

*UVi-Aire*

**UV Ozone Treatment For Kitchen Exhaust**

**UV OZONE CHAMBER**



Ozone is produced by UV lamps without the Titanium Dioxide coating that attenuates frequencies lower than 200 nanometers. At the 180 nm line, it breaks oxygen apart to form 2 unstable O which in turn fuse with another O<sub>2</sub> to form O<sub>3</sub>.

Ozone is a powerful oxidant and extremely effective germicidal agent which destroys organic molecules in the air as well as grease and oil from kitchen exhausts. It has a very short lifespan and in ambient temperatures, it will last 20-30 minutes before it returns to normal oxygen O<sub>2</sub>.

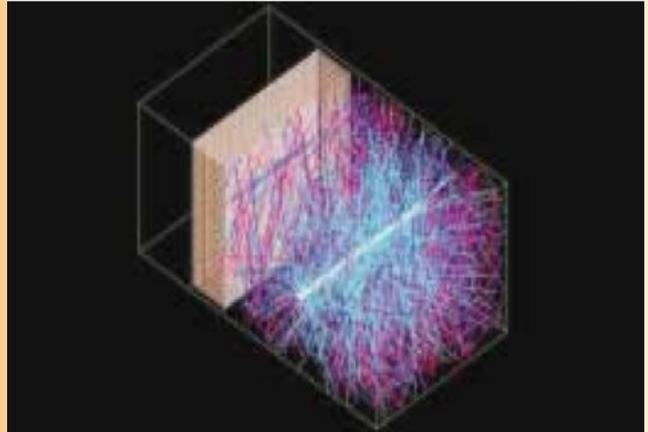
UV ozone is also a scientific breakthrough in odour and grease control, the most effective method known today for eliminating unpleasant odours, grease and oil mist in processing areas.

However in cases where a lot of smoke is generated during the cooking process such as char-grilling, the use of an industrial air cleaner or electrostatic precipitator is recommended.

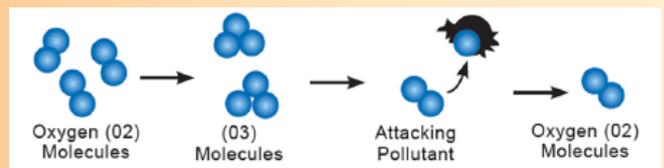
COS units should be installed as near to the cooking hoods as possible, or as far as possible from the discharge outlet, so as to give the longest possible contact time with the cooking exhaust. For optimum performance, the contact time for air treatment in the duct should be approximately 0.1 to 0.2 seconds or longer if possible. Charcoal filters may be installed at the last stage to mop up residue ozone

## How UV Ozone Lamp Works

**First Stage :** The high intensity UV irradiance oxidizes the oil mist and grease, converting them into vapour and other manageable substances

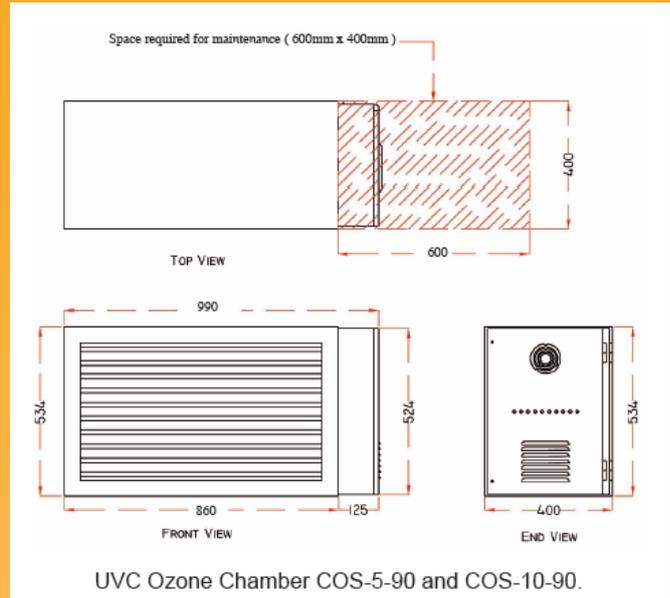


**Second Stage:** The UV lamp produces Ozone O<sub>3</sub>. This is a very powerful oxidizing agent. It oxidizes the organic compounds and acts as a deodorizing agent and is effective for odour control. It also sterilizes the air.



Ozone is a suicidal molecule; it looks for a contaminant to attack, oxidizing it and destroying itself in the process

Units are designed for easy installation to existing or new exhaust ducts. The ballast housing and other components are kept out of the air stream. Lamps can be easily replaced via the unit's housing. Multiple units can be connected and linked to a separate control unit for interlocking operations with the exhaust fan. The control unit is an optional item.



Model No:	Voltage	Current	Watts per Lamp	Lamp's Length	No of Lamps	Lamp Life	Weight of Unit	Capacity (CMH)*
<b>COS-5-90</b>	230VAC	3A.	75	846mm	5	9000 hours	32kg	5000-7500
<b>COS-10-90</b>	230VAC	6A	75	846mm	10	9000 hours	37kg	7,500-15,000

Housing Material: Stainless Steel  
 Dimension (W x H x D) : 990 x534 x400mm

\* Air Handling Capacity depends on the severity of odour & oil mist and the type & intensity of cooking involved  
 For heavier cooking application, use the lower capacity and for lighter cooking, use up to maximum capacity

Multiple Units may be required for higher air volume of the kitchen exhaust fan and for higher cooking intensity

### Applications

- Kitchen Exhausts
- Sewage Ventilation
- Garbage Rooms
- Old Rooms
- General Odour Control

### OPTIONAL ITEM

#### DUO Interlocking Control Panel CP-FDC-230

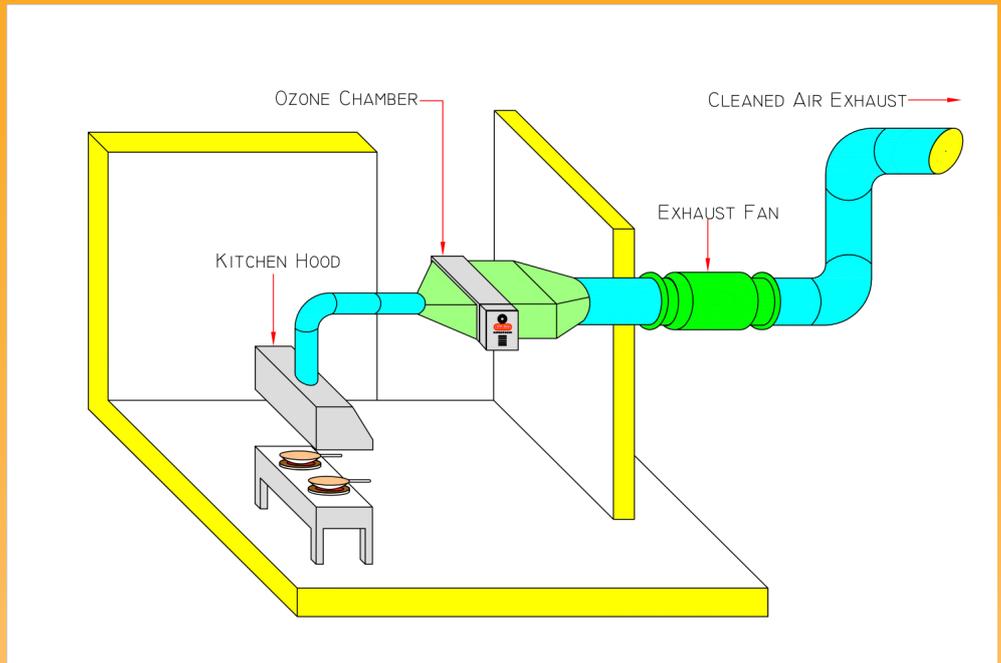


As the COS units produce intense a UV radiation and large amount of ozone, its operation should be interlocked with the exhaust fan for safety reasons.

The COS Interlocking Unit is available as an option. The interlocking signal from the kitchen exhaust fan control panel shall be 230VAC, max 2A. That is, the kitchen exhaust fan control panel sends the 230VAC supply to activate the COS Interlocking Unit, thereby activating the COS units

**Dimensions of CP-FDC-230** : 250 x 210 x 151 mm

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### Features & Benefits

- Compact Design
- Quick and Easy Installation
- Easy Maintenance
- Reduces Duct Cleaning
- Operations Indicator LEDs
- No Pressure Drop
- Interlock Control Panel
- No Noise

### Location / Placement

COS-5-90 and COS-10-90 units should be installed as near to the cooking hoods as possible, or as far as possible from the discharge outlet, so as to give the longest possible contact time with the cooking exhaust.

*For optimum* performance, the contact time for air treatment in the duct should be approximately 0.1 to 0.2 seconds or longer, if possible. Charcoal Filters may be installed at the last stage to mop up residue ozone