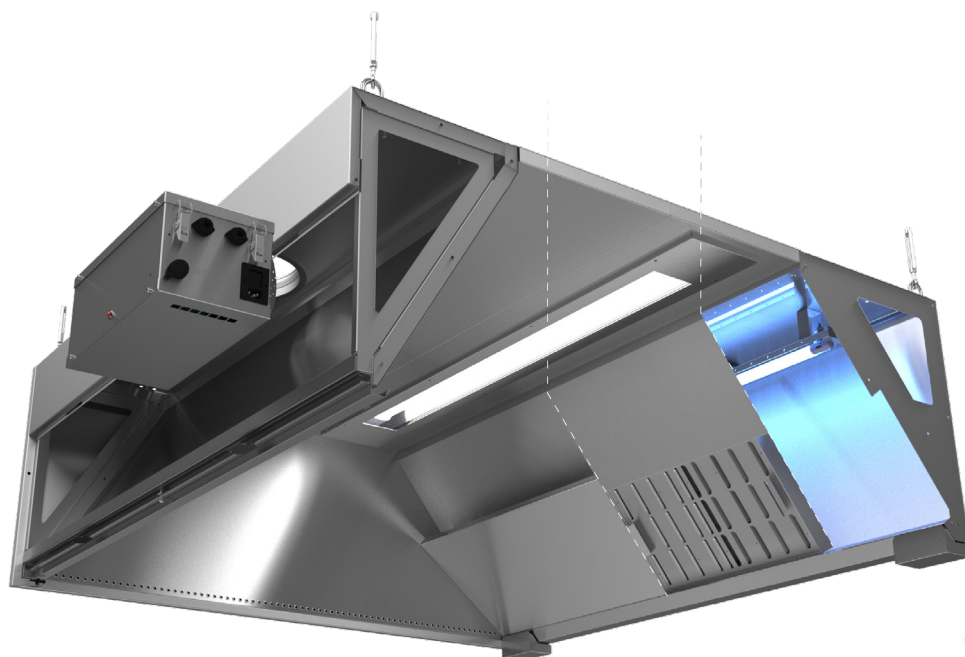




UV 1.0 Ultraviolet Cleaning System for kitchen canopies

UV 1.0 Ultraviolet Cleaning System for kitchen canopies

UV 1.0 Ultraviolet Cleaning System



ETS NORD's UV cleaning system utilizes ultraviolet light to significantly reduce grease and odor particles from the exhaust chambers and extraction ducts of commercial kitchens. UV cleaning is optionally available with many ETS NORD commercial kitchen canopies.

Benefits obtained with ultraviolet cleaning:



Effective grease reduction



Significantly improved fire safety



Enables the use of heat recovery



Effectively reduces odors



Effective at killing bacteria

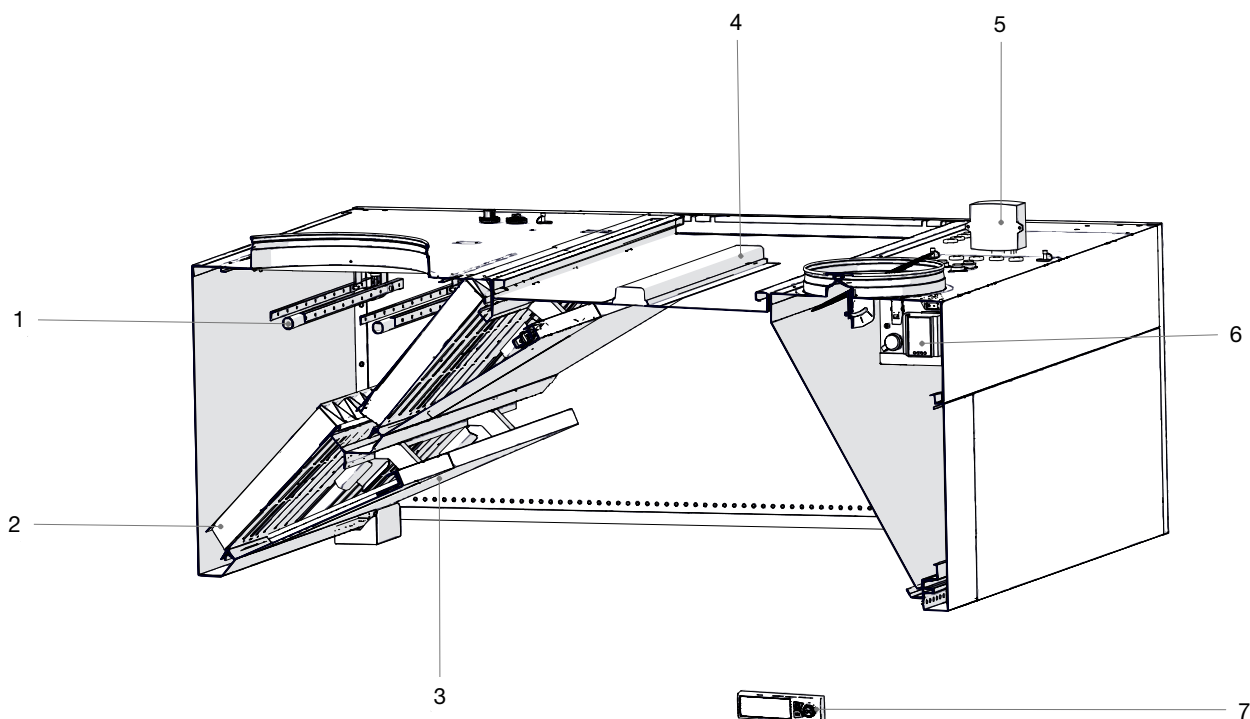


Low maintenance costs

The UV cleaning system consists of the following components:

- Canopy
- UV lamp
- Integrated Control Unit
- LCD Control Panel
- Remote monitoring IoT (Internet of Things) from the local area network or Internet.*

* Allows to connect the UV cleaning system to the Internet and provides remote monitoring.



- 1 – NIQ UV Lamp
- 2 – HFK Grease Filter
- 3 – UV Shield and safety switch
- 4 – Lighting
- 5 – Pressure sensor
- 6 – Integrated Control Unit
- 7 – LCD Control Panel

Function

The HFK grease filters inside ETS NORD canopies have a capture efficiency of 97% of 10µm particles. To further clean the extraction airstream from other contaminants entering the extraction ducts, a UV cleaning system is integrated into the canopy to further eliminates residual particles and improves fire safety.

The removal of grease in the airstream takes place by photolytic oxidation, which is a combination of photolysis and ozonolysis. UV-C lamps are used to generate ultraviolet radiation at both 185 nm and 254 nm wavelengths. At 254 nm the process of photodegradation takes place as a result of the ultraviolet radiation, breaking down organic molecules (in this case grease particles, vapors and bacteria) into minerals and water vapor under the influence of photons. At 185 nm ozone is produced which traverses through the exhaust system, further cleaning the airstream and increasing the overall efficiency of the system. Any residual ozone exiting the system to the outdoors is quickly converted to oxygen and no environmentally harmful compounds whatsoever are generated during the entire process.

Depending on the size of the kitchen canopy, 1-4 lamps per canopy are installed, which ensures efficient cleaning of the extracted air.

Benefits obtained with UV cleaning:

- Effective grease reduction.
- Significantly improved fire safety.
- Reduced odors.
- Possibility to connect kitchen exhaust to plate (cross-flow) heat exchangers.
- Reduction of time and effort needed to clean the exhaust ventilation system, resulting in reduced maintenance costs.
- Improved hygiene - a healthier and safer working environment.

The operation of the UV lamps is overseen by a Control Unit integrated inside the supply air chamber of the canopy, which can be monitored and controlled with an LCD panel. The Control Units of multiple UV cleaning systems (up to 10 systems) can be interconnected and controlled from a single LCD panel.

UV cleaning system features

Safety:

- The system will shut down if grease filters are removed or not correctly fitted.
- The system will shut down if the pressure in the extraction chamber drops below 20 Pa.
- Electronics are protected by thermal protection and type C circuit breaker.
- HACCP International certificate for food safety under preparation.
- Meets kitchen UV safety requirements.
- CE certified.



Redundancy:

- UV lamps are powered separately, so the failure of one lamp does not affect the others.
- Each canopy operates independently, even when the main canopy and panel are switched off.

Compatibility with building automation:

- Modbus, I/O and LAN connectivity are included as standard.
- Data flow with building automation - alarm notification, operating mode, maintenance notification, connection to the ventilation device, FACP compatible.
- Remote monitoring IoT (Internet of Things) from the local area network or Internet.
- Timer clock configuration option.



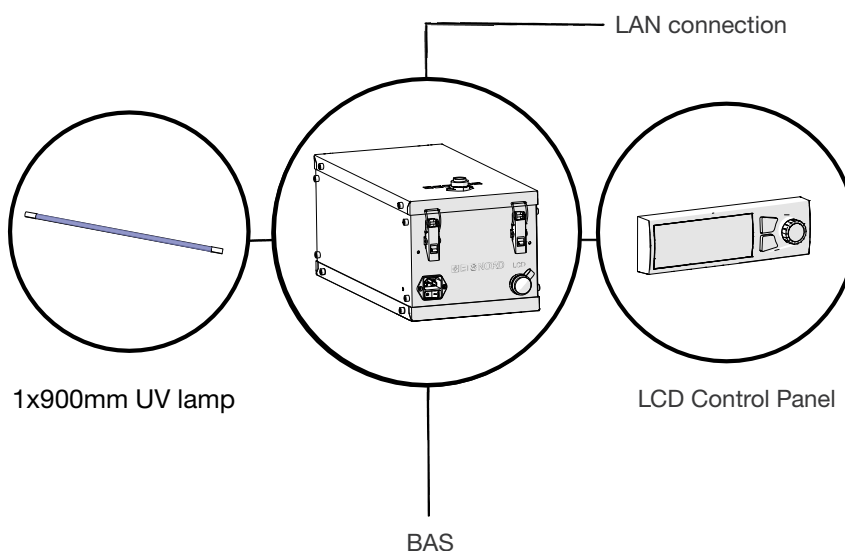
Control Units

The choice of UV Control Units depends on the size of canopy and volume of extraction air. Please consult with ETS NORD kitchen specialists when selecting a UV canopy to find a suitable solution.

NB! All electronics are integrated into ETS NORD canopies. The UV cleaning system must be installed by a qualified technician and the canopy must be marked accordingly.

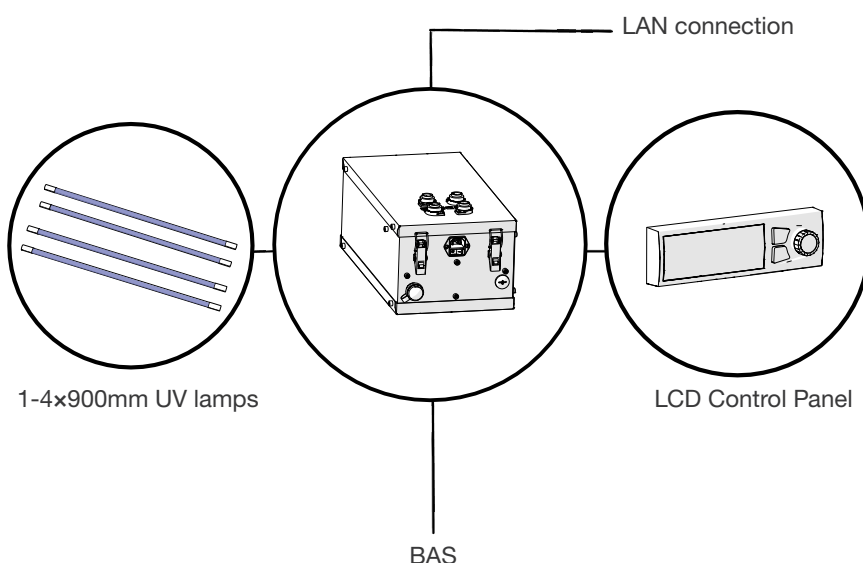
UV-S is designed for single-section canopies with a maximum airflow of 415 l/s. Its maximum power is 185 W.

UV-S Module 1.0 185 W



UV-L is designed for single and multi-section canopies with a maximum airflow of 1660 l/s. Its maximum power is 740 W.

UV-L Module 1.0 740 W



Maintenance

After 10 000 operating hours the intensity of the lamps decreases 20% at 185nm, it is advised to change all UV lamps in the system after that time. UV lamps are hazardous waste that must be disposed of according to 2012/19/EU WEEE directives.

The lamps should be inspected once a week, and if dirt is visible, wipe the glass surface of the lamp gently with a damp cloth. For more heavily soiled lamps, use isopropyl alcohol.

ETS NORD offers the customer a maintenance service, during which the operation of the system is monitored, the customer is notified of any malfunctions, and the lamps are replaced, if the customer has signed up to a maintenance contract.



ETS NORD AS

Address: Peterburi tee 53
11415 Tallinn
Estonia

Phone: +372 680 7360
info@etsnord.ee
www.etsnord.ee

ETS NORD Finland

Address: Pakkasraitti 4
04360 Tuusula
Finland

Phone: +358 40 18 42 842
info@etsnord.fi
www.etsnord.fi

ETS NORD Sweden

Address: Järsjögatan 7
69235 Kumla
Sweden

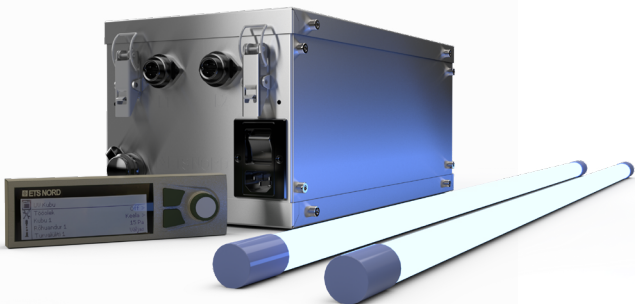
Phone: +46 19 554 20 50
info@etsnord.se
www.etsnord.se

Address: Pinjegatan 5
21363 Malmö
Sweden

Phone: +46 40-94 68 70
info@etsnord.se
www.etsnord.se

ETS NORD International

info@etsnord.com
www.etsnord.com



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