

CASE STUDY

Fast Food Restaurant



PROBLEMS

- Air pollution
- Gases & odours
- Dirt, dust and particles

Client: Multinational Fast Food Chain

Location: China

Industry: Shopping Malls

INNOVATIVE CLEAN AIR SOLUTIONS FOR A GLOBAL LEADER IN THE FAST-FOOD INDUSTRY

ABOUT OUR CLIENT

This leading fast-food chain started with its first restaurant in the United States of America and is known as the leader in the global retail foodservice industry. Our customer has opened thousands of restaurants globally with over 200,000 employees, to provide high-quality, finger-licking food service that caters to millions of people in more than 100 countries every day. With hundreds of restaurants in China located in busy areas like public halls and shopping malls, employee's safety, health, and indoor air quality is one of the primary concerns and focus areas. The client is committed to a clean indoor dining atmosphere.

THE SITUATION

Fast food stores are usually located in a crowded commercial area or building where there are problems such as polluted air, gases, and odours. The fresh air fan units in the ventilation system are often close to the pollution source, i.e., exhaust air of other shops in the building. The customer is committed to providing a healthy dining atmosphere along with mouth-watering food. Camfil was approached by the consultant working on the project to supply premium air through filtration solutions to make sure their consumers experience the best.

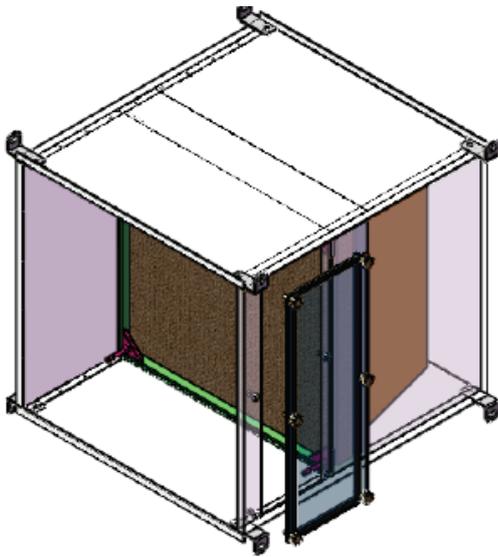
OBJECTIVE

Provide a premium dining experience by using world-class air filtration that will ensure the health of staff and customers. Another objective of the client is to be LEED-certified (Leadership in Energy and Environmental Design) that is the most prestigious "green building" ranking.



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SOLUTION

Camfil is known as a pioneer air filtration solution provider in the industry and a team of experts was called for consultation. After an on-site survey and discussion, Camfil engineers found that the fast-food chain store needs a uniquely designed custom solution. Through a fresh approach to problem-solving, innovative design, precise process control, and a strong customer focus, a series of products were installed to get the premium air filtration along with energy-efficiency and savings on maintenance.

A. 1 to 2 fresh air fan units that can handle air volume at 1500-4000 cubic metres per hour (CMH)

B. Between the fresh air inlet and the fan unit, a safety filtration housing with 2 stages of filter

- Pre-filter – ISO coarse 60% filter
- Secondary filter – ISO ePM2.5 50% (Eurovent Rated)

Additional measures:

- To minimize air leakage, metal filter frames along with compression fitted bolts were installed.
- An access door on the side of the housing was designed for future maintenance.
- Housing has two pressure drop sampling pots reserved at the side to install the differential pressure gauge or switch.

AFTER-EFFECTS

Fresh air fan unit with good filtration reduces the particle pollution in the indoor space and keeps fan and duct clean so that the coils of air conditioners won't get blocked by dust. This results in a significant reduction in the maintenance cost.

EVALUATION - *The customer is the first fast-food chain brand using two-stage air filtration at Fresh Air Inlet. About 325 stores in China have already installed and adopted this design and implemented 'clean air solutions' to enhance the dining atmosphere. Customers at the store will experience delectable burgers along with premium indoor air quality.*

FILTERS INSTALLED



PANEL FILTER WITH METAL FRAME

Camfil's panel filter with a robust metal frame to reduce the service space.

HI-FLO BAG FILTER

ISO ePM2.5 50%

A unique glass-fiber bag filter with high dust holding capacity, ensuring stable operational efficiency during the whole life cycle and reducing the energy consumption of the ventilation system.

