



ELECTROSTATIC PRECIPITATORS

Engineered Solutions for Cleaner Industrial Air

DESIGNERS & SUPPLIERS OF COMPLETE PLANTS FOR
VENTILATION, DUST AND FUME EXTRACTION.

ENVIROVENT is a leading provider of engineered air pollution control solutions for the mining, mineral processing, bulk materials handling and industrial sectors. We specialise in the design, manufacture, installation and commissioning of complete ventilation, dust and fume extraction systems, supported by experienced engineers, skilled technicians and comprehensive after-sales service.

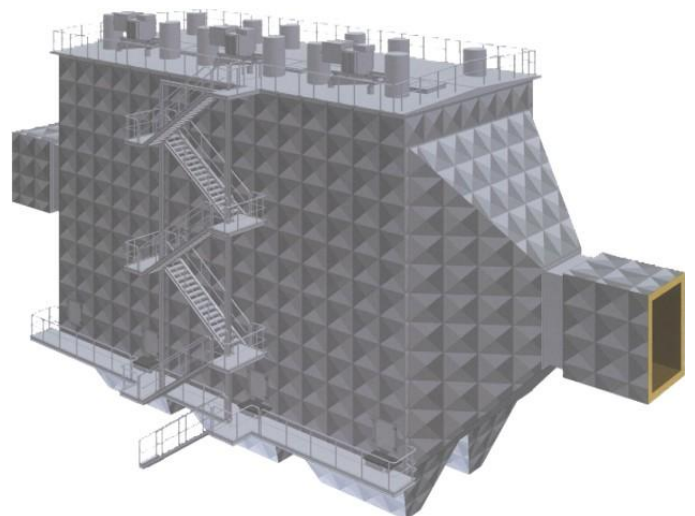
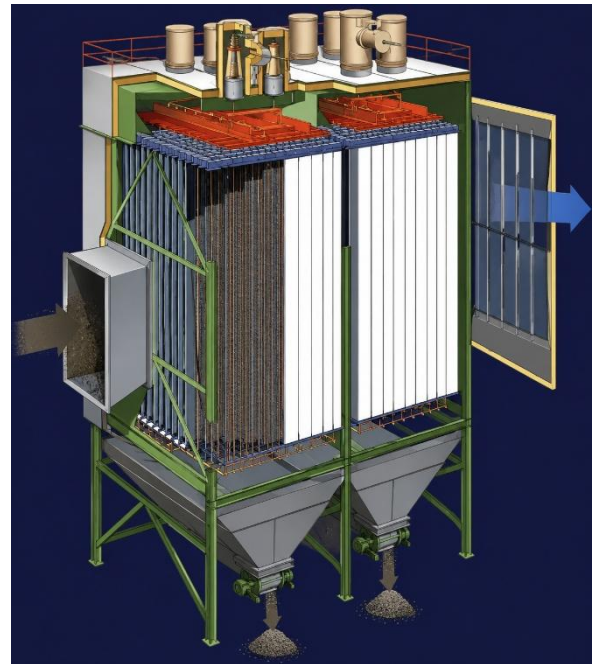
Our solutions are developed to address a wide range of industrial air pollution challenges, including dust control, fume extraction and product recovery. Every system is engineered to suit the specific application, delivering reliable performance, efficient operation and long-term value for our customers.

ELECTROSTATIC PRECIPITATORS

Envirovent Electrostatic Precipitators are designed for the efficient removal of particulate matter from industrial gas streams using proven electrostatic separation technology. Suitable for high gas volumes and elevated operating temperatures, these systems provide exceptionally high collection efficiencies while operating with extremely low pressure loss, low energy consumption and minimal maintenance requirements.

OPERATING PRINCIPLE

- ✓ **Particle Charging**
Discharge electrodes are energised with a high-voltage direct current, creating a strong electric field that ionises the surrounding gas. As dust-laden gas passes through the precipitator, airborne dust particles become electrically charged.
- ✓ **Electrostatic Collection**
The charged particles migrate towards the earthed collecting electrodes under the influence of the electric field, where they adhere to the collecting surfaces while the cleaned gas continues through the precipitator.
- ✓ **Electrode Cleaning**
Mechanical rapping systems periodically remove the accumulated dust from the collecting electrodes, allowing the collected material to fall into the discharge hoppers for continuous removal without interrupting normal operation.
- ✓ **Uniform Gas Distribution**
Gas distribution devices ensure uniform airflow across the collecting field, maximising collection efficiency and preventing localised gas velocities.
- ✓ **Automatic Voltage Control**
Microprocessor-controlled high-voltage equipment continuously regulates the electrical field to maintain optimum collection efficiency under varying gas and process conditions.



MODEL EL ELECTROSTATIC PRECIPITATOR

The Envirovent EL Electrostatic Precipitator is designed for the continuous removal of particulate matter from large industrial gas streams. As illustrated in the typical collection efficiency curve below, the EL can achieve collection efficiencies exceeding 99.9% while operating with exceptionally low pressure loss, low energy consumption and low maintenance requirements.

The EL is ideally suited to high gas volume industrial applications, including cement, lime, gypsum, power generation and waste incineration, delivering reliable long-term performance with an extended equipment service life.

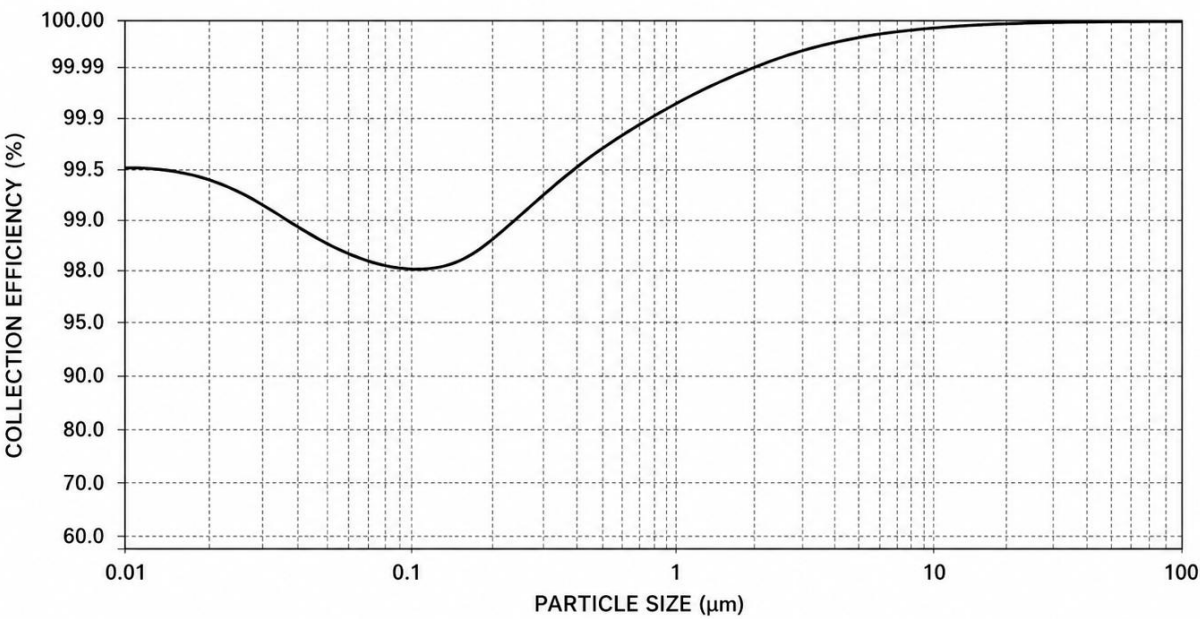
KEY BENEFITS

- ✓ Proven and reliable design
- ✓ Collection efficiencies exceeding 99.9%
- ✓ Extremely low pressure loss
- ✓ Low energy consumption
- ✓ Low operating and maintenance costs
- ✓ Suitable for high-temperature applications



TYPICAL PRECIPITATOR COLLECTION EFFICIENCY

Typical collection efficiency varies with particle size, dust resistivity, gas velocity and operating conditions.



ENVIROVENT (PTY) LTD.

☎ | +27 87 265 0014
@ | info@envirovent.co.za
🌐 | <https://envirovent.co.za>



At Envirovent, we believe every application deserves the right solution—not simply the biggest solution. We work closely with our clients to develop engineered solutions that deliver cleaner industrial air through practical, reliable and cost-effective air pollution control systems.

Contact our engineering team to discuss an air pollution control solution tailored to your application.

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