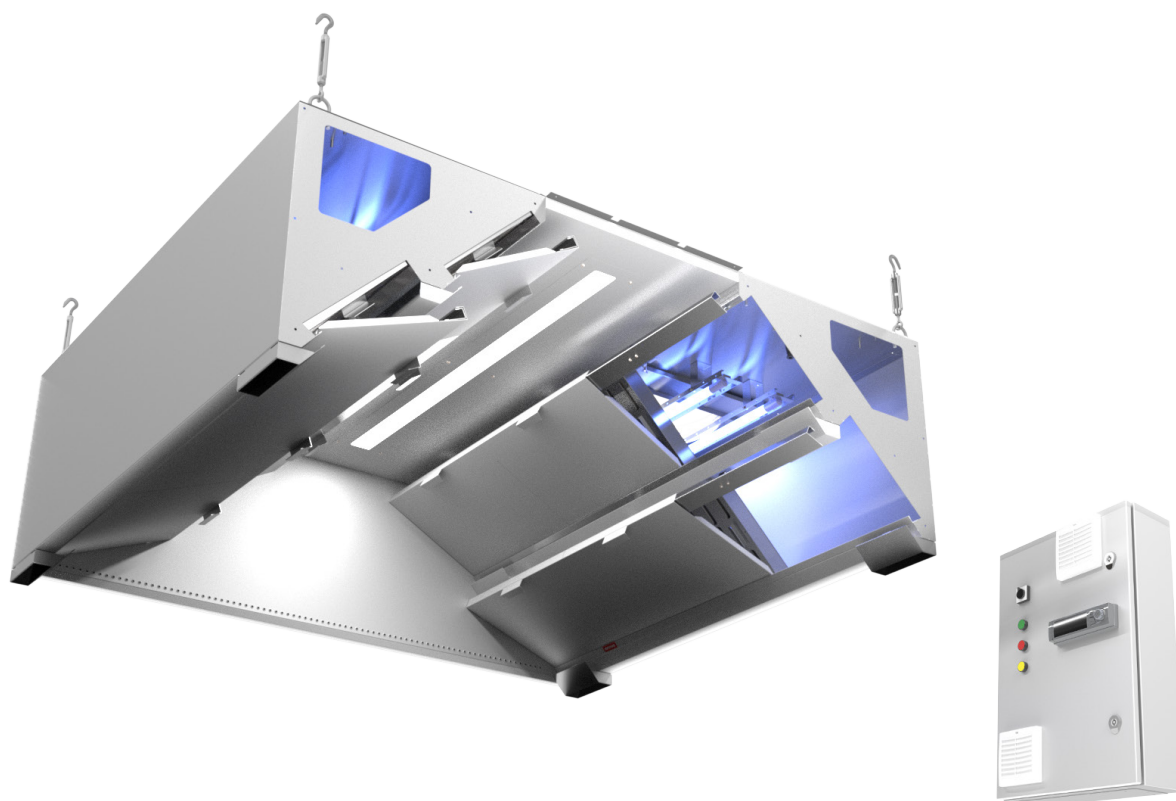




NORDcanopy

UV-W Ultraviolet Cleaning System for Kitchen Canopies - Maintenance and User Manual

Contents

1. HV Grease Canopy Maintenance Instructions	4
1.1 Removing the HFK Grease Filters, Grease Cups and Shields	5
1.2 Reinstalling the HFK Grease Filters, Grease Cups and Shields	5
2. UV Lamp Maintenance Instructions	6
2.1 UV Lamp Maintenance	6
2.2 Replacing UV Lamp	6
3. Operating principles of the UV-W	8
4. LCD panel	8
4.1 NORDcanopy UV-W	9
4.2 UV-unit	10
4.3 Alarms	11
4.4 System settings	12
5. Warranty Information	13

ETS NORD UV-cleaning system uses UV-C radiation to destroy grease particles in the canopy extraction chamber and in ducts. UV radiation is extremely dangerous to humans and the user should never look at ultra-violet radiation with the naked eye.

Facts about UV Radiation

UV radiation is radiation invisible to the eye, consisting of several sub-rays divided by wavelength. The most dangerous of these are VUV and UVC, which are blocked by the Earth's ozone layer. Only UVB and UVA can escape the ozone layer, the dangerous effects of which are manifested by prolonged exposure. In the case of UV radiation, according to EN 16282-8:2017, the maximum effective radiation intensity is:

- 0.5 mW/m² measured at 10 cm from the separator.

In Estonia, the limit of effective radiation intensity in the working environment is:

- 30 J/m² for 8 hours of exposure or 1 mW/m² in Annex 1 of VV Regulation No. 47.

Prolonged exposure to UV radiation can cause the following injuries:

- On the skin: irritation, burning sensation.
- In the eyes: irritation, burn, visual impairment.
- In the lungs: irritation of the respiratory tract, difficulty breathing.

Precautions must always be taken if UV radiation is detected indoors in one way or another.

Facts about Ozone

Ozone is a colorless gas whose sharp smell can be recognized by a person at a concentration of 0.02 ppm (0,4 mg/m³). Ozone smells similarly to the chlorine used in swimming pools. When ozone is used, the current legislation must be observed. In Estonia, the following hygienic limits for ozone have been provided:

- 0,05...0,2 ppm (during working hours, 8 hours)
- 0,3 ppm (15 minutes)

Acute exposure to ozone can cause the following injuries:

- On the skin: irritation and burning sensation.
- In the eyes: severe irritation, burns and decreased vision.
- Lungs: irritation in the respiratory organs and breathing problems.

If ozone is detected indoors, precautions should be taken.

Warnings!



This device emits ultraviolet radiation and ozone!

Prolonged exposure to ozone and ultraviolet radiation can cause bodily injury.



When removing grease filters, make sure that the lamps are not on!



Risk of falling!

Make sure installation and service personnel have stable work platforms when installing the device.



Use protective glasses and gloves during installation and maintenance!



ALWAYS power off the system before any maintenance work!



Only original spare parts and UV lamps purchased from ETS NORD may be used in the UV cleaning system! UV lamps can be ordered from the sales office.

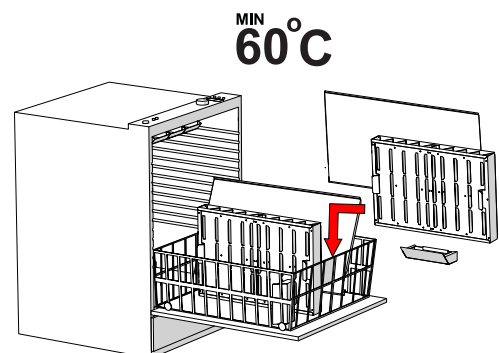
1. HV Grease Canopy Maintenance Instructions

The frequency of cleaning the canopy depends on its use and should be determined based on the intensity of kitchen use. To ensure the best hygiene, fire safety and functionality, it is important to maintain cleanliness in the entire kitchen, including the appliances located in the kitchen.

- All internal and external surfaces of the kitchen canopy, including light fixtures, are cleaned using neutral cleaning agents. Carefully rinse the surfaces after cleaning, to avoid harmful interactions of cleaning agents and high temperatures.
- To clean the exhaust chamber HFK filters and UV lamp(s) are removed from the kitchen canopy.
- To clean the supply chamber, the front panel of the kitchen canopy is removed.
- To clean the HFK grease filters, they are removed from the hood exhaust air chamber. Runoff grease is drained into the kitchen grease drain and filters are washed by hand, in a dishwasher or with steam. When cleaning filters, the same procedures are also performed on grease cups and protective shields.
- UV lamps should be inspected at least once a week for contamination. The soiled lamp is cleaned with a damp cloth. To clean a more heavily soiled lamp, 90-100% isopropyl alcohol should be used.
- **ATTENTION!** Do not use hard or abrasive detergents, chlorine or bleach when cleaning the canopy!
- **ATTENTION!** Never clean the kitchen canopy when any of its surfaces are hot or in use.

ATTENTION! When performing canopy maintenance, you must always switch off the UV cleaning system from the LCD control panel.

UV protective shields, HFK grease filters and grease cups can be washed by hand, in the dishwasher or steam cleaned.

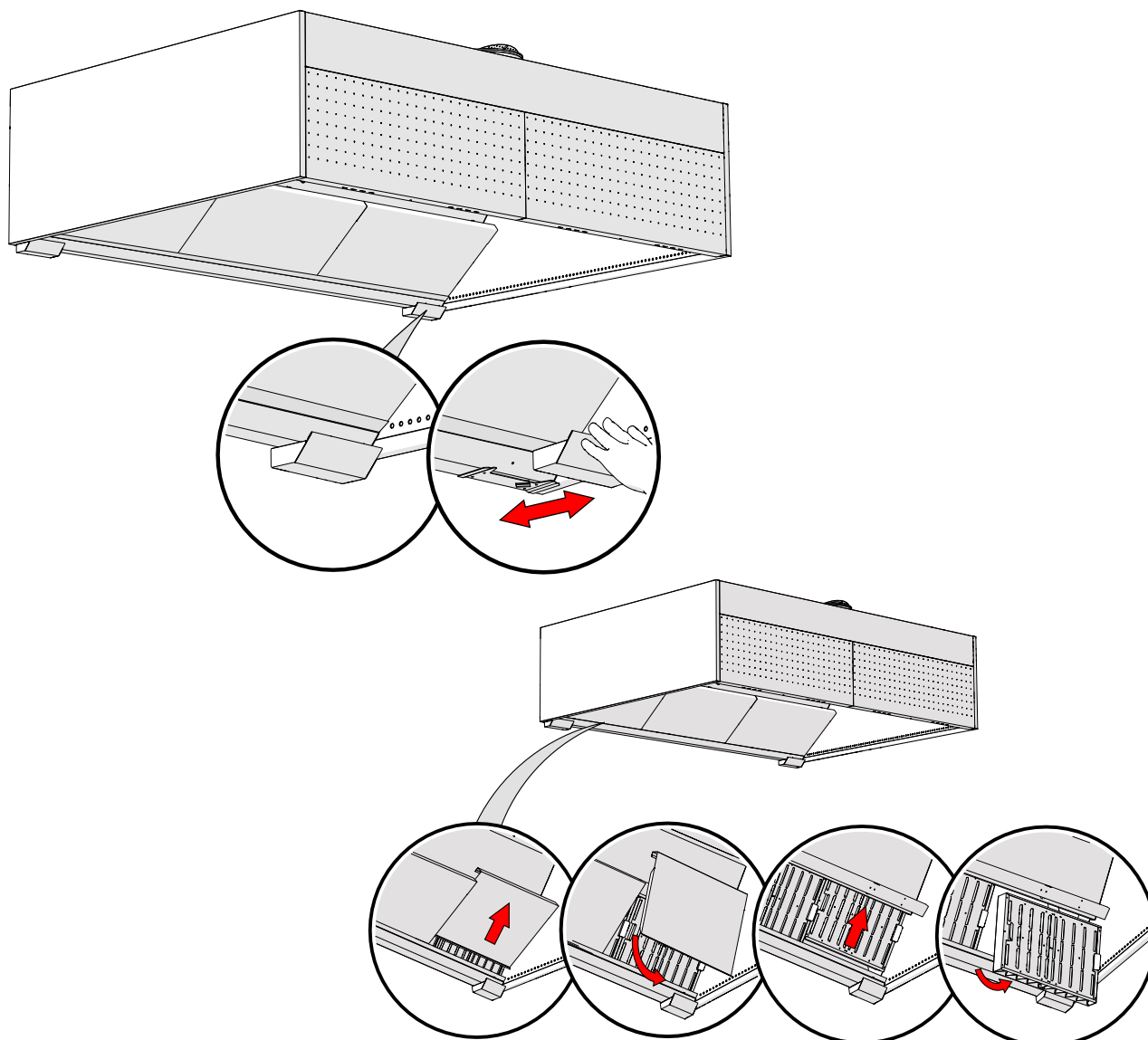


1.1 Removing the HFK Grease Filters, Grease Cups and Shields

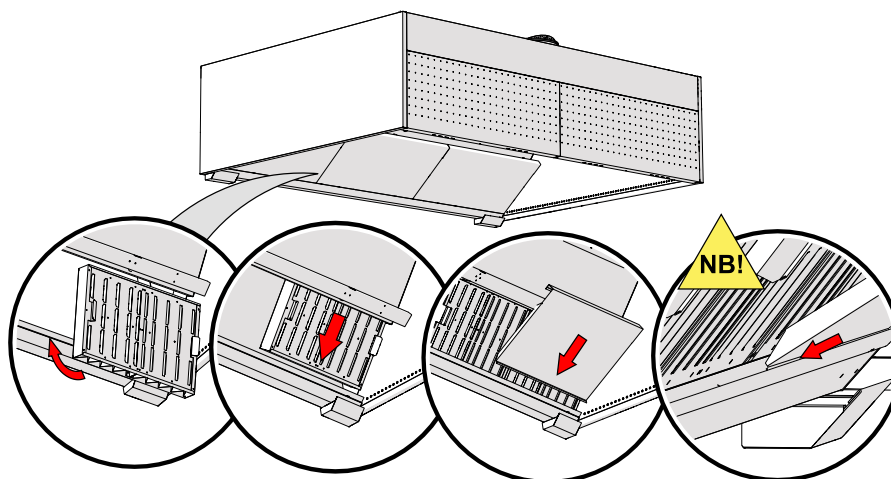


Danger of ultraviolet radiation!

Protective shields and grease filters must not be removed from a working system!



1.2 Reinstalling the HFK Grease Filters, Grease Cups and Shields



NB! When restoring the UV protective shields make sure that they are fixed properly, and that the safety switch is pressed down.

2. UV Lamp Maintenance Instructions

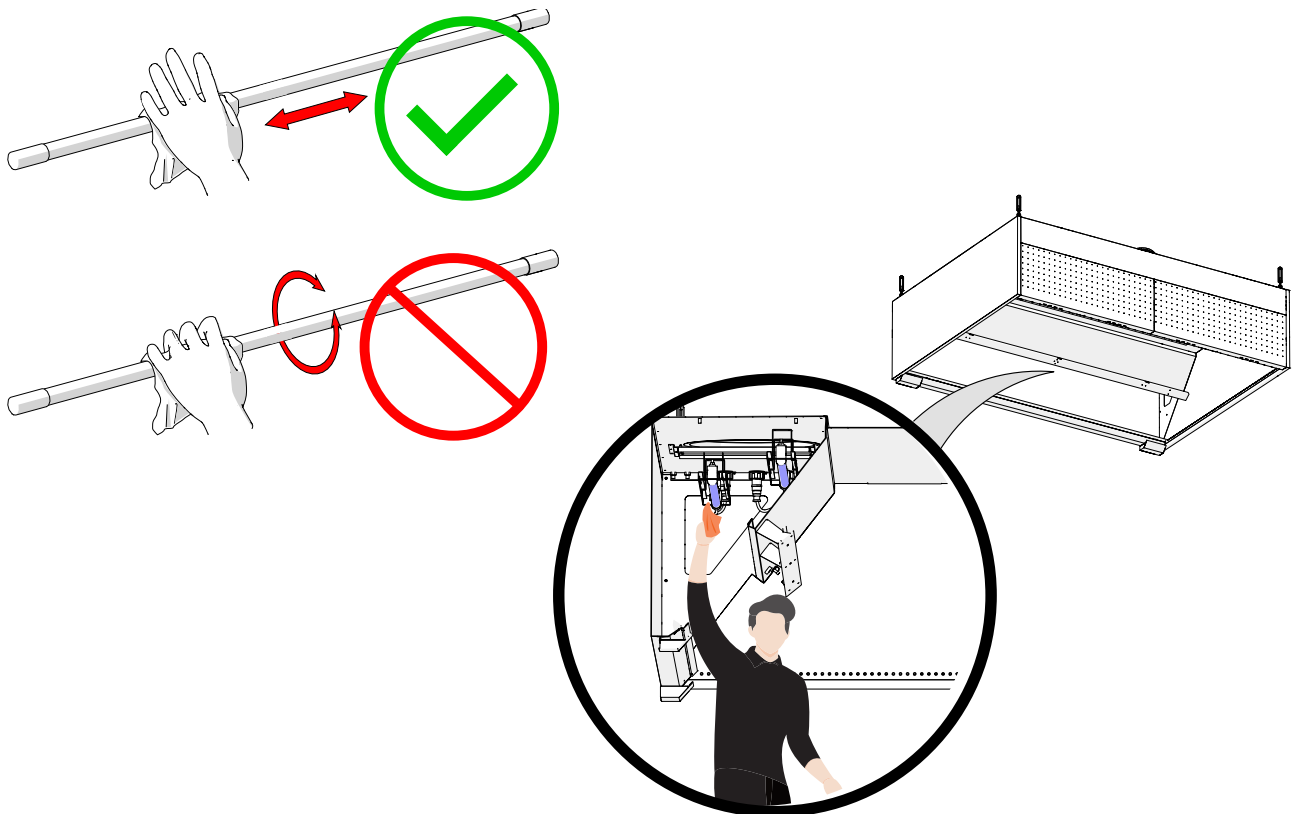
During maintenance and cleaning the system is turned off from the LCD panel. It is possible to check and clean the UV lamp without removing it from the mounting rail. The UV lamp must only be removed if the system is switched off and the UV control unit is disconnected from the mains!

2.1 UV Lamp Maintenance

NB! The surfaces of some of the low-pressure UV lamps can reach temperatures of up to 160°C. Allow it a cool down period of at least 10 minutes before touching it.

It is possible to check and clean the UV lamp without removing it from the mounting rail. After turning the system off from the LCD panel allow the lamp(s) to cool for at least 10 minutes. During cooling you can perform a visual inspection of the canopy, exhaust air chamber and the UV lamp(s).

The UV lamp(s) should be inspected at least once a week for contamination. The soiled lamp is cleaned with a damp cloth. To clean more heavily soiled lamps, use 90–100% isopropyl alcohol.



2.2 Replacing UV Lamp



Always turn off the system and disconnect the control unit from the mains before replacing the UV lamp. After turning off the power, let the UV lamp cool for 10 minutes after which it will be safe to handle.



Use protective glasses and gloves during installation and maintenance!



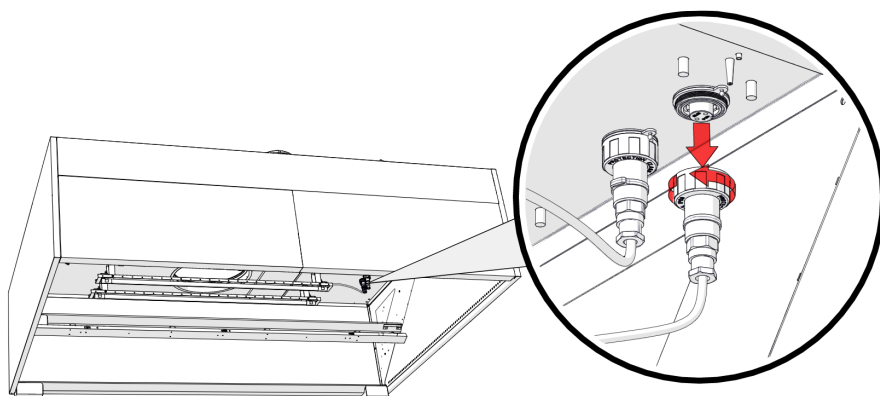
Risk of falling!

Make sure installation and service personnel have stable work platforms when installing the device.

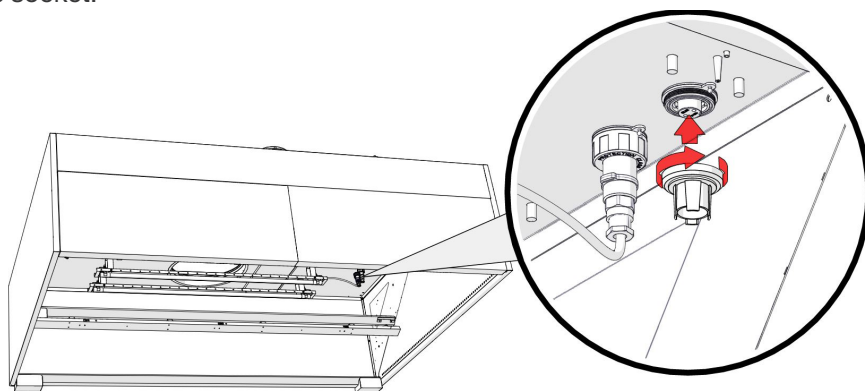


Only original spare parts and UV lamps purchased from ETS NORD may be used in the UV cleaning system!

To remove the UV lamp(s) from the canopy, disconnect the UV lamp(s) from the power circuit by first turning the locking ring of the plug clockwise and then pulling the plug down. Do not pull on the cable, but only on the plug.



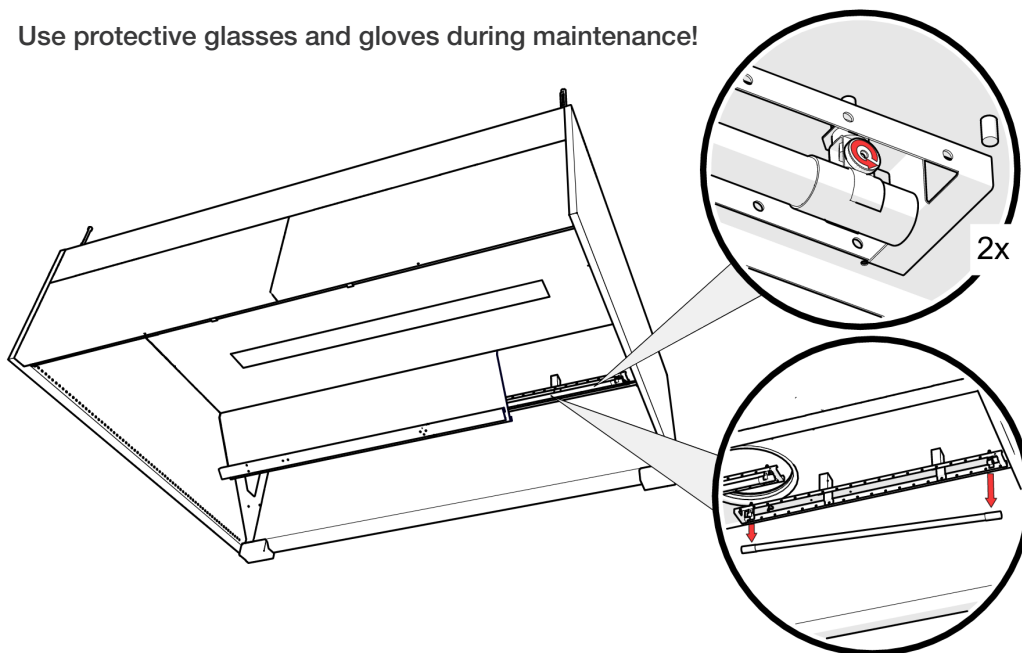
After disconnecting the UV lamp from the plug, screw the cap of the bulb onto the open socket on the ceiling. The protective cap hangs from the socket.



To remove the UV lamp from the canopy extraction chamber, open the lamp fixing clips by turning its screw fastener counterclockwise, and then carefully remove the UV lamp from the canopy extraction chamber.



Use protective glasses and gloves during maintenance!



When the kitchen canopy has been serviced, the UV lamp and the UV control unit must be installed back into the canopy in the reverse order of how they were removed.

3. Operating principles of the UV-W

The UV-W Ultraviolet Cleaning System operates normally when no alarms are active, depending on the severity of the alarm the system may stop working and require technician services.

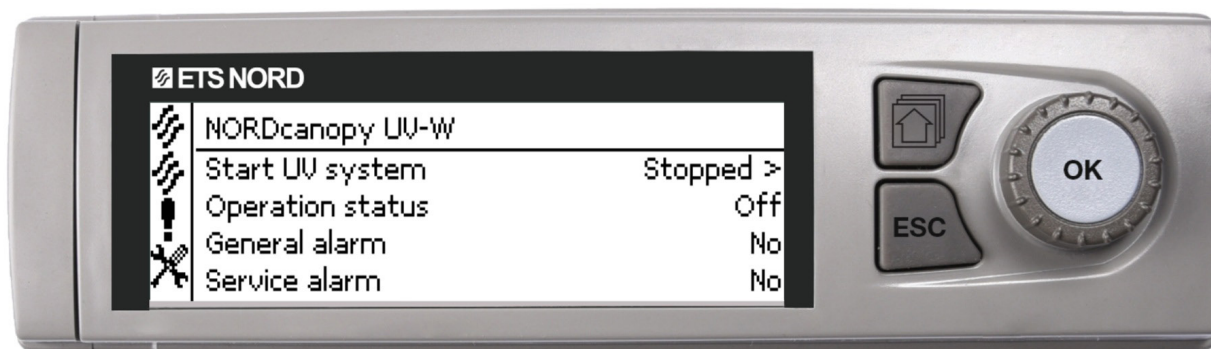
Once the UV-W system is started the unit will operate the UV-lamp(s) without user intervention via LCD panel under the following conditions:

- The control unit's work is operated by work permission which is obtained from a higher secondary unit such as a ventilation device, AFS or BMS.
- The UV-lamp(s) will be turned off when the UV protection shields are removed. Once the UV protective shields are restored and properly fixed (the safety switch is pressed down) the UV-lamp(s) will be turned on again.
 - This action triggers an alarm that is displayed on LCD panel: "Safety switch x.x not okay!"
- The UV-lamp(s) will be turned off if there is a pressure drop (below the set pressure low limit value - 20 Pa) in the exhaust air chamber section where the lamp(s) are located. Once the pressure has risen the UV-lamp(s) will be turned on again.
 - This action triggers an alarm that is displayed on LCD panel: "Exhaust air chamber pressure x.x low, UV paused!"
- The UV-lamp(s) will be turned off if the system temperature exceeds the conditions for uninterrupted work (0°C - 50°C). Once the system temperature has cooled down enough the UV-lamp(s) will be turned on again.
 - This action triggers an alarm that is displayed on LCD panel: "Ballast x high temperature, UV unit paused."

The UV-lamp has a lifespan of 20 000 switching cycles and after 10 000 operating hours the intensity of the lamps decreases 20% at 185nm, therefore it is advised to change all UV lamps in the system after that time. These events trigger an alarm that is displayed on LCD panel:

- "Lamp x maintenance, service@etsnord.com"
- "Lamp x max. ignitions, maintenance!"

4. LCD panel



Button	Action
OK	Turn the button to navigate in the menu. Press the button to enter the menu and accept the changes.
ESC	Press the button to move back to the previous menu or to cancel changes. Holding the button down for a few seconds of time dims the background light and returns the panel to home menu view – NORDcanopy UV-W .

Icon	Description
	Indicates UV system menus.
	Indicates alarms menu.
	Indicates settings menu

4.1 NORDcanopy UV-W

Start UV system – Displays/changes the selected system operating mode:

- **Stopped** - The system has not been started, and the UV-lamp(s) will not be turned on.
- **Started** - The system has been started and depending on the operating conditions (work permission, sections exhaust air chamber pressure and the state of the UV protection shield safety switch) the UV-lamp(s) will be turned on.
- **Smart schedule** - System is stopped/started automatically according to a schedule which can be set by using **Configure Smart schedule**.

Operation status – Indicates whether the system is operational (**On**) or not (**Off**).

General alarm – Indicates whether the system has any active fault alarms that are affecting the system's work.

Service status – Indicates whether the system has any active maintenance alarms.

System work permission – Indicates whether the system has received a work permission from either a ventilation device, AFS or BMS.

Time to next service – Displays the number of days left until general canopy maintenance, an alarm will be triggered when there are 0 days left.

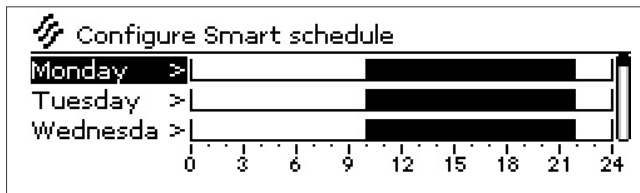
Configure Smart schedule – Allows to set a time program which can be taken into use when changing the unit's Start UV system state to **Smart schedule**.

UV-W ... SW ver. – Displays the control unit software version.

Configure Smart schedule

In the **Configure Smart schedule** menu, graphic views are both accessible in general and edit modes that display the specific times when new control commands are received. The graphical representation consists of columns of varying heights that correspond to different controls.

To view the graphical representation of the weekly program, simply press the **OK** button on the corresponding day of the week. This will display a detailed view of the activation times for the different control modes. From this view, you can also edit, delete, or add new switch time values as needed



The picture example shows that the system will be Started from Monday to Thursday from 11:00 to 23:00 and from Friday to Saturday 11:00 to 00:00. System will not be working on Sunday until Monday at 11:00.

Enter the **Configure Smart schedule**, press **OK** button on any day to start building a schedule. Turning the **OK** button clockwise increases the numeric value and counterclockwise decreases it, moves through control mode selections. To skip entries without changing them simply turn the **OK** button.

To add new switch time:

Time Mode	M	T	W	T	F	S	S
00:00 Add new	☐	☐	☐	☐	☐	☐	☐

Press **OK** on the "00:00 Add new" line.

Time Mode	M	T	W	T	F	S	S
00:00 Started	☐	☐	☐	☐	☐	☐	☐

Press **OK**, set the switch time for the **Started** control mode. Hours and minutes are set separately, select desired days.

Time Mode	M	T	W	T	F	S	S
11:00 Started	☒	☒	☒	☒	☒	☒	☒

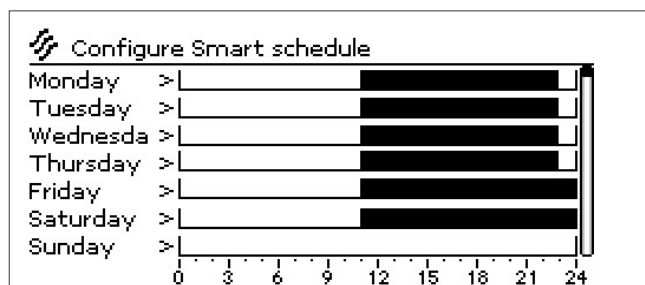
Confirm the new time switch mode by pressing the **OK** key.

Time Mode	M	T	W	T	F	S	S
11:00 Started	☒	☒	☒	☒	☒	☒	☐
23:00 Stopped	☒	☒	☒	☒	☐	☐	☐
00:00 Stopped	☐	☐	☐	☐	☒	☒	☒

Repeat the process for the Stopped control mode.

Time Mode	M	T	W	T	F	S	S
11:00 Started	☒	☒	☒	☒	☒	☒	☐
23:00 Stopped	☒	☒	☒	☒	☐	☐	☐
00:00 Stopped	☐	☐	☐	☐	☒	☒	☒
00:00 Add new	☐	☐	☐	☐	☐	☐	☐

Once switch modes are added, press **ESC** button to exit the time mode build view.



Full view of the created schedule.

To delete a switch time:

Time Mode	M	T	W	T	F	S	S
11:00 Started	☒	☒	☒	☒	☐	☐	☐
23:00 Stopped	☒	☒	☒	☒	☐	☐	☐
00:00 Delete switch time	☐	☐	☐	☐	☒	☒	☒
00:00 Add new	☐	☐	☐	☐	☐	☐	☐

Select the time switch slot to delete. Press **OK** on the mode, select **Delete time switch** as its value, confirm this by pressing the OK key.

Time Mode	M	T	W	T	F	S	S
11:00 Started	☒	☒	☒	☒	☐	☐	☐
23:00 Stopped	☒	☒	☒	☒	☐	☐	☐
00:00 Add new	☐	☐	☐	☐	☐	☐	☐

New schedule where the system will be **Started** from Monday to Thursday from 11:00 to 23:00. System will not be working from Friday to Sunday.

4.2 UV-unit

Canopy is marked with section identification labels which help navigate and identify information fields in LCD panel menus.

Depending on the canopy build and configuration it may contain up to four sections, each with its own safety switch, pressure sensor and HFK filters.

A section may house up to four lamps, depending on canopy build and configuration.

UV-unit 1: controls UV-lamps 1-4							
1.1	Section 1	1.2	Section 2	1.3	Section 3	1.4	Section 4
UV-unit 2: controls UV-lamps 5-8							
2.1	Section 1	2.2	Section 2	2.3	Section 3	2.4	Section 4
Pressure & safety							

Menu displays the canopy section corresponding measured exhaust air chamber pressure value and the state of the safety switch.

Section	Pressure	Safety
Pressure 1.1	35Pa	Okay
Pressure 1.2	30Pa	Okay

Filters & airflow

Menu displays the canopy section corresponding amount of HFK filters and calculated exhaust airflow (l/s or m3/h depending on which flow selection unit has been selected). It is important to always make sure that once canopy maintenance is finished the same amount of HFK filters is put back to the section for this directly affects the exhaust airflow calculation.

Section	Filters	Airflow
Filters 1.1	4pcs	393
Filters 1.2	5pcs	455

Status indicators

Menu displays the state and fault statuses of the UV-lamp(s).

Lamp	State	Fault
Lamp 1	Off	No
Lamp 2	Off	No
Lamp 3	Off	No
Lamp 4	Off	No

Usage statistics

Displays the working time of the lamp in hours i.e., the total number of hours that the lamp has been in the On state and number of times it has been turned off/on. It is important from time to time to check the lamp's runtime and ignitions value, because at 10 000 hours and 20 000 clicks the lamp must be replaced. The system itself also has notification alarms when these events occur.

Lamp	Runtime	Ignitions
Lamp 1	100h	200clicks
Lamp 2	100h	200clicks
Lamp 3	50h	200clicks
Lamp 4	50h	200clicks

4.3 Alarms

When an alarm becomes active, it's displayed on the LCD panel. Pressing OK button will acknowledge it and pressing ESC button will silence the alarm but not acknowledge it. The number of active alarms is shown in the top right corner of any view.

	Alarms	2
	Active alarms	
	Alarm history	
	Acknowledge all alarms	
	Reset alarm history	

Active alarms

Every active alarm is shown in a separate row, where you can see when the alarm has become active. An exclamation (!) mark in front of the date shows that the alarm has been silenced by pressing ESC button. Pressing the OK button on alarm will display more information about the alarm.

	Active alarms	2
	11.05.2026 17:45:46 Exhaust air chamber pres	>
	11.05.2026 17:45:46 Exhaust air chamber pres	>

Alarm history

Displays the last 10 alarms.

	Alarm history	
	11.05.2026 17:45:46 Exhaust air chamber pres	>
	11.05.2026 17:45:46 Exhaust air chamber pres	>

Acknowledge all alarms

Used to acknowledge all alarms at once.

	Confirm	
	Acknowledge all alarms	

Yes No

Reset alarm history

Used to clear the alarm history from the LCD panel and from the web view.

 Confirm

Reset alarm history

Yes ☐ No ☒

Alarm signal

Allows to remove the unit alarm sound.

 Alarm signal

☐ On

☒ Off

4.4 System settings

It is important that the time (24-hour format) and date are correct. Alarm information, for instance, shows when an alarm has been activated and inactivated. It is highly recommended that the time and date are correct. The device clock takes daylight savings and leap years into account automatically.

 System settings

 Time 15:42 >

 Date 11.05.2026 >

 Language English/English >

 Time zone 2 >

Changing time

Press **OK** button to start adjusting the time hours and minutes, turning the **OK** button clockwise increases the numeric value and counterclockwise decreases. Press **OK** button to accept changes.

 Time

Enter the minutes

15:42

hh:mm

Changing the date

Press **OK** button to start adjusting the date by setting the day, month and year (name of weekday is updated automatically). Turning the **OK** button clockwise increases the numeric value and counterclockwise decreases. Press **OK** button to accept changes.

 Date

Enter the day

Mon 11.05.2026

Changing the language

Press **OK** button to enter the language selection, turning the button **OK** moves up and down in the selection. Pressing **OK** button accepts the chosen language and restarts the unit in the chosen language.

 Language

☒ English/English

☐ suomi/Finnish

☐ Svenska/Swedish

☐ eesti/Estonian

Changing the time zone

Press **OK** button to enter time zone, turning the **OK** button clockwise increases the numeric value and counterclockwise decreases. Pressing **OK** button confirms the choice.

 Time zone

2

min: -12 max: 14

Changing daylight saving

Press **OK** button to enter daylight saving, turning the button **OK** moves up and down in the selection. Pressing **OK** button confirms the choice.

 Daylight saving

☒ On

☐ Off

5. Warranty Information

The following warranty conditions apply to the UV purification system:

- A two-year warranty is granted for a new product against defects and manufacturing faults, provided that:
 - The UV purification system has been commissioned by ETS NORD.
 - Annual maintenance of the unit has been carried out on time.
 - Components that have exceeded their operating hours or switching cycle life (e.g. UV lamps) have been replaced on time.
- The warranty for a new UV purification system covers the replacement and repair of defective parts.
- Spare parts are covered by a 90-day warranty against defects and manufacturing faults from the date of original installation.
- The warranty becomes effective from the commissioning date.

The two-year warranty for UV lamps applies under the following conditions:

- 10,000 operating hours
- 20,000 switching cycles

If any of the above limits are reached before the end of the warranty period, replacing the old lamp with a new one will void the two-year warranty for the UV lamps.



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*Let's move the air **together!***