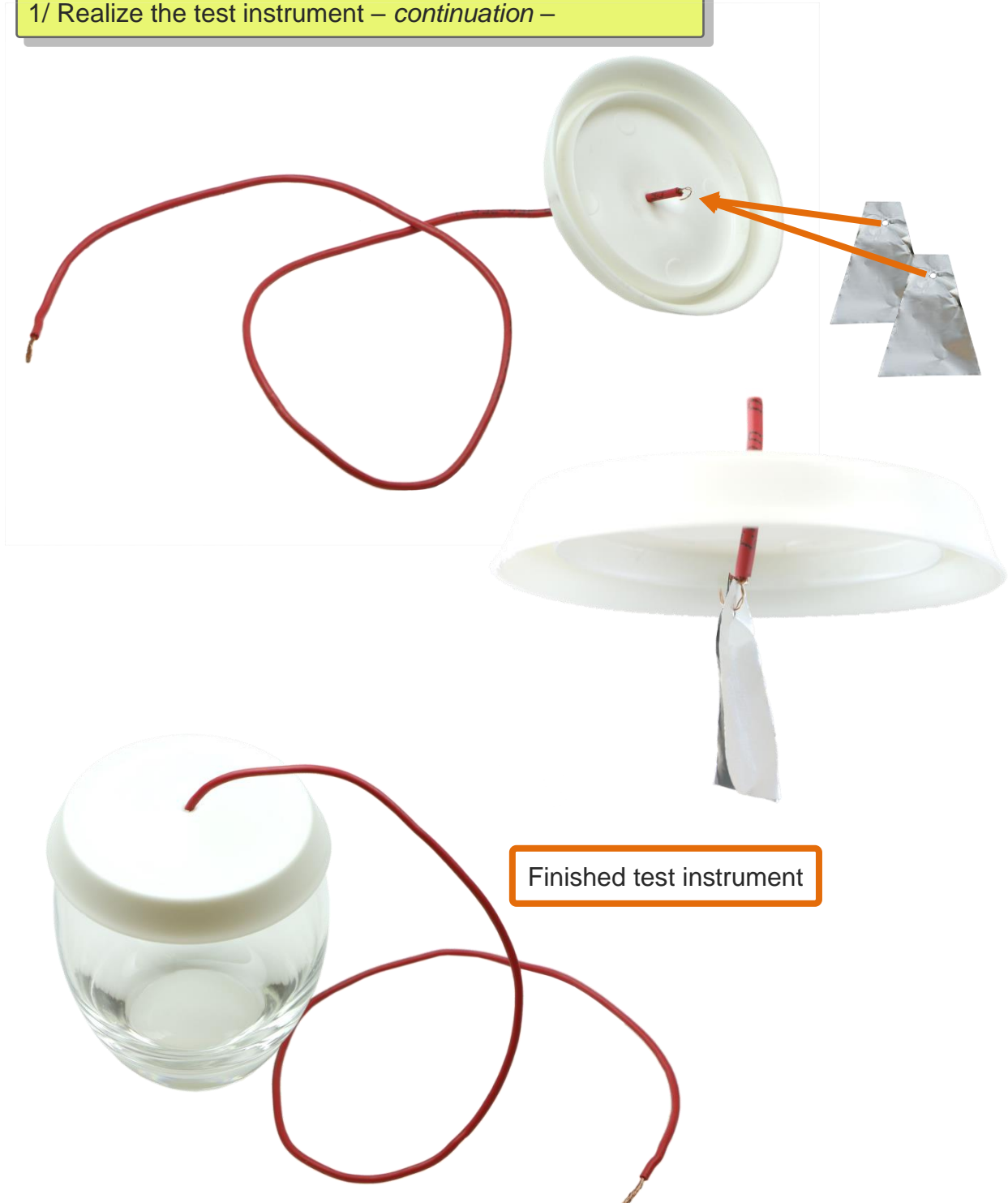


FUNCTIONAL PRINCIPLE

Ionizer

How to verify that the ionizer releases negative ions into the air ?

1/ Realize the test instrument – *continuation* –



Finished test instrument

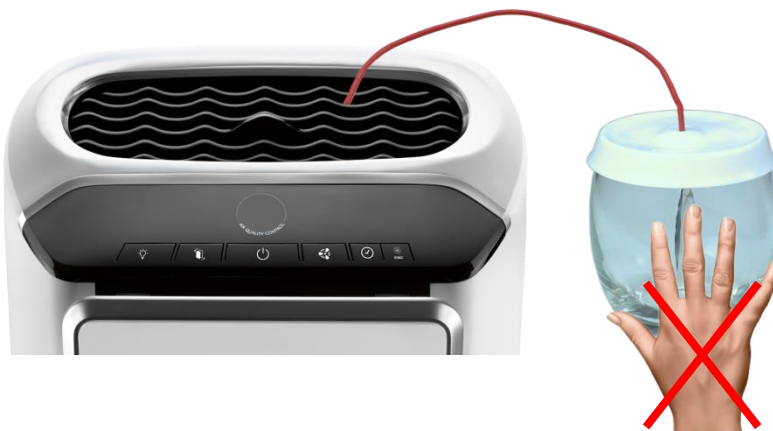


FUNCTIONAL PRINCIPLE

Ionizer

How to verify that the ionizer releases negative ions into the air ?

2/ Check procedure : verify that the ionizer releases negative ions



Don't touch the glass during all the test





FUNCTIONAL PRINCIPLE

Ionizer

How to verify that the ionizer releases negative ions into the air ?

2/ Check procedure : verify that the ionizer releases negative ions– *continuation* –





FUNCTIONAL PRINCIPLE

Ionizer

How to verify that the ionizer releases negative ions into the air ?

2/ Check procedure : verify that the ionizer releases negative ions– continuation –



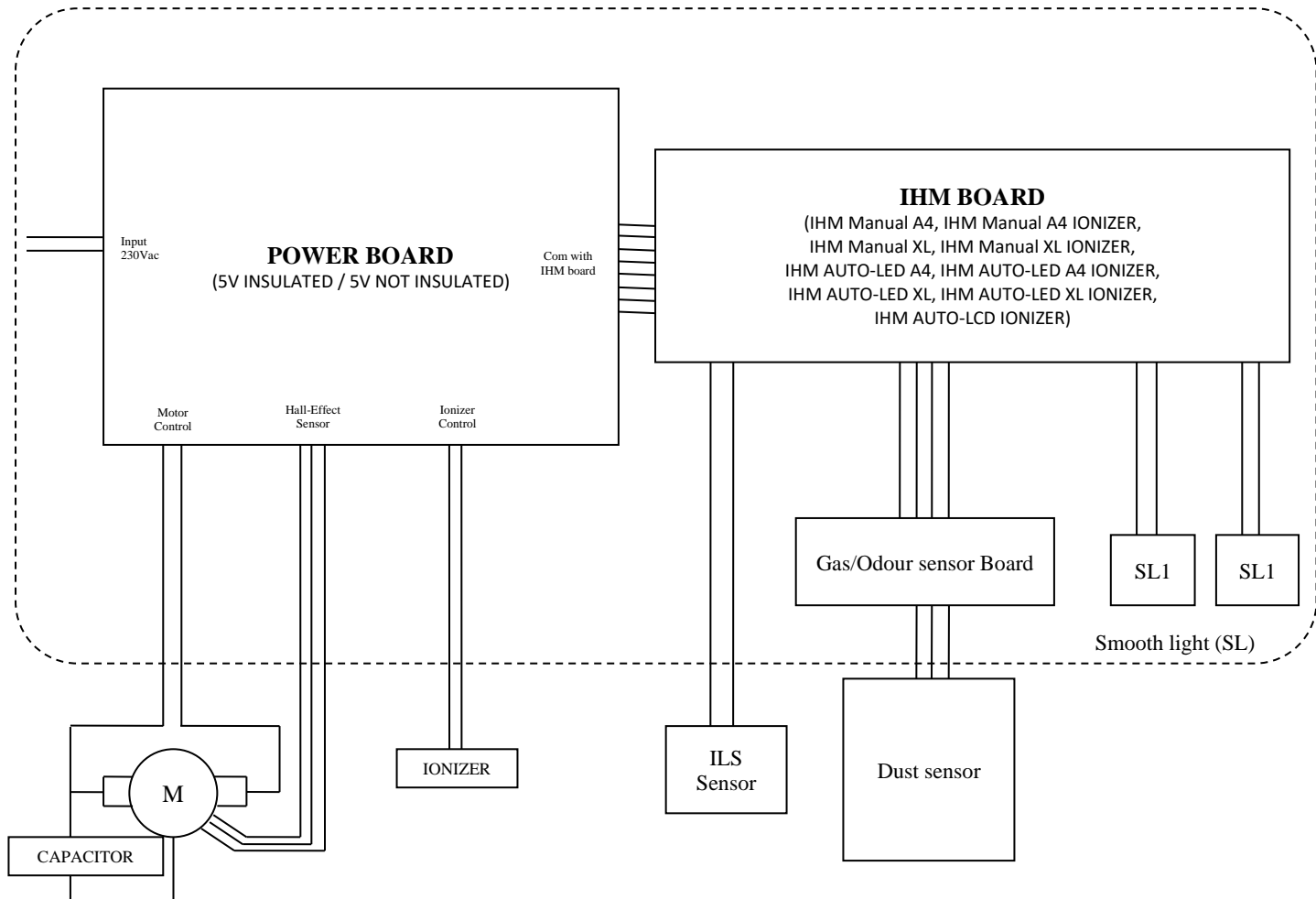
IF

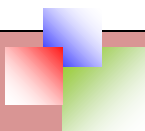


Replace the Ionizer



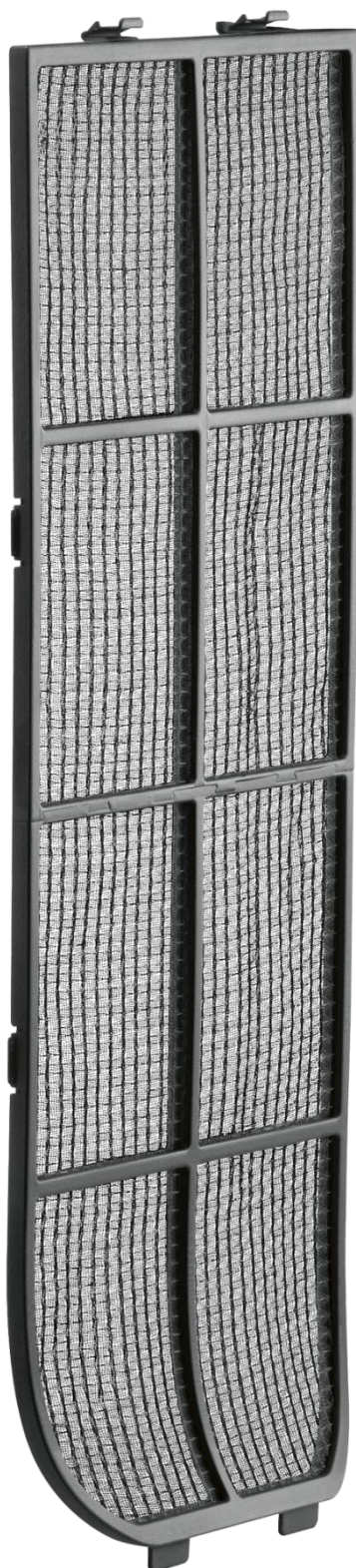
WIRING DIAGRAM





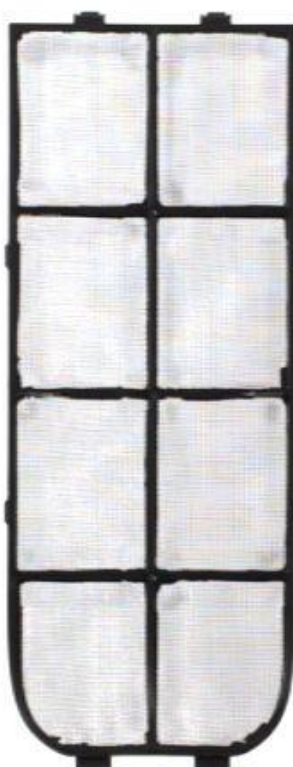
MAINTENANCE

Pre-filter



This data is based on an average use of 8 hours per day at speed 2.

The recommended frequency for cleaning and replacing the filters may vary depending on the duration of use and the operating environment.

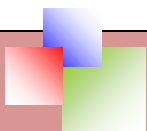


The pre-filter can be re-used: remove the dust using a vacuum cleaner or wash with water.

The appliance's efficiency can be reduced if the pre-filter is not cleaned regularly.

Never use a pre-filter that is still damp.

The pre-filter is the only filter which can be re-used and washed with water.

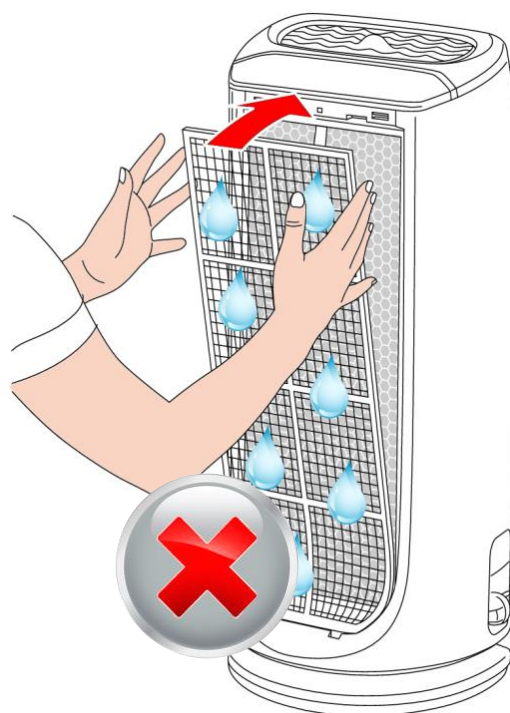
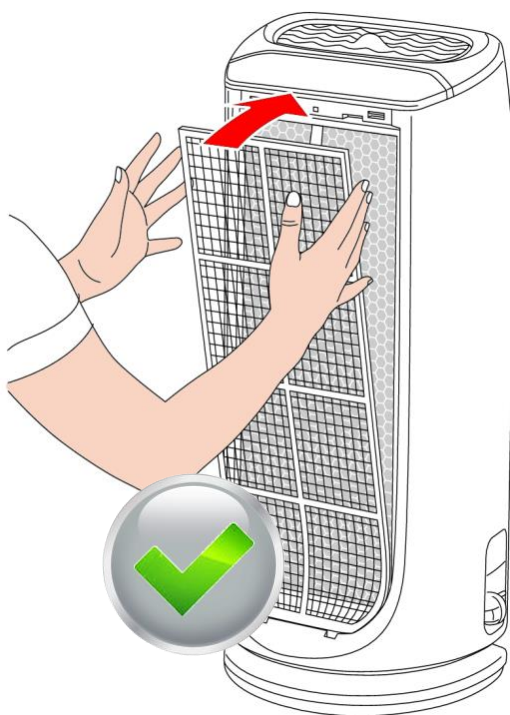


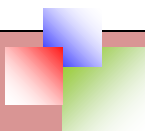
MAINTENANCE

Pre-filter



Clean the pre-filter
every 2 to 4 weeks





MAINTENANCE

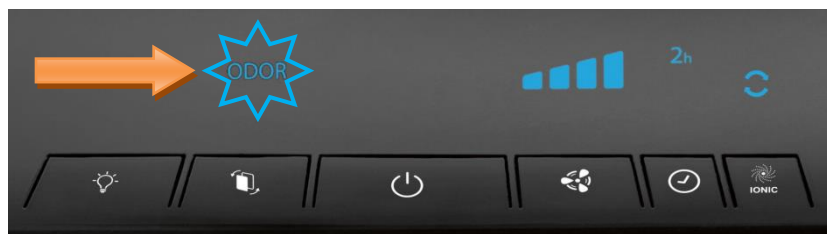
Active carbon filter



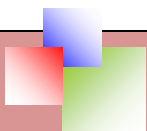
This data is based on an average use of 8 hours per day at speed 2.
The recommended frequency for cleaning and replacing the filters may vary depending on the duration of use and the operating environment.



An “ODOR” light indicates when the Active carbon filter needs to be replaced.



Active carbon filter exist as an accessory.
Ref. ➔ **XD6060..** for Bedroom model
Ref. ➔ **XD6061..** for XL size room model

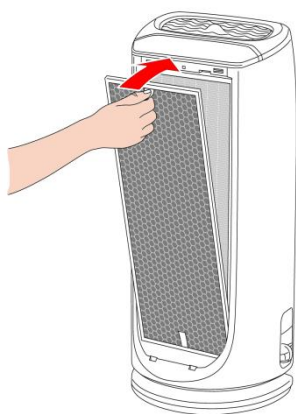
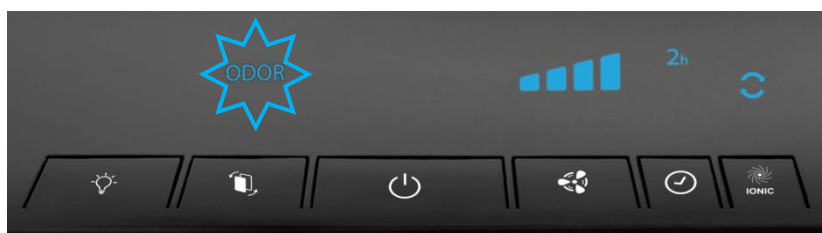


MAINTENANCE

Active carbon filter



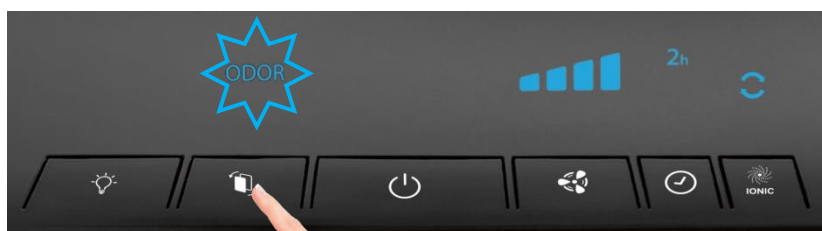
Resetting the filter



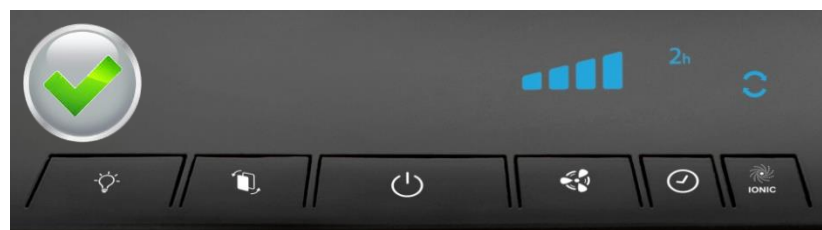
Replace the
Active carbon filter

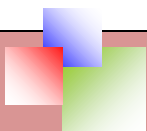


The Active carbon filter cannot be cleaned and re-used.



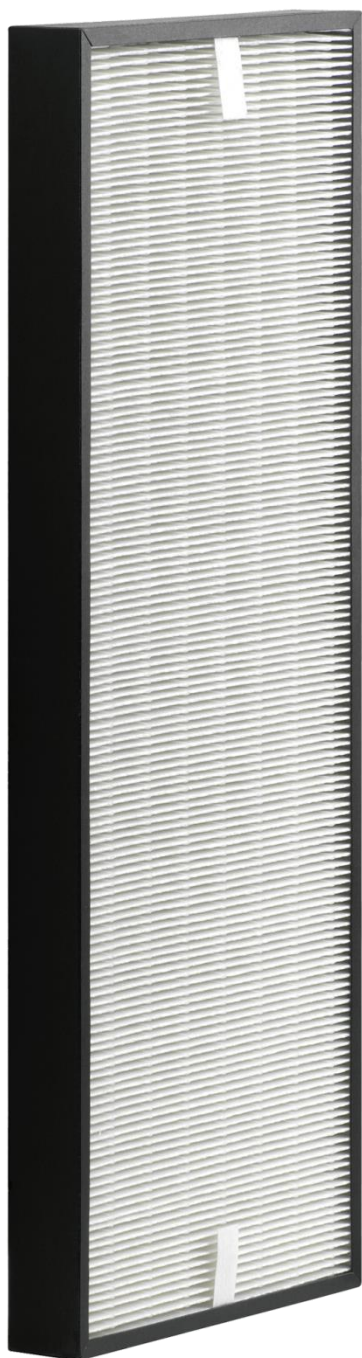
2s





MAINTENANCE

HEPA filter

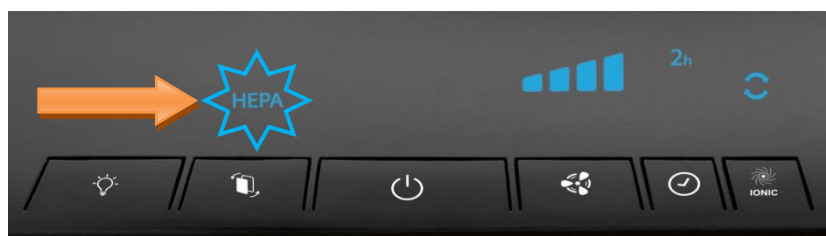


This data is based on an average use of 8 hours per day at speed 2.

The recommended frequency for cleaning and replacing the filters may vary depending on the duration of use and the operating environment.



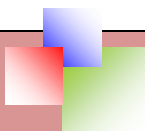
A “HEPA” light indicates when the HEPA filter needs to be replaced.



HEPA filter exist as an accessory.

Ref. ➔ **XD6070..** for Bedroom model

Ref. ➔ **XD6071..** for XL size room model

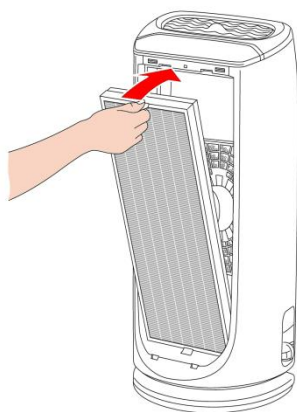
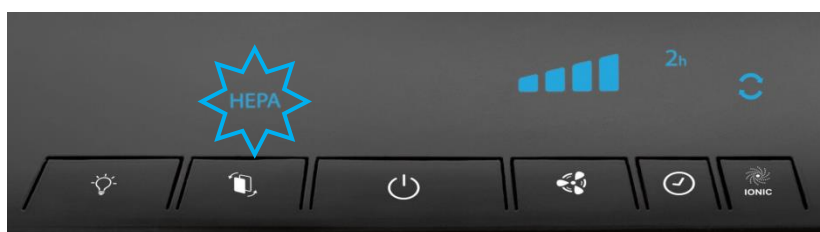


MAINTENANCE

HEPA filter



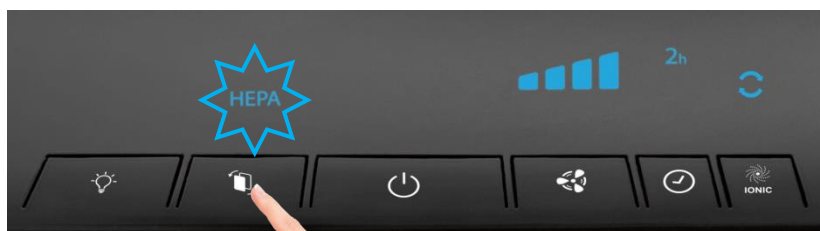
Resetting the filter



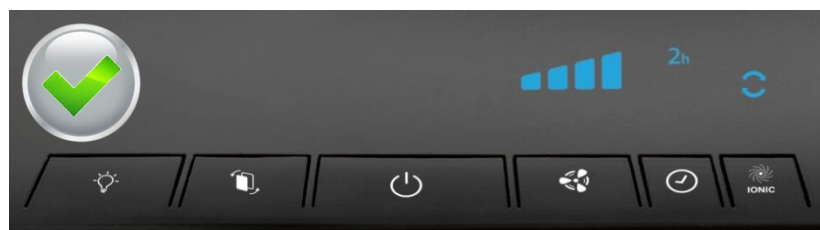
Replace the HEPA filter

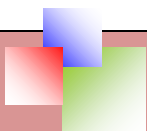


The HEPA filter cannot be cleaned and re-used.



2s





MAINTENANCE

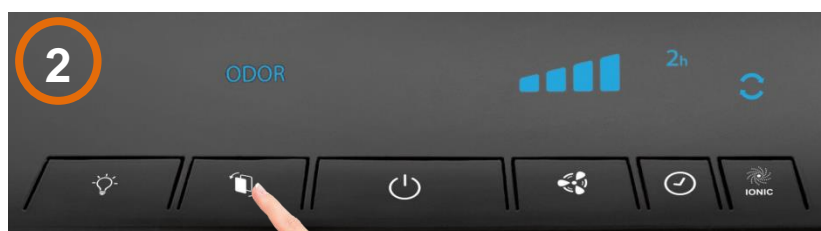
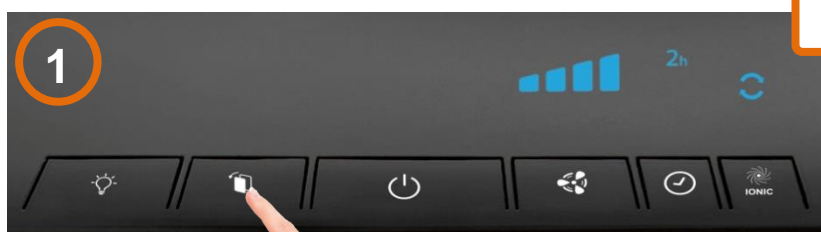
HEPA filter

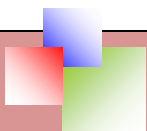
Active carbon filter

If you have replaced an Activ carbon filter or a HEPA filter before its end of life, force the reset of the filter replacement cycle :

1. Hold the reset button for 2 seconds.
2. Press the reset button briefly to select the filter you have changed.
3. After selecting the filter to reset, hold the reset button for 2 seconds. The electronic meter is then reset.
4. If no button is activated for 10 seconds in forced reset mode, the reset mode is canceled.

Forced reset





MAINTENANCE

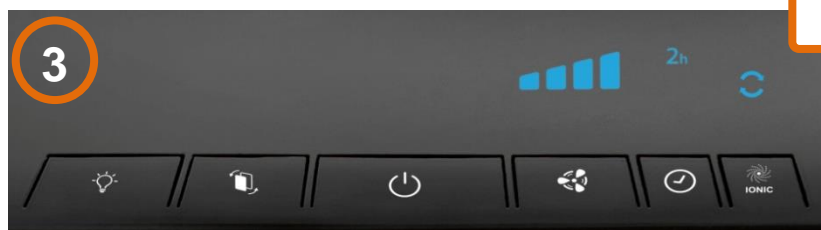
HEPA filter

Active carbon filter



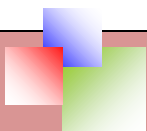
HEPA for example.

2s



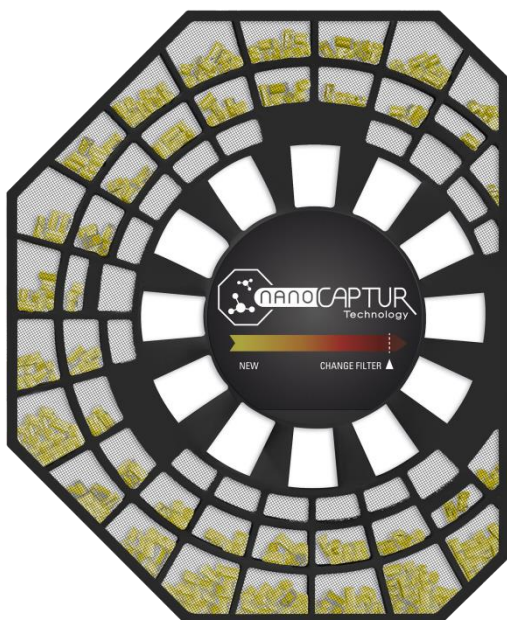
Forced reset





MAINTENANCE

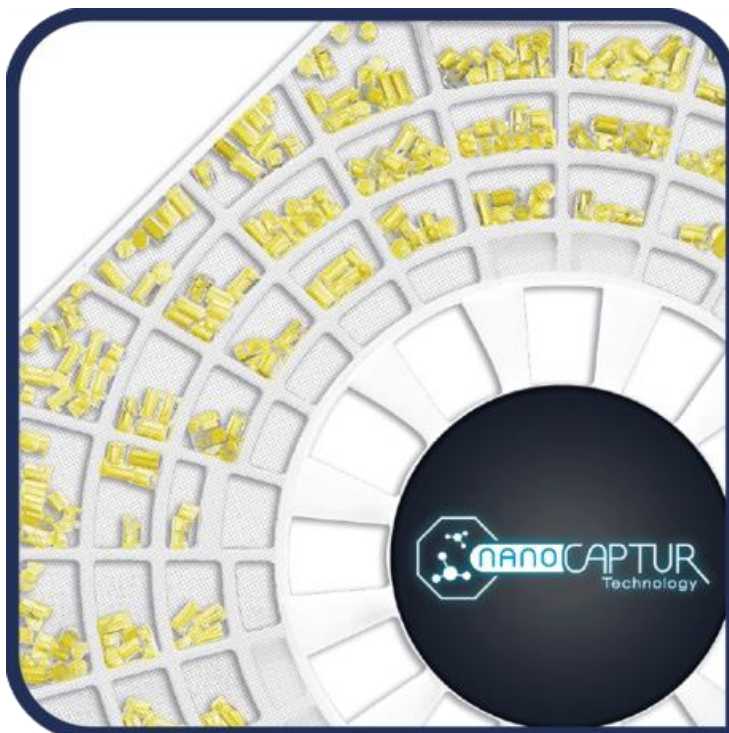
Nanocaptur[®] filter



This data is based on an average use of 8 hours per day at speed 2.

The recommended frequency for cleaning and replacing the filters may vary depending on the duration of use and the operating environment.

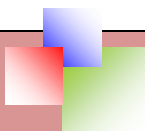
The NanoCaptur filter contains translucent granules which change color according to the formaldehyde absorption rate.



Nanocaptur[®] filter exist as an accessory.

Ref. ➔ **XD6080..** for Bedroom model

Ref. ➔ **XD6081..** for XL size room model



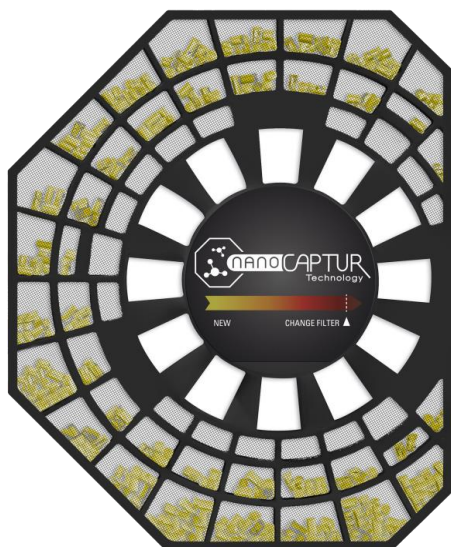
MAINTENANCE

Nanocaptur[®] filter

Refer to the color chart on the inside of the panel or the filter itself to establish the filter saturation rate.

Once the saturation rate has reached its maximum, the filter must be replaced.

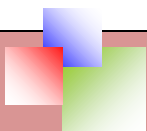
You have to check the filter saturation rate every six months.



SATURATION LEVEL / NIVEAU DE SATURATION

NEW

CHANGE FILTER



MAINTENANCE

Pollution sensors



According to
model



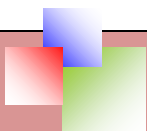
Particles sensors

1



Soft brush or cloth





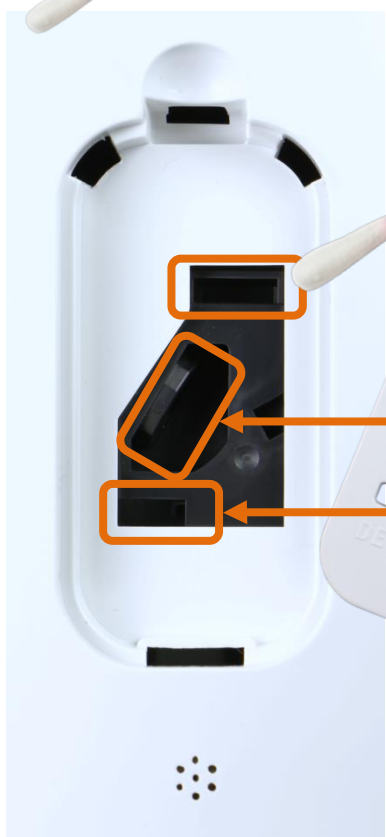
MAINTENANCE

Particles sensors

2

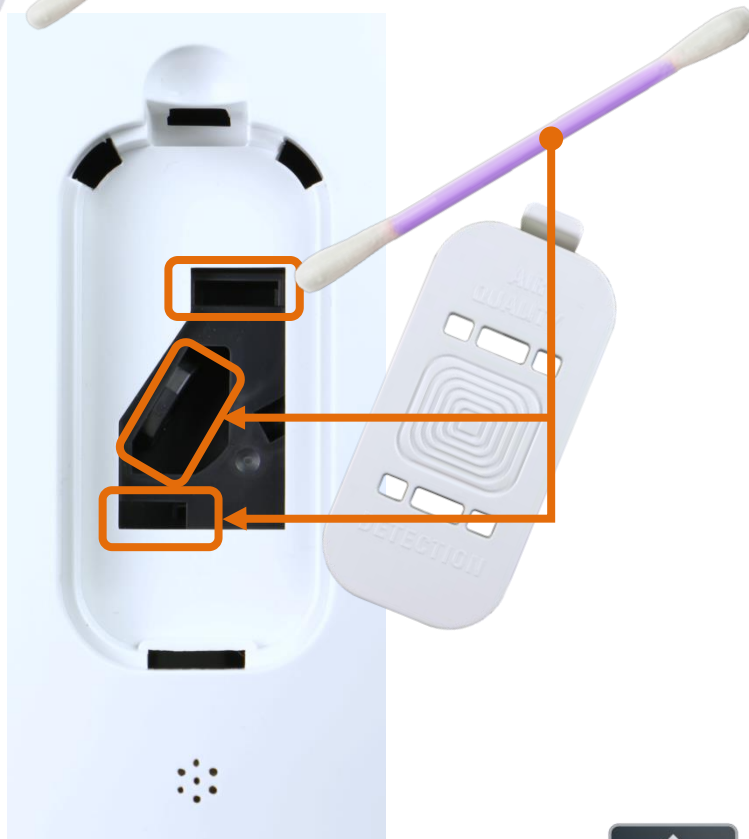
2a

Humidified cotton swab

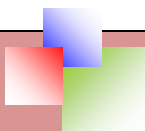


2b

Dry cotton swab



Clean the
Particles sensor
every 2 months



MAINTENANCE

Gas sensors



Clean the Gas sensor
every 2 months

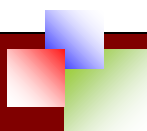
Soft brush or vacuum cleaner



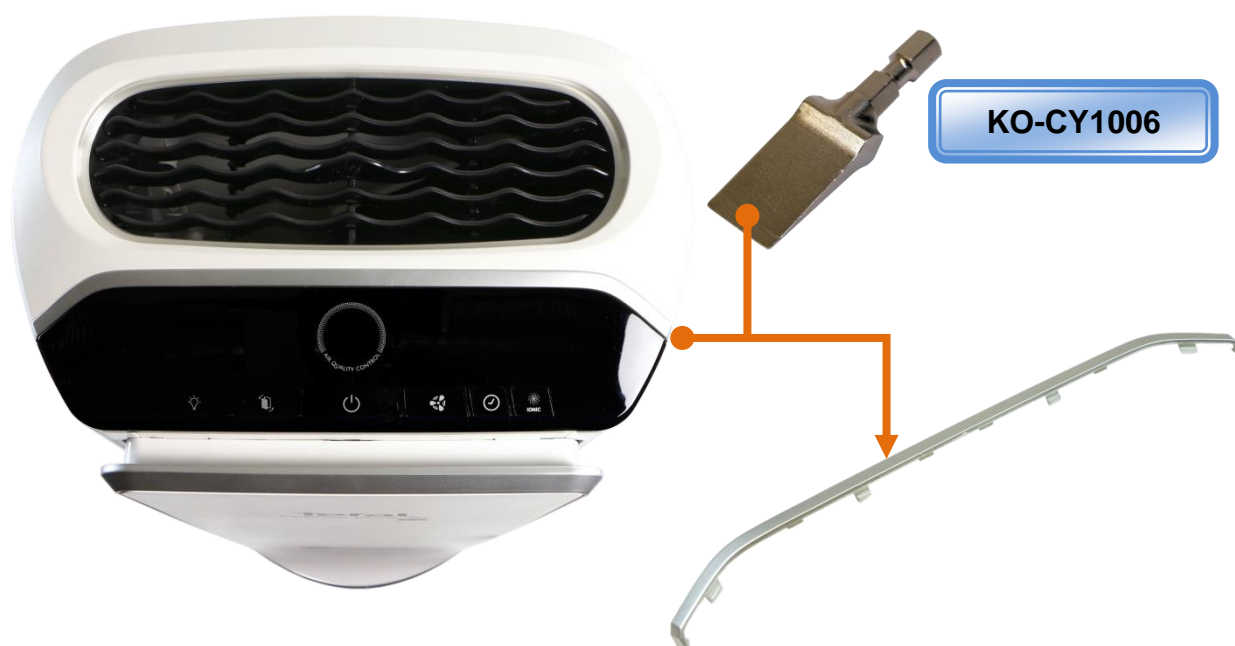
Pollution sensors



Never use a detergent or metal object to clean the pollution sensors. The efficiency of the sensors may be reduced if not cleaned regularly. Cleaning frequency varies depending on the operating environment of the appliance. If it is used in a dusty environment, clean the sensors more frequently.



DISASSEMBLING - REASSEMBLING



KO-CY1006



3 screws



For operations on product, use an antistatic strap.



RO-CY9810



CHECK PROCEDURE

Initial conditions of control



The procedure applies for each model.
Specific points of each model will be detailed in the course of the procedure

Necessary equipment



1 Multimeter

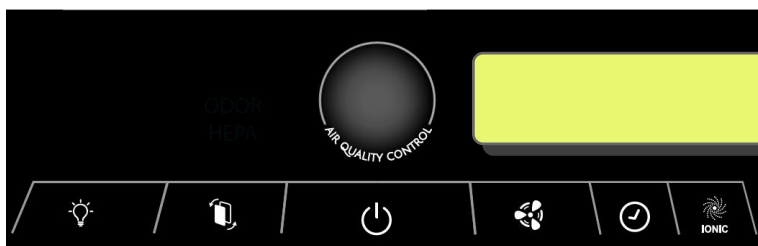
1 Cotton swab



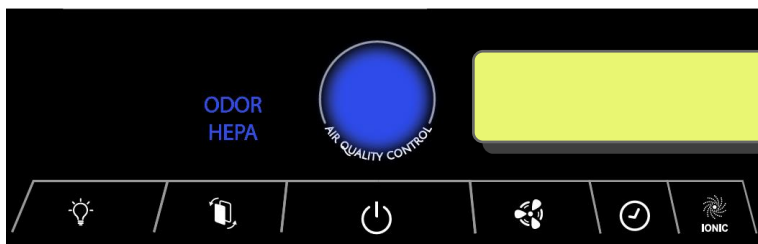


CHECK PROCEDURE

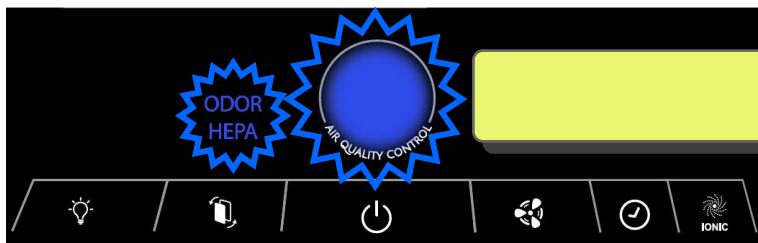
Status of the indicators / Status of the ambient light



Indicators OFF



Indicators Lit



Indicators Blinking



Light OFF



Light Lit



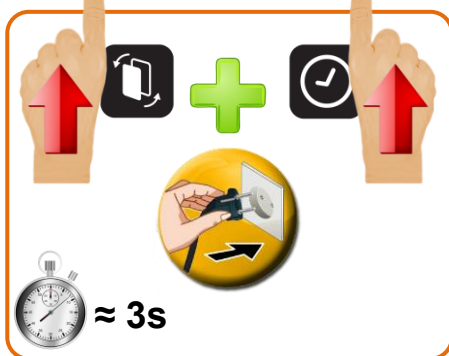
Light Blinking



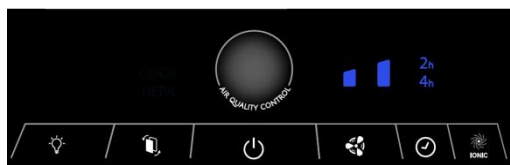
CHECK PROCEDURE

Action

1



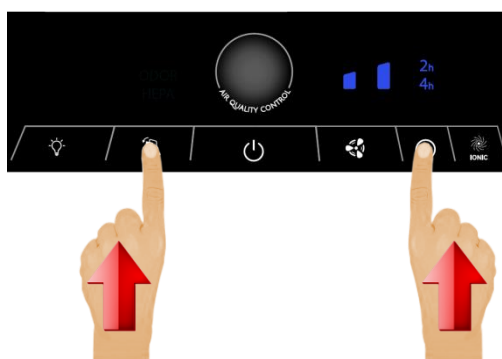
2



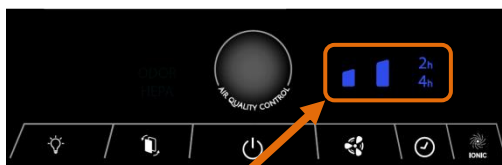
Effect



OK



OK



Software version (example)

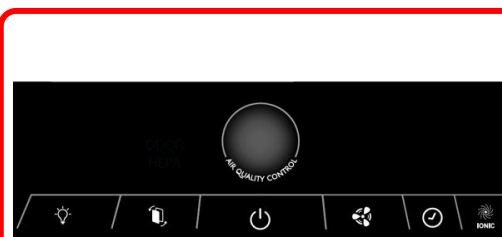
IF



Ac1

Ac2

Ac3





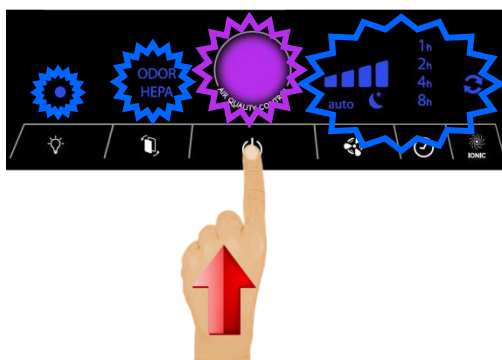
CHECK PROCEDURE

Action

Effect



3

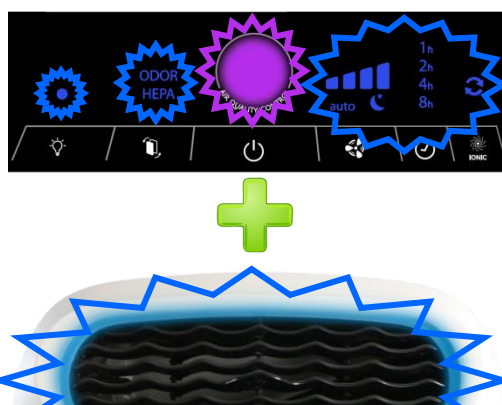
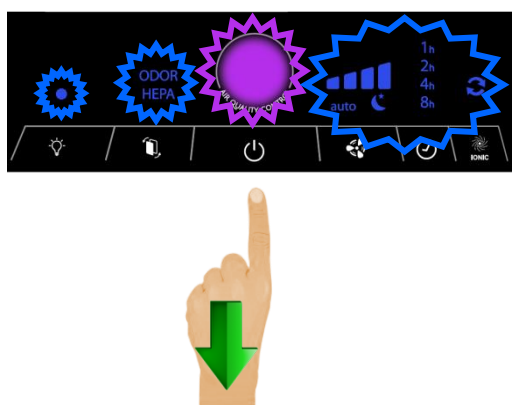


OK



OK

4



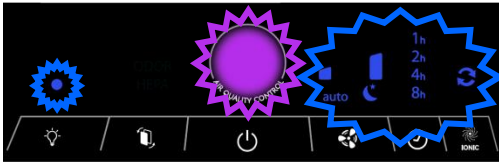

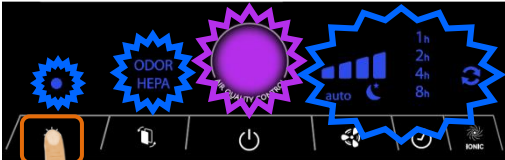



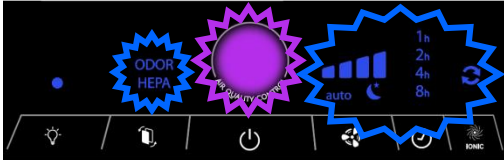


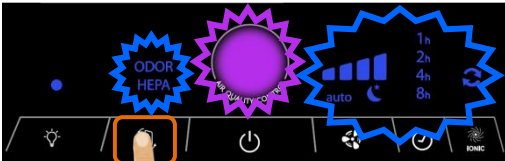


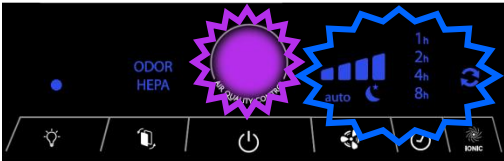


OK



OK

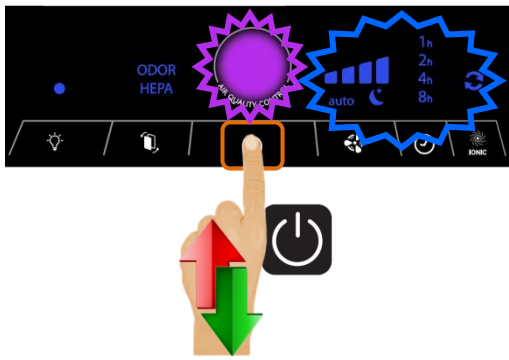




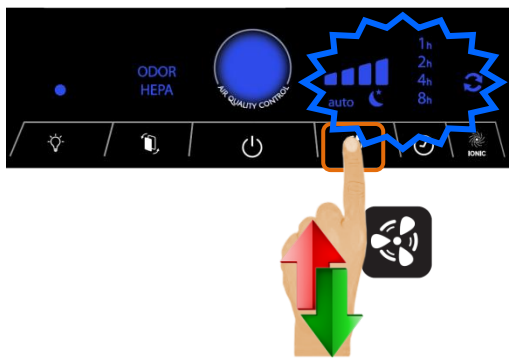



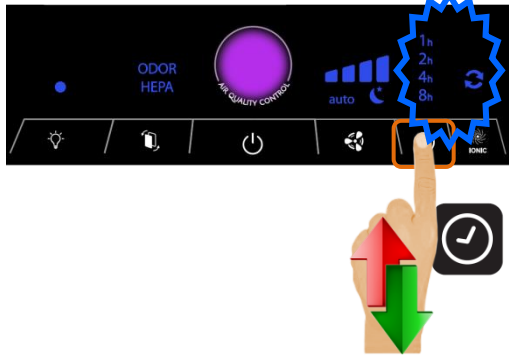





CHECK PROCEDURE

Action	Effect	
<div>4</div> <div>continuation</div>	<div>IF</div> <div></div> <div></div>	<div></div> <div><div>Ac4</div></div> <div><div>Ac5</div></div>
<div>5</div>	<div></div> <div></div> <div><div><div>For steps 5 to 10, pass from one to the next in less than 3s.</div><div></div></div></div>	<div></div> <div><div></div><div></div></div> <div><div>OK</div></div> <div><div>OK</div></div>
<div>6</div>	<div></div> <div></div> <div></div>	<div></div> <div><div></div><div></div></div> <div><div>OK</div></div>



CHECK PROCEDURE

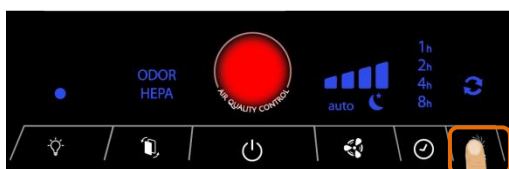
Action	Effect	
<p>7</p> 	 	 
<p>8</p> 	 	
<p>9</p> 	 	



CHECK PROCEDURE

Action

10



According to model



Effect



OK



OK



OK



OK



OK



CHECK PROCEDURE

Action

10

continuation

Effect



OK

OK

IF



Between steps 5 to 10



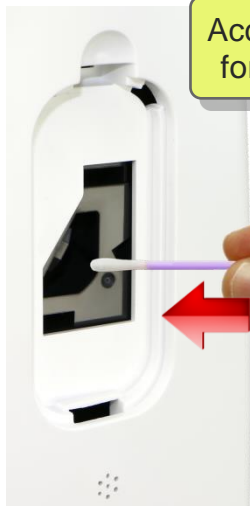
Ac2

Ac6

11



According to model
for steps 11 to 13



OK



CHECK PROCEDURE

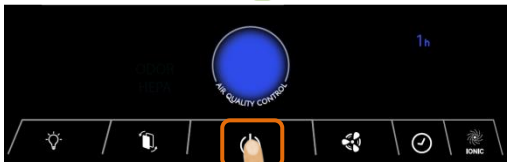
Action

11

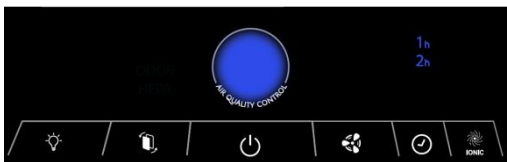
continuation



12



13



Effect



Shake from below upwards the cotton swab in the cavity of the particle detector during the entire duration of steps 11 and 12 to simulate the functioning of the sensor






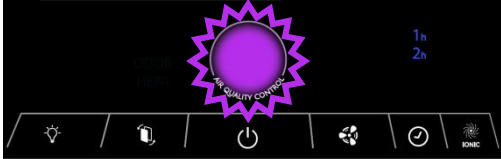



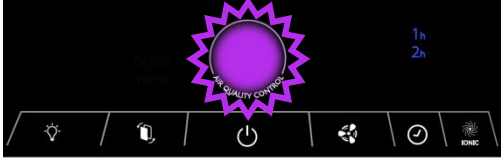


OK

OK

OK

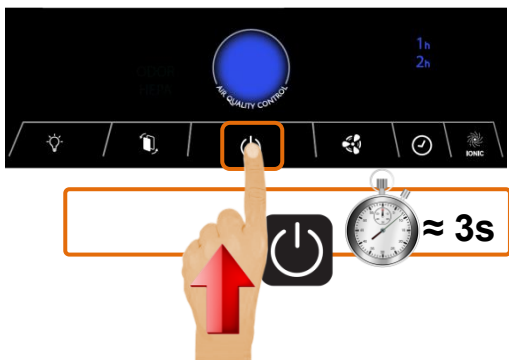
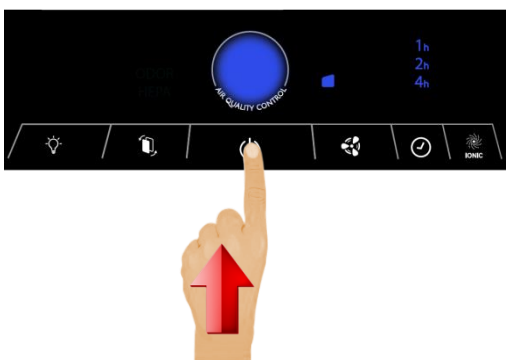


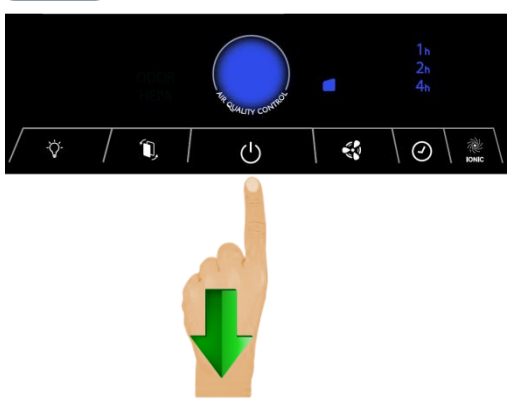




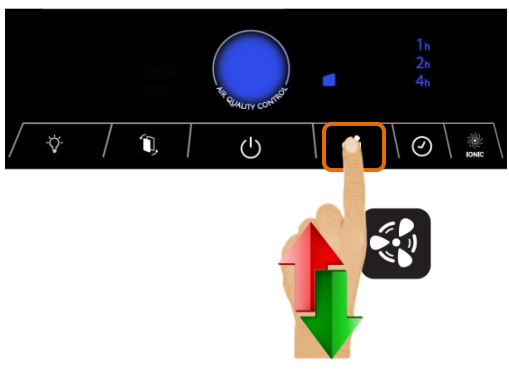
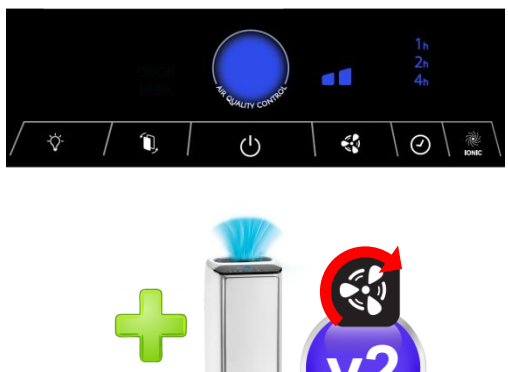





CHECK PROCEDURE

Action	Effect	
13 <i>continuation</i>	IF 	
	<div>For Bedroom size model</div> 	<div>Ac7</div> <div>Ac8</div>
	<div>For XL size room model</div> 	<div>Ac9</div>
	<div>For XL size room model</div> 	<div>Ac7</div> <div>Ac8</div>
	<div>For XL size room model</div> 	<div>Ac7</div> <div>Ac1</div>



CHECK PROCEDURE

Action	Effect	
<p>14</p> 		 
<p>15</p> 	 	 
<p>16</p> 	 	 



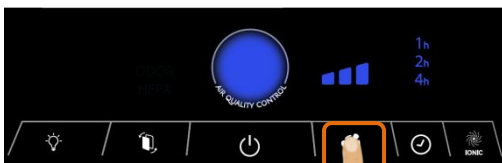
CHECK PROCEDURE

Action

17



18



Effect



OK



OK



OK

IF

Between steps 14 to 18



Ac1

Ac1

Ac1



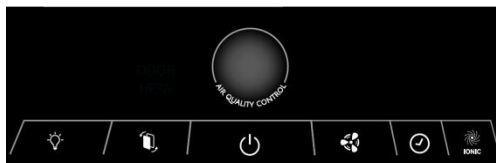
CHECK PROCEDURE

Action

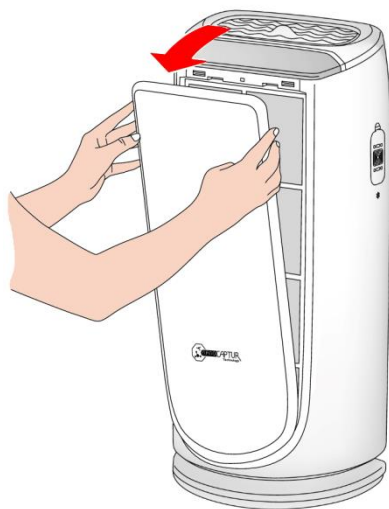
Effect



19

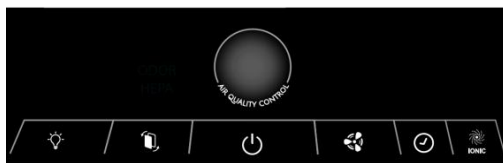


OK



OK

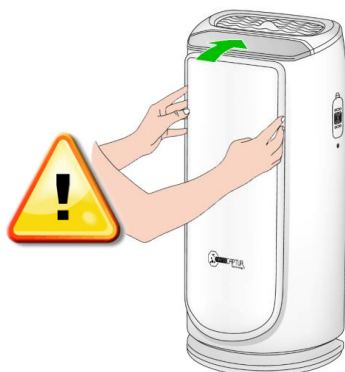
20



**END OF
AUTOTEST**

CORRECTIVE ACTION

A_c1



Check that the front panel is properly closed

A_c2

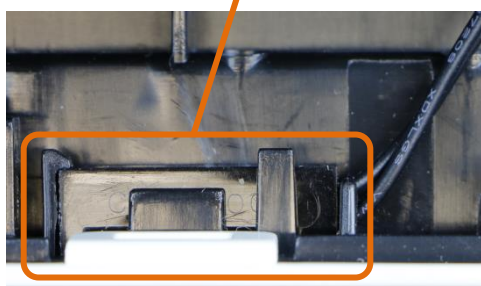


Check the mechanical action of the keyboard on the electronic board

A_c3

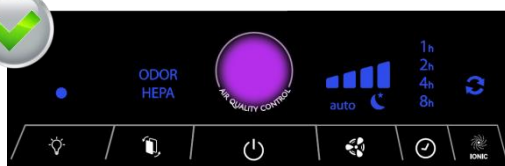


Check the continuity of the ILS



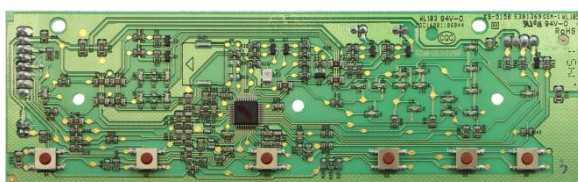
CORRECTIVE ACTION

A_c4



Missing display, for example

Replace the
electronic board / command



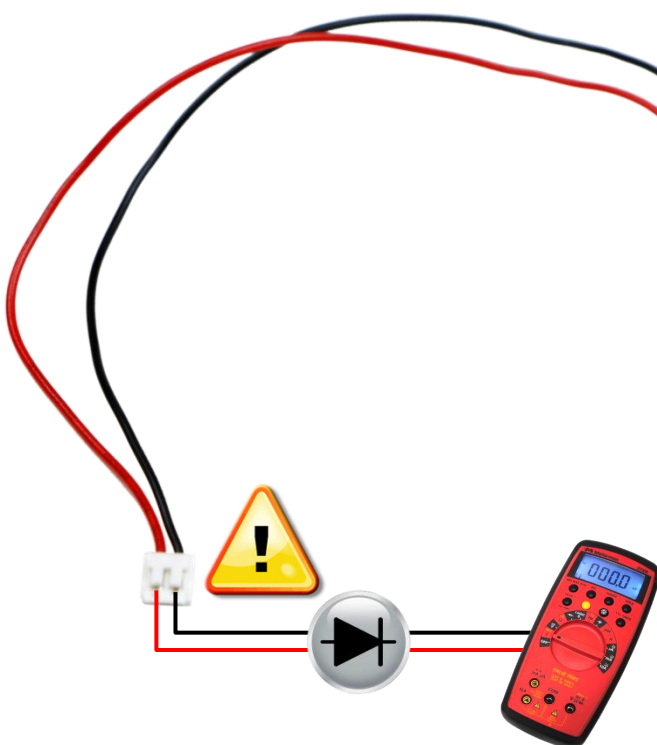
A_c5



Control LEDS

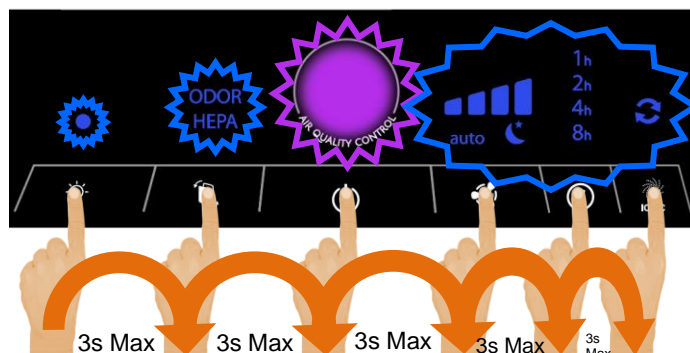


Replace the LED
beam



CORRECTIVE ACTION

Ac6



Try the autotest again

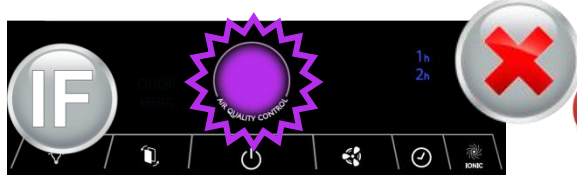
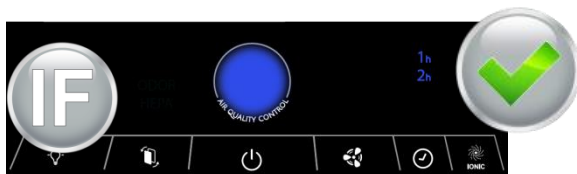
Ac7



Repeat the check procedure to verify that the simulation of particle motion in the sensor cavity for steps 11 and 12 was carried out correctly.



For Bedroom size model, after this new check procedure, if :



Ac8

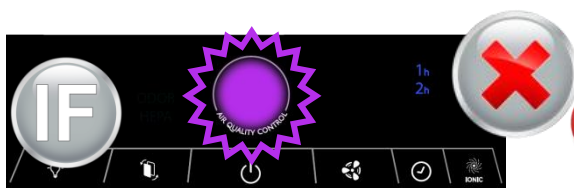
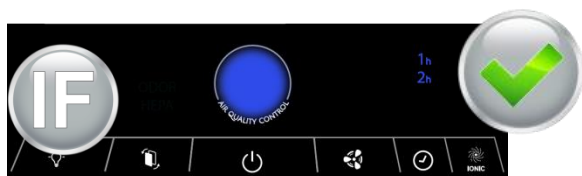
CORRECTIVE ACTION

(continuation)

Ac7



For XL size room model, after this new check procedure, if :



Ac8



Ac9



Ac1

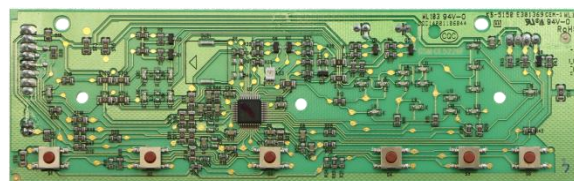
Ac8



Replace the
particles sensor

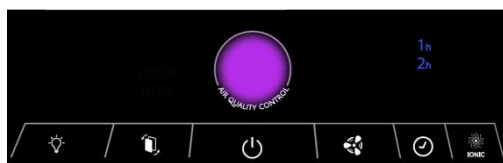


If the fault persists,
replace the
electronic board / command



CORRECTIVE ACTION

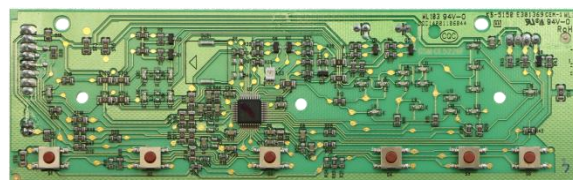
Ac9



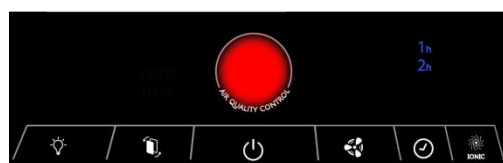
Replace the
gas sensor



If the fault persists,
replace the
electronic board / command



Ac1



Replace the
particles sensor
and the
gas sensor



If the fault persists,
replace the
electronic board / command

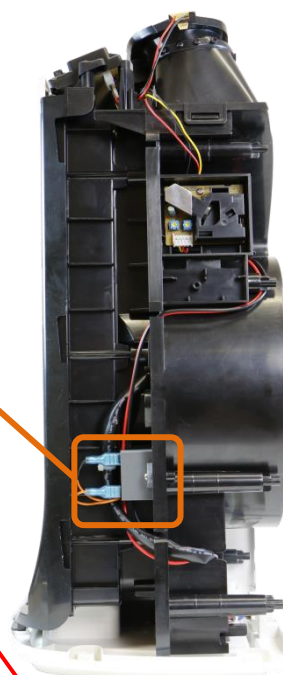
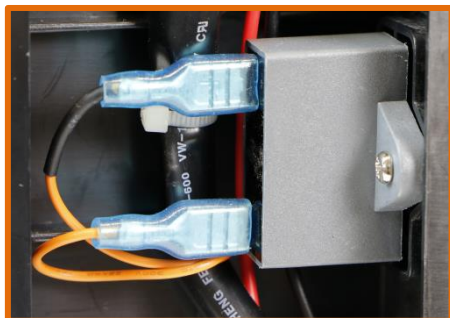


CORRECTIVE ACTION

Ac1



Check the capacitor



example

IF

Measure = $1\mu\text{F}$



IF

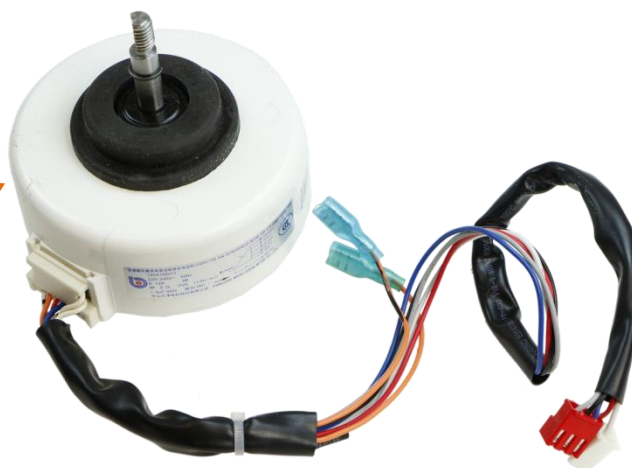
Measure = $0\mu\text{F}$
 ➔ Replace capacitor



Ac1



Replace the motor



CORRECTIVE ACTION

Ac1



Replace the electronic board / power

