STERYLIS ®

PROFESSIONAL ROOM STERILISERS

USER'S
MANUAL

MODELS:

BASIC-100, BASIC-150, BASIC-300, BASIC-400, BASIC-800

Contents

1. Notes for service technicians

The following service instructions are intended **exclusively for qualified service personnel.** To reduce the risk of danger (electric shock, UV-C exposure), persons without appropriate qualifications or without appropriate training should not perform any servicing other than as described below.

When servicing this appliance, the service technician is exposed to dangerous UV-C radiation and high voltage. The possible effects of exposure to these dangers and assistance in such cases are described later in the manual. **It is essential that you read this information before you start servicing.** Before starting service work, you should also read the UV-C radiation safety data sheet.

All service work must be carried out in accordance with the instructions for service technicians.

The voltage inside the device is high and can cause an electric shock. It is dangerous to touch any parts inside the device. In the event of an injury, follow the first aid instructions on page 5 of this manual.

The device emits UV-C radiation hazardous to human health. Before servicing, make sure that the fluorescent lamps do not emit UV-C radiation. Observe the general safety rules. Use protective measures in accordance with this manual or the UV-C safety data sheet. In case of exposure to radiation, follow the first aid instructions in this manual and the UV-C safety data sheet.

2. Notes for users

1) The STERYLIS room sterilizer can emit health hazardous UV-C radiation and is powered by a high voltage of 230V. **For this reason, please read these operating instructions very carefully, especially the chapter on safety!**

2) Keep this manual and store it in a safe place. Do the same for the UV-C safety data sheet.

3) Special attention should be paid to the information specified in the grey fields with the warning sign and those in bold.

4) Follow the instructions.

5) In case of detection of malfunctioning of the device, contact the manufacturer's service department.

6) For additional information not included in this manual, please contact the manufacturer directly.

7) It is essential that you read the meaning of the following warning icons. They are located in the manual, on the housing of the device or on other parts of the steriliser and are directly related to it:

Symbol	Meaning
	Important safety instruction. Be sure to read it!
	Warning, high voltage!
	Dangerous UV-C radiation inside the device.

Proper disposal of this product

 This label indicates that this product should not be disposed of with other household waste throughout the EU. To avoid harmful effects on the environment and human health from uncontrolled waste disposal, the equipment should be recycled for material reuse. To return your used device, use the equipment collection systems or contact the point of sale where you purchased the product. They can accept this product for safe environmental recycling.

3. Important safety instructions

There are several warning stickers on the housing of the device, the contents of which are also presented below. **It is imperative that you comply with them!** Failure to comply with the information contained therein may lead to a risk to the health or life of the user or other persons, animals and living organisms, and may lead to the failure of the device.

⚠ CAUTION!

HIGH VOLTAGE INSIDE THE UNIT!
The unit must be disconnected from the power supply before servicing. Service work may only be carried out by qualified personnel!
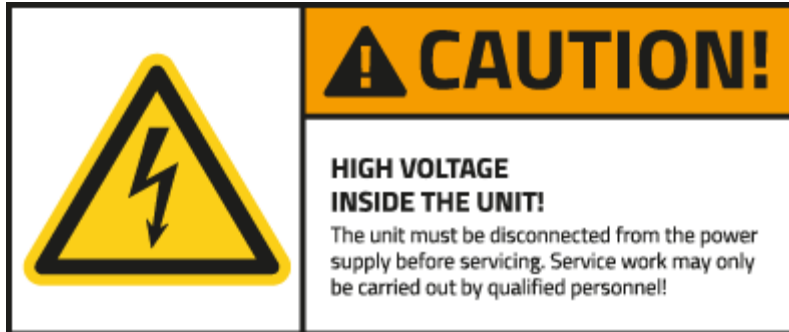
High voltage inside the device is dangerous to human health. In case of electric shock with the parameters as in the device, skin burns, muscle spasms, loss of consciousness and, in extreme cases, cardiac arrest can occur. Therefore, **all service work may only start after the unit has been disconnected from the power supply and may only be carried out by qualified and properly trained personnel!**

In the event of an electric shock, isolate the victim from the power source as soon as possible - turn off the fuses and then unplug the plug from the electrical outlet. The second, but more risky way is to pull the victim away from the power source with a wooden stick. Call an ambulance as soon as possible after the victim is isolated from the power supply. If the victim is unconscious but breathing, circulation is maintained and spinal injury can be ruled out, the spine should be placed in a lateral fixed position. If the victim is not breathing, artificial respiration must be performed and, if necessary, a heart massage. If the victim has symptoms of concussion (pale, cold skin, sweat, chills, accelerated heart rate), place them in an anti-shock position - on their back, with their legs raised.

⚠ CAUTION!

DO NOT OPEN! Strong UV radiation inside the unit!
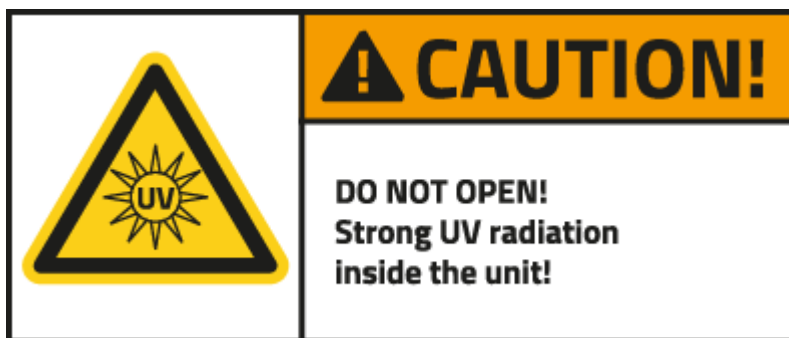
Despite a specially designed disinfection channel and limiting switch protection (removing any of the air filters disconnects the fluorescent lamps), there is always a minimal risk of UV-C radiation escaping outside the device due to improper use of the product or the occurrence of an unforeseeable failure by the manufacturer. **It is therefore necessary to read the following information on the possible effects of UV-C exposure, first aid measures and protective equipment!**

Fluorescent lamps inside the device emit UV-C radiation, which can cause negative effects on skin and eyes. The effects of radiation exposure depend on the wavelength, the amount of radiation absorbed and the type of tissue exposed. The most common symptom of skin exposure to this type of radiation is erythema (redness). The degree of redness and its course depend on the size of the radiation and the wavelength of the radiation. A high dose of UV-C radiation can lead to skin burns, which are manifested by painful swellings and blisters. Long-term exposure to radiation leads to unfavourable changes in the epidermis: it accelerates the skin aging process and causes pre-cancer and neoplastic changes. Repeated exposure of the skin to radiation, particularly high intensity, can cause excessive keratinization, which is a contributor to the formation of cancers such as basal and squamous cell carcinoma and melanoma. UV-C radiation absorbed by the skin can cause inflammation of the cornea, conjunctivitis, damage to the retina and cornea and can lead to photochemical

cataracts. The most common, acute symptom of eye exposure to UV-C radiation is inflammation of the cornea and conjunctiva. Corneal inflammation manifests itself in photophobia, increased tearing, a feeling of a foreign body in the eye, eyelid spasm, and sometimes visual impairment. The symptoms of inflammation appear after a period of concealment lasting even less than 30 minutes, and the symptoms of inflammation disappear about 14 hours after exposure. Radiation-induced conjunctivitis occurs after a latency period of 5 to 10 hours and is manifested by redness, itching, burning and tearing. If a higher dose is used, the correct vision may be impaired. The symptoms disappear after 10 hours to several days, depending on the exposure. **For this reason, never open the device while the UV lamps are running!**

Description of first aid measures:

General rules	All symptoms of exposure to UV-C radiation occur after the so-called latency period lasting from several minutes to several hours.
Eyes	In case of slight symptoms of eye burn (slight pain, tearing, itching, redness): avoid direct sunlight, cool your eyes (with a cloth dampened with cold water or glasses with cooling gel). Do not scratch or rub your eyes. If you have contact lenses, it is essential to remove them to prevent further irritation. An appointment with an ophthalmologist is recommended. In case of more serious symptoms (severe blinking pain, foreign body impression in the eye) it is necessary to contact an ophthalmologist. Until an ophthalmologist has given assistance, proceed as with lighter symptoms of eye burns.
Skin	In case of slight burns, it is recommended to cool the skin with running water or apply a cooling gel on the skin. Contact with a doctor is recommended. In case of increased skin exposure to UV-C radiation, it is essential to consult a doctor.

Personal protective equipment (UV-C radiation)	
Skin protection	Laboratory apron or other laboratory skin protective clothing
Hand protection	Nitrile gloves
Eye protection	Spectacles with side panels and UV400 marking, protective goggles or full face shields. Filters in the given protective measures must be marked at least "3-1,2" (3rd part number, 1,2 degree of protection). If glasses or goggles are used as eye protection, cover the remaining skin of the face with clothing.

This equipment may only be used by children at least 16 years of age and by persons with reduced physical and mental capabilities and those without experience and knowledge of the appliance, if supervision or instruction regarding the use of the equipment is provided in a safe manner, so that the hazards are understandable. Children should not play with the equipment. Children without supervision should not clean or maintain the equipment.

The manufacturer shall not be liable for any damage to property or damage to health and life resulting from improper use of the STERYLIS BASIC devices or from the general safety rules of use.

4. Product features

4.1 Purpose

The product is designed for air cleaning and disinfection. Depending on the operating mode, it can work as a standard air purifier and an air purifier extended with sterilization lamps with UV-C light source (in standard or silent mode). The recommended maximum cubic capacity of the room in which the product can work is given in the technical characteristics of the product for each model. The device is designed for use in commercial areas.

4.2 Product description

STERYLIS BASIC room sterilizer is a device consisting of air filters, UV-C radiators of the fan(s) and a controller together with a user panel. The whole device is closed in a housing made of stainless steel, powder coated on the outside. A pre-filter (F1) is a standard filter made of fully synthetic non-woven fabric. The filtering capacity is achieved by the phenomenon of attraction of pollutants by charged electrostatic fibres. The second filter is an active carbon filter (F2). It attracts harmful gases through adsorption. It stops both particulates and unpleasant smells. UV radiator is a battery of specialized light sources based on fluorescent tubes emitting UV-C radiation for air sterilization. A UV-C source does not produce ozone during operation. The fan drags the right amount of air through the filters and the UV lamp, making the cleaning and disinfection process possible.

In filter mode, the room air is cleaned with a pre-filter (F1) and an activated carbon filter (F2). A pre-filter with electrostatic properties traps particles of harmful pollutants, including those of microscopic size (several micrometers). It also removes harmful bacteria and allergens using a coating applied to the filter medium. In addition to particles, the active carbon filter retains harmful gases and odours through adsorption.

In the UV-C disinfection mode the UV-C lamps between the two filters are activated. The lamps emit UV-C radiation with a wavelength of 253.7 nm and power depending on the size of the device (see technical data). UV-C radiation irreversibly inactivates viruses, bacteria, fungi, moulds and yeasts. The Sterylis steriliser has been designed in such a way that people can stay inside when the device is in disinfection mode with the UV-C light source switched on. The UV-C radiation that breaks down the DNA is enclosed in a specially designed light trap so that not even the smallest part of it can escape outside the device.

In the silent disinfection mode, the unit operates in a similar way to the standard mode, but with reduced fan capacity. This results in a significantly reduced sound power level of the steriliser.

In the automatic disinfection mode, the device can operate on various programs, which are described in Chapter 6.4.

STERYLIS BASIC is available in 6 versions, whose technical parameters are shown in the table:

Name	STERYLIS	STERYLIS	STERYLIS
Model	BASIC-100	BASIC-150	BASIC-300
Rated voltage	230 V	230 V	230 V
Frequency	50 Hz	50 Hz	50 Hz
Rated power*	140 W	180 W	215 W
Rated current*	0,6 A	0,8 A	0,9 A
Maximum airflow capacity	260 m³/h	300 m³/h	420 m³/h
Types of air filters	F-1: STAK-001001003-00100 F-2: STAK-001002003-00100	F-1: STAK-001001003-00100 F-2: STAK-001002003-00100	F-1: STAK-001001003-00100 F-2: STAK-001002003-00100
Number of UV-C sources / Electrical power of single UV-C source / Model	8 / 9 W / STAK-003010000-00200	3 / 36 W / STAK-003011000-M00	4 / 36 W / STAK-003011000-00300
UV-C wavelength	253,7 nm	253,7 nm	253,7 nm
UV-C source standard	EN 61195	EN 61195	EN 61195
Total electrical power of UV-C sources	72 W	108 W	144 W
Total radiant power of UV-C sources	19 W	36 W	48 W
Average UV-C radiation intensity	127 J/m2	150 J/m2	257 J/m2
Net weight	16 kg	17 kg	31 kg
IP degree of protection	IP20	IP20	IP20

Name	STERYLIS	STERYLIS
Model	BASIC-400	BASIC-800
Rated voltage	230 V	230 V
Frequency	50 Hz	50 Hz
Rated power*	440 W	650 W
Rated current*	1,9 A	2,8 A
Maximum airflow capacity	430 m³/h	780 m³/h
Types of air filters	F-1: STAK-001001004-00100 F-2: STAK-001002004-00100	F-1: STAK-001001003-00100 F-2: STAK-001002003-00100
Number of UV-C sources / Electrical power of single UV-C source / Model	6 / 55 W / STAK-003011000-00400	8 / 55 W /STAK-003011000-00400
UV-C wavelength	253,7 nm	253,7 nm
UV-C source standard	EN 61195	EN 61195
Total electrical power of UV-C sources	330 W	440 W
Total radiant power of UV-C sources	118 W	157 W
Maximum UV-C radiation dose	521 J/m2	382 J/m2
Net weight	32 kg	45 kg
IP degree of protection	IP20	IP20

*in "UV-C air disinfection standard mode"

4.3 Principle of operation in disinfection mode

The UV-C lamps used in the device emit radiation of a strictly defined wavelength of 253.7 nm. It is a wavelength that has a photolithic effect on microorganisms such as bacteria, moulds, yeasts and viruses. Ultraviolet light of this wavelength effectively penetrates their cell membrane destroying the structure of their DNA and thus preventing their reproduction. Subjected to high levels of UV-C radiation, microorganisms and viruses are permanently destroyed. In addition to the disinfecting effect of the UV-C radiation used, we also obtain a high quality deodorising effect (removing odours from the air). Due to the special design of the UV-C chamber, the device operating in disinfection mode can be used in rooms where people are present. Specially designed light traps inside the device completely prevent invisible, harmful UV radiation from escaping from the device. The specially selected type and high power of the UV-C light source with a selective emitted wavelength of 253.7 nm, and the unique solution of the double quartz filter UV-C lamp used in STERYLIS sterilisers, causes the harmonic components of the ozone-producing UV light emissions below 240 nm to be blocked inside the lamp. Thus, in disinfection mode, the STERYLIS BASIC sterilizer does not produce any harmful ozone at all and is completely safe for the people around it.

5. Packing contents

A user who has purchased any model of STERYLIS BASIC room sterilizer is included in the set:

1) Complete room steriliser ready for use
2) Detachable 3-meter long power cord
3) Additional 10-meter long power cord*
4) Operating manual
5) Safety data sheet
6) UV-C safety data sheet
7) Declarations of conformity in Polish and English

* if you purchase the device as an option with a longer power cord

If the manufacturer is not responsible for any of the above mentioned parts of the documentation, he should be contacted for completion or downloaded from the website at the address: https://www.sterylis.com

6. Operation

The device should be operated in rooms whose parameters are consistent with the technical characteristics of the device. In addition, they must be operated in accordance with the information contained in the chapters: "Maintenance" and "Important safety instructions".

6.1 Operation of the device

To operate the room steriliser, use the user panel on the front of the device. The construction and operation of the user panel is described in the following sections.
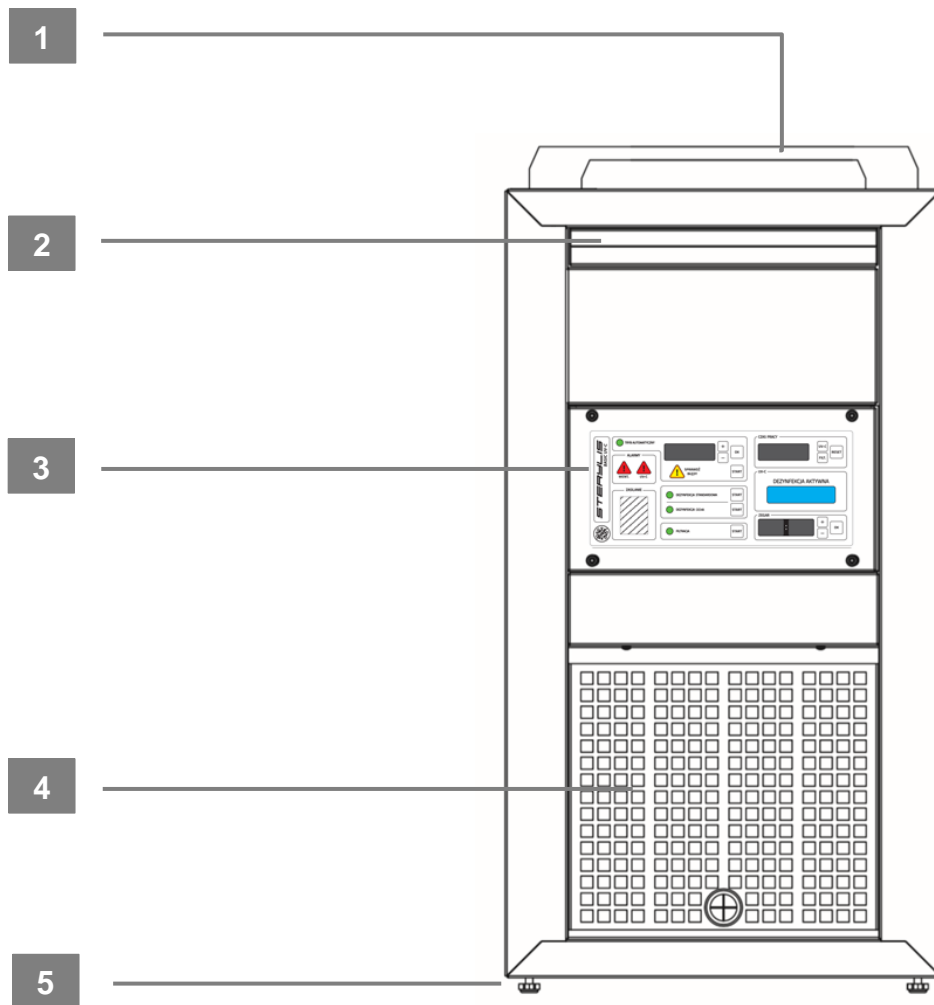
1	Handle to transport the device	4	Cassette filters (pre-filters)
2	Cassette filters (with activated carbon)	5	Feet (transport wheels for selected versions)
3	User panel		

6.2 Control panel
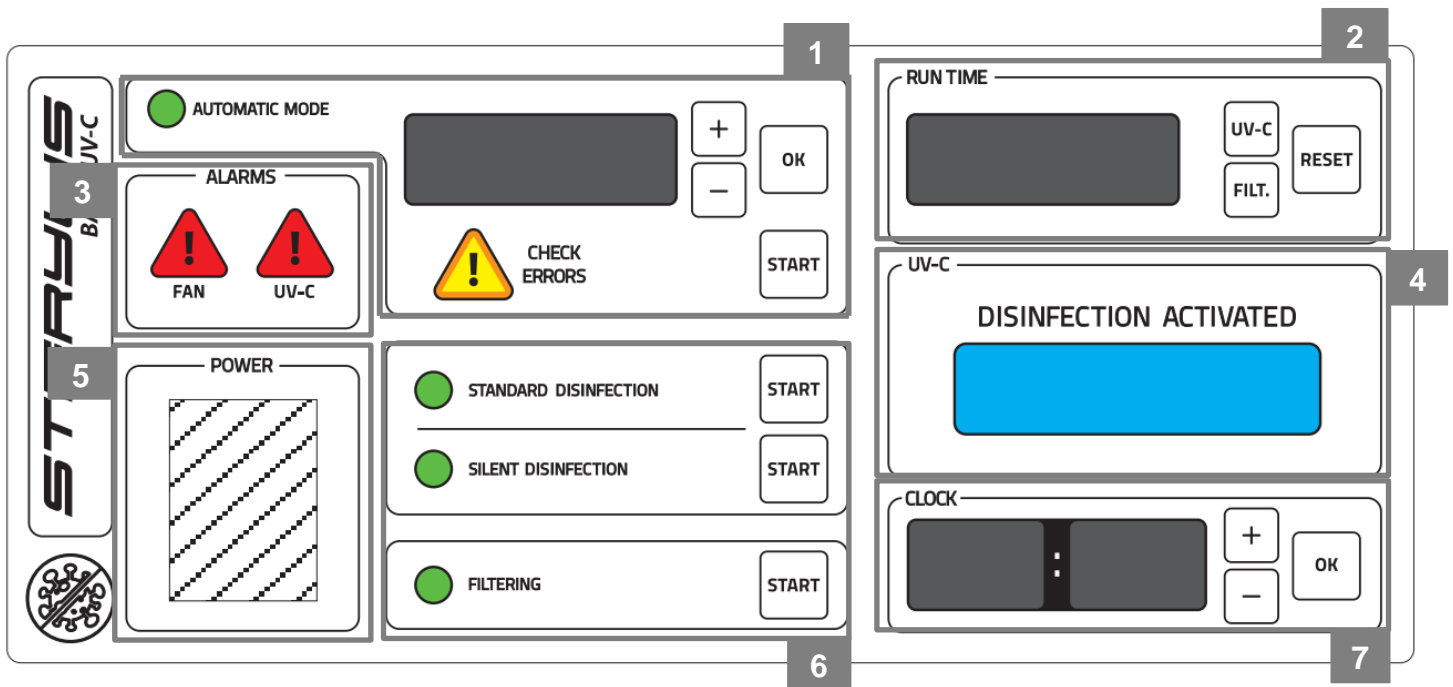
1	**AUTOMATIC MODE** section with segmented display
2	**OPERATION TIME** section with operation time segmented display
3	Alarm icons for fan or UV-C fluorescent lamp system failure
4	UV-C section with graphic display
5	User panel switch
6	Operating modes section: standard disinfection, silent disinfection and filtration
7	**TIMER** section with segmented timer

6.3 Access levels

Two access levels are possible, based on user privilege. Each access levels has a unique access code. Refer to the table below for privilege scope depending on access level.

Access level	Privilege scope
USER	• Mode activation: Filtration, UV-C air disinfection - standard mode, UV-C air disinfection - silent mode, UV-C air disinfection - automatic mode • Resetting d105 and d120 counters associated with F002 and F006 messages
SUPER-USER	• Mode activation: Filtration, UV-C air disinfection - standard mode, UV-C air disinfection - silent mode, UV-C air disinfection - automatic mode • Resetting d102, d105, d120 and d201 counters • Access to configuration parameters: C116, C117, C142, C150, C151, C152, C154 and C200 • Access to service functions: t200, t204

6.4 Starting the device and selecting the operating mode

The device can operate in several operating modes, the activation of which is forced by means of appropriate buttons on the user panel. The following modes are available: Filtration, UV-C air disinfection - standard mode, UV-C air disinfection - silent mode and UV-C air disinfection - automatic.

To start the device, insert the power cord plug into an electrical outlet. The voltage required for proper operation is 230 V, 50 Hz. Then move the user panel switch to the **"I"** position.

When the device is started, it will be in standby mode, which means that it is ready for operation and waiting for a command from the user. The display in the **AUTOMATIC MODE** section shows "**Aut.x**".

6.4.1 "Filtration" mode

To start the "Filtration" mode of operation, press and hold the **START** button located at the green filtering mode indicator. The filter mode light will start blinking (the device will check the proper functioning of the relevant actuators - **PRE-TEST** function) and then it will start to light steadily and the device will start working in the selected mode.

If any errors are detected during the **PRE-TEST** function, the device will display a **tESt** message, enter the standby mode and then display the corresponding error codes on the display in the **AUTOMATIC MODE** section.

The filtration mode can also be directly selected if the device operates in any of the disinfection modes. To switch from disinfection mode to filtration mode, press and hold the **START** button located at the green filtration mode light.

To interrupt the filtration process, press and hold the **START** button located at the green filtration mode light again.

6.4.2 "UV-C air disinfection - standard mode" operating mode

To start the "UV-C air disinfection - standard mode" operating mode, press and hold the **START** button located at the green standard mode light. The standard mode light will start blinking (the device will check the proper functioning of the relevant actuators - **PRE-TEST** function) and then it will start to light steadily and the device will start working in the selected operation mode.

If any errors are detected during the **PRE-TEST** function, the device will display a **tESt** message, enter the standby mode and then display the corresponding error codes on the display in the **AUTOMATIC MODE** section.
During operation of the device in disinfection mode, the display in the **UV-C** section is activated as standard.

The standard mode can also be directly selected if the device operates in any of the disinfection or filtration modes. To switch from disinfection or filtration mode to standard disinfection mode, press and hold the **START** button located at the green standard mode light.

To interrupt the standard disinfection process, press and hold the **START** button next to the green standard mode light again.

PLEASE NOTE! Each time the UV-C disinfection mode is activated, the UV-C lamps are lit for at least 90 seconds! Power supply of the UV-C lamps is maintained even if the UV-C disinfection mode is manually switched off. Switching off the UV-C lamps before 90 seconds elapses is only possible in emergency (error **E101**, **E201**, **E202** or **E301**).

6.4.3 "UV-C air disinfection – silent mode" operating mode

To start the "UV-C air disinfection - silent mode" operating mode, press and hold the **START** button located at the green silent mode light. The silent mode light will start blinking (the device will check the proper functioning of the relevant actuators - **PRE-TEST** function) and then it will start to light steadily and the device will start working in the selected operation mode.

If any errors are detected during the **PRE-TEST** function, the device will display a **tESt** message, enter the standby mode and then display the corresponding error codes on the display in the **AUTOMATIC MODE** section.

During operation of the device in disinfection mode, the display in the **UV-C** section is activated as standard.

The silent mode can also be directly selected if the device operates in any of the disinfection or filtration modes. To switch from standard disinfection or filtration mode to silent disinfection mode, press and hold the **START** button located at the green silent mode light.

To interrupt the silent disinfection process, press and hold the **START** button next to the green silent mode light again.

PLEASE NOTE! Each time the UV-C disinfection mode is activated, the UV-C lamps are lit for at least 90 seconds! Power supply of the UV-C lamps is maintained even if the UV-C disinfection mode is manually switched off. Switching off the UV-C lamps before 90 seconds elapses is only possible in emergency (error **E101**, **E201**, **E202** or **E301**).

6.4.4 "UV-C air disinfection – automatic mode" operating mode

Automatic operation can be carried out in several programs: **AUT.1**, **AUT.2**, **AUT.3, AUT.4** and **AUT.5**. The characteristics of these work programs are presented in the table below.

Program code	Program name	Program description
AUT.1	WEEK	Work from 8.00 am to 4.00 pm, only on working days. Low fan speed operation. Repeating indefinitely.
AUT.2	HOME	Work from 6.00 pm to 9.00 pm, only on working days. Low fan speed operation. Repeating indefinitely.
AUT.3	MIX	Operation for 5 min at high fan speed and then 45 min at low fan speed. Repeating indefinitely.
AUT.4	MAX_3H	3 hours of operation at high fan speed, then start silent disinfection mode. Repeating indefinitely.
AUT.5	WEEK_24H	Operation in 2nd gear / 100% UVC / 24h mode only on working days from 0:01 on Mon. until 23:59 to Fri. (based on the set date and time) repetition for an indefinite period of time

First, the operating in automatic mode are tested - a positive PRE-TEST result deletes any previously detected errors, a negative PRE-TEST result sets the appropriate error codes.

Signaling of the PRE-TEST operation depends on the status of active errors at the moment of starting the PRE-TEST function:

- no active errors - blinking green light for a given mode for the entire duration of the test
- reported active errors - blinking green light for a given mode and additionally on the display in the "AUTOMATIC MODE" section, the word "tESt" is blinking

Completion of the test with a positive result - switching to the "Air disinfection UV-C - automatic mode" mode
- The exceptions are F2xx limit switches errors which cause the PRE-TEST operation to be suspended (pause) indefinitely, until the cause of the error disappears.

Ending the test with a negative result - transition to the standby mode - the display in the AUTOMATIC MODE section shows the name of the selected program: "Aut.x" or "LOCH." in lockout mode, scrolls alternately with the active error and message codes.

During operation of the device in the automatic disinfection mode, the display in the **UV-C** section is activated as standard.

The automatic mode can also be directly selected if the device operates in any of the disinfection or filtration modes. To switch from disinfection or filtration mode to automatic disinfection mode, press and hold the **START** button located at the green standard mode light.

To interrupt the automatic disinfection process, press and hold the **START** button next to the green automatic mode light again.

> ⚠️ **PLEASE NOTE!** Each time the UV-C disinfection mode is activated, the UV-C lamps are lit for at least 90 seconds! Power supply of the UV-C lamps is maintained even if the UV-C disinfection mode is manually switched off. Switching off the UV-C lamps before 90 seconds elapses is only possible in emergency (error **E101**, **E201**, **E202** or **E301**).

6.5 Sleep mode

STERYLIS BASIC goes into sleep mode when it is connected to the power supply and the main switch is in **"O**" position. In sleep mode the device seems to be switched off - the user panel is black, no error messages are displayed and no drivers are active.

Set the main switch to **"O**" position to move the device to the sleep mode from any operating mode (except the lock mode). Set the main switch to **"I"** position again to leave the sleep mode and automatically switch the device to the operating mode as shown in the table below:

Active mode before the sleep mode	Active mode after the sleep mode
Standby mode	Silent disinfection mode
Standard disinfection mode	Standard disinfection mode
Silent disinfection mode	Silent disinfection mode
Filtration mode	Filtration mode

6.6 Front panel locking mode

The STERYLIS BASIC room sterilizer is equipped with the possibility of activating a user panel lock. It is designed to block the device in such a way that unwanted people cannot operate it.

To activate the front panel locking mode:
During active standby, automatic disinfection, silent disinfection, standard disinfection or filtration, press and hold the **UV-C** and **FILT** buttons in the **OPERATION TIME** section simultaneously for 3 seconds. Entering the lock mode will be

confirmed by displaying "**LOCH**" in the **AUTOMATIC MODE** section.

To deactivate the front panel locking mode:
During active front panel lock mode, press and hold the **UV-C** and **FILT** buttons in the **OPERATION TIME** section for 3 seconds simultaneously.

6.7 Changing the configuration parameters

To change the configuration parameters, press and hold the OK button in the "TIMER" section in the standby mode. Then enter the appropriate code to change the parameters: **1557**

Entering the access code:
The 4-character code to be entered is shown on the display in the **AUTOMATIC MODE** section. Use **+** and **–** buttons to change the value by 1 active character. The active character is the character that flashes quickly, inactive characters are lit continuously. Use the **OK** button to change the active character to the next one on the right. Enter proper code and approve it by pressing and holding the **START** button. If the code is incorrect, the **HHHH** message will be displayed followed by a short squeal. When this happens, re-enter the code.

You can change the following parameters:

Parameter code	Description	Min value	Max value	Default value
C116	Service interval – UV-C lamps [h]	0	9999	9000
C117	Service/inspection interval – air filters [h]	0	9000	2160
C142	Expiration date – air filter [months]	0	24	12
C150	Date setting – day of the month	1	31	15
C151	Date setting – month	1	12	7
C152	Date setting – year	2020	2120	2020
C154	Active UV-C lamp indicator – LED bar	0	1	1
C200	FIRMWARE revision (read only)	-	-	FW_REV

The individual parameters are changed using the **+** and **–** buttons in the **AUTOMATIC MODE** section. The code of the selected parameter is displayed in the **AUTOMATIC MODE** section. The current value of the selected parameter is displayed in the **OPERATION TIME** section. To change the value of the selected parameter, operate the **UV-C** and **FILT** buttons in the **OPERATION TIME** section. The selection of the active digit is made by means of the **RESET** button. To confirm the value of the selected configuration parameter, press and hold the **OK** button in the **AUTOMATIC MODE** section. The selected value will be confirmed by a short beep and all active displays will flash.

To return to the standby mode, press and hold the **OK** button in the **TIMER** section.

6.8 Working time counters

The device is equipped with the operating time counters listed in the table below. The user has the possibility to read the indications of these counters and reset them.

To view or reset the counters, press and hold the **OK** button in the **TIMER** section in the device standby mode. Then enter the appropriate code to change the parameters.

Entering the access code:
The 4-character code to be entered is shown on the display in the **AUTOMATIC MODE** section. Use **+** and **–** buttons to change the value by 1 active character. The active character is the character that flashes quickly, inactive characters are lit continuously. Use the **OK** button to change the active character to the next one on the right. Enter proper code and approve it by pressing and holding the **START** button. If the code is incorrect, the **HHHH** message will be displayed

followed by a short squeal. When this happens, re-enter the code.

You can interfere with the following counters:

Parameter code	Description
d102	UV-C lamp service interval timer [s]
d105	Fan service interval timer [s]
d120	Air filter interval timer [s]
d201	Active electricity consumption meter [kWh]

Use **+** and **-** buttons in the **AUTOMATIC MODE** section to change individual parameters. The code of the selected parameter (counter) is shown on the display in the **AUTOMATIC MODE** section. The current value of the selected parameter is shown on the display in the **OPERATING TIME**section

To return to the standby mode, press and hold the **OK** button in the **TIMER** section.

The current meter value is displayed on the display in the **OPERATING TIME** section or can be viewed using the **UV-C** and **FILT** buttons. Press the **UV-C** or **FILT** button in the standby mode or any active mode to display the current value of **d102** counter and **d105** counter in the **OPERATING TIME** section. The counter value will stay on the display for 30 seconds after the button is pressed. The displayed value is in hours.

6.8.1 Resetting the working time counters

Resetting the working time counters can be done in several ways, which are described below.

*Via the service menu (resetting counters **d102**, **d105** or **d120**):*

Go to the service menu by pressing the **OK** button in the **CLOCK** section. Enter the correct access code. Select the desired counter using the **+** and **-** buttons in the **AUTOMATIC MODE** section. To reset the display of the selected counter, press and hold the **OK** button in the **AUTOMATIC MODE** section. The reset is confirmed by a short beep and flash of the displays.

*Via the **OPERATING TIME** section (resetting counters **d102** or **d105**):*

Press the **UV-C** or **FILT** button in the **OPERATING TIME** section to display the reading of **d102** or **d105** counter respectively. To reset the selected counter, press and hold the **RESET** button in the **OPERATING TIME** section. The reset is confirmed by a short beep and flash of the displays.

*Via the **OPERATING TIME** section (resetting counter **d120**):*

Press the **FILT** button in the **OPERATING TIME** section to display the reading of **d105** counter. To reset the counter, press and hold the **RESET** button in the **OPERATING TIME** section. The reset is confirmed by a short beep and flash of the displays. Then press and hold the **RESET** button again within 60 seconds or less of resetting **d105** counter. Successful resetting is confirmed by a double beep and a double blink of the displays.

*Through the air filter removal sequence (resetting counter **d105**). Only when message **F002** is active.*
With the device is in standby mode, remove one air filter cartridge and then the other air filter cartridge so both cartridges are removed at the same time and **E201** and **E202** messages are generated. When both cartridges are removed at the same time, the **d105** counter is reset. Successful resetting is confirmed by a short beep and a double blink of the displays. When counters are rest, insert the cartridges back into the device.

*Via the **OPERATING TIME** section (resetting counter **d120**): Only when message **F006** is active.*

Press and hold the **RESET** button in the **OPERATING TIME** section. Successful resetting is confirmed by a double beep and

a double blink of the displays.

6.8.2 Electricity consumption counting

The device is equipped with a function of counting the total amount of electricity consumed. The energy is measured in all operating modes, including standby and sleep mode. The value of the electricity consumed is previewed using the **d201** meter.

6.9 Other functionality of the device

Other functions are described in the following subsections. These are: **AUTO-TEST**, **PRE-TEST**, **SET-TIME** function and the active UV-C lamp indicator.

To access the above mentioned functionalities, press and hold the **OK** button in the **TIMER** section in the device standby mode. Then enter the appropriate code to move to the above mentioned functions.

Entering the access code:
The 4-character code to be entered is shown on the display in the **AUTOMATIC MODE** section. Use **+** and **-** buttons to change the value by 1 active character. The active character is the character that flashes quickly, inactive characters are lit continuously. Use the **OK** button to change the active character to the next one on the right. Enter proper code and approve it by pressing and holding the **START** button. If the code is incorrect, the **HHHH** message will be displayed followed by a short squeal. When this happens, re-enter the code.

The available functions are under the following codes:

Parameter code	Description
t200	**AUTO-TEST** function
t204	**SET-TIME** function

PRE-TEST function is started automatically when the selected operating mode is activated.

The individual parameters are changed using the **+** and **-** buttons in the **AUTOMATIC MODE** section. The code of the selected parameter is displayed in the **AUTOMATIC MODE** section. To move to a given function, select it and press and hold the **OK** button in the **AUTOMATIC MODE** section.

To return to the standby mode, press and hold the **OK** button in the **TIMER** section.

6.9.1 AUTO-TEST function

The function consists in an automatic check of the operating status of all actuators (fan and UV-C lamps). If the device detects an error in one of the elements during the process, it will display the error. If an element error has been detected during previous use of the unit, the **AUTO-TEST** function can erase this error if the unit will function correctly during this function.

When the **AUTO-TEST** function is active, the mode lights and **tESt** on the display in the **AUTOMATIC MODE** section blink quickly.

To interrupt the **AUTO-TEST** function, press any of the **START** buttons corresponding to filtration, silent disinfection, standard disinfection or automatic disinfection modes.

When the **AUTO-TEST** function is completed, the unit will go into standby mode.

6.9.2 SET-TIME function

The SET-TIME function allows you to set the current time on the controller. The function is started manually by the user after calling the t204 function in the AUTOMATIC MODE section.

Selecting this function causes the currently set time to be displayed on the "Clock" display in the [hh: mm] format

After selecting and during the operation of the t204 function, the "WORKING TIME" display should be completely blank.

To set the current time:

The **+** and **-** buttons change the value by 1 active digit. The selection of the active digit is made by pressing the **OK** button in the **TIMER** section. The time is saved immediately after changing any number, no additional approval is required.

To return to the standby mode, press and hold the **OK** button in the **TIMER** section.

Setting the current date:

To set the current date, go to configuration parameters **C150**, **C151** and **C152** then correctly set and validate the values of these parameters according to Chapter 6.7.

To return to the standby mode, press and hold the **OK** button in the **TIMER** section.

6.9.3 Active UV-C lamp indicator

Active UV-C lamp indicator (blue LED bar) is located on the front panel of the device and indicates that UV-C lamps are on.

The indicator can be permanently disabled by configuring parameter **C154** according to Chapter 6.7, where:

"0" - indicator inactive
"1" - indicator active

7 Maintenance

7.1 Recommendations for maintenance

⚠️ **Note!** All maintenance work should only be carried out when the unit is disconnected from the power supply (with the exception of alarm removal activities)!

⚠️ All service activities related to the ozone generators may only be performed by authorized personnel and the manufacturer's factory service. For details on service, see the Warranty and Service section.

- The device should be kept in a state of general cleanliness. Use only neutral detergents for cleaning.

- Do not use for washing the water jet under pressure.

- The air filters should be checked and replaced periodically as described in Chapter 7.2. The signalling of exceeding the time of use / need to check the air filters is indicated on the user panel by displaying appropriate messages (see: Section 8). Replacement of the filters must be carried out according to the instructions in chapter 7.2.1 and 7.2.2. Do not let the filters clog and avoid their excessive operation.

- After the service life of the UV lamps (9,000 operating hours) in the steriliser, they should be replaced. This is related not only to the possible burning of the lamp but also to the decrease of its maximum radiation dose over time. The UV lamps' overrunning time is indicated on the user panel by displaying an appropriate message (see Section 9). Only the qualified service technicians can replace the lamp/s!

7.2 Replacing the filters

Filter cleaning and replacement intervals depend on the on-site environmental conditions, the extent of use and the setting (configuration) of the device. A filter inspection reminder (message **F002**) pops up automatically at intervals of 3 to 12 months, depending on the way the device is used.

Assess during inspection whether or not filters are damaged and whether they can be still used. It is necessary to replace filters that meet at least one of the following criteria:

- signs of any mechanical damage (holes, tears, structural defects, etc.)
- visible stains, decolouration, leaks or other impurities from liquid substances
- heavy and unpleasant smell
- heavily contaminated with dust which significantly reduces airflow

⚠️ **PLEASE NOTE!**
Heavily soiled filters should under no circumstances be cleaned (washing, vacuuming, air blowing, etc.) but must be replaced.

⚠️ Always replace all filters in the unit.

⚠️ A filter replacement reminder (message F006) pops up automatically every 12 months. Using the same filters for longer than the recommended 12-month period may deteriorate operating conditions and decrease unit's performance.

After filter inspection or replacement delete message F002 and/or F006. The deletion method is described in chapter 8 of this manual.

7.2.1 Pre-filter replacement (F1)

Make sure that the device is switched off and disconnected from the power supply.

Follow the instructions below:
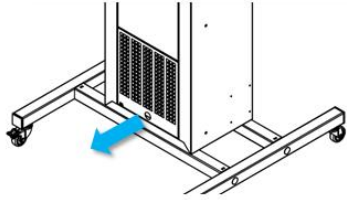
1. Insert your index finger into the hole in the air filter cartridge and pull it towards you with a slight movement.
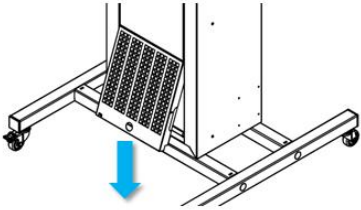
2. Pull the cassette out with a downward motion
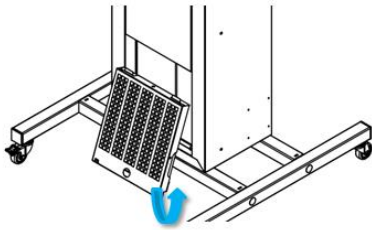
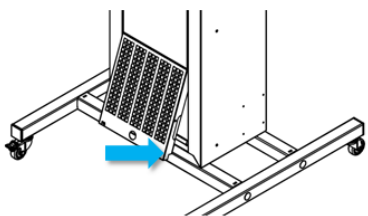3. Turn the front air filter cartridge towards the floor
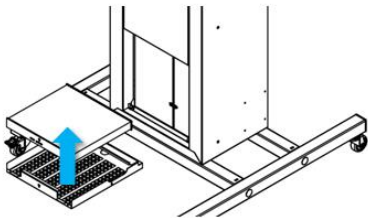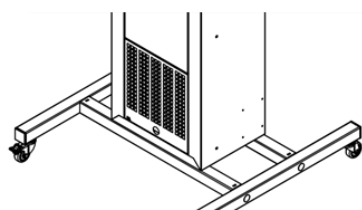

4. Remove the air filter from the cartridge
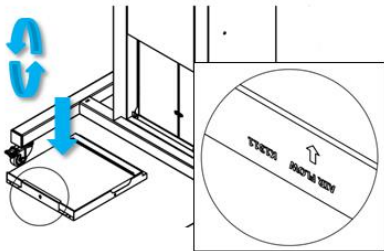
5. Insert a new air filter into the cartridge, making sure that the direction of the arrow on the cartridge and on the filter are aligned.
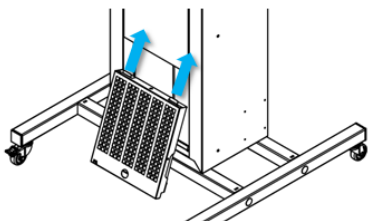
6. Turn the air filter cartridge as shown in the picture opposite and put it back into the device

7. Push the cassette into the device housing
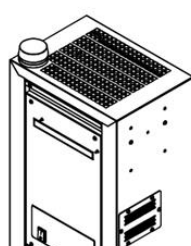

8. The filter has been properly replaced

A pre-filter that is pulled out of the destination causes a violation of the limiting switch. In case of violation of the limiting switch in filtration or disinfection mode, the process will be stopped at the current moment and the unit will go into pause mode. When the limiting switches of the filter cartridge are no longer violated (inserting the filter cartridge back), the unit will resume the filtration/disinfection process. Tripping the limit switch also causes the corresponding error code to be displayed in the **AUTOMATIC MODE** section. If the limit violation ceases, the error is automatically deleted.

The safety limiting switches provide protection in case of an attempt to change the air filters during operation.

7.2.2 Active carbon filter replacement

Make sure that the device is switched off and disconnected from the power supply.

Follow the instructions below:

1. Remove the air filter cartridge out by pulling it towards you

2. Remove the air filter from the cartridge

3. Place a new air filter in the cartridge. Make sure that the direction of the arrow on the cartridge is the same as the direction of the arrow on the air filter

4. Insert the filter cartridge back into the device and push it

5. The filter has been properly replaced

A pre-filter that is pulled out of the destination causes a violation of the limiting switch. In case of violation of the limiting switch in filtration or disinfection mode, the process will be stopped at the current moment and the unit will go into pause mode. When the limiting switches of the filter cartridge are no longer violated (inserting the filter cartridge back), the unit will resume the filtration/disinfection process. Tripping the limit switch also causes the corresponding error code to be displayed in the **AUTOMATIC MODE** section. If the limit violation ceases, the error is automatically deleted.

The safety limiting switches provide protection in case of an attempt to change the air filters during operation.

7.3 Replacing the UV-C lamps

Regular replacement of the UV-C radiators is essential for proper operation. Exceeding the service life of UV light bulbs may result in their burning out. It should also be remembered that with time the maximum dose of lamp radiation decreases.

The lifetime of UV bulbs is approx. 9000 hours. This is also the time after which the message indicating the necessity of replacement will be displayed.

Note! The replacement of UV-C fluorescent tubes in STERYLIS sterilisers may only be carried out by the manufacturer's service or another authorised service centre!

8 Possible errors and messages

All possible errors and messages are indicated by 4-digit codes on the display in the **AUTOMATIC MODE** section. If more than 1 error occurs simultaneously, the codes are displayed one after the other, the presentation time of each code is 2 seconds. The meaning of all errors and messages is described in the table below.

Code	Description
E101	UV-C sources malfunction - incorrect power consumption
E102	Fan malfunction - incorrect power consumption
E201	Air filter error F1
E202	Air filter error F2
E301	Error of relay outputs - welded contacts
F001	Exceeded service life of the UV-C lamp
F002	Exceeded service life of air filters
F006	Air filters expiration date exceeded

PLEASE NOTE! Error **E301** is a critical error. If error **E301** occurs, cut the power supply to the device in the safest possible way, observing the safety rules described in these operating instructions! After disconnecting the power supply, contact the service department.

Important notes on the occurrence of codes from the above table:
- **Exxx** errors are stored and cannot be deleted by restarting the device.
- Errors **E201** and **E202** should disappear when the filter cartridges are inserted back into the device again and correctly.
- Errors **E101** and **E102** can be reset by using the **PRE-TEST** and **AUTO-TEST** functions.
- **Fxxx** messages can be deleted by resetting the corresponding counters:
  - **F001** – counter d102
  - **F002** – counter d105
  - **F006** – counter d120

The device can communicate with the user through the following indications:

Indication	Meaning
Display message "**Aut.x**"	The device is in standby mode
Green filtration mode light is on	The device works in filtration mode
Green silent mode indicator light, active UV-C display	The device works in silent disinfection mode
Green standard mode light on, UV-C display active	The device works in standard disinfection mode
Green auto mode light on, active UV-C display	The device works in automatic disinfection mode
Flashing green light in filtration mode	**PRE-TEST** function for filtration mode in progress, no active errors
Flashing green light in silent mode	**PRE-TEST** function for silent disinfection mode in progress, no active errors
Flashing green light in standard mode	**PRE-TEST** function for standard disinfection mode in progress, no active errors
Flashing of the green automatic mode light	**PRE-TEST** function for automatic disinfection mode in progress, no active errors
Green filtration mode light blinking + **tESt** text blinking	**PRE-TEST** function for filtration mode in progress, active errors
Green silent mode light blinking + **tESt** text blinking	**PRE-TEST** function for silent disinfection mode is running, active errors
Standard mode green light blinking + **tESt** text blinking	**PRE-TEST** function for standard disinfection mode is running, active errors
Green automatic mode light blinking + **tESt** text blinking	**PRE-TEST** function for automatic disinfection mode is running, active errors
Blinking **tESt** + blinking of all mode lights	**AUTO-TEST** function in progress
HHHH message followed by short squeal	Wrong access code
LOCH message display, **ACTIVE LOCK** LED lit	The device is in lock mode
All displays blink and a short beep	Resetting the value of the selected counter **or** Calling the selected service function **or** Saving the value of the selected configuration parameter
Fan failure light blinking	Fan(s) malfunction
Blinking of the UV-C source failure light	UV-C lamps malfunction
Blinking of the **CHECK ERRORS** light + error code display in the **AUTOMATIC MODE** section	Active error

9. Declaration of conformity

$C\epsilon$

This device complies with the relevant directives and standards in force in the European Union, provided that the device is operated as intended and in accordance with this manual.

The product complies with the following directives:

- Directive 2014/35/EU, on the harmonisation of the laws of Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

- Directive 2014/30/EU, on the harmonisation of the laws of the Member States relating to electromagnetic compatibility

- Directive 2011/65/EU, on the restriction of the use of certain hazardous substances in electrical and electronic equipment

And with the following standards:

- PN-EN 55014-1:2017
- PN-EN 55014-2:2015
- PN-EN 60335-2-65:2004+A1:2008+A11:2012
- PN-EN 60335-1:2012+A11:2014-10+A13:2017-11+A1:2019-10+A2:2019-11
- PN-EN 61000-3-2:2019
- PN-EN 61000-3-3:2013+A1:2019-10

The full declaration of conformity is enclosed with the packaging and is held by the manufacturer and distributors of the device.

10. Warranty and Service

The warranty period is 1 year. It is possible to extend the warranty period for a fee. Please contact the manufacturer for more detailed warranty information.

Manufacturer's data
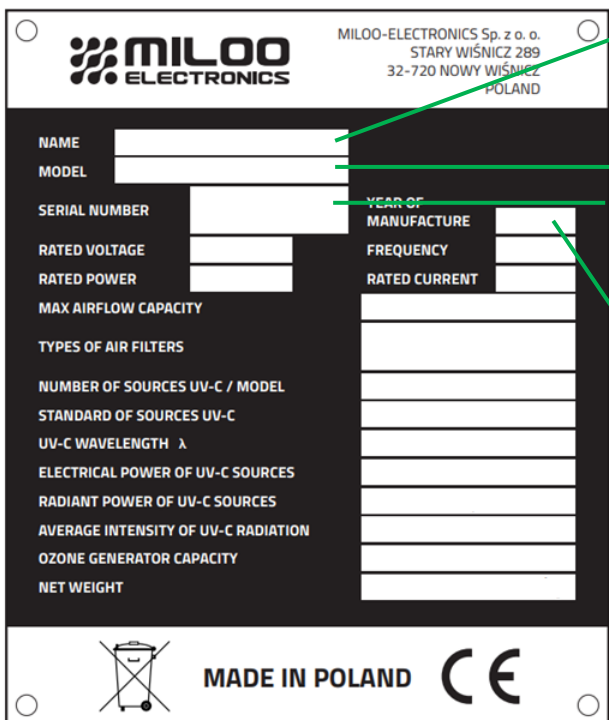
MILOO-ELECTRONICS Sp. z o.o.

Stary Wiśnicz 289,

32-720 Nowy Wiśnicz

Phone +48 14 662 19 55

E-mail address: info@sterylis.com

Contact with the service department

Phone: +48 801 080 257

E-mail address: serwis@emiloo.pl

When contacting the service department, you may be required to provide the data on the unit's nameplate:

- Serial number
- Date of manufacture
- Device name and model

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