

Kitchen Ventilation Emission Control Solutions

 **Electrostatic Precipitators (ESP)**

 **Ecology Units**



A BREATH OF FRESH AIR

YOU'VE COME TO THE RIGHT PLACE

ABOUT US

Privately owned and managed with enthusiasm, drive and determination, KVE PURE AIR is an internationally recognised brand committed to leading the world with product and technical ingenuity in designing and manufacturing electrostatic precipitators or ESP's for controlling exhaust emissions.

QUALITY STANDARDS

Our Electrostatic precipitators have been CE listed, and our production is ISO 9001 ISO14001 and OHSAS18001 certified.

Bearing CE listing, KVE PURE AIR ESP units meet some of the most rigorous standards in the world to eliminate electrical, mechanical and fire hazards.

Aiming to lead the world in air clean solutions, we always foresee new challenges to create a greener future with KVE PURE AIR technology.

MARKET LEADING WARRANTIES

Behind our products are the highest industry standards and market leading warranties. Nothing leaves our factories without upholding our globally renowned standards, we never compromise our reputation. We want our customers to remember us for our expertise, passion and knowledge in air filtration.



RESIDENTIAL



Residential

For all your stylish, high quality and energy efficient needs.



COMMERCIAL



Commercial

Create a safe and comfortable work space for customers and employees alike.



KVE PURE AIR

ESP RANGE

**Eliminate offensive kitchen
smoke, grease & odour**



Innovative design to eliminate grease and smoke particles

Why electrostatic precipitation?

Because an ESP provides the highest level of efficiency available today. Up to 98% in fact. Gone are the days of costly, space consuming and non-recyclable filters that send tonnes 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. We use state-of-the-art ultrasonic technology to remove this film, literally vibrating the collected particles free of the collecting tubes. This is a simple step towards environmental sustainability. Plus, as all cleaning takes place off site.

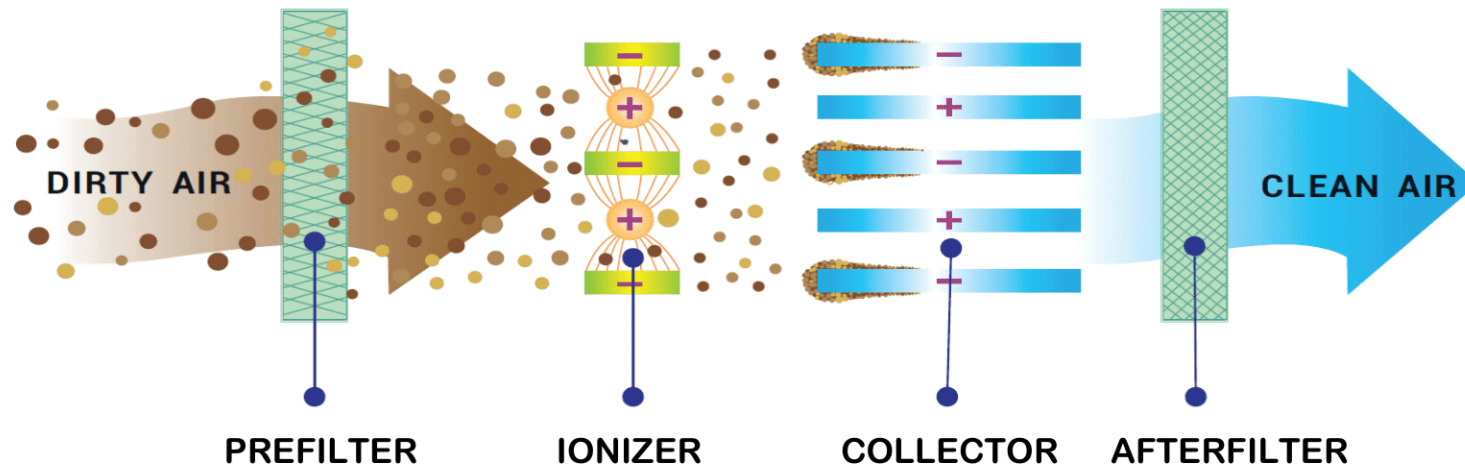
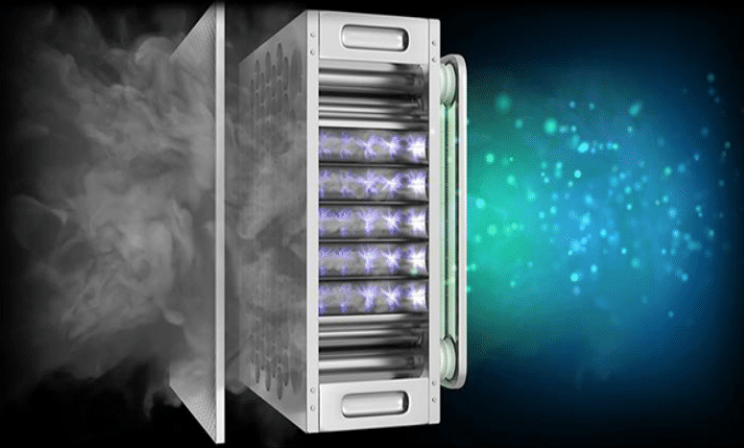
The Modular Design

KVE PURE AIR specialise in creating bespoke integrated solutions. That's why our ESP units can be configured to accommodate any air volume, and are specifically designed to be combined with our patented control technology. Together, these units provide unrivalled filtration of grease and odours. Maximum efficiency, minimum space: Our Electrostatic Precipitator (ESP) is the most sustainable and efficient way of removing grease and smoke from kitchen emissions.

Our technology

Electrostatic precipitation consists of four distinct stages. Firstly, grease and smoke particles in the air stream are positively charged by central cathode needles. This causes the charged particles to migrate towards surrounding cylindrical anode collection tubes, where they settle and form a film. The final stage of this process is removal of this film. Here at KVE PURE AIR, we use an offsite ultrasonic bath to literally vibrate the grease and dirt particles free of the collecting tubes.

ELECTRIC FIELD WORKING PRINCIPLE



95% Purification Efficiency



Powerful
Airflow



IP55



Economic
& Efficient



Low
Energy

(A)

SPRAYING

Sprayed with thermosetting pure polyester coating, UV & Corossion resistsant
Suitable for outdoor use

(B)

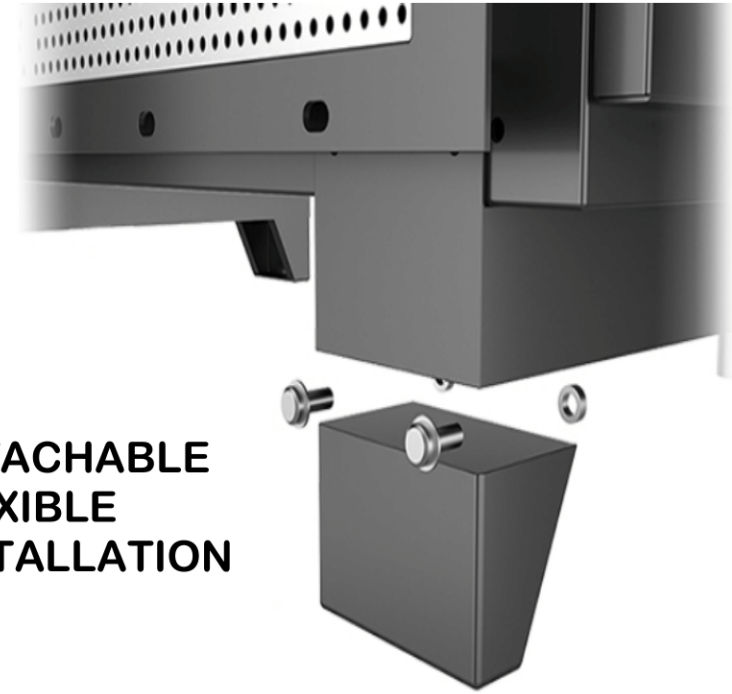
THICKENED FLANGE

Protection from deformation

(C)

PERFORATED FILTER

Filter large particles, uniform wind action



**DETACHABLE
FLEXIBLE
INSTALLATION**

SUITABLE FOR COMMERCIAL AND INDUSTRIAL KITCHENS



Suitable for outdoor installation



**Stylish
Design**



**Easy
Install**



**Easy
to Clean**



**Made
Tough**

EP 2K,3K,4K,6K,8K,10K



EP 12K,16K,20K,24K



EP 28K,36K



EP 32K



EP 48K



EP 54K,72K



ESP Selection Table

Model	Rated Airflow (CFM)/(m³/h)	Dimension LxWXH (mm)	Flange Size (mm)	Drain Diameter (inch)	Power (W)	Weight (Kg)
EP2K	2000/3500	620x694x540	440x475	1	50	55
EP4K	4100/7000	620x1243x540	1023x440	1	75	90
EP6K	6100/10500	620x1790x540	1571x440	1	105	122
EP8K	8200/14000	620x2338x540	2119x440	1	125	154
EP10K	9417/16000	735x1568x1745	1194x1495	1	1496	299.2
EP12K	11777/20000	735x2030x1631	1654x1380	1	1532	352.8
EP14K	14120/24000	735x2213x1745	1837x1493	1	1576	388.2
EP16K	16480/28000	735x2030x2376	1654x2125	1	2298	522.9
EP18K	18834/32000	1470x1568x1745	1194x1495	1	2992	598.4
EP20K	21118/36000	735x2213x2546	1837x2295	1	2364	576
EP28K	28251/48000	1470x2213x1745	1837x1493	1	3152	776.4
EP30K	31783/54000	1470x2030x2376	1654x2125	1	4596	1045.8
EP42K	42377/72000	1470x2213x2546	1837x2295	1	4728	1152

All dimensions are in mm.
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Please contact us directly for more information.



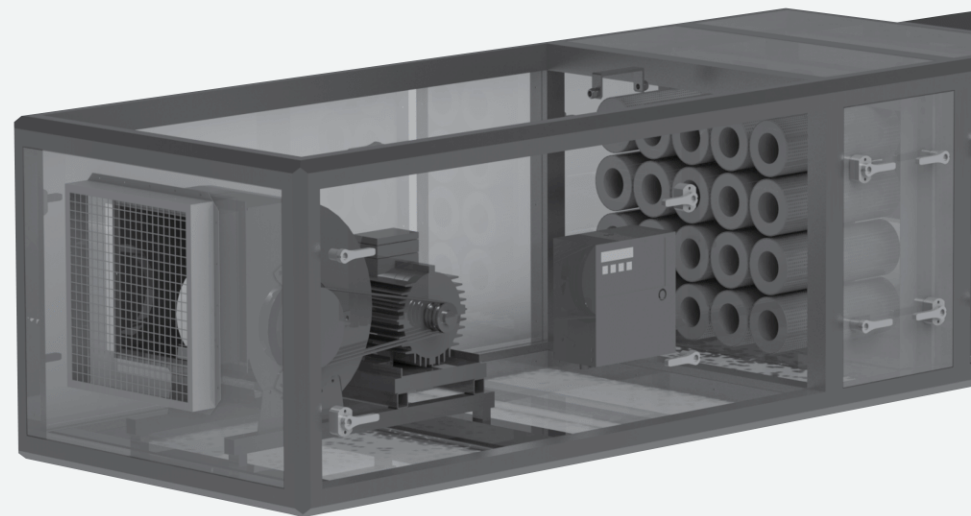
KVE PURE AIR

Ecology Units

Here at KVE PURE AIR, we specialise in creating bespoke integrated solutions. We don't want to just get rid of odour, or just remove grease. We want to provide you with comprehensive solutions that can deal with all of your problems in one fell swoop. With our Ecology Unit, we can offer just that.

Our Standard Specifications

- Airflow ranges from 880 CFM to 30870 CFM
- Casing is made of 25 mm thick, double insulated panels with stainless steel inner skin
- UL certified filters in accordance to EN 779
- Washable type, 2 inches thick metallic panel filters, G2 class
- Electrostatic Precipitator with honeycomb structured filter cell having fumed and mist elimination efficiency $\geq 95\%$
- Available in programmable auto wash option
- Washable type 4 inches thick synthetic panel filters, G4 class, dust weight arrestance more than 90%
- Disposable type, 24 inches deep, synthetic pocket filters, F7 class, dust spot efficiency between 80% to 90%
- Refillable type, 24 inches deep, canister type activated carbon filters
- Centrifugal fans in accordance to AMCA 210
- IE1/IE2, TEFC, IP55 degree of protection, Class F insulated, VFD compatible electric motors



FRAMEWORK

- Structure with aluminium profile of 50 mm
- Solid connecting corners made of glass-reinforced nylon, complete with thermal break
- Concealed intermediate aluminium profile to obtain a better thermal break and to reduce unit length.
- The base frame for each section is made galvanised steel sheet



Control System

IP66 rated control panel constructed from heavy gauge epoxy coated steel for remote mounting with front locking screws complete with timers, relays and lamps to indicate system on the operating condition of extract fan, filters, and odour neutraliser.

Control Panels shall be customized to include but not limited to:

- a) Starters for ESP unit and Extract fan
- b) VFD (Optional)
- c) H-O-A Selector switch
- d) On/off push button for hand mode
- e) Replace filter indication lamps
- f) Indication lamps for Off(Red),Run(Green) & Trip (Amber) status
- g) ESP (Controlled- 1- Power supply)
- h) Remote /DDC Signal
- i) Run status (DI) and Auto Status (DI)
- J) Starters for Fresh air fans, Odour neutralizer and Motorized dampers (Optional)
- K) PLC programming (Optional)

* Units are compatible for 50/60 Hz.

* Various power options available including 220V/3PH/60Hz



FILTER Options

METALLIC PRE-FILTER (MEDIUM EFFICIENCY)



Metallic Washable Filters are made of galvanised steel frame and multi-layer aluminium mesh filter media. These filters have applications in greasy exhausts, aggressive atmospheres as well as civil and industrial air conditioning systems with high relative humidity and dust load.

- Class: G1, G2
- Efficiency: 50% <G1< 65% / 65% <G2< 80%
- Clean pressure drop: 15 Pa
- Final pressure drop: 150 Pa
- Face Velocity: 2.5 m/s

SYNTHETIC PRE-FILTER (MEDIUM EFFICIENCY)



Synthetic Filters are made of galvanised steel frames and synthetic fibre filter media and are most effective for filtration of large dust particles in civil and industrial air conditioning systems.

- Class: G3, G4
- Efficiency: 80% <G3< 90% / 90% <G4< 95%
- Clean pressure drop: 70 Pa
- Final pressure drop: 250 Pa
- Face Velocity: 2.5 m/s

SOFT BAG FILTER (HIGH EFFICIENCY)



Soft Bag Filters are made of galvanised steel frames and multi-layer high-density synthetic fibre, equipped with external high-resistance film for increased filtration of solid particles and acts as a pre-filtration stage of HEPA filters.

- Class: F5, F6, F7
- Efficiency: F5< 65%, 65% <F6< 80%, 80% < F7< 90%
- Clean pressure drop: 70 Pa
- Final pressure drop: 250 Pa
- Face Velocity: 2.5 m/s

RIGID BAG FILTER (HIGH EFFICIENCY)



Rigid Bag Filters are made of plastic frame and water-repellent fibreglass paper, with a calibrated step pleated filter media with continuous thermoplastic thread separator. Rigid Bag Filters have been uniquely designed for efficient filtration of airborne particles and acts as a pre-filtration stage for HEPA filters.

- Class: F7, F8, F9
- Efficiency: 80% <F7< 90%, 90% <F8< 95%, F9= 95%
- Clean pressure drop: 80 Pa
- Final pressure drop: 150 Pa
- Face Velocity: 2.5 m/s

ABSOLUTE FILTER (HEPA FILTER)



Absolute Filters are made of galvanised steel frame with side handles, and water-repellent fibre paper with constantly calibrated spacing, separated through continuous thermoplastic threads. Absolute Filters are most effective for filtration of airborne solid particles and removal of a majority of air contaminants in controlled environments.

- Class: H12, H13, H14 according to EN 779:2002
- Efficiency: H12 >= 99.5%, H13 >= 99.95%, H14 >= 99.995%
- Clean pressure drop: 200 Pa
- Final pressure drop: 450 Pa
- Face Velocity: 2.5 m/s

ACTIVATED CARBON FILTER (DEODORIZATION FILTER)



Activated Carbon Filters are commonly used for the chemical/physical absorption and the deodorisation of gaseous pollutants. The frame is made of galvanised steel and cylindrical cartridges of active carbon minerals, designed to eliminate organic odors.

- Class: CA-1
- Clean pressure drop: 200 Pa
- Maximum operating temp: 50 °C
- Maximum relative humidity: 70%
- Face Velocity: 2.5 m/s

Our Standard Filter Sequence

1st Stage: Electrostatic Precipitation

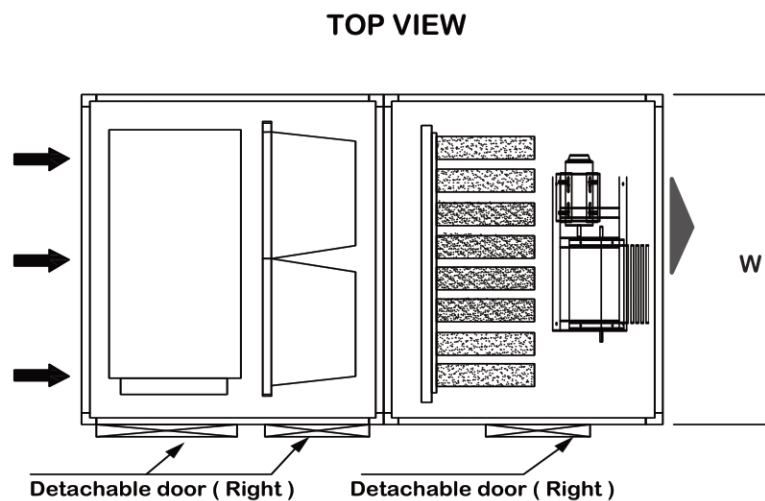
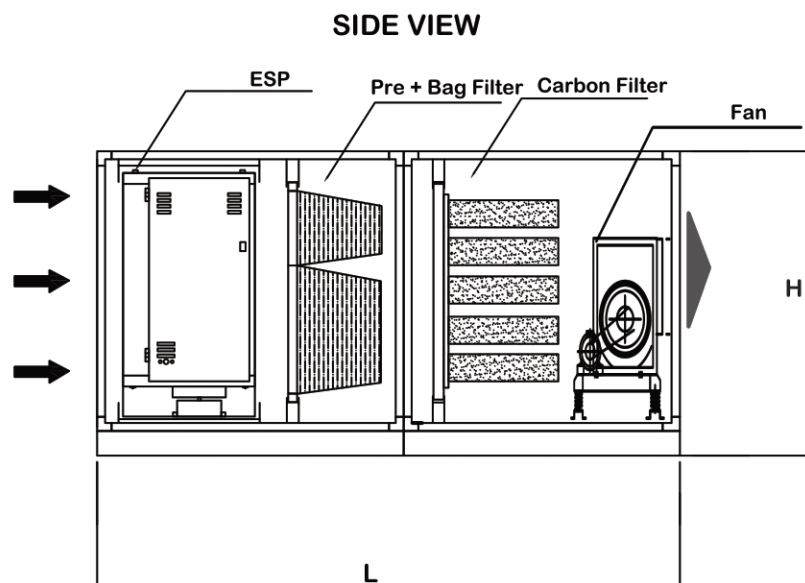
2nd Stage: Metallic Pre Filters

3rd Stage: Bag Filters

4th Stage: Active Carbon Filters

5th Stage: Extract Fan Section





Ecology Unit Selection Table

Model	Rated Airflow (CFM)/(m³/h)	Dimension LxWxH (mm)	Air Outlet Size (mm)	Drain Dia (inch)	Filter (Quantity)	Weight (Kg)
EC-1	1000/1700	3410x760x750	265x258	1	4	295
EC-2	2000/3340	3410x1310x820	288x287	1	4	466
EC-3	3000/5097	3450x1310x820	361x361	1	4	475
EC-4	4000/6800	3540x1330x1290	404x403	1	4	600
EC-5	5000/8500	3540x1330x1290	453x450	1	4	612
EC-6	6000/10200	3630x1330x1290	507x507	1	4	705
EC-7	8000/13600	3550x1630x1430	569x571	1	4	705
EC-8	10000/16990	3680x1930x1430	638x641	1	4	961
EC-9	12000/20400	4280x1930x1740	715x716	1	4	1305
EC-10	14000/23790	5140x2530x1600	801x801	1	4	1637
EC-11	16000/27190	5140x2540x1740	801x801	1	4	1903
EC-12	18000/30560	5260x2860x1830	898x898	1	4	2283
EC-13	20000/33980	5260x2860x1830	898x898	1	4	2299

All dimensions are in mm.
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 Please contact us directly for more information.

SKETCH

NOTES





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