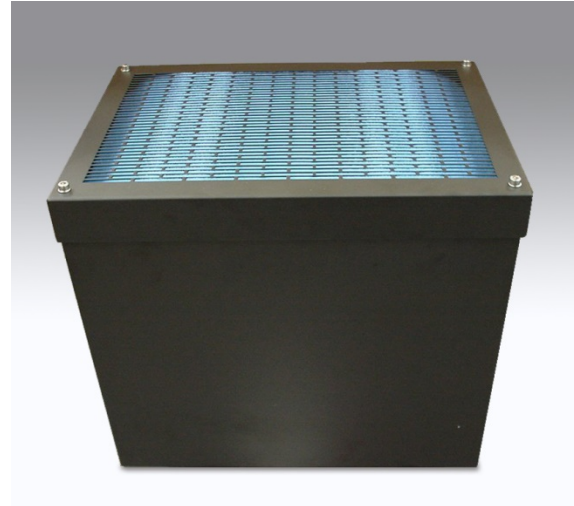# OZONE FILTER

Description

Ozone (O$_3$) is a potentially toxic gas, often found to be present in very high voltage electrical devices and can also be produced by ultra violet light. It has a time weighted average of 0.2mg/m^3 (0.1parts per million) and a short term exposure limit of 0.6mg/m^3 (0.3ppm) as stated by the Occupational Safety Health Administration (USA).

Ozone may be detected by its sweet smell in concentrations less than 2ppm. It has a molecular weight of 48 and is an unstable gas, converting in time to oxygen (O$_2$).

GEW supply an ozone filter capable of destroying ozone. Each filter cell is manufactured from transparent Makrilon to withstand temperatures of up to 115°C. The life span of the media is fairly long due to the catalytic process that occurs and media replacement should be determined by colour change from purple to light brown.

The ozone filter unit is designed to reduce the ozone concentration level present in the exhaust duct to a level suitable for discharge in to a factory situation.

The concentration level of ozone in our ducting after the lamp is around 0.3 ppm. After the ozone filter it is reduced to less than 0.01 ppm. The threshold limit value over an 8 hour period is 0.1 ppm. Consequently the ozone filter is operating below 10 % of the threshold limit value.

Therefore it is completely safe to run the ozone filter discharging back into a factory environment.
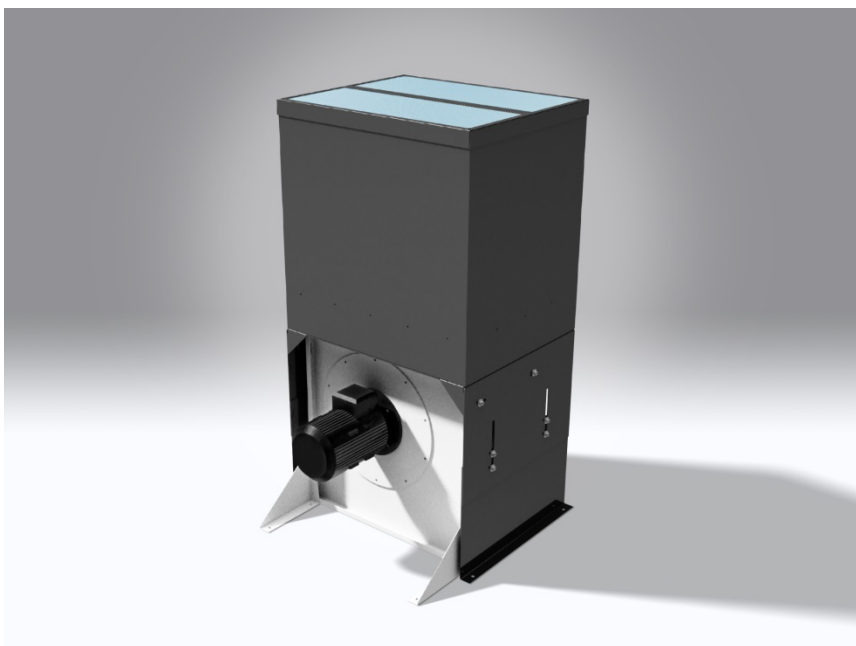
In a typical installation the ozone filter is positioned directly above the UV system's cooling fan. The example shown left is for a 24kW UV system and stands at 1.4m height.

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