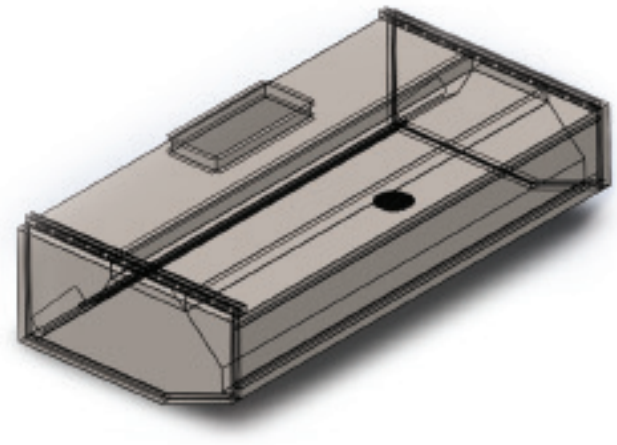
Engineered Exhaust Hood Solution

Greenplus Integrated Foodservice Solutions and Services PLT (LLP-0007787LGN)

COMMERCIAL KITCHEN VENTILATION SYSTEM



An exhaust hood is more than just a stainless steel box installed in your kitchen. The exhaust hood plays an important role in providing a comfortable and better working environment. It removes pollutants, reduces the energy consumption, increases productivity and ensuring safety for the kitchen personnel.

Many people put the priority of a kitchen ventilation system as the last item on their investment list, resulting in a poor and terrible working environment even after having installed the best cooking equipments.

Common Challenges in Commercial Kitchen Ventilation System

Heat | Odour | IAQ | Productivity

Grease | Smoke at Discharge | Energy Bill | Fire Risk

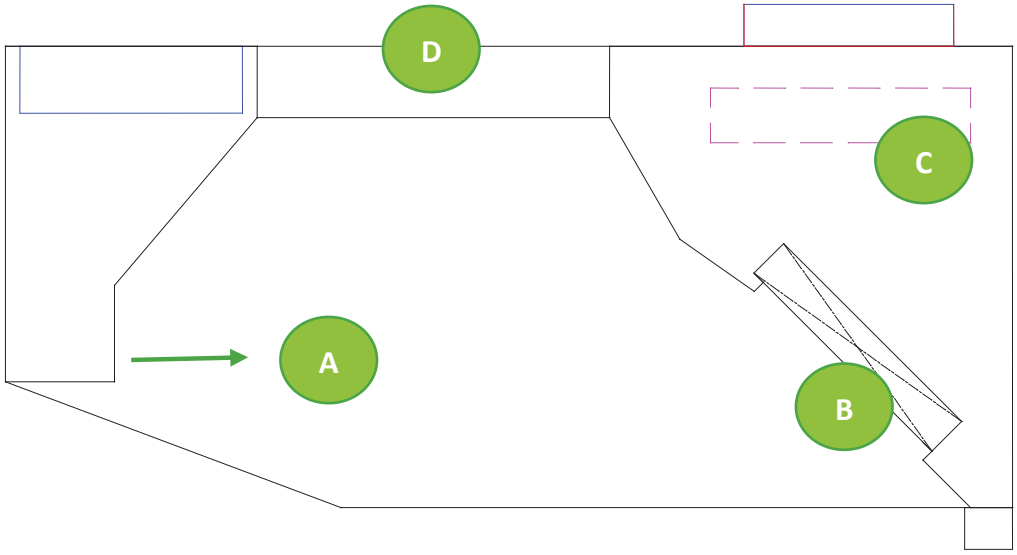
An exhaust hood performance is defined by its ability to Capture and Contain all cooking vapours efficiently and at the same time filtering the grease particles and vapours grease generated during the cooking process.

Greenplus engineered exhaust hood system aims to provide an ideal engineered solution in its design, taking into consideration all aspect of design considerations, chanllenges and performance of the exhaust hood as well as integrating the design with your complete HVAC system. We provide you with more than just a product (stainless steel box) but a total solution for your business, restaurant and building.

Differences within Conventional Hood and Engineered Hood Solutions

Conventional Design	Engineered Design Solutions
• Budget Driven – Wrong Size, High Airflow, Canopy Box	• Functionality Driven
• Knowledge Gap – Kitchen Contractors vs MEP Contractors	• Design Considerations – including grease filtration, smoke & odour control
• Standalone System – no integration with TOTAL HVAC Design (AC & MUA)	• Meeting the gap between KEC & MEP
• Low Efficiency	• Integrated with total HVAC System (Exhaust, Make Up Air & Air Conditioning)
• High Energy Consumption	• Improved Capture and Containment System
• No proper grease filtration, smoke and odour control	• Optimum Energy Consumption

GREENPLUS EXHAUST HOOD SYSTEM FEATURES:



A Performance Jet System to enhance the capture and containment efficiency of the exhaust hood.

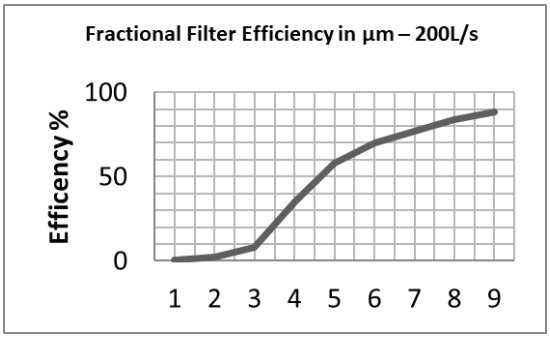
B High Efficiency NVX® 3 chamber grease filter provides exceptional filtration efficiency of grease particles in comparison to standard industrial baffle filter.

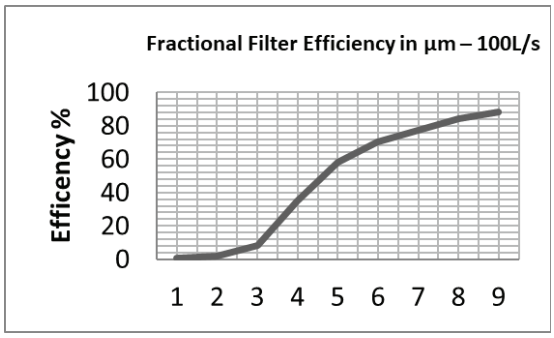
C High Intensity UVC System for complete vapour grease removal, the system integrated with complete built-in safety and monitoring devices.

D Vapor-proof fluorescent lighting

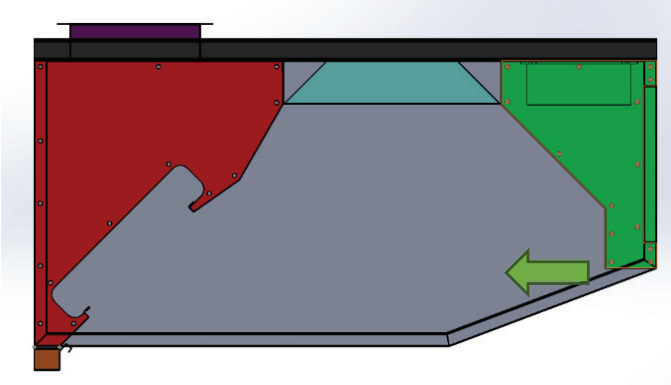
Nvx® 3-chamber High Efficiency Filter

The grease filters feature distinct contra-rotating grease-displacement vortices for efficient particle removal.
It provides better grease particles filtration in comparison to standard industrial baffle filters. The filter feature funnelled air inlets to reduce high-frequency noise.





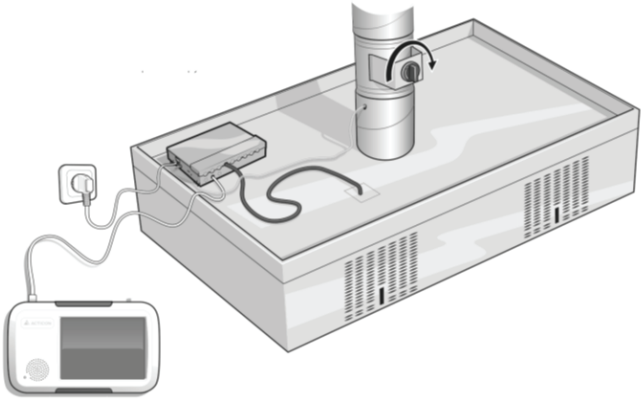
Performancce Jet System



A perimeter jet system is used to contain kitchen smoke from escaped from the front edge of the exhaust hood. Hence, increase the hood efficiency.

A built-in fan will draw a small amount of air volume from kitchen area in an average of 60 CFM per meter.

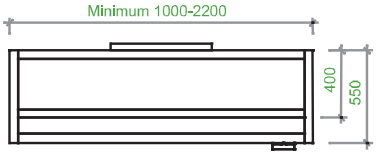
UVC Technology

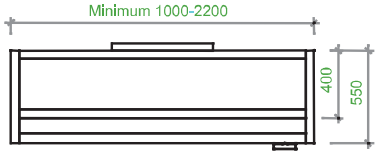


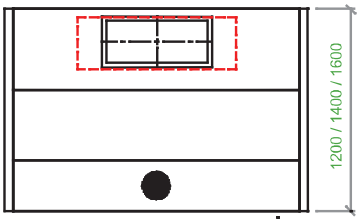
UV Treatment is an effective and long established technology in air purification. The System is developed to optimized and reduced operation costs. High intensity UV tubes is used to provide more powerful reaction in breaking down hydro-carbon grease molecules into carbon dioxide and water vapours. The system also integrated with complete safety features and sensors to ensure personnel safety in the kitchen from been direct expose to harmful UV light.

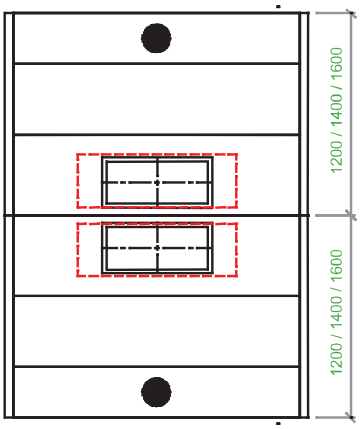
HOOD CONFIGURATIONS

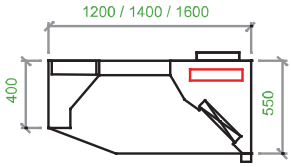
Wall Mounted / Single Island Configuration

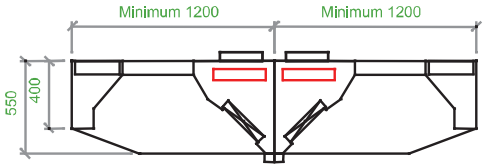






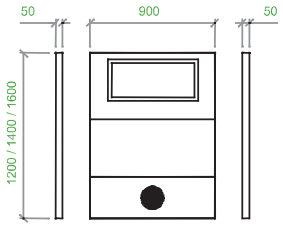






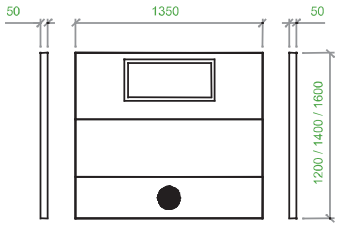
Application: Restaurant, Hotel, Show Kitchen, Galley/Vessel, Food court, Shopping Mall and F&B Establishments

Modularization and Configuration



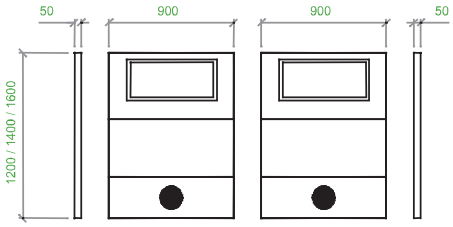
L: 1000mm
D: 1200/1400/1600mm

Light: FL/HL
UV: Not Available



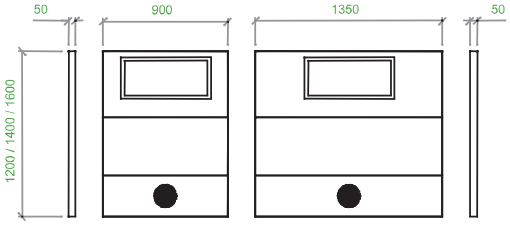
L: 1450mm
D: 1200/1400/1600mm

Light: FL/HL
UV: YES



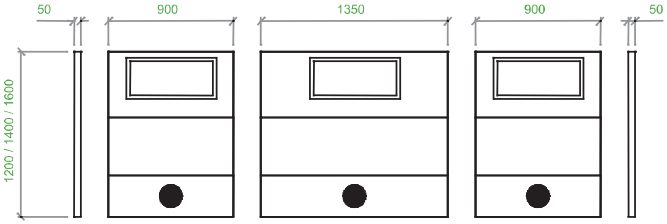
L: 1900mm
D: 1200/1400/1600mm

Light: FL/HL
UV: YES



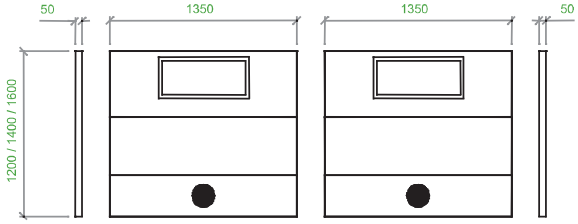
L: 2350mm
D: 1200/1400/1600mm

Light: FL/HL
UV: YES



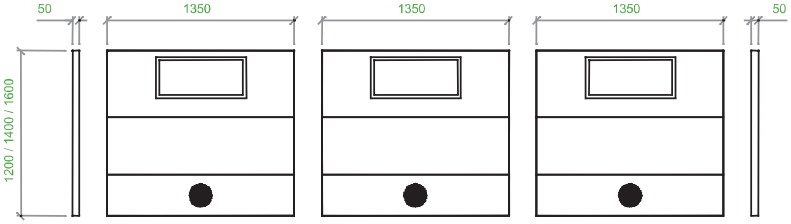
L: 3250mm
D: 1200/1400/1600mm

Light: FL/HL
UV: YES



L: 2800mm
D: 1200/1400/1600mm

Light: FL/HL
UV: YES



L: 4150mm
D: 1200/1400/1600mm

Light: FL/HL
UV: YES

L = length D = Depth FL = Fluorescent Lighting HL = LED Halogen Lighting

RECOMMENDED SPECIFICATION

The exhaust hood shall be constructed from stainless steel AISI 304, _____ (1mm/1.2mm) with satin brush finishing. The front panel of the exhaust hood is removable for access and maintenance purposes. The side panel of the exhaust hood must be double walled (Single walled is not permitted) to provide a more solid and rigid constructions.

- The size of the exhaust shall be as indicated in the drawings and the exhaust hood will be delivered in modular form for easy installation and transportation.
- The exhaust airflow rate shall be calculated by the Thermal Convective Method of DW 172.

The exhaust hood shall be complete with the following features:

- Performance Jet System -

The exhaust hood will be equipped with a Performance Jet System which provides an air guard at the front edge of the exhaust hood to prevent cooking plumes spillage outside of the exhaust hood coverage.

A built-in fan will draw a small volume of air from the kitchen area in an average of 60 CFM per meter. This fan will creates an air jet via the nozzles located at the perimeter of the exhaust hood. The air jet aims to push the cooking plumes towards the filter surface, reduced spillage and increase the efficiency of the kitchen exhaust hood in term of capture and containment.

- Light fixtures -

Low-energy fluorescent lighting shall be built into the canopy as a standard fixture. The light fixture shall provide in excess of 500 lux directly to the work surface. A reflective lamp casing will help to distribute light efficiently.

The light fitting is secured within a stainless steel access hatch. This hatch opens to provide easy, safe and convenient maintenance access. All edges shall be fully-gasketed and watertight.

- Grease filters -

The canopy will have high-efficiency 3-chamber NVX® grease filters. The grease filters feature distinct contra-rotating grease-displacement vortices for efficient particle removal. The buttress supports maintain the structural integrity of the filter during fire.

- UVC System -

The UVC come with Ultraviolet lighting tubes used for kitchen ventilation. The UVC system aims to elimination of grease vapours in the airstream by converting the grease molecules into CO2 and H2O. Each cassette is made of stainless steel with 4 short tubes that can handle up to 800 l/s per cassette. Each system can work up to minimum of 12000 hours or 2 years.

The system is integrated with complete safety features (other than mechanical contact switch) that will protect anyone in kitchen from harmful UV rays. The control system must be able to detect kitchen exhaust ON/OFF status. Any removal of exhaust filters and faulty at the UV lamps/cassette will result in alarm/warning. The system will also provide reminder for cleaning maintenance at every 200 hours.

- The control system also provides option to be interlock with BMS system.
- The display panel must show the status of the system (operation/alarm) and the remaining operating hours.

About greenplus

In **greenplus**, knowledge and implementation go hand in hand. We are determined to offer you the best knowledge and implement the design in every scenario given at the best of our ability. We ensure you that our designs will provide you the best combination of technologies and as well as cost effectiveness for your investment. We integrate the best solutions in the industry and we offer you the peace of minds in making sure all system will be integrated efficiently and work as one.

Additional Services by greenplus

- **Kitchen Indoor environment assessment and optimization**
  We access your kitchen environment to identify the main issues in your ventilation system and we make proposal to improve your working conditions…

- **Kitchen Ventilation Design Review and Consultation**
  We review your ventilation design and provide you with solid and practical consultation to ensure your system works…

- **3rd Party Testing and Commissioning Services**
  We can provide 3rd party services to confirm that your ventilation system is delivered according to the specific design

- **Total HVAC Design**
  Including ducting, emission control, fan selection, air conditioning design and etc.

Contact Us:

greenplus
Your professional partner in kitchen ventilation

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