CompactClean™
Electrostatic Precipitator (ESP)
Low TCO air pollution control solution

The production industry is under continued pressure to improve environmental performance. Air pollution control measures such as electrostatic precipitators, are an essential means of reducing dust emissions and can be challenging to implement.

The flexible option for air pollution control

Long erection times are expensive and inconvenient and installation problems caused by inexperienced contractors can impact the equipment's performance. That’s why we have developed the modular ESP – a simpler but equally effective air pollution control solution designed for fast on-site erection.

Our modular ESP solutions prioritise performance while also delivering the lowest total cost of ownership (TCO). Designed for the smaller applications typically relevant in district heating, biomass or power boilers, lime kilns, brick ovens and special metallurgical processes, these ESPs are engineered to deliver industry-leading efficiency and performance, while benefiting from a simple modular design that minimises onsite installation work.

Not only can they be installed in weeks rather than months, but they match fabric filters in efficiency, delivering reliable dust emission control down to 5 mg/Nm³.

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**Key benefits**

- Preassembled, pre-erected
- Easy container transport
- Standard modules
- Flexible layout
- Simple and fast erection
- High quality, low cost sourcing
Built for high performance and low cost of ownership

Flexible and fast – ESP installation according to your specifications

**Preassembled, pre-erected**
Every aspect of the modular ESP is designed for the lowest cost, maximum simplicity and optimum performance. The flexible modular concept utilises a high degree of standardisation, which brings down the purchase price. The modules are preassembled with internals fully pre-erected and secured for transportation from the workshop.

**Easy container transport**
Each module cross-section is optimised to fit into shipping containers, ensuring easy and low-risk transportation by land and sea.

**Installation in weeks not months**
By undertaking the maximum degree of workshop preassembly, customers benefit from shorter on-site erection time and thus a significantly lower total cost.

View of internals

*CompactClean™ ESP*

- Casing
- Drive unit with geared motor
- Inlet flange
- Hatch for bottom access
- Pyramid hopper with discharge
- T/R
- Roof
- Hatch for top access
- Ladder and access platform
- Trunking (HV Connection)
- PIACS® DC4 control cabinet
Flexible layout
We are offering three module types, enabling a number of flexible combinations. Modules can be combined in series and parallel configurations and the module height is flexible, covering a range from small to medium volume flows. Our expert process team will work with you to define the total number of modules needed to meet your specific dust control requirements.

The same high standards
Our modular ESPs benefit from several existing FLSmidth products and features, including:
- Proprietary microprocessor controls (PIACS DC4), enabling the modular ESP to react efficiently to process variations. This ensures that outlet emissions remain low even under challenging conditions
- High-voltage Fibulax® electrodes for specific process and operating conditions – maximising utilisation of power input and increasing efficiency
- Optimized rapping systems with standard tumbling hammers for cleaning collecting plates and electrodes efficiently

Specification table for CompactClean™ ESP

<table>
<thead>
<tr>
<th>Volume flow, interval</th>
<th>11,500 to 47,500 Am³/h</th>
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<tbody>
<tr>
<td>Flue gas temperature</td>
<td>max 250°C higher on request</td>
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<tr>
<td>Pressure, static max</td>
<td>-500 mmWG</td>
</tr>
<tr>
<td>Inlet dust load</td>
<td>10 g/Nm³ higher on request</td>
</tr>
<tr>
<td>Emission limits</td>
<td>5 mg/Nm³ in general on your demand</td>
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<tr>
<td>Availability</td>
<td>at least 98%</td>
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</tbody>
</table>

Container unloading

Workshop preassembly