NORDcanopy

EOZ – External Ozone Cleaning System for commercial kitchen exhaust

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

ETS NORD

EOZ External Ozone Generator

The EOZ External Ozone Generator is designed for direct connection to a kitchen exhaust duct system, and is appropriate for use in either new or existing kitchen ventilation. The EOZ chassis contains one or more OZ Ozone Modules, the very same units found in ETS NORDs kitchen canopy portfolio. It may be installed in any convenient location and orientation in your kitchen's mechanical space, as long as easy access for service is ensured. Units found in ETS NORDs kitchen canopy portfolio.

The Control Panel, with its many advanced features, makes system configuration and management convenient and easy to use.

Function

Ozone (O3) is a very effective oxidant, and when mixed into a kitchen exhaust airstream it breaks down grease and odor particles to water vapor, carbon dioxide and dry minerals, all natural products of oxidation which exit the exhaust system.

Created by the process of electrical discharge, the ozone starts doing its work in the canopy exhaust chamber and thereafter throughout the greater exhaust system.

To achieve best results with exhaust air odor reduction, the reaction time for ozone within the airstream should be at least 2 seconds, and this time should be taken into account during the design phase of the kitchen exhaust system.

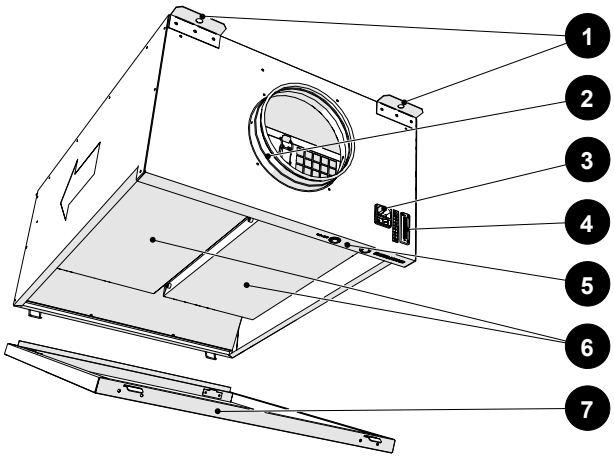
Benefits obtained with ozone cleaning:

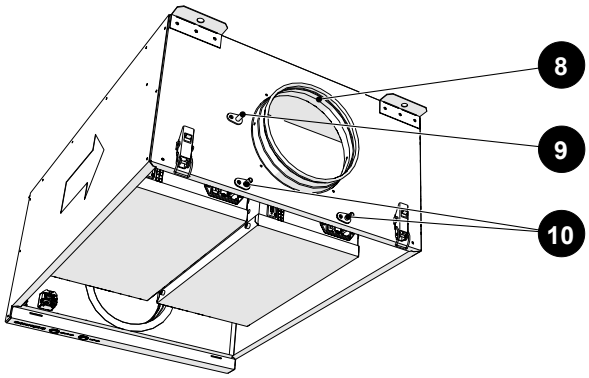
- Effective grease reduction
- Significantly improved fire safety
- Enables the use of heat recovery
- Effectively reduces odors
- Effective at killing bacteria
- Low maintenance costs
- Can be installed in any orientation

Without ozone cleaning system

With ozone cleaning system

Construction



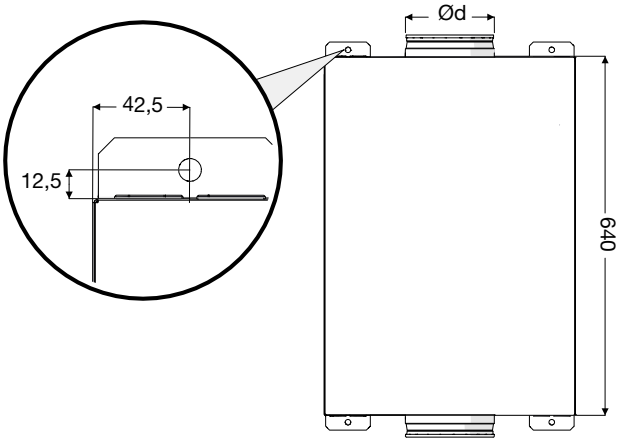


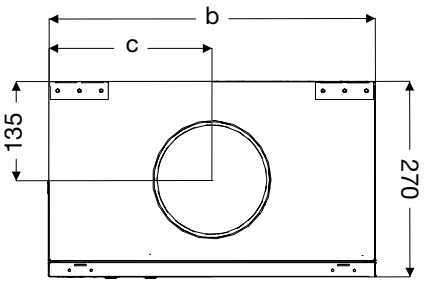
1- Suspension brackets
2- Supply air connection
3- Power socket
4- Data cable socket
5- Status LED(s)
6- Ozone Module(s)
7- Service hatch
8- Exhaust air connection
9- Exhaust pressure measurement nozzle
10- Ambient pressure measurement nozzle(s)

- EOZ is manufactured from acid-resistant steel (AISI 316).
- Duct connections are equipped with ozone-resistant rubber gaskets.
- Status LED(s) provide information on the operating status of each ozone module.
- EOZ is supplied with one or more Ozone Module(s).
- Each Ozone Module is equipped with a pressure safety switch that only enables the generator to start when the required negative pressure is present.

EOZ Dimensions and Technical Data

Model	Modules quantity	b (mm)	c (mm)	Ød (mm)	Weight (kg)	Voltage (V, Hz)	Max power (W)
EOZ-1	1	250	125	125	13	230/50	300
EOZ-2	2	450	225	160	20	230/50	600





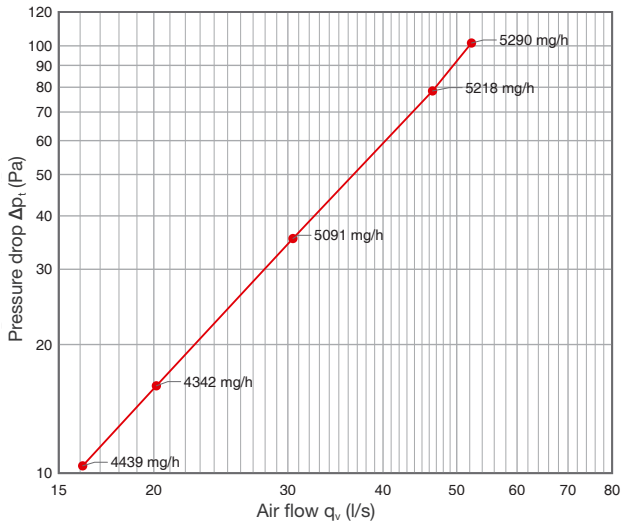
Model	Ozone capacity* (mg/h)	Treated exhaust air (l/s)	Recommended airflow through (l/s)	Pressure drop **
EOZ-1	5000	700	30	35
EOZ-2	10000	1400	50	30

**Obtained under conditions of 20°C, 20% RH and the corresponding amount of airflow.*
***Pressure drop with respect to the amount of airflow through EOZ.*

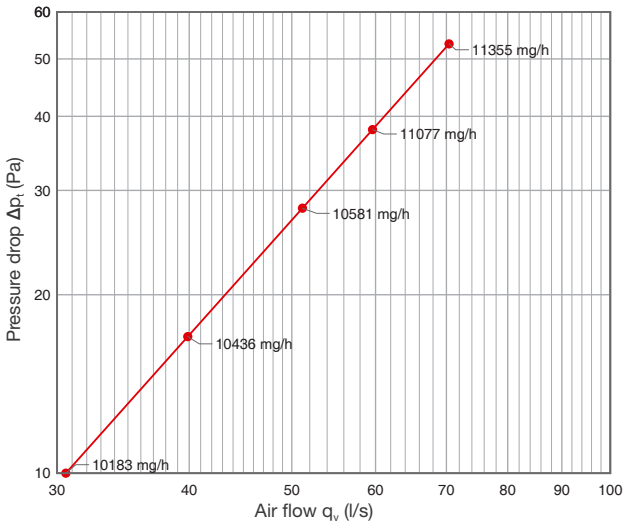
Ozone production

Ozone production in relation to airflow through the unit, and differential pressure between the exhaust and ambient pressure, can be seen on the graphs below.

EOZ-1

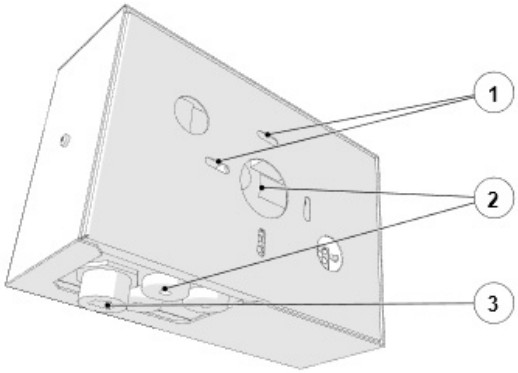


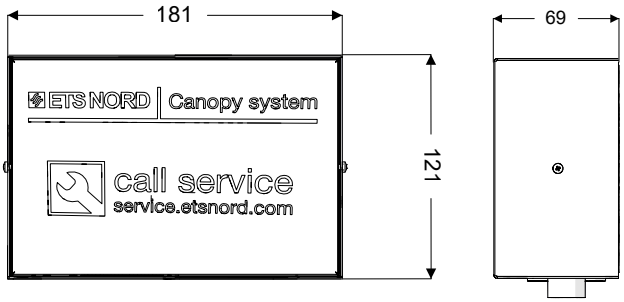
EOZ-2



Control Panel

The Control Panel is an advanced configuration and management tool which monitors all ozone generators on the premises, acting as both an alarm panel and data collection unit. It can be connected to building automation via either BACnet or Modbus and can be remotely monitored via local network or the internet. Compared with ozone and UV solutions from other manufacturers, only one Control Panel is needed per kitchen, regardless of the number of ozone generators installed.





1. Anchor points for wall mounts
2. Data cable bushings
3. RJ-45 connector

There are three cables that must be connected to the Control Panel:

- A Data cable (3x0,25 mm^2) for communication between the Control Panel and EOZ unit;
- an I/O cable (5x0,5 mm^2) for connection to the building automation;
- a LAN cable for accessing the Control Panel operations interface via the local area network or Internet.

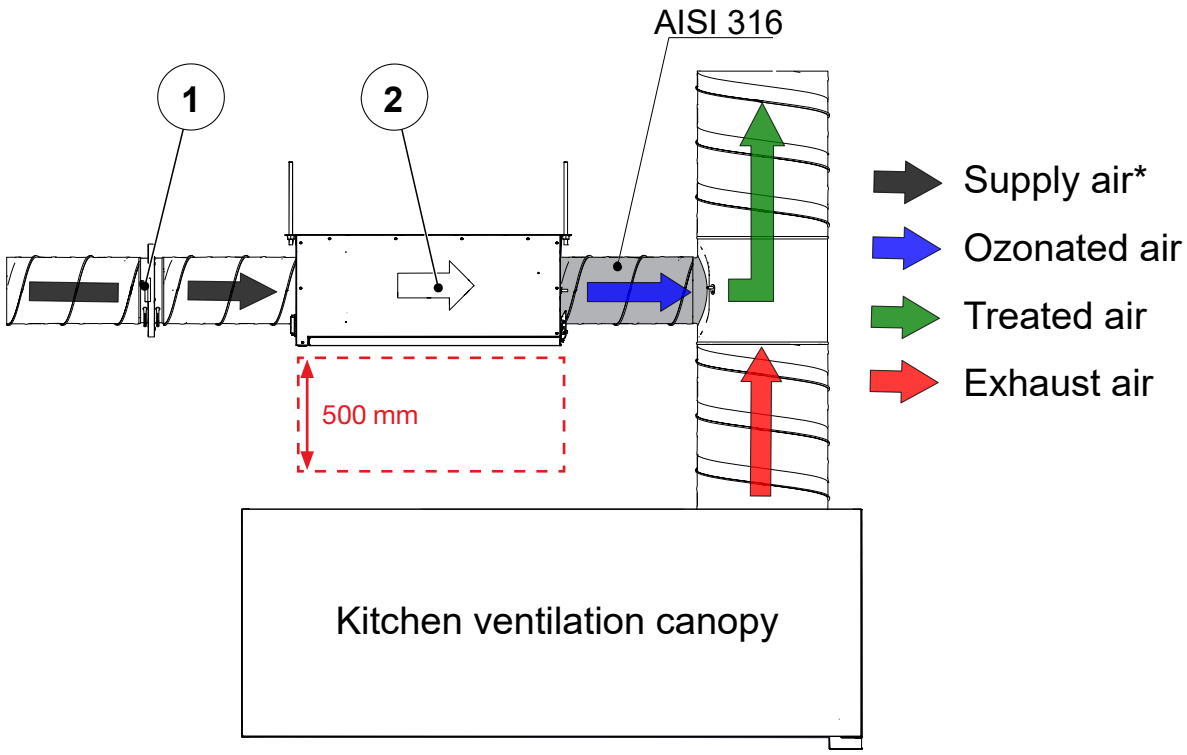
- Easy integration into either new or existing kitchens.
- Compatible with building automation.
- Remote monitoring (IoT – Internet of Things).
- Data visualization and history.
- Safe and simple to use.

This symbol indicates that when the end-user wishes to discard the device, it must be taken to a proper waste station for recycling.

Installation

An EOZ External Ozone Generator may be installed in any convenient location in your kitchen's mechanical space, ideally within reach of both supply and exhaust air ducts. When installing, note the direction of airflow and install the EOZ unit accordingly. Ensure no other equipment will block access to its service hatch once installed.

Note: All ducts, fittings, screws or rivets from the exhaust connection of the generator to the exhaust duct must be manufactured from at least AISI 316 stainless steel.



1. KRI Regulating damper (for installation refer to the KRI manual)
2. EOZ External Ozonone Generator unit

* Supply air from AHU

Facts about ozone

- Ozone is a colourless gas, the sharp smell of which can be detected by a person at a concentration of 0.02 ppm (0,4 mg/m^3).
- The smell of ozone is similar to the smell of chlorine used in swimming pools.
    - The use of ozone is subject to the applicable protection legislation. For example, in Sweden, the Swedish Work Environment Authority provides the following hygienic limits for ozone:
    - HTP value: 0.1 ppm (during working time, 8 hours)
    - HTP value: 0.3 ppm (15 minutes)
- Acute exposure to ozone may result in the following damage:
    - skin irritation and burning sensation
    - severe irritation and burns in eyes and vision loss
    - pulmonary irritation in the respiratory tract and respiratory problems
- If the presence of ozone is detected indoors, the ozone generator must be switched off immediately and the area must be ventilated.

For further installation and technical information, please check our website or contact your ETS NORD representative.

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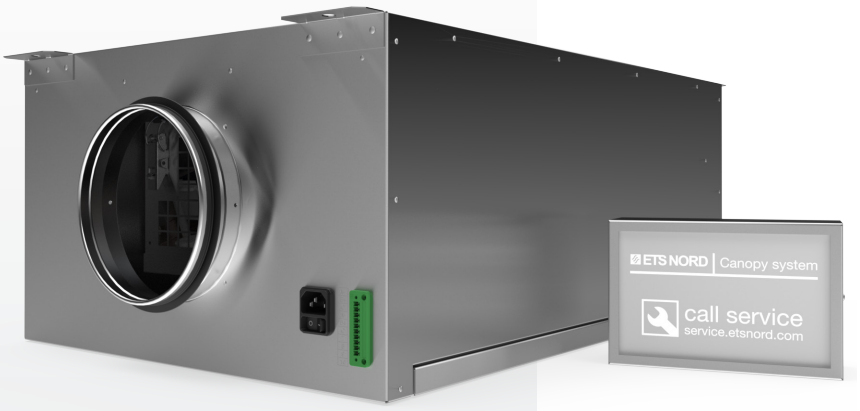

Let's move the air ***together!***