Electro-clean UV

Electrostatic Precipitator with UV Module



High Efficiency Grease, Smoke & Odour Removal

IP55-rated construction

Low Pressure Drop

Optional oil sump to capture oil & grease

EMAQ+ Compliant

- **Compliant with EMAQ+,** TR19 and BESA DW/172
- **Optional oil sump** – Clean capture of grease and oil
- **Energy-efficient operation** – Low-power consumption and pressure drop keeps operational costs down
- **Packaged System** – Incorporates a slimline UV section.
- **Virtually grease-free ductwork** –Lowering duct cleaning frequency
- **Modular design** – Seamless integration with our ESP and activated carbon modules
- **Maintenance access** – Innovative UV modules for installation in tight spaces
- **Adjustable airflow direction** - For flexible installation

Electro-clean UV is a modular solution for grease, smoke, and odour control, integrating electrostatic precipitation with UV ozone technology. Designed for commercial kitchens, it captures airborne particulates, reduces fire risk, and enables heat recovery for improved energy efficiency.

This high-performance system effectively removes grease and smoke particulates while neutralising odours, ensuring compliance with TR19 Grease - keeping your ductwork cleaner for longer.

For easy maintenance, the unit features an optional oil sump. Its modular design ensures straightforward installation and seamless integration with our ESP and activated carbon modules.

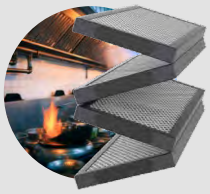
EMAQ+ compliant and CE certified, the Electro-clean ESP-UV delivers reliable performance with a low-pressure drop, reducing energy costs while maintaining a safe, efficient ventilation system.

Modular upgrades...



Electro-clean

Reliable, high performance ESP for grease & smoke control



Carb-clean

Integrate with Carb-clean for odour and ozone control

Electro-clean UV

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How a Combined ESP-UV System Works

Stage 1 - Pre Filter
Dirty kitchen extract air goes through an aluminium mesh filter where large grease particulate in the air is intercepted.

Stage 2 – Ionization
The smaller grease and smoke particles that pass through the primary filter enter the ionization zone where particles as small as 0.01 micron are effectively ionized and carry a positive charge to continue to the collector cell area.

Stage 3 – Collector Cells
Charged grease and smoke particles are then captured via collector cells which are composed of many parallel plates. Grease and oil are collected in the base sump of the ESP and clean air leaves the ESP outlet.

Stage 4 – UV
High energy UVC lamps are used to break down odours and traces of grease in the extract air by the mechanism of photolysis and ozonolysis – combining high intensity UVC light with ozone technology.

Technical Details

	ESP 2520-UV2	ESP 5040-UV4	ESP 7560-UV6
Max. Recommended Airflow (m^3/s)	0.7	1.4	2.1
Weight (Kg)	61	97	127
Dimensions (H x W x L mm)	540 x 630 x 750	540 x 1090 x 750	540 x 1550 x 750
Optional oil sump (H mm)	add 120		
Input Voltage (V / Ph / Hz)	220/1/50		
Power (W)	215	430	645
Maximum Temperature (°C)	50		
Static Pressure (Pa)	<120 per pass at recommended airflow		
IP Rating	IP55		
Construction	Cold rolled sheet		
Finish	Powder coated		
Certification	UKCA / CE		

*4 and 5 cell options available, please enquire

Installation Requirements

- Ductwork transitions to and from the ESP units to support laminar air flow in accordance with DW/144 (22.5-30 degrees maximum).
- ESP units installed no less than 1 metre away from a bend.
- ESP units to be interlocked with airflow.
- ESP unit to be installed on the negative side of the extract fan.
- According to the type and volume of cooking, single pass, double pass or triple pass ESP filtration can be selected, to ensure effective purification.
- Use Type D MCB with leakage protection

Safety when Working with Ozone

If the extract duct discharges at low level or there are receptors within a 5-meter radius of the discharge point, activated carbon (minimum 0.1 second dwell / residence time) is required to absorb residual ozone before reaching atmosphere.

Maintenance

Minimum 640mm side access required to allow the door to open fully to safely remove filters and collector cells. Service and cleaning frequency depends on the type and volume of cooking. EMAQ+ Guidance recommends an ESP service clean every 1-3 months for a system employing ESP filtration. The UV lamps have a normal operating life of 8,000hrs after which time they should be replaced. Speak with a Air-Transfer representative to find out more.

Warranty

1 Year following compliant installation.