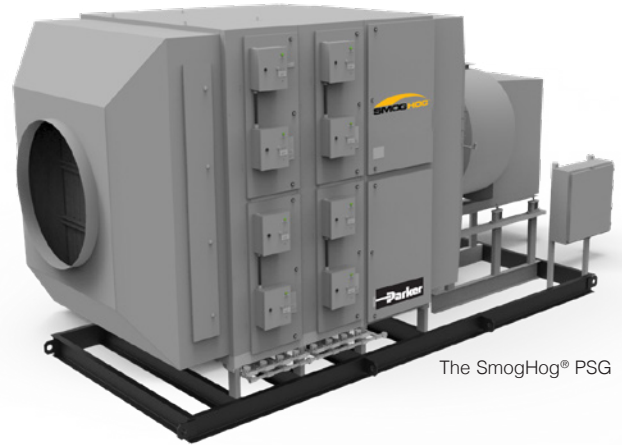


Hudson Yards



The SmogHog® PSG

Focus:

Hudson Yards, New York, the largest mixed use private Real-Estate venture in American history

Challenge:

Meeting NYCFCF COA code and NFPA Code, air pollution control, odor from kitchens leaving the restaurants, and allowing architects to design stunning views of NYC without the equipment being an obstacle

Solution:

SmogHog® PSG Collector with automatic filter wash

Impact:

- Economic benefit
- Neighborhood quality and excellence
- Compliance with federal/state/ local requirements
- Cost savings

Project Name:

Hudson Yards

Address:

New York, New York

Owner/Mechanical:

Related Corporation / KSW Mechanical

Locations:

Restaurants, Food Courts, Corporate Cafeterias, and Commissary: PEAK Observation Deck, TAK Room, Mercado Little Spain, Momofuku Kawi, and Teak Room at the Conservatory

The largest mixed-use private Real Estate venture in American history, a 25 billion-dollar development.

This feat of engineering rests on a new \$1 billion platform, sitting on top of the old “Hudson Yards” rail center. A second Phase, “The Western Yards” is planned for future expansion of the site. With different engineers, architects, and mechanicals the owner desired a seamless and consistent expert voice to help each principle through Code enforcement and NFPA guidelines therefore a dedicated Parker Application Engineer was designated as that expert.

Challenge

Mixed-use developments all face the same issue regarding air pollution control from various restaurants, corporate cafeterias, and food courts. The odor entering the buildings where tenants work, live and play needs to be filtered and cleaned not only from restaurants attached to Hudson Yards but neighboring eateries. Also, maintaining and allowing architects to design stunning views of NYC and the Hudson River. Most importantly installing a system to meet NYCFCF COA code and NFPA code.

Solution

With 40 years of kitchen emissions control expertise and thousands of installations in NYC, Parker, and K-Vent, Inc. listened to the engineer and architect to meet each specific project requirements on-site. The SmogHog® PSG provided a consistent design, repeatable part list for maintenance teams, and a robust filtration system for various cooking types including “Solid Fuel”. The ability the SmogHog contains to automatically wash the filters each night and provide a clean, efficient and annual cost-saving filtration plan met all the requirements from the owners.

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Impact

The owner's motivation for the selection of emission control equipment can be grouped into three categories— economic benefit, neighborhood complaints, and compliance with federal/state/ local requirements. Parker was able to meet requirements in all the categories.

| Criteria Affecting Equipment Selection | Kitchen Emission System – SmogHog® Configuration | |
|--|---|---|
| | Single Pass | Double/Triple Pass |
| Owner's Motivation | Economic Benefit <ul style="list-style-type: none"> Keep ductwork clean and HVAC clean Prevent hood damage Neighborhood Complaints <ul style="list-style-type: none"> Nuisance odor Visible plume | Federal/State/Local Requirements <ul style="list-style-type: none"> Exhaust Restriction Populated location where uncontrolled kitchen exhaust will not be allowed |
| Type of Cooking | Low Temp Grease Volatilization (200°F to 300°F) <ul style="list-style-type: none"> Griddle frying Deep-fat frying Vat frying Overhead broiling Electric grill Low Emission Cooking <ul style="list-style-type: none"> Oven Stove Steamers | Open Flame Grease Volatilization (300°F to 800°F) <ul style="list-style-type: none"> Barbecue Charbroiling Solid fuel |

Cost Savings Example

| | SmogHog Unit/ESP Technology | Leading Competitor Unit/Filters |
|---|---|--|
| Service company time and labor to remove, wash dirty cell, and replace clean cell | \$100 | N/A |
| Service company time and labor to replace and dispose of aftermarket filter | N/A | \$300 |
| Replacement Filter Cost | ESP Cell Technology, replacement filters are not needed | \$117.12 Pre-filter 30% \$235.80 Carbon filter \$143.46 Media filter \$496.38 per unit |
| Number of Units | 5 | 5 |
| Number of Months | 12 | 12 |
| Total Cost | $\$100 \times 5 \times 12 =$ \$6,000 | $\$300 + \$496.38 \times 5 \times 12 =$ \$47,782.80 |

- Minimum Ducting Required:** SmogHog custom configurations, saved expensive runs of heavy-gauged, welded exhaust ducting. “There were situations where we had to breakdown the SmogHog into pieces and reassemble on-site, which provided the customer a better result”. Rich Hayes, President KVent.
- Reduced Maintenance Costs:** Maintenance is minimized because SmogHog aluminum collection cells are easy to clean and reuse, eliminating prohibitive costs associated with filter replacement and disposal. “Cells are interchangeable compared to other PCU’s, you do not need multiple types of collection cells, cutting down on inventory costs. The performance is the best.” Dan Panoiu, Owner, Prestigious Maintenance of NYC.



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Impact *(continued)*

- Environmentally Compliant:** SmogHog systems assure compliance with even the strictest federal, state, and local environmental standards, meeting air quality needs and eliminating unexpected retrofit costs later.
- Unmatched Design and Technical Support:** Parker Hannifin has been leading the way as a manufacturer of commercial ventilation systems since 1966. Parker Hannifin provides complete solutions and plays an active role as a project partner from start to finish. “It’s some of the best constructed and thought out equipment and we have the least amount of problems with it”. Joel Berkowitz, Managing Partner Fireproofing Corp.
- Customer Loyalty:** Engineers and restaurant design teams are continuing to specify SmogHog at Hudson Yards for future projects on-site along with other mixed-use buildings around NYC. There is no better testament to our customer’s satisfaction, experiences, and their overall value of the SmogHog brand than repeat purchases and continuing the relationships.



K-Vent, Inc., Parker’s local dealer is the most experienced Kitchen Emissions Systems representatives in the tri-state area. They are a sales organization dedicated to the design, engineering and sale of Kitchen Emission Systems. They provide service on all of their systems.



Providing Clean Air Solutions

Parker Hannifin is committed to providing clean air solutions that protect your employees, improve plant performance and enable you to realize your operating goals.

State-of-the-Art Labs and Advanced Filtration Research for Optimized Performance. Purpose-built labs and test facilities with the latest equipment allow our engineers and technicians to quickly and accurately assess filter capabilities and develop innovative new medias.

High Performance Filters & Specialized Equipment Solutions. With decades of experience manufacturing high performance original equipment and aftermarket filters to meet a variety of system types and configurations,

we can satisfy whatever requirement is needed including customized solutions.

World-class Manufacturing Processes with a Global Footprint. We produce top quality filtration solutions through stringent manufacturing processes.

Application Expertise for Any Filtration Challenge. Our ability to design a solution to fit your application begins with engineering expertise proven by hundreds of global installations.

