



DAMAIR INDIA

ELECTROSTATIC AIR CLEANER





Need For ESP in Ventilation and AHU Applications

The need for an ESP in ventilation is to remove potentially irritating and nuisance Particles that adversely affect human health and air handling Equipment. Particles of $10\ \mu\text{m}$ size may be trapped in the nose and cause irritation and/or allergic reactions. These particles can also soil surfaces and equipment. Such contamination can provide nutrients for biological growth in ductwork or cause duct corrosion, both of which contribute to indoor air quality (IAQ) degradation. Filtration of large particles is needed to protect air-handling systems and equipment from contamination.

Recirculated air in HVAC systems may contain high concentrations of large particles. Those up to $30\ \mu\text{m}$ are inhalable and affect the health-related aspects of Indoor Air Quality. Many allergens, fungi, and bioaerosols are in the $3\ \text{to}\ 10\ \mu\text{m}$ size range. Large particles can also be carriers of viruses and small bioaerosols.

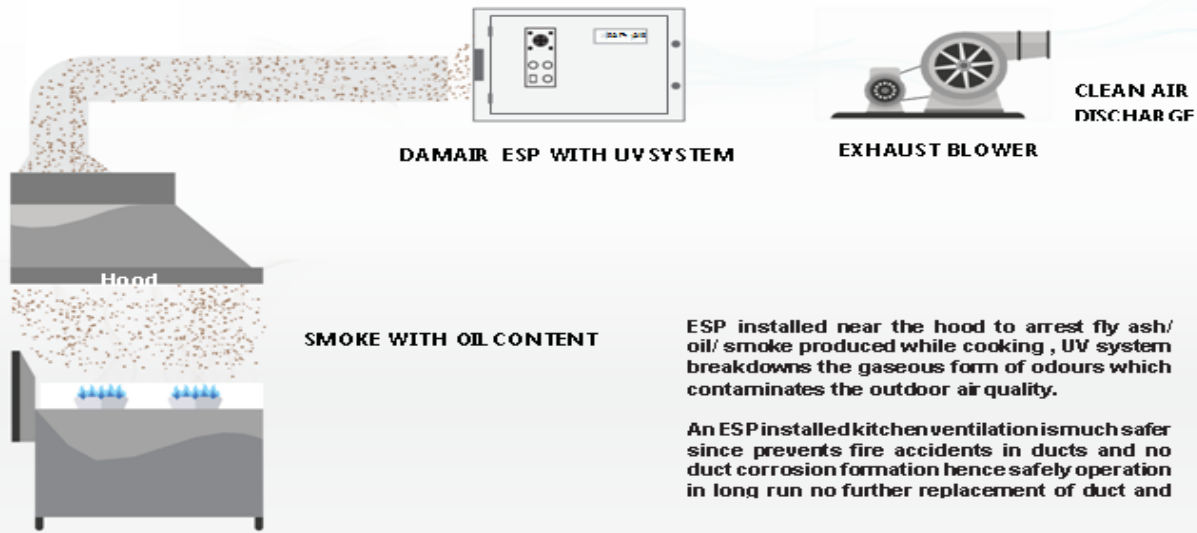
DAMAIR ELECTROSTATIC AIR CLEANERS

DAMAIR INDIA High efficient Electrostatic air cleaners are designed and manufactured with latest technology standards and upgrades with an aim of air pollution control and prevention. **DAMAIR INDIA** electrostatic air cleaners are ideal for removing *oil, smoke and fly ash from wood-fire cooking kitchen applications as well industrial Dust, oil mists and smoke from industrial processes*, An additional accessory modules to control and breakdown odors levels which are in gaseous form. **DAMAIR INDIA** systems are well concentrated and designed based on user friendly, maintenance friendly and long life of the system.

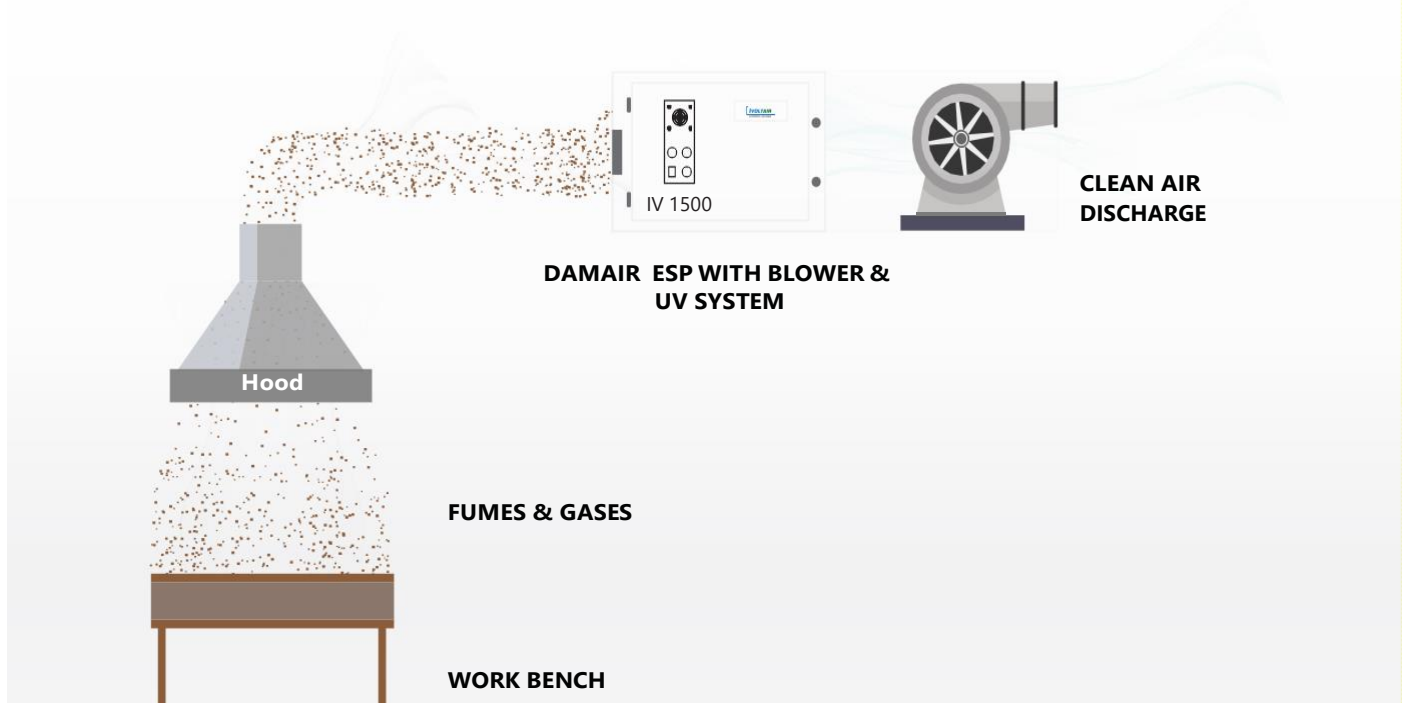




TYPICAL ESP INSTALLATION IN COMMERCIAL KITCHEN

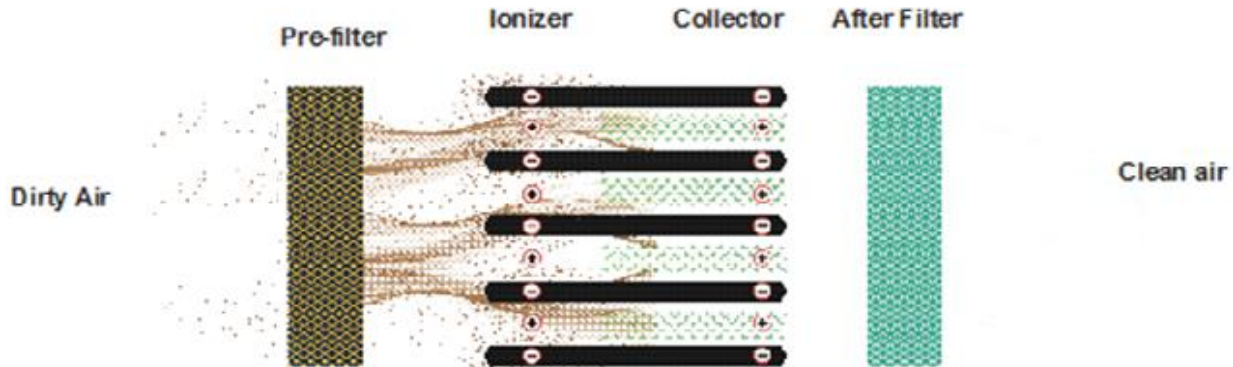


TYPICAL ESP INSTALLATION IN WORKSHOPS / WORK BENCH AS A SMOKE / DUST / GASES EXTRACTOR





How It Works



When contaminated air passes through the Damair unique designed ionizer stage1 the particles gets charged with high DC electric field strength then these charged particles along with air enters to the collector stage2 and gets attracted to the grounded collector plates due to the repel action by positive plates, Cell needs to be cleaned when the units indicates maintenance or periodical scheduled maintenance is recommended manually for manual deanable ESP units, Auto clean ESPs doesn't need regular manual clean hence a hard wash is required for once in a 4-6 months, Auto dean ESP consists cleaning mechanism with wash nozzles, manifold and pumping system with Programmable controller integrated



DAMAIR ESP BENIFITS

1. Damair units are low pressure loss and washable with an easy maintenance procedures
2. Low pressure loss for a dean cell thus **saves energy** in long run and better savings comparatively with other filters
3. High deaning efficiency up to **96%** found on DOP single pass test
4. Particle collection from 0.01micron to 10 micron meters.
5. Easy washable pre-mesh filters and mechanically rugged cell.
6. Semi-spiked zigzag plate type ionizer (Damair R&D) module for maximum partide charging and no breakage or rust, Precision designed collector module for maximum collection efficiency.
7. CE certified High voltage direct current PWM technology based solid state power supply module.



KITCHEN EXHAUST APPLICATIONS

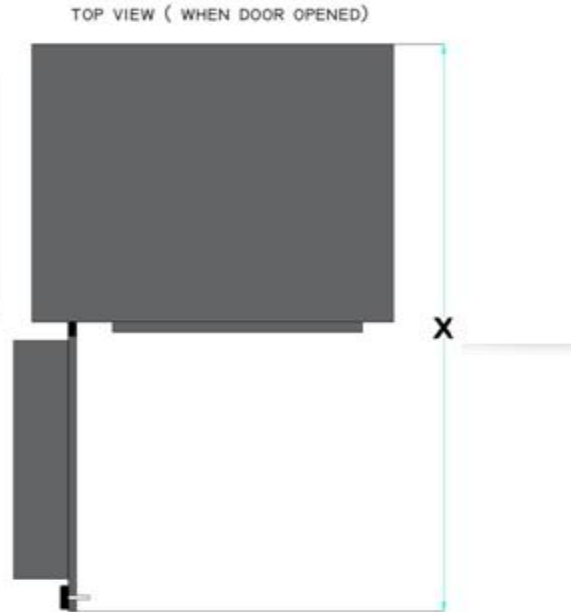
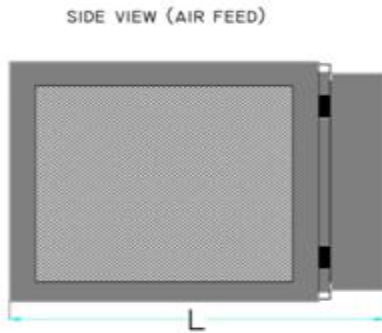
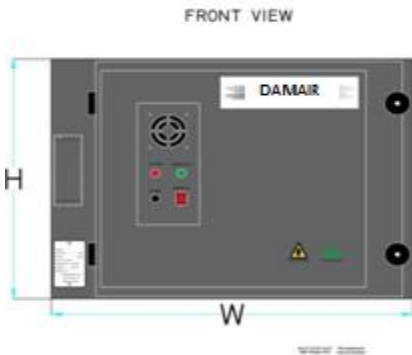
- 1. SMOKE
- 2. GREASE
- 3. WOOD-FIRE
- 4. ODOR
- 5. DISPLAY MOBILE COOKING STATIONS

INDUSTRIAL APPLICATIONS

- 1. OIL
- 2. FUMES
- 3. DUST
- 4. COOLANT
- 5. CNC WORKSHOPS
- 6. PHARMA INDUSTRIES

HVAC APPLICATIONS

- 1. LOUNGES
- 2. SMOKING ROOMS
- 3. RETURN AIR
- 4. SUPPLY AIR





ESP Selection Chart

Model	IV1500	IV3000	IV4500	IV6000
Air Volume				
CFM	1500 CFM	3000 CFM	4500CFM	6000CFM
CMH	2550 CMH	5100 CMH	7650 CMH	10200 CMH
Unit size in mm (H*W*L*X)	514*695*716*1215	514*695*1281*1780	514*695*1846*2335	514*695*2441*2920
Static pressure required				
Clean unit	3 mm water gauge			
Choked units	10mm water gauge			
Operation voltage	220volts Ac 50-60hz 1ph			
Power consumption	50watts maximum	100 watts maximum	150 watts maximum	200 watts maximum
Electrical safety	Door safety switch integrated			
Power supply	6kv/12kv			
Safety	short circuit, arc protection & auto reset function (recovery time) 0 second)			
Efficiency	96%			
Particle size	0.01-10 micron			
No of cells	1	2	3	4
No of mesh filters	1	2	3	4
BMS connectivity	Potential free NO contact			
Installation type	Ceiling suspended, wall & Frame mount			
Test Standards Followed (Air cleaners)	ASHRAE 52.2.2017			
Standards Approved (Power pack)	CE			
Operator interface	Healthy, Fault & Service indications			

CE certified High voltage DC power supply module

BMS COMPABILITY for monitoring the status of ESP

Note: Higher air velocities can be achieved addition of multiple ESP units

UV SYSTEM

AUTO-CLEAN ESP



DAMAIR ESP with UV lights are available as per the requirement of the application and are integrated to the ESP units, available for all ESP models

DAMAIR AUTO CLEAN ESP units are custom designed as per the demand of the application, this system consists of washing system made of SS304 manifold, high pressure watering nozzles, detergent spray unit, drain system and an intelligent control unit, auto clean ESP doesn't require regular manual wash hence required manual hard wash once in a 4-6 months

ODOR CONTROL UNIT

ODOR control units are used where the exhausted air places needs odor control, DAMAIR odor control units are available for various air velocities based on type of applications

DAMAIR ESP WITH BLOWER

DAMAIR ESP with blowers are available up to 3000CFM, 30mm static for applications like - Non ducted kitchen hoods, mobile cooking stations and low air velocities applications



Important: Maximum efficiency of the ESP obtained by proper duct design, operation under specified air velocity conditions, regular maintenance for installed units

DAMAIR offers free inspection consultation in ESP installation Procedures, air velocity selection and limited after sales maintenance training and support.

Our Other Products





Our Mission

we at **DAMIR INDIA** pvt. ltd are committed towards Green Earth systems and applications by promoting solutions to the field of Air, water & ENVIRONMENTAL pollution control by taking a part as our responsibility, our moto **GO GREEN** for better tomorrow

Damair is a registered trademark of **DAMAIR INDIA** Pvt Ltd

DAMAIR

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Authorised Dealer