

KITCHEN EXTRACT

ESP RANGE

1500 | 3000 | 4500 | 6000

US Version 1.1

purified[®]air

COMMERCIAL KITCHEN FILTRATION EXPERTS

Purified Air Ltd. has been manufacturing and servicing market-leading technology to filter and control oil, grease, smoke and odour from commercial kitchens since 1984.

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KITCHEN EXTRACT

ESP RANGE

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Our ESP's have been specifically designed for kitchen extract systems; they have integral sumps to collect the oil, grease and smoke particles filtered out of the exhaust.

This not only simplifies servicing but eradicates potentially dangerous spillage from the bottom of the units and greatly cuts down on build-ups of grease within the ducting.

The ionisation voltage has been designed to run at a negative potential which enhances the ionisation of particles and also produces more ozone which is helpful in reducing cooking odours.



KEY FEATURES

- Eliminates up to 98% of oil, grease and smoke particles
- Filters particles down to sub-micron levels
- Produces Ozone to help reduce malodours
- Designed with an integral sump
- Modular in design
- Specifically designed for commercial kitchen application
- Energy efficient: - uses no more than 50W
- Greatly reduces grease build-up within the duct run
- IP65 rated for outside location

FILTERS REMOVE



Smoke



Steam

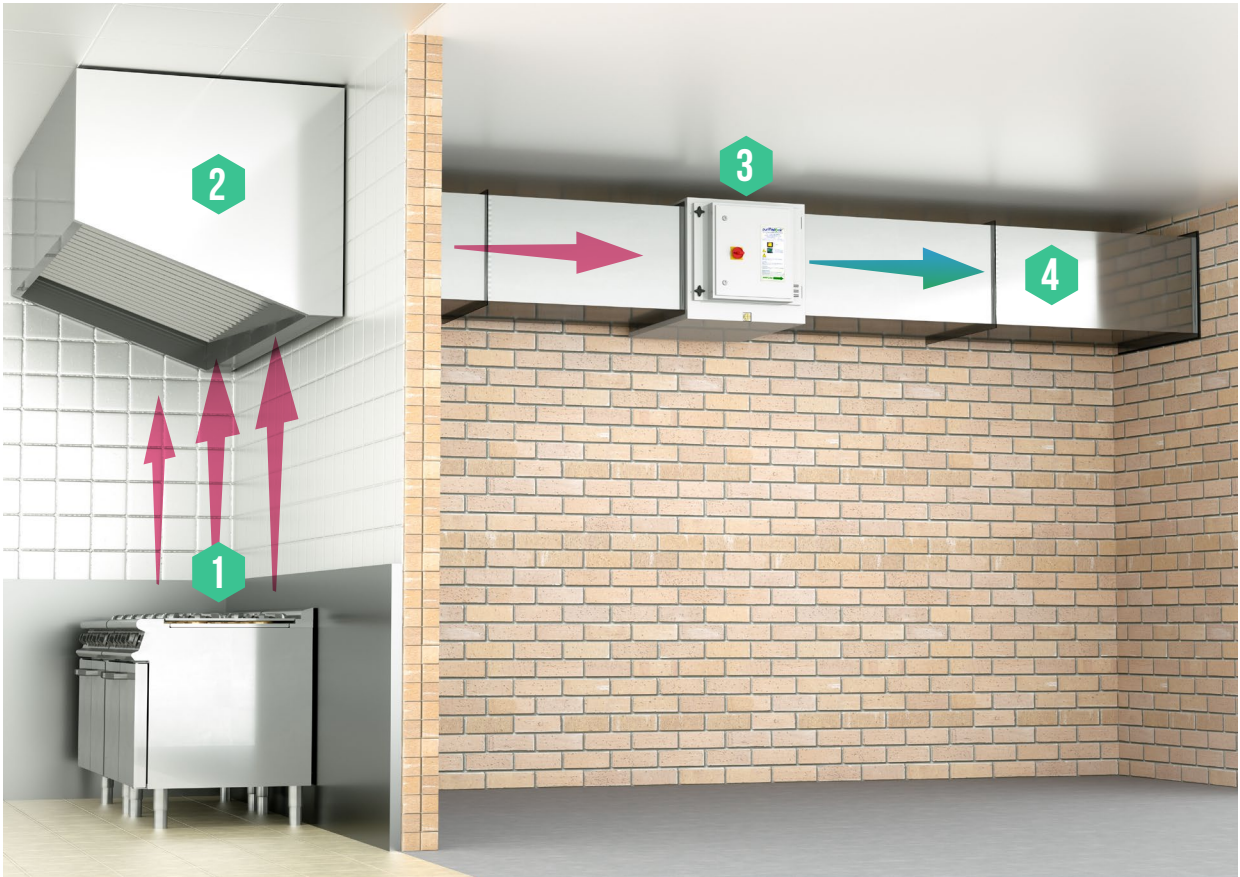


Oil



Grease

HOW IT WORKS



Our ESP units fit in-line with the kitchen ducting and can be configured modularly to cope with all extract volume requirements.

- 01 Cooking particulates and odours
- 02 Canopy Grease Filter

- 03 ESP - Particulate Control Unit
- 04 Airflow

OUR SERVICES



Design

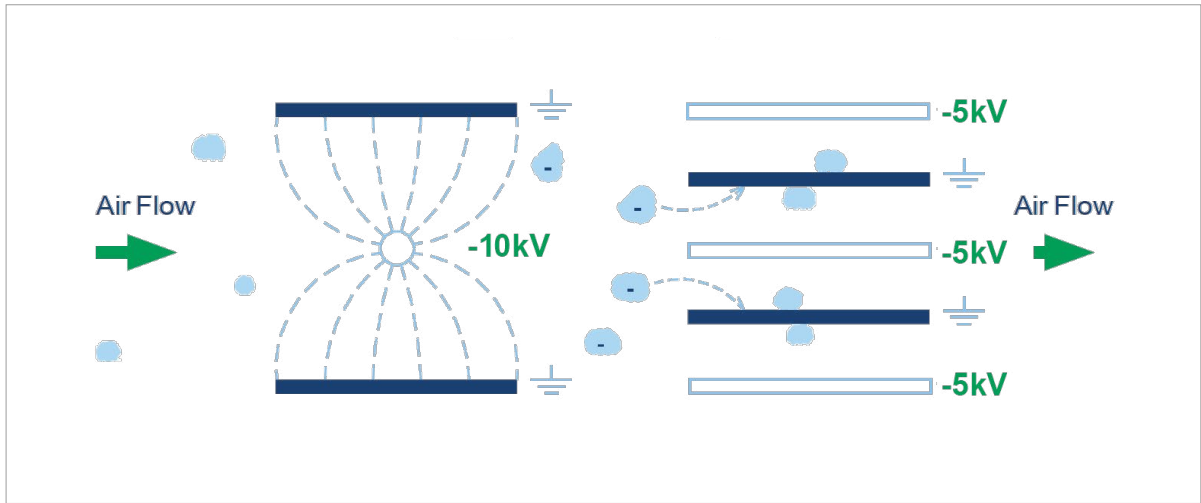


Manufacture



Maintain

THE ELECTROSTATIC PROCESS



The above diagram shows, in a basic visual, how an electrostatic precipitator works:

As air passes into the combined ioniser / collector cell, the particulates in the air stream are polarised. As they continue through the ioniser and between the collector cell plates,

the polarised particulates are repelled away from the negatively charged plates and attracted to the earthed plates where they stick and so are filtered out of the air flow.

THE BENEFITS OF ELECTROSTATIC TECHNOLOGY



Eliminates up to 99% of particles



Filters particles down to sub-micron levels



Modular design



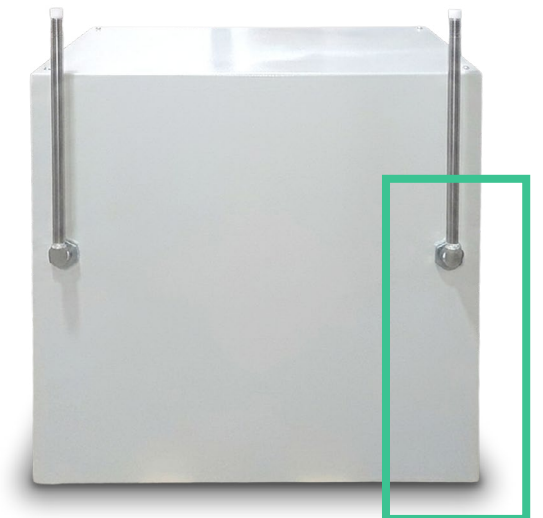
Energy efficient

NFPA 96 Compliant Fire Protection for ESP Systems



Key Features

- Targeted nozzle protection for ESP internals and downstream ductwork
- Supports compliance with NFPA 96 (2021) and local codes
- Suitable for high-grease commercial kitchen environments
- Integrates seamlessly with modular ESP installations
- Designed to meet AHJ (Authority Having Jurisdiction) requirements



Where required, Purified Air ESP systems can be configured with an ANSUL fire suppression system as an optional addition. These systems are designed to provide targeted protection within the ESP housing and downstream ductwork, using strategically positioned discharge nozzles to cover high-risk areas such as internal filtration sections and grease accumulation zones.

Installation is carried out in accordance with ANSUL R-102 Restaurant Fire Suppression System guidelines and manufacturer recommendations, ensuring full alignment with US fire safety standards. As part of a compliant kitchen ventilation design, fire suppression provides an additional layer of protection against grease-related fire risk within filtration systems.

When combined with high-efficiency electrostatic filtration, removing up to 98% of grease, smoke, and oil particles, the system supports safer operation and helps reduce the potential for fire propagation through the ductwork.



In accordance with NFPA 96 (2021), Section 9.3.3, any pollution control unit (PCU) or electrostatic precipitator (ESP) installed in the path of commercial kitchen exhaust may require protection by an approved automatic fire suppression system, subject to local code interpretation and the Authority Having Jurisdiction (AHJ).

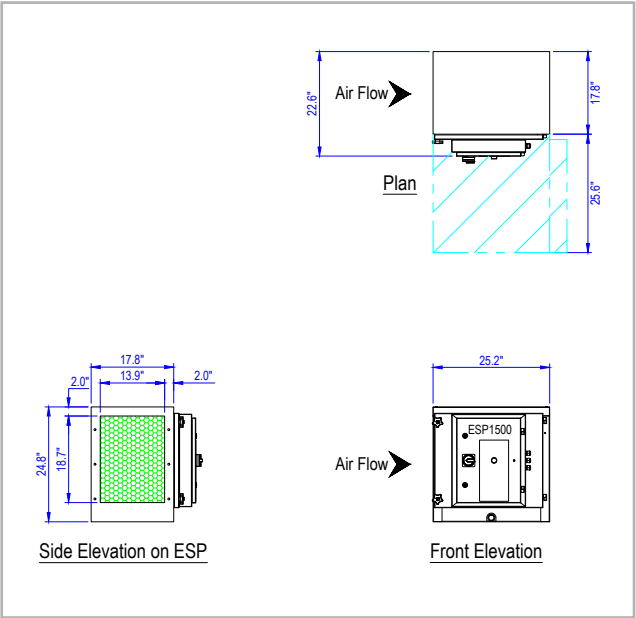
TECHNICAL SPECIFICATION

	ESP 1500	ESP 3000	ESP 4500	ESP 6000
Supply	115 _{V/1PH 50-60HZ}	115 _{V/1PH 50-60HZ}	115 _{V/1PH 50-60HZ}	115 _{V/1PH 50-60HZ}
Power Consumption	20 _W	30 _W	40 _W	50 _W
Maximum Airflow	1500 _{CFM (UP TO)}	3000 _{CFM (UP TO)}	4500 _{CFM (UP TO)}	6000 _{CFM (UP TO)}
Dimensions (Inches)	W 17.7 H 24.8 D 25.2	W 35.4 H 24.8 D 25.2	W 53.1 H 24.8 D 25.2	W 70.9 H 24.8 D 25.2
Dimensions (mm)	W 450 H 630 D 640	W 900 H 630 D 640	W 1350 H 630 D 640	W 1800 H 630 D 640
Weight (lb)	122 _{LBS}	188 _{LBS}	260 _{LBS}	338 _{LBS}

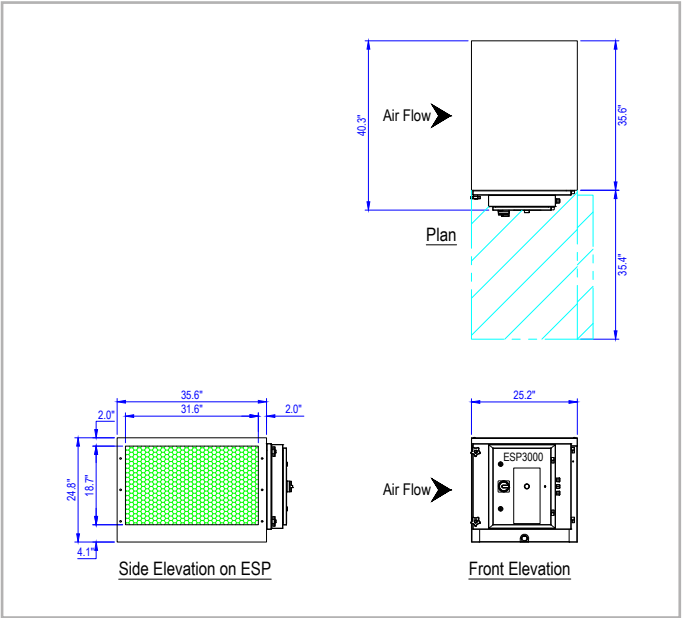
Please note: This equipment needs to be interlocked with the extract fan.

DRAWINGS

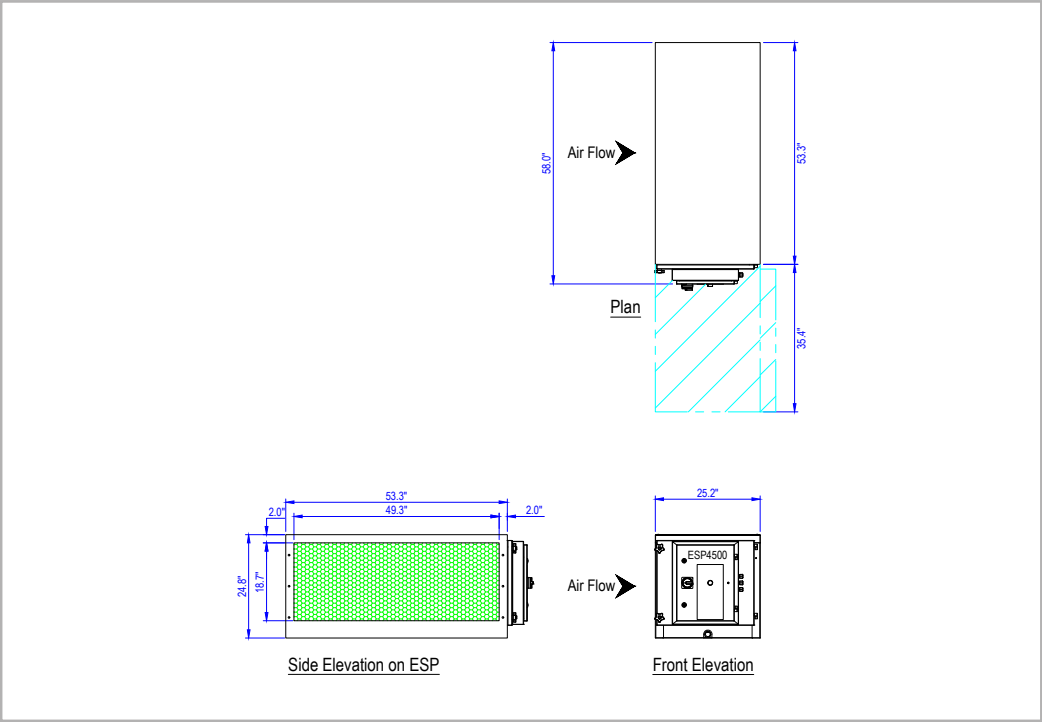
ESP 1500



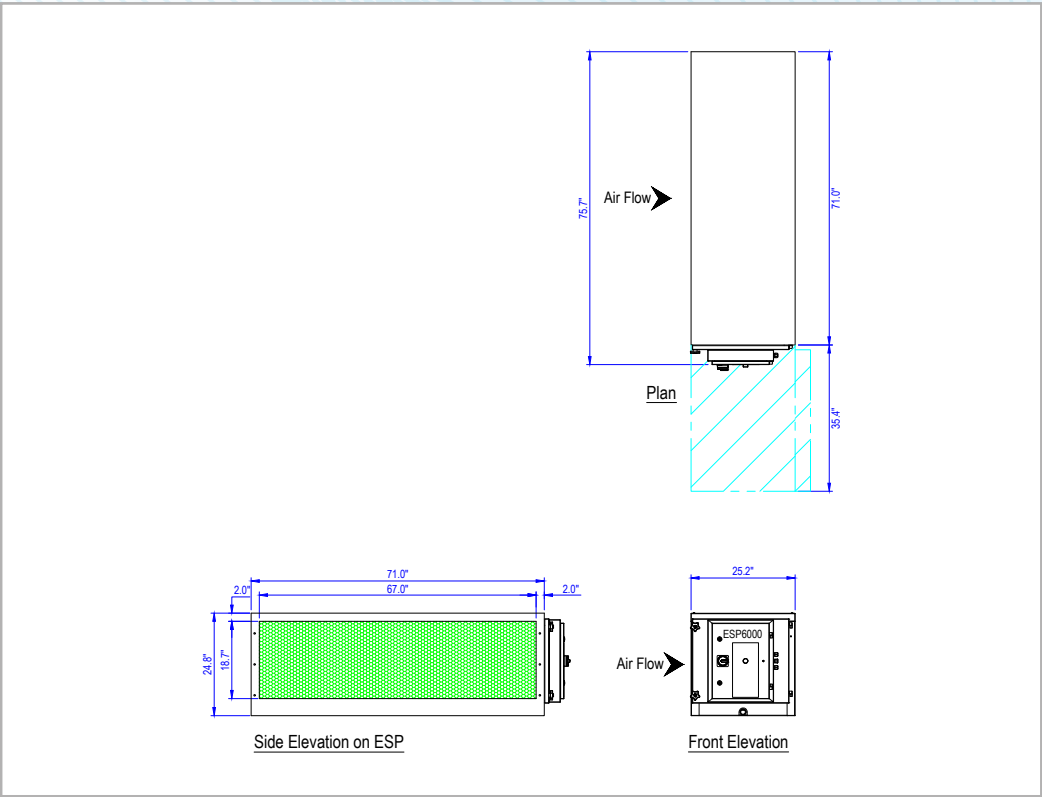
ESP 3000



ESP 4500



ESP 6000



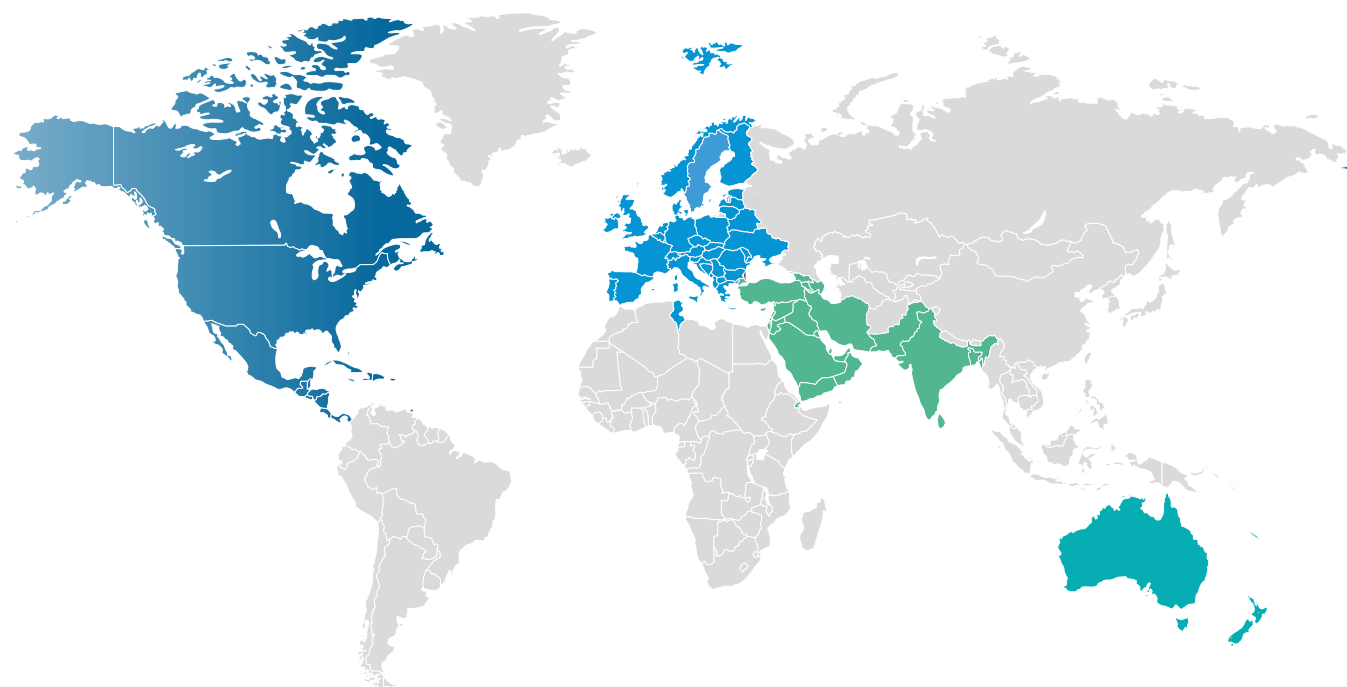
ABOUT US

Purified Air Ltd. has been striving to find the best and most cost-effective way to filter and control oil, smoke, fat and odour produced by commercial kitchens and service since 1984.

Purified Air manufactures filtration and odour control products for stock and bespoke systems, supplying systems to many sectoral brands. The design of each solution is based on the type of food cooked, the cooking process used, and the extracted air volume providing tried and tested purified kitchen exhaust air for Fast Food, Casual Dining and Luxury Concept Restaurant (Fine Dining) markets. By working with these variables, we can design and supply some of the world's best commercial kitchen filtration and odour control systems.

WORLDWIDE COVERAGE

- United Kingdom
- Middle East
- Europe
- North America
- Asia
- Australasia



GET IN TOUCH

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