

Electrostatic Precipitators

Introducing our high
performance range

chapman
ventilation

Innovative design to eliminate grease and smoke particles

Maximum efficiency, minimum space: Chapman Ventilation's Electrostatic Precipitator (ESP) is the most sustainable and efficient way of removing grease and smoke from kitchen emissions.

Why electrostatic precipitation?

It's simple - an ESP provides the highest level of efficiency available today. Up to 95%, in fact. Gone are the days of costly, space-consuming and non-recyclable filters that send tons of waste to landfill every year. Instead, electrostatic precipitation offers a truly sustainable and low-maintenance option. It uses an electrostatic charge targeted specifically at grease and smoke particles to remove these contaminants from the air stream, causing them to form a film inside the ESP unit.

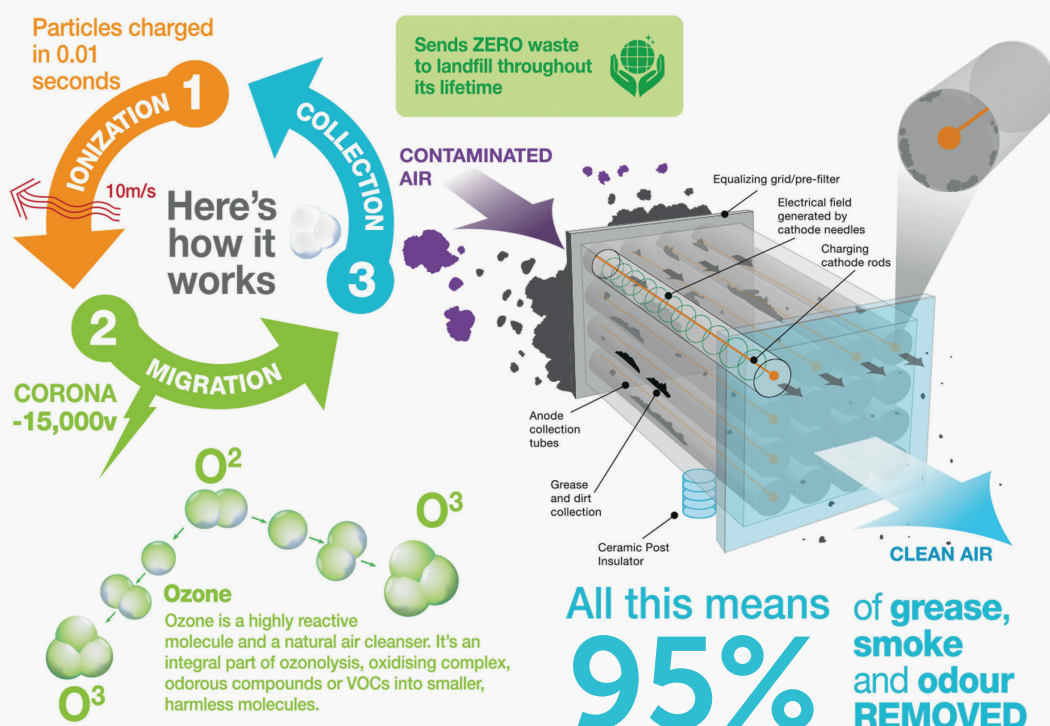
The modular design

Chapman Ventilation specialises in creating bespoke integrated solutions. That's why our robust ESP units can be configured to accommodate any air flow, and provide unrivalled filtration of grease and odours.

Our technology

Electrostatic precipitation consists of three distinct stages. Firstly, grease and smoke particles in the air stream are negatively charged by central cathode needles. This causes the charged particles to migrate towards the surrounding cylindrical anode collection tubes, where they settle and form a film.

Our ESP system also generates ozone to react with the oxidisable odours and in addition the high voltage electrostatic field works to break down the covalent bonds on the odour molecules. This dual action significantly but not entirely reduces the overall odour at discharge. Here at Chapman Ventilation, we are continuously improving our products to ensure that they are the most effective and efficient pieces of equipment on the market today.

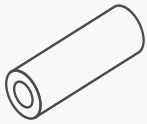


Grease, smoke, moisture, gases and vapour: these particles constitute the cooking plume. Typically, they vary in size from 30 microns to sub microns, from combined grease and moisture to vaporised molecules.

Electrostatic precipitation is up to 95% effective at removing particles including odours, grease and smoke.

Features

A Chapman Ventilation ESP features several technological advancements, all of which contribute to increased efficiency and environmental sustainability:



The cathode needles are positioned centrally within the cylindrical anode collectors. This ensures a constant, robust and improved ionisation field.



Patented technology varies power delivery, ensuring efficient particulate removal.



Typically, existing ESP technology only allows for an inlet velocity of 3-4m/s. Chapman Ventilation's ESP can handle three times that. Our units are able to handle velocities up to 10 m/s with no detrimental effect on performance.



A flow-equalisation plate removes large particles and encourages even air-flow distribution across the cells, thereby increasing efficiency.



Our systems now generate ozone to help reduce odours from kitchen emissions.



We have solved one of the major problems consistent across all ESPs until now: the need to swap out cells as part of a monthly cleaning cycle. We have developed a technique that allows us to clean cells on site there and then, without having to remove and replace them.

Maintenance

With no moving parts, an ESP requires little but often active maintenance. A regular cleaning routine in order with the density of pollution generated ensures that your ESP is always performing at its optimum efficiency. Your representative will be able to guide you through the details.

Each module features a clear, illuminated display that indicates when a service is required. For the most part, servicing is simple.

The filter cells are thoroughly cleaned and de-greased on site that day by one of our experienced engineers. Our technology means the cells do not have to be taken off-site to be cleaned. This is a unique service.

Not only does it reduce time and cost but it can also increase service intervals and system efficiency.





Product Code: SP-ESP 12

Air Volume	1.2 m ³ /s (4320 m ³ /h)
Dimensions	1015L x 847W x 800H
Pressure Drop	260Pa
Weight	110.4kg



Product Code: SP-ESP 24V

Air Volume	2.4 m ³ /s (8640 m ³ /h)
Dimensions	1015L x 847W x 1600H
Pressure Drop	260Pa
Weight	188kg



Product Code: SP-ESP 48

Air Volume	4.8 m ³ /s (17,200 m ³ /h)
Dimensions	2030L x 847W x 1600H
Pressure Drop	460Pa
Weight	441.60kg



Product Code: SP-ESP 24P

Air Volume	2.4 m ³ /s (8640 m ³ /h)
Dimensions	1015L x 847W x 1600H
Pressure Drop	260Pa
Weight	220.8kg



Product Code: SP-ESP 24S

Air Volume	2.4 m ³ /s (8640 m ³ /h)
Dimensions	2030L x 847W x 800H
Pressure Drop	460Pa
Weight	220.8kg



Product Code: SP-ESP 72

Air Volume	7.2 m ³ /s (25,908 m ³ /h)
Dimensions	3045L x 847W x 1600H
Pressure Drop	640Pa
Weight	662.40kg

The above dimensions are just a guide. Full dimension drawings are available on request. Due to constant product development, specifications and design may be subject to change without notice. Alternative air volume selections are available. Please contact us directly for more information.

Find out more

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