

# NEAFES

ANTIVIRAL AIR PURIFIER



USER MANUAL



Our valuable customer; thank you for your preference in FORM products.

The purpose of this user manual is to present the use and maintenance instructions of NEFFES Air Purifiers to the user.

Please read the safety warnings carefully and keep the manual for future reference to smoothly operate the NEFFES Air Purifier you purchased.

## **WARNINGS AND SAFETY MEASURES**

- Don't disassemble, repair or modify the device without authorization. Otherwise, it may cause failure or danger. Unauthorized modification may result in fire or breakdown.
- The devices are intended for indoor use only.
- It should be used under appropriate conditions in accordance with its technical specifications and design purposes.
- Any non-original spare parts should not be used for the device.
- The input voltage must not exceed the rated voltage. Otherwise, it may result in fire or breakdown.
- Don't use the device for removing soot or ventilation in kitchen. Otherwise the service life of the filters may be shortened and the machine may be damaged.
- When using pesticide, stop the machine first to prevent any chemicals from being sucked in. Otherwise the chemicals may accumulate inside the device and generate a pungent and hazardous substance under certain circumstances.
- Don't sit or stand on the device or shake it. Otherwise, the device may breakdown.
- Don't use the device to remove toxic substance such as carbon dioxide and silicon gas.
- Don't use the device at heavily smoky or dusty place (e.g. kitchen) or where flammable gases or metal dusts may be present. Otherwise, fire or failure may occur.
- Don't use solvent like alcohol or diluting agents to clean the air purifier.
- The packaging used in your product is recyclable. Dispose the packaging of your product separately in accordance with the local official regulations to ensure it to be recycled.
- Please pay attention to the transport warnings and signs on the device package.
- Do not carry the device alone during handling.
- Protect it from excess vibration and shock.
- Improper operations (installation, assembly, adjustment, modification, service and maintenance) may result in injuries or material damage. Read this manual carefully for assistance and consult with service personnel if you need further information.
- It should not be used by children and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge.
- Make sure that there is no obstacle in front of air suction holes at the bottom while the device is running.

- Do not put any cover or object on the device, which may cover its blowing nozzles.
- Do not insert your fingers or foreign objects through the blowing nozzles of the device.
- Do not install the device in a humid, wet or steamy (such as bathroom) place. Do not operate the device with damp or wet hands. Otherwise, this may cause electric shock or damage.
- Avoid bending, stretching, or placing objects on the power cable, which may damage it.
- Do not use damaged power cords or deformed plugs. Using damaged power cords or plugs may cause short circuit, electric shock, or fire.
- If the power cord is damaged, it must be replaced to avoid dangerous situations.
- Disconnect the device from power supply if you are not to use it for a long time or before you transport it.
- Always disconnect the device from power supply before any cleaning, maintenance and filter replacement operations.

## GENERAL INFORMATION

NEFFES Air Purifier traps 99.95% of particles larger than 0.3 microns in the air, thanks to the filters inside it.

NEFFES enhances the indoor air quality, eliminating the harmful particles in the air such as dust, bacteria, virus, germ, mold, pollen, mite, pet allergens as well as odor and smoke. It is especially effective in providing a healthy and safe air environment in areas such as offices, restaurants, hospitals, hotels, cafeterias, libraries, sports halls, kindergartens, schools, public buildings with a high density of people.

The body of the device is made of galvanized sheet resistant to corrosion and heavy working conditions, and is coated with electrostatic powder paint.

The device has high-efficiency and speed-controlled EC motor fans. The EC motors increase the energy efficiency of the device, providing energy savings. The fan can be operated at 5 different speeds via the control panel.

The Neffes Air Purifier has a 4-stage filtration system.

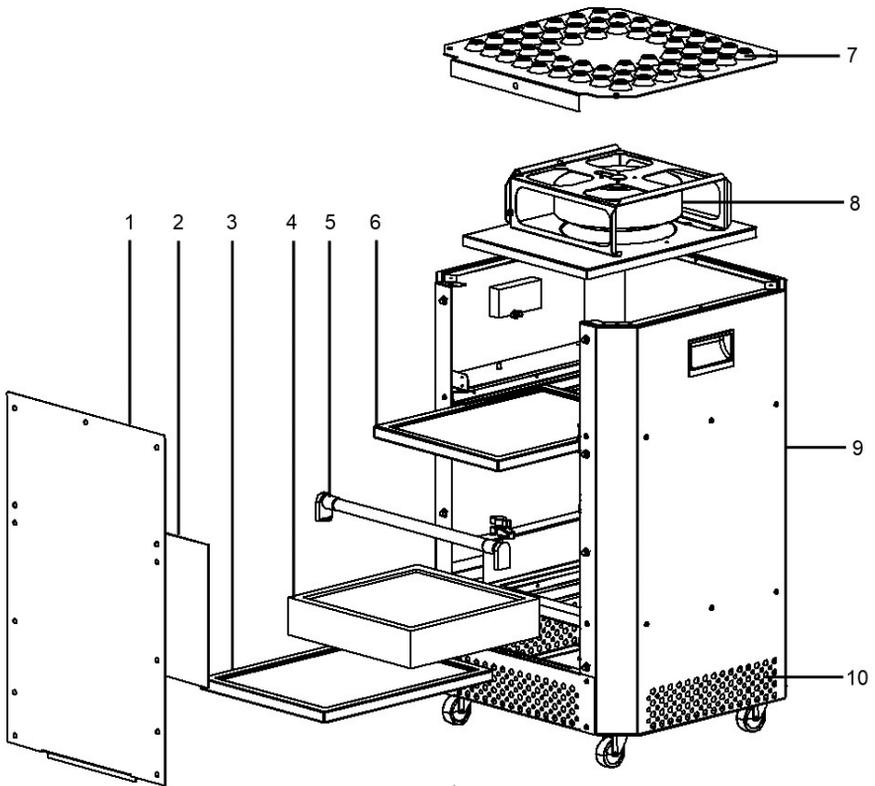
The antimicrobial coated cassette type pre-filter has a high dust holding capacity. It can be easily replaced thanks to its washable and sliding system.

HEPA filters can trap at least 99.95% of particles larger according to the EN1822 standard. It filters particles such as bacteria, viruses, germs, mold that pass through the pre-filter.

The cassette-type activated carbon filter removes cigarette smoke, food and similar unpleasant smell. It neutralizes over 90% of chemical gases such as formaldehyde, hydrogen sulfide, ammonia and benzene.

The UV-C lamp is effective in removing microorganisms. UV-C rays in the wavelength range of 254nm damage the DNA/RNA chains of microorganisms, stopping all their activities and neutralizing them.

## DESCRIPTION OF COMPONENTS



- |                     |                            |
|---------------------|----------------------------|
| 1. Service Panel    | 6. Activated Carbon Filter |
| 2. Reflective Sheet | 7. Blowing Nozzles         |
| 3. Pre-Filter       | 8. Fan                     |
| 4. Hepa Filter      | 9. Casing                  |
| 5. UV-C Lamp        | 10. Air Intake Grill       |

### Package Content

- Ready-to-use Neffes air purifier
- Use and Maintenance Manual
- Power cable

## **HANDLING**

If the devices are to be handled manually, this should be performed by at least two persons.

If they are to be handled through pallets, they should be preferably positioned vertically side-by-side. If the devices are to be handled in a vertically stacked position, the maximum number of devices to stacked on top of each other should be maximum 3 for NFS-400-U model, and 2 for NFS-1000-U.

The devices should be properly fixed against falling and tipping before and during handling, and necessary protective measures should be taken.

Note: Dropping the NEFFES air purifier to the ground may cause a balance problem in the fans and make the device unusable, even if the device body is not damaged. This will make the device out of warranty.

## **STORAGE**

If the devices are to be kept for assembly or stored, they should not be removed from their boxes and stored in their boxes.

They should be stacked vertically side-by-side. If the devices are to be handled in a vertically stacked position, the maximum number of devices to stacked on top of each other should be maximum 3 for NFS-400-U model, and 2 for NFS-1000-U.

During storage, the devices should be protected from external weather conditions and should not be placed on a damp and wet ground.

## **LAYOUT AND INSTALLATION OF THE DEVICE**

The device is especially effective in providing a healthy and safe air environment in areas such as offices, restaurants, hospitals, hotels, cafeterias, libraries, sports halls, kindergartens, schools, public buildings with a high density of people.

To get maximum efficiency from the device, place it in the middle rather than wall corners in the place where it will be positioned. If you place near a wall, position it at least 20 cm away from the wall. Never close the top and air vents of the device.

Necessary health and safety measures should be taken during handling and assembly of the device.

Make sure that there is no missing or damaged parts before the assembly.

## CLEANING AND MAINTENANCE

**Always disconnect the device from power supply before cleaning.**

Regular maintenance will prevent unexpected breakdowns and performance losses in the device.

The filters become dirty over time, reducing air flow and causing performance loss. Therefore, it is important to replace or clean the filters regularly.

### General Cleaning

Always disconnect the device from power supply before cleaning.

The external body of the device may be cleaned with a slightly moist cloth as required. Abrasive cleaning agents should not be used.

Attention should be paid to prevent the moisture from reaching the interior surface of the device.

### Filters

**The device must not be run without filter. The filters must be completely attached to the device after a cleaning or replacement operation.**

**The filters must be replaced by the service.**

**Always disconnect the device from power supply before a filter cleaning or replacement operation.**

**Always use a protective gloves and mask when replacing the filters.**

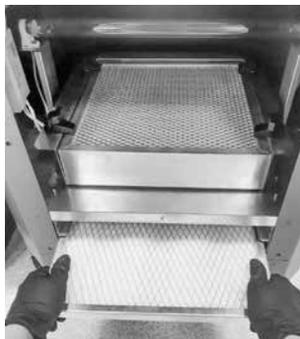
**Do not dispose them with domestic wastes. The waste filters must be disposed safely. Ask for help from our service teams for necessary technical support.**

**Pre-Filter:** When the pre-filter replacement indicator is on, the filter should be cleaned or replaced.

Time to filters to get dirty may vary by the environment where it is used and the frequency of use.

Disconnect the device from power supply, open the service panel and the remove the filter by pulling it to yourself.

If there is accumulated dust or foreign substances on the filter, wash it by hand with warm water. Do not attach the filter until you make sure that it is completely dried.



**Activated Carbon Filter:** Activate carbon filters are uncleanable by their nature.

They should be replaced once a year depending on the environment where it is used and the frequency of use.

Disconnect the device from power supply, open the service panel and remove the filter by pulling it to yourself and attach the new one. Then, close the service panel.



**Hepa Filter:** When the hepa filter replacement indicator is on, the filter should be replaced.

Time to filters to get dirty may vary by the environment where it is used and the frequency of use.

Disconnect the device from power supply, open the service panel, carefully loosen the clips holding the hepa filter and remove it by holding from its front section and lifting upward.

Place the new filter into the frame and tighten the clips. Then, close the service panel.

Since hepa filters trap viruses and bacteria, the used ones may contain harmful particles. After the filters are removed using necessary protective equipment, they should be put in a trash bag which should be tightly sealed. Then, this trash bag should be put in another trash bag and tightly sealed. The date and time of this process should be written on the bag with a non-erasable pen. After 72 hours, the bag containing the filter can be disposed with domestic wastes. However, if the filters are not subjected to this process, they should be regarded as medical waste and disposed accordingly.



Make sure that the new hepa filter is properly fit in the filter frame. Otherwise, the device will not operate properly. The junked filters should be disposed properly and safely.

**UV-C Lamp: The UV-C lamp should not be touched with bare hands.**

When the lamp replacement indicator is on, the UV-C lamp should be replaced. Disconnect the device from power supply, open the service panel and carefully remove the UV-C lamp from its holder.

Carefully wipe the UV-C lamp with a clean cloth once a month to improve its efficiency. Vinegar may be used for mineral deposits, pure alcohol for moist organic residues and a lint-free cloth for oil. Commonly used cleaners which do not leave any residue will work.

Since UV-C lamps contain mercury, they should not be disposed with domestic wastes. The lamps whose lifetime is expired must be disposed with 20 01 21\* code or sent to a recycle plant in accordance with the Environment Law No. 2872 and the Regulation on Waste Management dated 02.04.2015 and numbered 29314.



## DEVICE FUNCTIONS

### 1. On/Off

Connect the device to a power supply and press "ON/OFF" button on the control panel. The device will start running with the fan in the 1st stage.

When the device starts to run, the UV-C lamp will be in closed position.

Press the "UV-C" button in the keypad to turn on the lamp. When the lamp is on, the led near the "UV-C" lamp will turn on.

### 2. Speed Selection

The device has 5 different speed settings.

Each time you press the "FAN SPEED" button on the keypad on the device, the fan speed will up to the next level and the LEDs will light up one by one. For example, when the device is in the 3rd speed stage, all the 3 LEDs will light up.

When the fan is in the last stage, if the button is pressed once, the fan speed will switch to the 1st stage.

When the device works again after a power outage, it will resume the previous mode.

### 3. Alarms

The device has 3 alarms.

**"PRE-FILTER" alarm;** This is a time-adjusted alarm and gives a filter replacement alarm after 1000 working hours under average pollution conditions.

Press and hold the "FAN SPEED" button for 5 seconds to reset this warning after you clean or replace the filter. Then, the warning light will off.

**"HEPA" alarm;** It is on when the hepa filter gets dirty so as to affect the device performance. When you change the hepa filter, the filter differential pressure sensor will detect it and the warning light will off.

**"LAMP" alarm;** This is a time-adjusted alarm and gives alarm after the lifetime of UV-C lamp (8000 hours) is expired. Press and hold the "UV-C" button for 5 seconds to reset this warning after you replace the UV-C lamp. Then, the warning light will off.

## TROUBLESHOOTING

Failure	Possible Causes	Solution
The device does not start up.	Is the outlet energized or not?	Check the power supply.
	Is the device plugged properly?	Make sure that the device is properly plugged.
The device does not blow air.	Is the air inlet or air outlet blocked by foreign matters?	Make sure that the air inlet/outlet of the device is unblocked or replace its position.
	The fan may not work.	Contact with the authorized service.
It does not clean sufficiently.	Are there any objects around the device that prevent air suction?	Eliminate such objects.
	The filters have not been cleaned/replaced for a long time.	Clean/replace them.
Smell comes from the air outlet of the device.	Is smell generated temporarily when someone smokes or in a similar case?	After a while after the device works, the smell will gradually decrease and then disappear.
	The filters have not been cleaned/replaced for a long time.	Clean/replace them.
The UV-C lamp does not work.	Was the UV-C lamp activated by pressing the UV-C button?	Press the UV-C button to activate the lamp.
	The UV-C lamp was inserted to holder properly?	Make sure that the UV-C lamp was properly inserted to the holder.

## TECHNICAL SPECIFICATIONS

MODEL	NFS-400-U	NFS-1000-U
Recommended Usage Area [m <sup>2</sup> ]	10 - 75	80 - 170
Dimensions (WxDxH) [cm]	50x45x80	65x69x105
Filters	Antimic Pre-filter / HEPA / UV-C Lamp / Active Carbon	
Fan Type	EC	
Air Flow Rate Stages [m <sup>3</sup> /h]	70 / 105 / 205 / 280 / 380	185 / 270 / 510 / 710 / 910
Sound Pressure dB(A)	43 / 46 / 51 / 55 / 59	46 / 49 / 52 / 56 / 60
Weight [kg]	24	41
Consumed Power [W]	85	170
Control Card	EC Fan Control (5 Stages)	
	UVC Lamp On/Off	
	Lamp Replacement Alarm	
	Pre-filter Pollution Alarm	
	HEPA Filter Pollution Alarm	
Safety	Magnetic key denegerizing the unit for service when the cover is opened	

# FORM ENDÜSTRİ TESİSLERİ

Form Endüstri Tesisleri is the manufacturing company of the Form Group. It has moved into it's new 11.000 m<sup>2</sup> factory and sales office in Pancar Industrial Zone in İzmir. Form Endüstri Tesisleri has over 50 years of experience in manufacturing many different HVAC productions. Sunvia daylighting systems, FesKlima evaporative coolers and Troke Smoke and Heat Extraction Systems are patented designs of Form Manufacturing.

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## FORM GROUP COMPANIES

FORM Group Companies, established in 1965, manufactures, imports, sells and services Air Conditioning and Industrial systems equipment, to improve the life and manufacturing quality of people and products. FORM Group Companies, offering high energy efficiency and environment friendly system solutions, is one of the leading companies in its field, respecting the environment and the ethical values.

### Central Air-Conditioning Systems Sales and Service

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İzmir

2020.09

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FORM 55  
YEARS