NORDcanopy

OZ 4.0 Ozone Cleaning System product sheet

- Keeps kitchen exhaust ducts clean
- Ensures better fire safety
- Significantly reduces kitchen exhaust duct maintenance cost
- Compatible with building automation

ETS NORD

OZ 4.0 Ozone Unit

OZ Ozone unit is an integrated ozone cleaning system intended to be used together with ETS NORD professional kitchen canopies or ventilation ceilings. The devices are designed for the exhaust air systems of professional kitchens with high requirements to minimize grease and odor. Ozone cleaning is optionally available with many ETS NORD commercial kitchen canopies.

Benefits obtained with ozone cleaning:

- Effective grease reduction
- Significantly improved fire safety
- Enables the use of heat recovery
- Effectively reduces odors
- Effective at killing bacteria
- Low maintenance costs

NOTE! The Ozone Module needs supply air to function!
The Ozone Module must not be installed if the hood serving it doesn't have a supply air duct installed.
In HG Grill hoods and HC Ventilation ceilings the Ozone Module must not be installed if it doesn't have its own supply air duct installed.

Function

Ozone (O_3) is a very effective oxidant, and when mixed into the kitchen's exhaust air brakes down grease and odour particles to water vapor, carbon dioxide and dry minerals.

Note! For best results with odour and grease reduction, the reaction time for ozone within a kitchen exhaust system should be at least two seconds. However, longer exposure can further improve results. This time should be considered during the design phase of the kitchen exhaust system.

Exhaust duct without ozone cleaning system

Exhaust duct with ozone cleaning system

Ozonator features

All ozone units in the single kitchen are monitored and controlled through a single control panel and if there is an internet connection, through the web interface. The control panel displays system malfunctions and informs the kitchen staff about them. ETS NORD OZ 4.0 Ozone units can be connected to building automation system through Modbus RTU or TCP/IP, I/O status signals and by giving ozonators permission to work.

Ozone unit consists of three ozone generators and a controlling system. This product is installed in the supply chamber of ETS NORD HZ Grease canopy, ensuring protection of the device against mechanical impacts and ozone leakage. In the case of HG Grill canopies and HC Ventilation ceilings, the ozone unit is installed on top of the canopy's exhaust chamber.

In order to save energy with the ozone cleaning system, it is possible to use an automated solution Smart Mode, which sets specific time periods for the ozone units when the devices work at full power and when at minimum power. Using the Smart Mode gives the ozone unit a longer life and makes it more energy efficient.

A maximum of 9 ozone units can be in one ozone cleaning system.

Safety:

- Ozone unit will shut down if the pressure in the exhaust chamber drops below 20 Pa;
- Electronic parts are protected by thermal protection;
- Meets kitchen ozone safety requirements;
- HACCP International certificate;
- CE certified

Compatibility with building automation:

- Modbus RTU and I/O status signals are included as standard;
- Modbus TCP/IP and LAN connectivity is included with remote access device;
- Data flow with building automation – alarm and maintenance notifications, working status;
- Gives work permission to ozone units either locally (through potential free contact) or remotely (Modbus);
- Remote monitoring (IoT - Internet of Things) from the local area network or internet;
- Automated time schedule option.

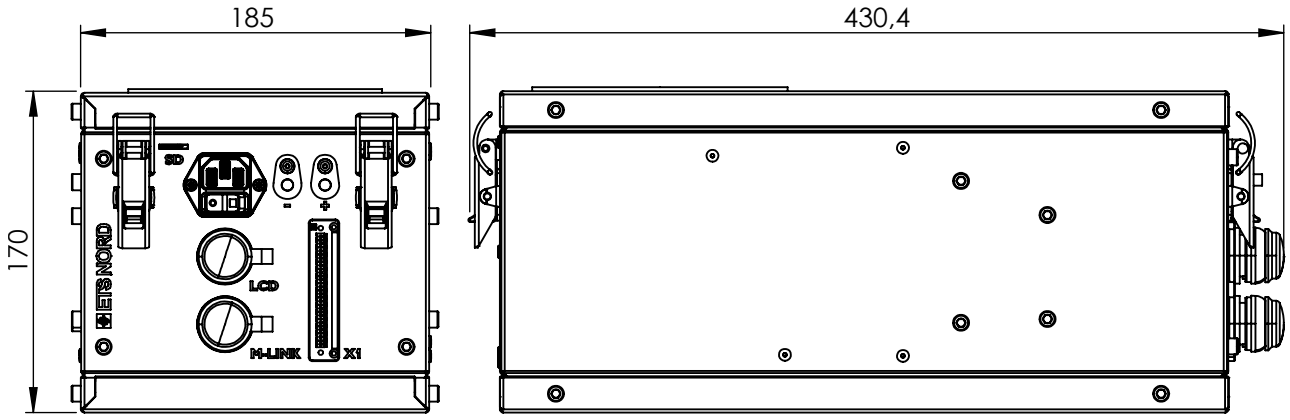
Technical data and dimensions

Technical data:	
Number of ozone generators	3
Max ozone capacity*	5000mg/h
K-value	6,75
Nominal voltage	230 V, AC
Power consumption	max. 330 W
Nominal frequency	50 Hz
Max input current of the unit	max. 1,8 A
Short-circuit current withstand capability (Icc; C16 circuit breaker on the supply side)	2 kA
Overvoltage category	II
Protection against electric shock	Basic insulation + switch-off of the automatic power supply
IP rating of the housing	IP2X
Pollution degree	I
Ambient temperature range during operation	0 ... +40 °C
Ambient temperature range during storage	-20 ... +70 °C
Relative humidity	max. 60 %RH/+20 °C

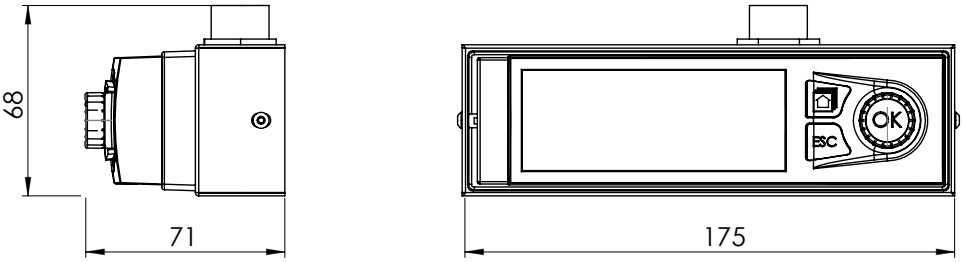
Technical data:	
Operating altitude above sea level	max. 1000 m
Internet connection	Via remote access device
Building management system	3 digital signals + COM relay outputs, Modbus RTU or TCP/IP
Fire alarm connection	1 discrete input (requires a potential-free output)
Max amount of ozone units in one system	9
Dimensions (height x width x depth)	430x185x170 mm
Unit material	Stainless steel AISI 316L, thickness 0,8 mm
Weight	5,45 kg
Basic standard	EVS-EN 60335-1:2012+A11+A13+A1+A14+A2+A15:2021
EEC standard	EVS-EN IEC 61000-6-1:2019, EVS-EN IEC 61000-6-8:2020

* Maximum ozone output capacity is obtained under the following conditions: measured at 10 meters in the duct from the ozone unit, supply air temperature 20°C, relative humidity 20% and with exhaust air 300 l/s.

OZ 4.0 Ozone unit dimensions



LCD Control panel dimensions



Necessary connections of the ozone unit:

- LAN cable from the LCD control panel to the Master ozone unit (Cat 6 cable);
- Power supply.

Optional connections:

- Modbus data cable between master and slave units (twisted pair cable min 2x2x0,25). Is needed when there is more than one ozone unit in the ozone cleaning system;
- Building management system cables (Modbus RTU, working permission, I/O status signals);
- Ethernet connection to the remote access device.

For more information, check OZ 4.0 Ozone unit installation manual.

Maintenance

Ozone generators from inside the ozone unit must be changed after 10 000 operating hours. When the service interval of 10 000 hours is full then the system notifies the user with an alarm through the LCD control panel or LED notification panel and the BMS if it is connected.

Maintenance of the ozone units is carried out only by the authorized personnel of ETS NORD or our service partners.

LED notification panel (optional)

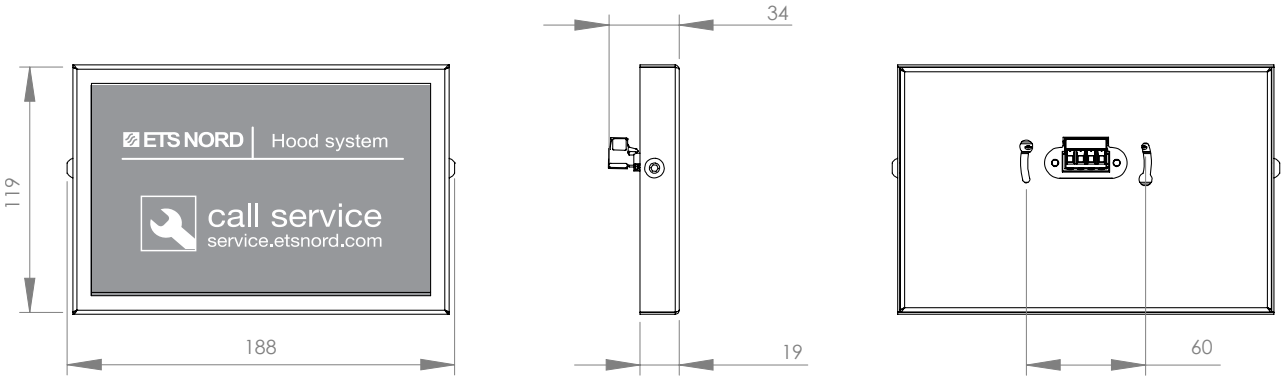
The LED notification panel in designed to visually convey the status of the ozone unit(s). The device can be installed in a kitchen on the canopy or on the wall where it would be easily visible to the user.

The notification panel displays to the user whether the ozonator:

- is working;
- has critical errors and maintenance is necessary;
- service interval is full, and the system must be serviced.

In case of critical errors and maintenance, contact ETS NORD service: https://www.etsnord.com/contact-info/service/

LED notification panel dimensions



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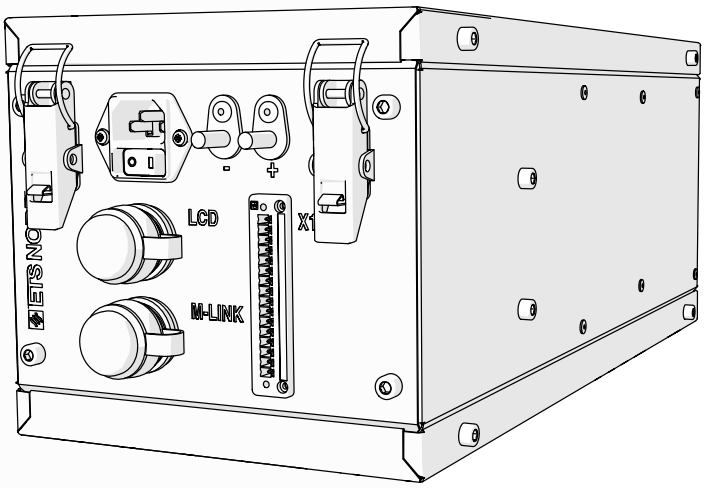

Let's move the air ***together!***