



## **Controlled Ozone Level Two for kitchen extraction systems scoring up to 26 DEFRA Points**

The Level Two System utilises combined properties of the two products to reduce cooking odours and grease emissions from commercial kitchens.

In the ten years since the DEFRA Guideline were written there have been many changes in the technology that is available to combat commercial kitchen emissions, key to these changes has been the development in the use of Gaseous Ozone.

The Controlled Ozone CO220M Generator has been developed in conjunction with a leading team of university scientists. The units do not rely on the use of UV bulbs to produce ozone which means that we have moved away from the problems associated with that method, including;

- The health risk of Arc Eye from exposure to the uv bulb
- The safety risk of the bulb breaking
- The breakdown of the efficiency of the bulb over a six to twelve month period
- The inability to control the ozone output.

The Ecovery Controlled Ozone System produces ozone by a method that is fully controllable.

The CO200 Units are also fitted with air pressure switches to ensure that they only produce ozone when there is sufficient air movement within the ducts for the safe use of the ozone.

They also have an on board plc that can be connected to external ozone sensors, giving the operator the ability to set the discharge levels of the ozone, the sensors can be mounted either at the ducting discharge point or within the kitchen, should the ozone levels exceed safety guideline levels the OC200 suspends production for 15 minutes before restarting, thus ensuring that the safety guidelines are adhered to at all times.

The combination of these two factors allows the installer to monitor the extraction exhaust air and adjust the production of ozone to a level that does not exceed safe level guidelines.

### **The Controlled Ozone Level Three Method**

#### **Three Stage Process**

**Stage 1** Cascade Filters High Efficiency Grease Filters are used to block up to 90% of airborne grease and flame from reaching the extraction system's plenum, this will ensure that only small organic particulates reach the extract ducts

**Stage 2** The use of controlled Ozone injection from the Co220M Units will break down the smaller organic particulates that pass through the grease filters and disperse them to atmosphere in a form that will not register as an odour.

**Stage 3** Daily cleaning of the Franke Filters, twice a year inspection\maintenance of the ozone system will ensure that the original odour control levels are maintained



## Maintenance Schedule

**Franke Cascade High Efficiency Grease Filters** collect 85% of the airborne grease and offer a low penetration flame guard.

Cleaning Requirement – The filters should be removed from the canopy, opened to enable the cleaning of both the inside and outside, all grease deposits must be removed and the filter thoroughly dried before placing back into the canopy, **This procedure must be carried out daily.**

**Controlled Ozone Co220M Series Gaseous Ozone Generators** break the remaining airborne grease particulates to a undetectable mist that disperses to atmosphere with minimal odour. The ozone output of these units will be controlled by sensors placed at the kitchen extraction discharge point.

Cleaning Requirement – The Co220M Series Units require to be serviced twice a year by a trained Controlled Ozone Engineer, there is no requirement for any form of maintenance from the restaurant staff.

To ensure that the initial levels of odour, grease and flame control are maintained It is essential that this program is strictly adhered to.

Should any changes be made to the equipment, cooking style or extraction configuration please notify the sender with a request to recalculate the risk.

These recommendations are based upon the DEFRA calculations and the information supplied by the projects M&E Consultant, including extraction and cooking equipment details.

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