

# KLEANLAND

We Clean the Air

## Industrial Oil Mist Collector(ESP)



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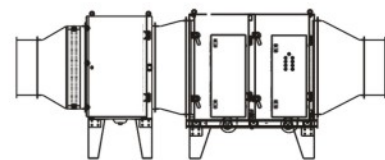
Electrostatic Air Filter Manufacturer Since 1992

# Electrostatic Exhaust Air Cleaning System from KLEAN

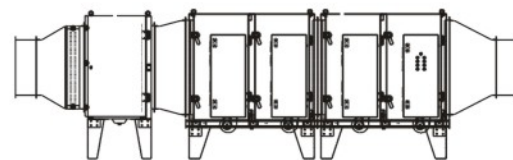


## Specifications

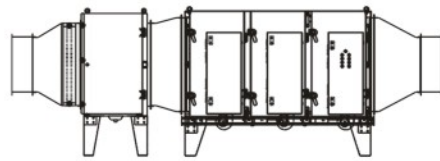
Model	Size L×W×H (mm)	Airflow m <sup>3</sup> /Hr	Weight (kg)	Power (kw)
BSG-216-12K	1911 × 2059 × 2100	8000~12000	1000	4.2
BSG-216-16K	2795 × 2059 × 2100	12000~16000	1500	5.7
BSG-216-20K	3822 × 2059 × 2100	16000~20000	2000	7.1
BSG-216-24K	4706 × 2059 × 2100	20000~24000	2500	8.5
BSG-216D-39K	3820 × 3035 × 2703	29000~39000	3400	11.7
BSG-216D-52K	3820 × 3035 × 2703	42000~52000	4100	15.6
BSG-216D-65K	5730 × 3035 × 2703	55000~65000	5000	19.5



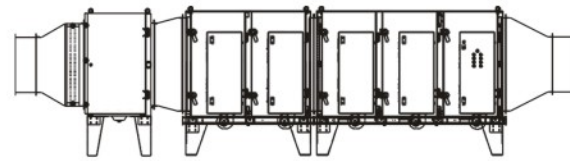
BSG-216-12K



BSG-216-20K

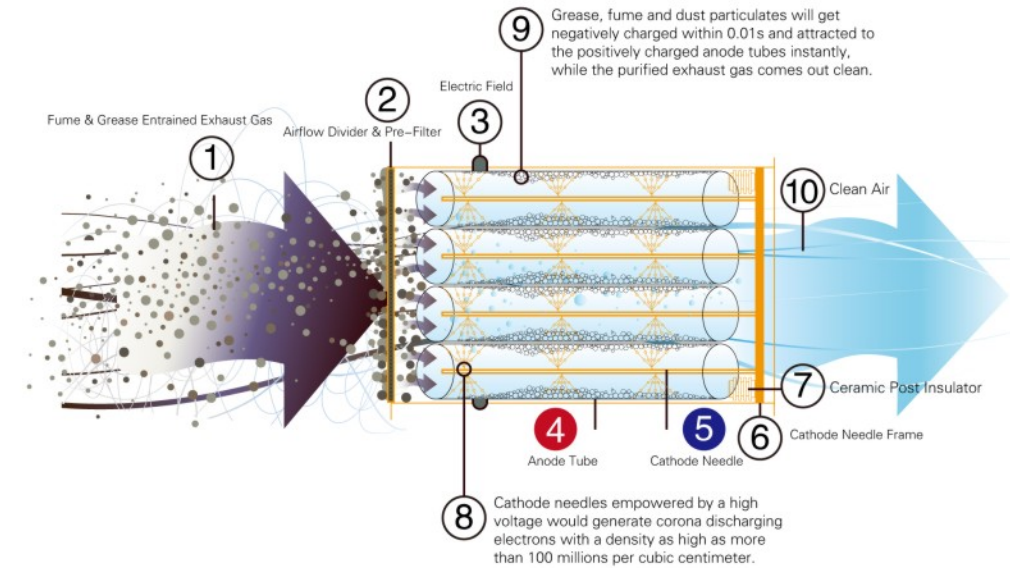


BSG-216-16K

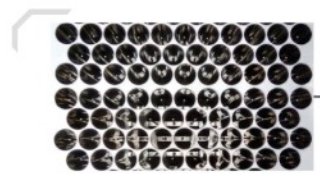


BSG-216-24K

Remark: Specs listed above are for reference only. For more details, technical offers and contract shall prevail.



## Features

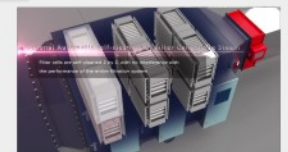


### Stainless Steel Filter Cells

Plus the cylindrical honeycomb cell structure which is widely recognized as a higher performing and more washable design compared with conventional plate cell structure, as well as sprung ionizers fixed on both ends of the filter cells, KLEAN filter cells are highly resistant to corrosion and robust enough to withstand heavy use, frequent cleaning and rough handling.

### Automatic self-cleaning of Filter Cells using Steam

High temperature steam auto-clean as well as on-line cleaning is made possible due to the compartmentalized filtration module design. This way, filter cells remain in a relatively clean conditions, resulting in optimum performance of the electrostatic air filter at all times, and significant savings in time and manpower for the manual cleaning of filter cells, as well as troubles and hazards associated with it.



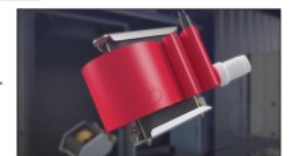
### Digitized Circuitry and Power Pack

With proprietary digital algorithms implemented throughout the feedback and control loops, KLEAN power pack provides benefits that are not achievable by any other type in the market. Operating parameters of the filter such as voltages, currents, run modes etc. are collected and processed by a MCU and are programmable during operation, thus optimal operation conditions can be achieved through programming instead of redesigning and reconstructing. EMI-induced data distortion can be largely reduced, thus false alarms are largely eliminated. Continuous updates and functionality extensions on the power pack program is made possible. Last but not the least, running records can be ported onto a remotely-located Host through RS485 communication module, paving the way for a cloud-based machine management solution.



### High Frequency High Voltage Transformer

Featuring a plurality of secondary rectifier circuit superposition that brings in better insulation and improved heat dissipation, a integration of booster coils and HV rectifiers that is encapsulated as a whole under high temperature vacuum conditions to get rid of creepage risks between components as well as instability of quality, plus nano coating techniques to eliminate structural deviation of workpiece resulting from repeated assembly and dis-assembly of die parts during manufacturing process, KLEAN HV transformer is capable of withstanding extreme ambient temperatures up to 100°C with no detrimental effect on performance.

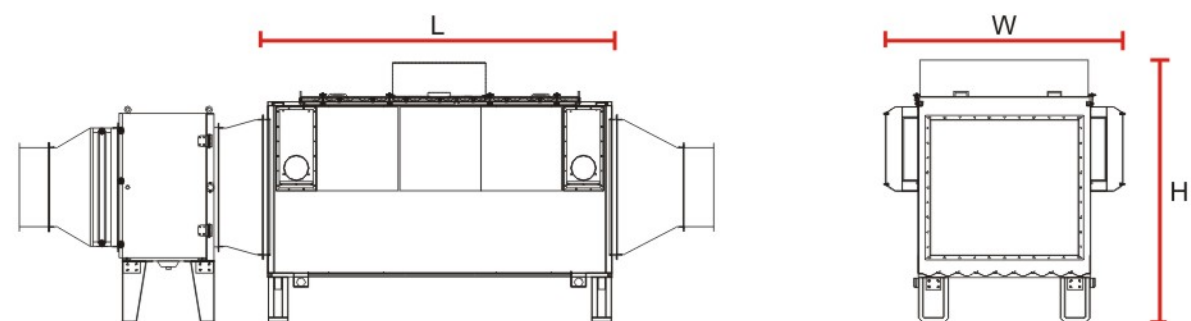


# Wide Spacing Electrostatic Precipitator for Industrial Exhaust Emission Control



## Specifications:

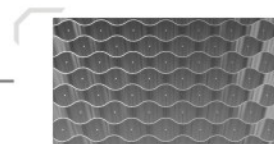
Model	BSG-216Q-16K-WK
Airflow(m <sup>3</sup> /Hr)	16000
Dimension(mm)	3377*2826*3120
HV Power Pack Specs	Maximum Secondary Current: 200mA Maximum Secondary Voltage: 60kV Maximum Power: 10kW
Weight(kg)	1200
Preliminary Cooling Device	Stainless Steel Corrugated Cooling Coils Heat Exchanger Or Stainless Steel Scrubber



## Features

### Stainless Steel Wide Spacing Filter Cell

Suitable for the treatment of smoke emissions with high content of lint, wax, and moisture.



### Auto-clean Unit

With the auto-clean unit, manual cleaning of filter cells is not necessarily required for more than once every year.

### Full Dimension Fire Protection

By means of: Digital Power Pack controlling the energy of arcings; Thermal Sensors monitoring the cross sectional area of airflow passage; And Fire Suppression Devices covering the full length of filter cells.



### Delivered Ready to Use

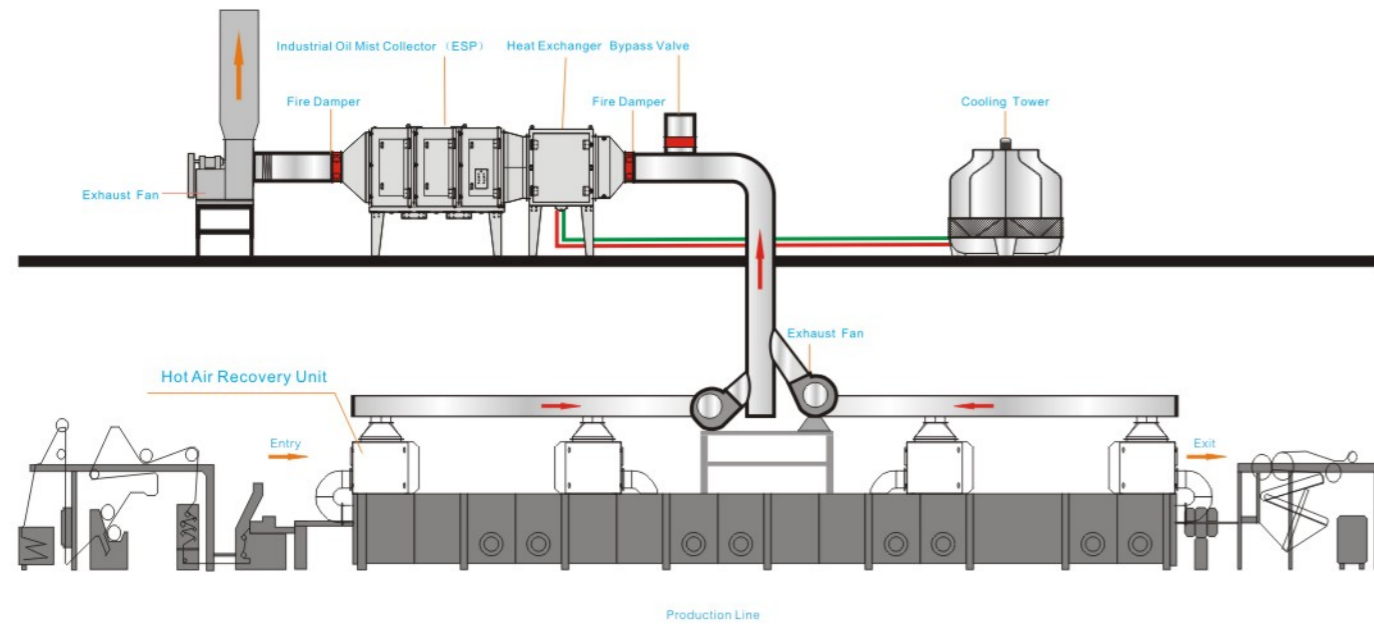
Reduces the need for on-site welding and fabricating as well as the associated hazards.

### Stainless Steel Corrugated Cooling Coils

Highly resistant to corrosion and fouling. Easier to handle: single cell weights only 70kg.



## Solution



Oil-based smoke emissions produced in thermal applications such as plastics extrusion, curing ovens, calendaring, or textile tenter frame ovens and dryers etc contain a mixture of pollutants including oils, resins, waxes, tars, and various solids, producing a prodigious stack plume. When using KLEAN oil mist collection system for the treatment of such hot dirty exhaust, preliminary cooling and prefiltration are required. The exhaust air, now containing a mist of fine oil droplets, then enters the electrostatic precipitators (ESP), where 95% of the oil contents in the exhaust can be collected to ensure that the system complies with emission levels legislation in most countries

## Common Uses

Industrial Cooking	Textile Processing	Plasticizers	Manufacturing Processes	Rubber	Asphalts
<ul style="list-style-type: none"> <li>Stir Fry Woks</li> <li>Deep Fryers</li> <li>Coffee Roasters</li> <li>Smoke Houses</li> <li>Charcoal Grills</li> <li>Gas Stoves</li> </ul>	<ul style="list-style-type: none"> <li>Heatsetting Stenter Chambers</li> <li>Yarn Coating</li> <li>Yarn Extrusion</li> </ul>	<ul style="list-style-type: none"> <li>PVC Artificial Leather</li> <li>Disposable Gloves</li> <li>Vinyl Wall Covering</li> <li>Vinyl Flooring</li> <li>PVC Coated Fabrics</li> <li>Conveyor Belts</li> <li>PVC Flex Banners</li> <li>PVC Air Socks</li> <li>Plastic Wire Mesh</li> <li>Blown Film</li> </ul>	<ul style="list-style-type: none"> <li>Welding</li> <li>CNC Machining</li> <li>Laser Cutting and Etching</li> <li>Steel Oil Quenching</li> <li>Wire Drawing</li> <li>Metal Sintering</li> <li>Fasteners and Die Making</li> <li>Melting Furnaces</li> </ul>	<ul style="list-style-type: none"> <li>Butting</li> <li>Curing</li> <li>Grinding</li> <li>Recycling</li> </ul>	<ul style="list-style-type: none"> <li>Coatings</li> <li>Hot Mix Plants</li> <li>Saturators</li> </ul>

## Filter Configurations

Filter Configurations	Wide Spacing ESP (Standard ●, Optional: ⊙, N/A: ○)	Classic Horizontal ESP (Standard ●, Optional: ⊙, N/A: ○)
HMI Panel	●	○
Stainless Steel Housing	●	○
Stainless Steel Filter Cell	●	●
Fire Nets with Fuse Links	●	●
PT-100 Fire Sensor	○	○
Electric Fire Damper	●	●
Pneumatic Fire Damper	○	○
Fire Control System	●	●
Impringer Prefilter	●	●
Self-Cleaning Prefilter	○	○
Water Auto-Clean of Cells	○	○
Steam Auto-Clean of Cells	○	○
Heat Insulation (Steam or Hot Water)	○	○
Service Platform	○	○

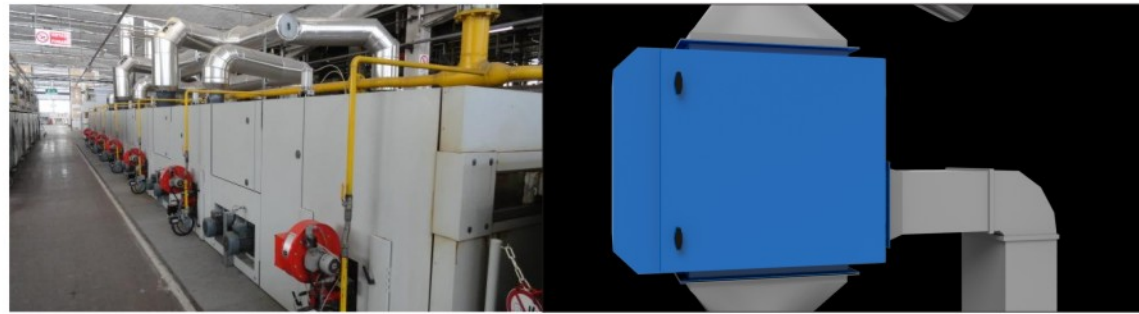
## System Solutions

Carbon Steel Finned Tube Cooling Coils	Stainless Steel Corrugated Cooling Coils
VOC Removal (ACF)	VOC Removal (UV)
De-Plume System	Water Scrubber

## More

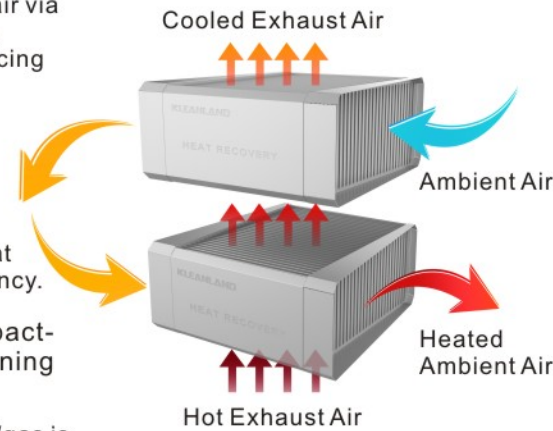
Hot Air Recovery Unit
Hot Water Recovery Unit
Oil-Water Separator

## Low-cost Heat Recovery Unit (Air-to-Air)



### Working Principles

Installed right on top of each stenter chamber in the exhaust duct, this system is enabled to make the most use of the heat transferred from the hot exhaust air to heat up ambient air via a cross-flow heat exchanger. Heated ambient air can be supplied back to the stenter frame, saving fuel and reducing the running cost of the stenter.

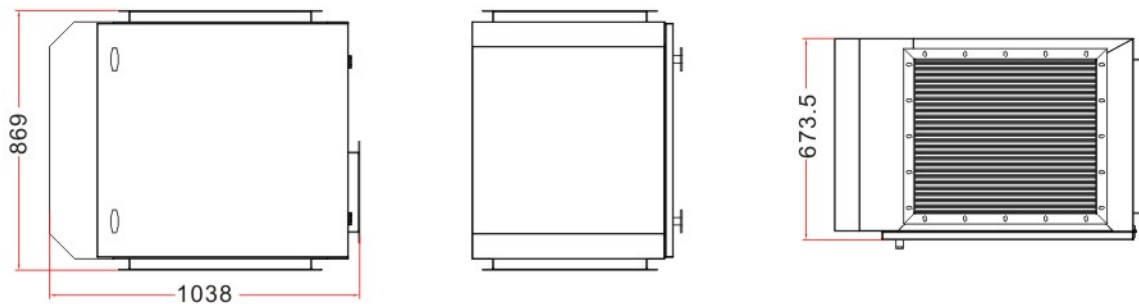


### Advantages

- ▶ **Highly Efficient:** Technologically advanced air-to-air heat exchanger is used, resulting in high heat transfer efficiency.
- ▶ **Easy to Handle:** Its knockdown structure and compact-sized parts provide excellent convenience for cleaning and servicing.
- ▶ **Huge Energy Savings:** Significant cut on the use of coal/gas is made possible in a long run.
- ▶ **Low Installation Cost:** There's no need to bring huge changes to current duct layout for its installation.

### Specifications

Dimension (mm)	Weight (kg)	Hot Air Volume (m <sup>3</sup> /h)	Return Air Volume (m <sup>3</sup> /h)
1038*673.5*869	25	2000	1500



## Stainless Steel Corrugated Cooling Coils

### Made of Stainless Steel 304

- Excellent Corrosion Resistance
- Smooth Surfaces on the Airside
- Improved Ease of Cleaning
- Optimal Fouling Resistance



Fouling of Finned Tube Coils

### Corrugated Tube Coils

- 70kg/pc
- Light-Weighted
- Ease of Handling

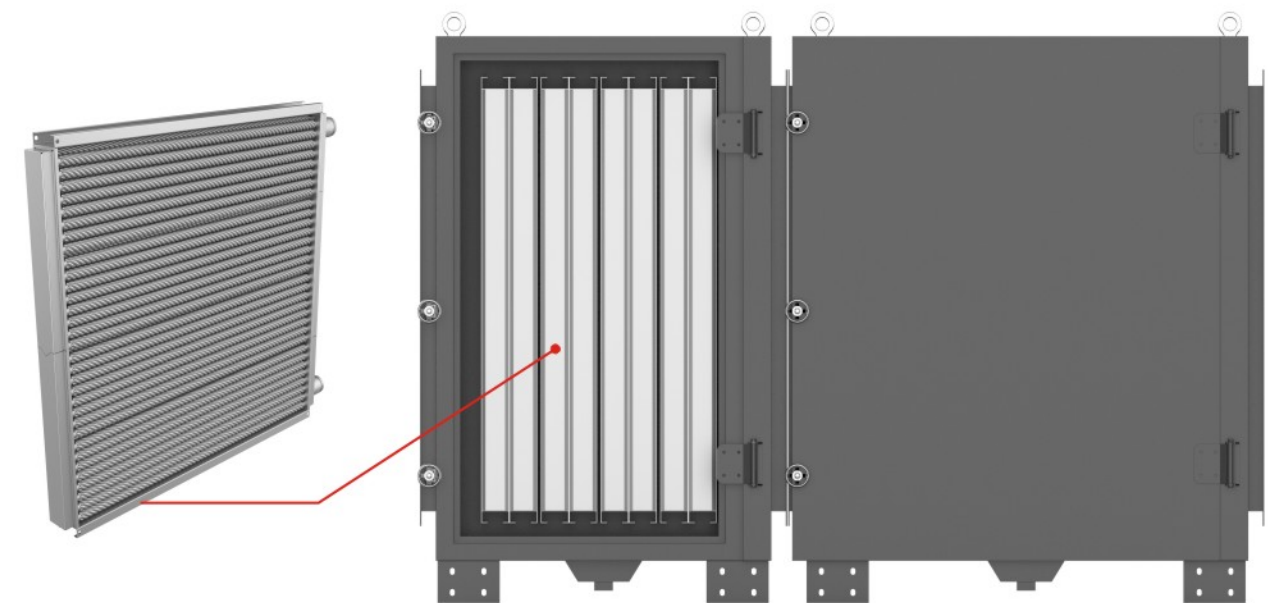
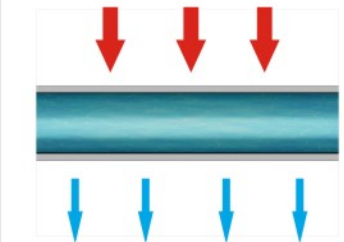


Finned Tube Coils 340kg/pc  
Corrugated Tube Coils 70kg/pc

1 Finned Tube ≈ 5 Corrugated Tubes

### Heat Transfer Efficiency

30% Higher than standard Finned Tube Cooling Coils



Cases

