

# RENA™ Kitchen solutions

## High-performance ozone system for cleaning kitchen exhaust

RENA is our most powerful system solution. It is developed for commercial kitchens and restaurants with one large or several hoods. Components are mounted on a stainless steel plate placed adjacent to the kitchen or further away in another room.

Safety is high. Ozone production shuts down if something out of the ordinary occurs. The system is remotely monitored and we get alarms directly to our Service Center and can fix and restart the system.

Ozone treatment brings many benefits. When the grease deposits in the kitchen duct are reduced, the fire risk is reduced. With lower risk of fire, less expensive materials than stainless steel may be used in the ducts. The odor decreases considerably in the

air discharged into the environment. When grease in the exhaust air is reduced, the energy in the air can be recovered. The cost for heating premises is reduced by up to 70% when the energy is recovered.

RENA Kitchen solutions has very low operating cost and the maintenance need is minimal. The raw material (ambient air) is free. Nothing needs to be purchased, transported or managed. You avoid moving parts, mechanical cleaning, fillings, waste and residues.

Ozone purification is an efficient and reliable method to treat exhaust ducts in commercial kitchens and restaurants. This has been discovered by thousands of property owners, municipalities, commercial kitchens and restaurants worldwide.

**Capacity** Adapted to the grease load and airflow. **Delivery** Short delivery time. **Installation** Normally a day. **Service Agreement Premium** Remote monitoring from our Service Center and lifetime product warranty.

# Choose a high-performance ozone system.

One is enough. Find the right model here.

Three things characterize our RENA high-performance ozone system compared to air fed ozone systems. First, RENA is fed with dry, pure oxygen - not plain ambient air containing moisture. Second, RENA is cooled with liquid - not plain ambient air containing moisture. Third, ozone production is very efficient and reliable thanks to the oxygen supply from the separate oxygen generator and the liquid cooling.

With RENA, you get the treatment capacity you need day after day, year after year - in contrast to air-fed or

air-cooled ozone systems which lose treatment capacity over time without frequent maintenance.

Do you have large air flow, high grease load and several hoods? No problem, one single RENA system treats large air flows even when the flow is divided on several air streams.

No matter which model you choose the system is delivered complete. Installation normally takes no more than one day - and maintenance requirements are very low.



*A single RENA system can treat both small and large air flows in the kitchen ventilation - up to 12,000 L/s (43,000 m<sup>3</sup>/h) at medium grease load.*

*RENA is therefore suitable for both small and large restaurants regardless of the grease load and air flow.*

*RENA is also the right choice for properties with several adjacent kitchens - such as food courts.*

*The ozone is distributed easily and flexibly to multiple kitchens and air ducts without intervention in the ventilation system.*

*Ozone concentration is seamlessly adjustable and can be controlled individually for each hood and kitchen. RENA systems can be easily upgraded.*

*If the kitchen will be expanded with more frying surfaces and needs more purification capability, we just change the ozone producing component in the cabinet.*

*The Service agreement Premium includes remote monitoring and lifetime warranty. The need for maintenance is very low and the response time is short.*

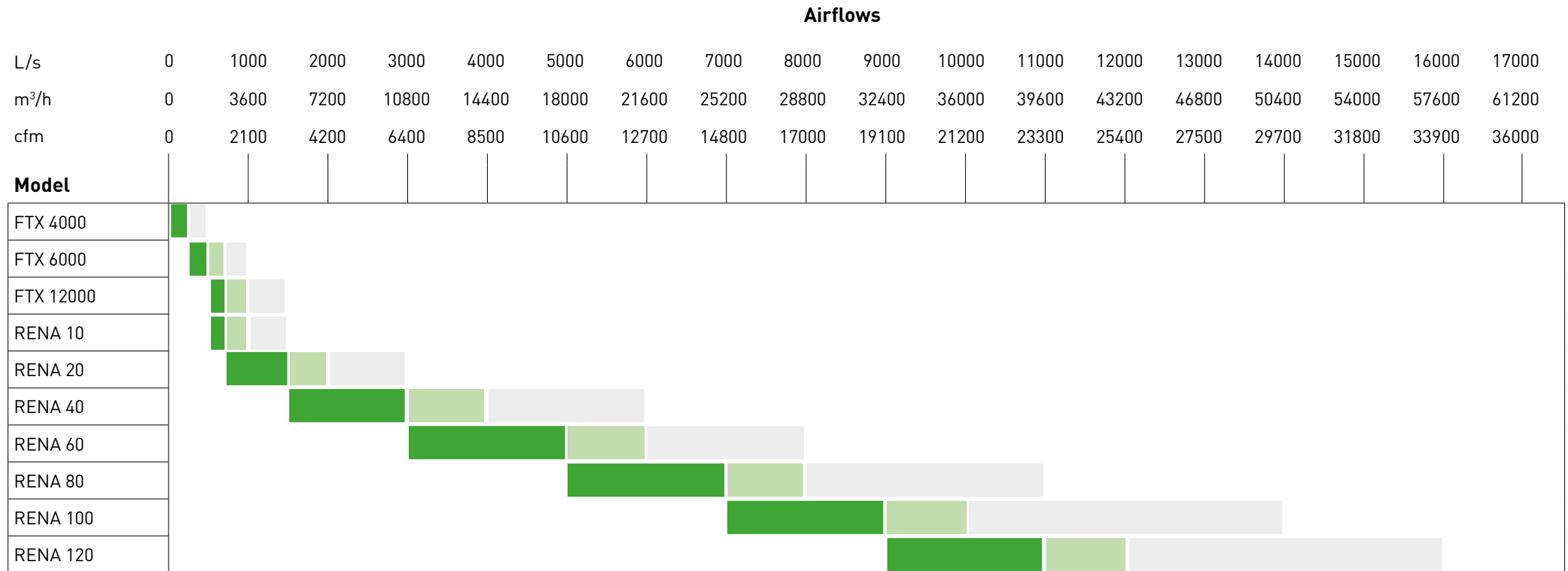
Select model on the next page

# Airflow and cooking determines the model

As you can see in the graph our RENA systems handles air flows from 500 to 12,000 L/s (1,800 to 43,000 m<sup>3</sup>/h). It is far more than our own air-fed systems in the FTX series. Almost regardless of the kitchen ventilation airflow and how many hoods to be purified, one RENA system is enough. The high purification capacity come from the fact that RENA produces far more ozone than air-fed ozone systems. The treatment capacity needed also depends on the food being cooked in the kitchen.

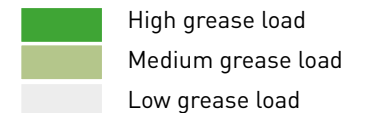
Higher grease load requires more treatment capacity. For very small restaurants with airflows up to 2,500 m<sup>3</sup>/h (700 L/s) air-fed ozone systems can be used. For flows over 2,500 m<sup>3</sup>/h RENA oxygen-fed ozone systems is the best choice.

RENA is efficient, reliable and requires minimal maintenance. In addition, RENA does not produce large amounts of nitrogen oxides (NOx) or build ups of nitric acids as air-fed ozone systems do.



All FTX models are air-fed and air-cooled (low performance).

All RENA systems are high-performance: they are fed with dry pure oxygen and cooled with liquid.



# RENA Kitchen solutions

## Specifications

Our RENA solutions are fed with dry pure oxygen and cooled with liquid. It is a very efficient and reliable technology to produce ozone. Day after day, year after year, purification capacity is constant. Ozone production is infinitely adjustable and easy to change if required.

A single RENA system is capable of producing enough ozone for multiple hoods, large airflows and high grease loads. RENA is available in seven models for different air flows. The ozone system components are mounted on a stainless steel plate simplifying installation.

### TECHNICAL SPECIFICATION

#### Ozone production

Concentration up to	240 g/Nm <sup>3</sup>
Distribution	The amount of ozone can be distributed individually for each hood

#### Feed (gas)

Oxygen	Maximum dew point of - 70° C / 158° F
Pressure internal	0.8 - 1.2 bar g (11.6 - 17.4 psig)
Gas flow	2.5 to 15 l / min depending on model

#### Cooling

Quality	Liquid coolant
Pressure in	2-4 bar g (29 - 58 psig)
Temperature	5 -12° C (41 to 53.6° F)
Flow	0.5 to 6 l / min depending on the model

#### Electrical properties

Voltage	230 VAC, 50 Hz, single phase
Effect	Between 0.5 - 2.1 kW depending on the model
Fuse	10 A slow
Optional	With cooling: 16 A slow

#### Connections

O <sub>2</sub> in	8 mm push-in
O <sub>3</sub> out	8 mm pipe connection
Liquid coolant in	8 mm push-in
Liquid coolant out	8 mm push-in

#### Ozone system

Size horizontal (H x W x D)	970 x 750 x 265 mm
Size vertical (H x W x D)	695 x 1100 x 265 mm
IP Class	64
Sound level	49 dBA

#### Control unit O<sub>3</sub>Eye

Alarm outputs: 5
Control inputs: 3
Possibility to connect up to three sensors
Adjustable ozone distribution to different fans/kitchens with distributor
Visual alarm indicators
Built-in safety switch
Remote control and monitoring (optional)
4-20 mA analog control input (optional)
Data logging (optional)

#### Sensor

Adjusted according to local regulations for ozone in working place	
Turns off the RENA system and alert our Service Center	
Housing	Polycarbonate   IP20 & NEMA 1 equivalent
Size	64 x 130 mm; 2½ x 81/8 in
Mounting	Screw fixture

