

# AP-90



## Operating instructions



Thank you for buying our air cleaner. Each system is carefully manufactured and subjected to a test run to ensure safety and reliability. Please read the instructions carefully before initial use and save them for future reference.

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## Scope of delivery:

Multifilter	1
Power cord	1
Remote control	1
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## Specifications:

Air volume:	720 m3/h
Voltage/rated output:	220 - 240 V ~ 50 Hz/60 Hz (117 W)*
Dimensions:	729 mm x 490 mm x 244 mm
Net weight:	15.6 kg
Plasma:	5 x 10 units/cm3
Noise level:	< 65 dB at the highest fan level
Ambient temperature:	5-40 °C
Relative humidity:	< 80%

CE RoHS

\* Voltage and frequency depend on the standard of the country or region in which the devices are used. Device data can be found on the product label. Use only devices that are intended for your region.

## Test reports:

The system has been microbiologically tested. The test reports can be called up with the test number below on the Institute website ([www.sgs.com](http://www.sgs.com)). We would also be happy to make them available to you if you need.

GZF20-017834-01 PM0.3  
GZF20-017834-02 CADR  
GZF20-017834-04 PM2.5  
GZF20-017834-05 BACTERIA REMOVAL RATE  
GZF20-017834-06 VIRUS REMOVAL RATE

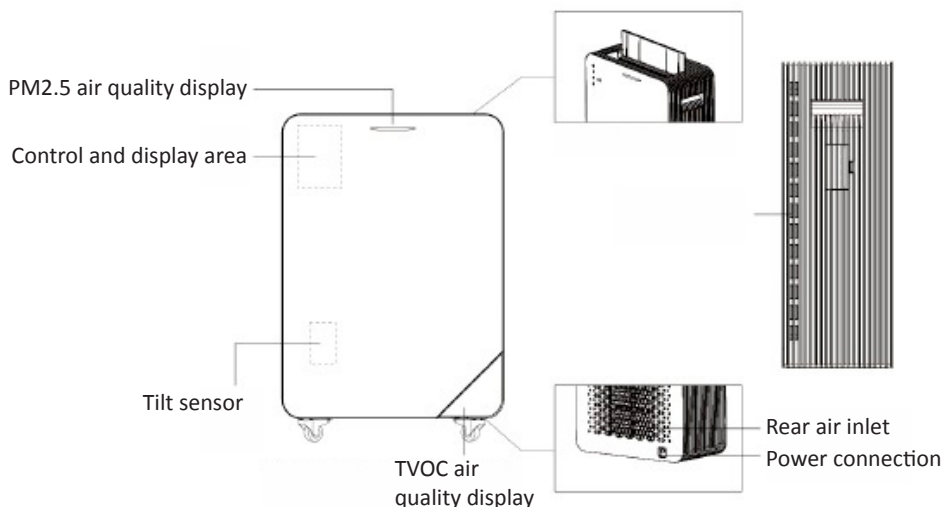


## Areas of application:

The system is equipped with a highly efficient filtration and cleaning system including a HEPA filter, an activated carbon filter, a titanium oxide photocatalyst filter, a UV sterilization lamp with a 254-nm wavelength, and a plasma generator.

ETS air cleaning systems are used to effectively remove toxins, viruses, bacteria, pathogens, dust, allergens, and odors from the ambient air.

## System overview:



- Multi-colored LED displays for air quality
- Four-layer air filter and five-stage air cleaning
- High-precision particle sensors and organic gas sensors installed for real-time air quality testing
- Remote control, manual controls, and night mode
- Four cleaning modes: 1) Manual, 2) Auto, 3) Quick cleaning, and 4) Night operation with cleaning at five fan levels
- Warning display for replacing the HEPA filter, activated carbon filter, and UV lamp

## Safety functions:

- The system does not start, or automatically switches off, if the machine is tilted more than 25 degrees (tilt sensor).
- The system does not start, or switches off, if no HEPA filter is installed.
- The system does not start, or switches off, if no titanium oxide filter is installed.

**Installation instructions:**

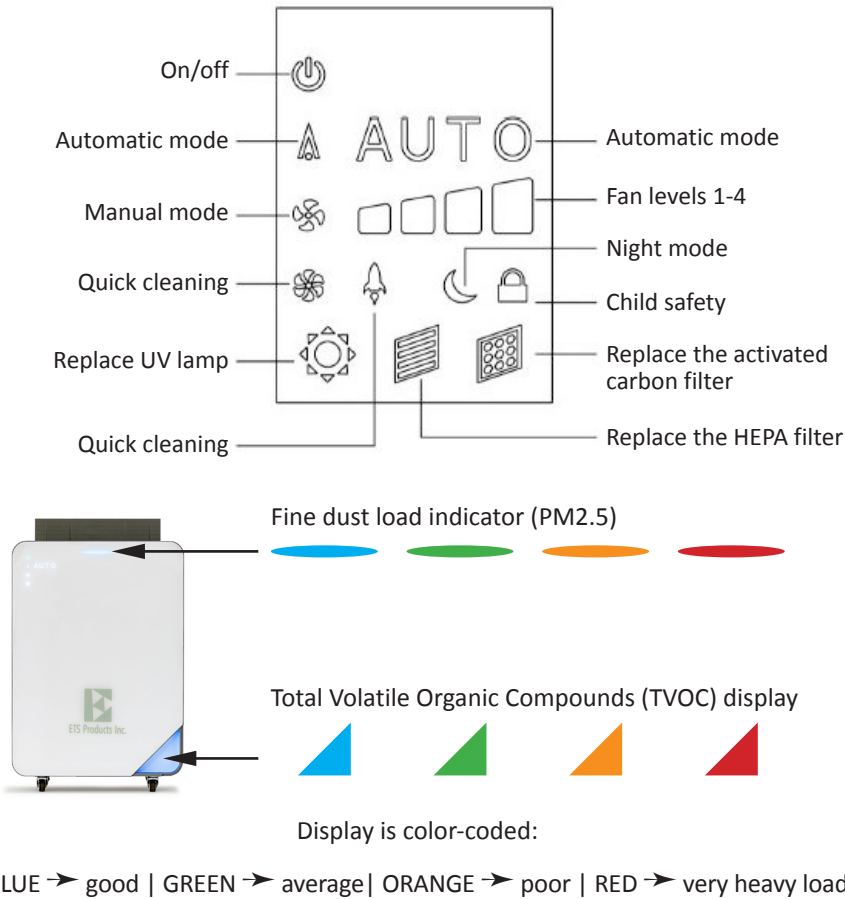
The device must be freestanding during operation with space of at least 30 cm to the rear and to both sides. The rear air inlet, the lateral sensors, and the air outlets must remain free and may not be covered.

**Commissioning:**



The systems are tested and delivered ready to operate. Remove any packaging and protective film. Ensure that the mains voltage and frequency indicated on page 2 match your mains voltage and use the power cable to connect the system to power.


**Control and display fields:**

The control and display field is in the upper part of the front panel; the fine dust display is in the top center, and the Total Volatile Organic Compounds display is on the bottom right.



### Control and display field:

If the device is connected to power, the power switch icon  indicates that the device is ready for operation. Touch the power switch icon. The device starts and emits an acoustic signal. The power switch icon turns green . After the device is switched on, the upper air hatch opens 90 degrees, and the system runs in automatic mode.

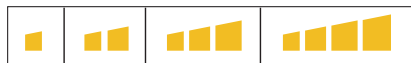
In the indicator field, the  icon and the word “AUTO” are displayed. Pressing this icon returns the device to automatic mode from other operating modes.

**In automatic mode, two sensors continuously measure the system air quality. The fan levels (1-4) are controlled automatically based on the measured air values.**

### Manual mode:

Manual mode is switched on with the  button. Pressing it more than once toggles among the fan levels (1-4).

#### Display of the four fan levels:



### Quick cleaning:

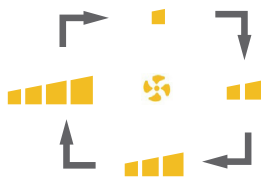
Quick cleaning is switched on with the  button. At the same time, quick cleaning mode is displayed in the display field with the  icon.

**Note:** The air volume indicated in the technical data is measured at Level 4. In manual quick cleaning mode, the air volume exceeds this value. After 80 minutes of operation in quick cleaning mode, the system returns to automatic mode.

### Night mode:

In auto mode, the device switches automatically to night mode as soon as the environment is dark for ten seconds. Everything except for the half-moon indicator and operating display is switched off: auto mode, manual mode, quick cleaning mode, the PM2.5 indicator, and the TVOC quality indicator. The fan speed is reduced to the lowest value, and the air outlet cover is only 45 degrees open. But the air quality sensor can continue to detect air quality. If the air quality worsens, the air speed shifts to Level 2 at low noise. If the environment is illuminated for more than ten seconds again, the device returns to automatic mode.

#### Toggling:



### Normal mode



### Night mode



**Remote control:**

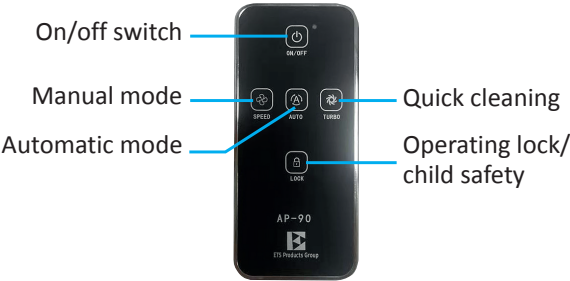
The remote control can be used to change system settings from within ten meters of the device front. It is recommended that the remote control not be use at angles greater that 45 degrees from the control panel.

Remote controls for the functions of the On/off switch, automatic mode, manual mode, and quick cleaning are analogous to direct system operation.

The remote control is also equipped with an operating lock/child safety system. If you press the lock button, the lock icon on the control panel lights up and remains lit.







All touch buttons on the system control panel and all buttons on the remote control except for the lock button are locked. The lock can be removed by pressing the lock button on the remote control again.

The remote control layout may deviate from the image below, but the functions are identical.



**Consumables display:**

The device is equipped with an indicator that shows when the filter or the UV lamp must be replaced. Wear depends on operating time. If the service life of a filter or the UV lamp expires, the service life indicator of the filter or UV lamp flashes to remind the user to replace it. If the icon in question lights up constantly, the filter or UV lamp must be replaced. Otherwise the device’s cleaning efficiency will be impaired. If your UV lamp needs to be replaced, contact our customer service.

	normal	Replace soon	Replace now
UV lamp	no display	 flashing	 continuously on
HEPA filter	no display	 flashing	 continuously on
Activated carbon filter	no display	 flashing	 continuously on

## Filter and cleaning levels:

To clean the air, the system uses several filters and air cleaning systems simultaneously:

**Prefilter:** The prefilter filters out large particles such as human hair, animal hair, lint, etc.

**HEPA filter:** The HEPA filter removes smoke, dust, pollen, allergens, toxins, and fine particles larger than  $0.3\text{ }\mu\text{m}$ .

**Activated carbon filter:** The activated carbon filter removes gases such as benzene and methanol, odors, etc.

**Photocatalyst TiO filter and UV-C lamp:** Eliminates viruses and bacteria in reactions with the titanium oxide coating in conjunction with UV-C light with a wavelength of  $253.7\text{ nm}$ .

**Plasma generator:** At the plasma stage, air is routed between electrodes carrying high electrical voltage. Plasma neutralizes bacteria, viruses, and mold spores.

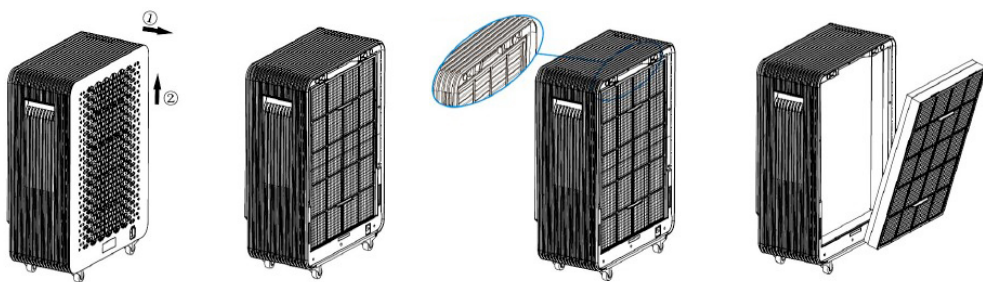
## Filter and cleaning levels:

➔ Use only original replacement parts. They have been harmonized with device operation. Using third-party replacement parts can impair cleaning performance. Doing so invalidates the guarantee and the test results from the microbiological institute.

➔ Switch off the device and pull the power plug before working on the machine to avoid danger of electric shock.

The rear cover is secured with magnetic closure. Place your hands on the top edge of the rear cover, pull it a short distance away from the device, and lift to remove the rear cover from the device.

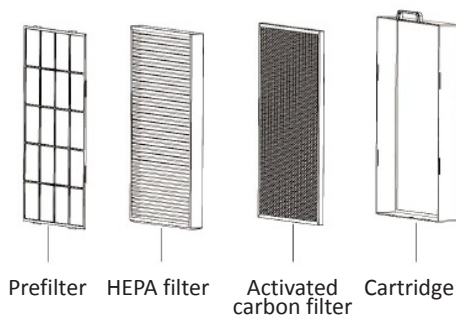
Turn the two filter cartridge fasteners 90 degrees and remove the filter cartridge by first rotating it out and then lifting it out of the lower guide. When re-installing the filter cartridge, rest it first on the base guide and then rotate it into the device. Before the rear cover is installed, the cartridge must be locked again.



Deposit the cartridge with its inner side flush with a flat surface. The prefilter, HEPA filter, and activated carbon filter can then be taken out of the frame. During reassembly, consult the sketch to the left for the proper sequence.

**Note:**

The photocatalyst filter and the UV lamp are permanently installed and may be replaced by technical customer service personnel only.

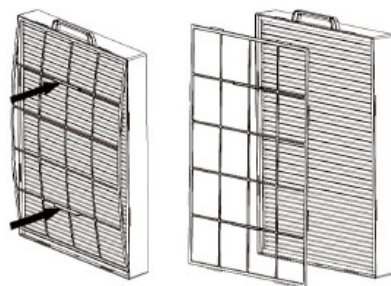


**Prefilter**

The prefilter must be checked regularly at intervals of no longer than four weeks and cleaned as necessary.

Remove the prefilter by lifting the tabs, rotating it up 90 degrees, and pulling it out. The prefilter is hooked into the cartridge.

The prefilter can be either cleaned with a vacuum cleaner or rinsed out with running water. Insert the prefilter only after it has dried completely.



**HEPA filters and activated carbon filters** cannot be cleaned. Do not replace these filters until the system indicates that doing so is necessary.

**Safety instructions:**

- Before use, the rear housing cover must be completely closed.
- Do not open the rear cover while the device is in use.
- Before connecting the machine to the power source, ensure that the voltage indicated on the type plate is the same as the mains voltage in your region.
- Do not use the product if the plug, the power cable, or the housing is damaged.
- Keep the product away from children.
- Do not block air inlets and outlets.
- The product is suitable for dry rooms only.
- Clean the housing with a dry or slightly moist cloth. Never use alcohol-based cleaning agents to wipe off the housing!

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You can find more information and technical data about air cleaning systems on our website.

