# Ideal Catering Solutions Canopy Installation / Specification

PLANNING AND BUILDING CONTROL
11 MAR 2014

## General

All our kitchen ventilation systems are designed and manufactured in accordance with HVCA Specifications DW/172, DW/144, TR19 and HSE catering information sheet No10. For sites with potential noise and odour issues DEFRA guidance documentation shall be applied.

## Design Flow Rates

Will be calculated specifically against the proposed catering appliances. Utilising the thermal convection calculation detailed in HVCA Specification DW/172 5.3. Supply air (**where applicable**) shall be provided to replace 85% of the extracted air. Consideration should be given to tempering the outdoor replacement air to 10°C, but in general this heat loss shall be made up by increasing the space heating in the area. The replacement air shall be split down so that 15% is introduced as entrainment air internally with canopy (this flow rate is to be added to the total extract flow rate ensuring the catering equipment is not short circuited). 30% is to be drawn from adjoining areas via a filtered passive air transfer duct (pressure of passive duct to be considered in extract fan selection). The balance of the replacement air (85% of total extract flow rate) is then to be introduced mechanically via integral outboard air plenums.

## Canopy

The canopy will be designed and dimensioned in accordance with the recommendations as set out in DW/172 with the extract Canopies being fabricated from 1.2mm Stainless steel, manufactured with condense channel complete with safe edge. The canopies shall be manufactured in suitable sections to allow access to the kitchen area. All joints shall be welded, or provided with suitable covers to remove all dirt traps and provide a hygienic cleanable surface. The canopies shall be designed in such away so as to be attached to the structure of the building. Where this is not practical the canopies should be designed in such a way as to use pillars as a means of support for the canopy itself.

## Grease Filtration

In general the filtration will be tested to LPS 1263 with the primary grease filtration provided by means of Stainless steel baffle type filter panels, selected to handle the required flow rates, mounted within full length assembly complete with removable grease collection drawers. The filters shall be constructed so that there are no sharp edges or projections and shall be easily removable for regular cleaning.

**Extract System**

We will use non fire rated galvanised mild steel extract ductwork manufactured in accordance with HVCA specification DW/144, sized to handle design flow rate at an air velocity of between 5-7 M/Sec. The system shall be installed complete with a die cast aluminium aerofoil design axial flow fan with a 100% speed controllable class F motor rated at IP54 with "sealed for life" bearings capable of generating the required flow rate at system pressure. The fan is to be provided with a local isolator, and to be controlled by the bespoke interlock/control panel. Clean out/access doors in accordance with HVCA specification TR19 to facilitate cleaning and system maintenance. The ductwork shall be routed to atmosphere by the most direct practical route, to terminate at a suitable location with a roof unit, bird mesh or discharge cowl.

**Mechanical Replacement Air – Only where applicable on specification**

Insulated stainless steel replacement air plenums, formed as an integral section of the extract canopy (operational sides) complete with double deflection pattern grilles sized to achieve a low velocity discharge. Galvanised mild steel extract ductwork manufactured in accordance with HVCA specification DW/144, sized to handle design flow rate at an air velocity of between 4-6 M/Sec. The system shall be installed complete with a die cast aluminium aerofoil design axial flow fan with a 100% speed controllable class F motor rated at IP54 with "sealed for life" bearings capable of generating the required flow rate at system pressure. The fan is to be provided with a local isolator, and to be controlled by an interlock/control panel. G4 grade disposable air filters mounted within purpose built assembly with suitable access provisions, to terminate at a suitable location with roof unit, bird mesh or louvered outlet.

**Canopy lighting – Only where applicable if on specification**

To be provided by means of low energy (A Energy Rating) lights to achieve approximately 500 lux at the appliance surface. The light enclosure shall be sealed against the ingress of grease and moisture and surfaces facing the cooking area shall be deigned to achieve a rating of IP55. All sealing gasket between the removable reflector and the light housing shall be of food quality neoprene and be able to withstand temperatures 100°C. The wiring from the light fitting to any junction point on the canopy must be heat resistant and installed in low smoke and fume (LSF) material. The power supply should be part of the electrical services contract.

**Gas Interlock – Only where applicable if on specification**

If we supply a gas interlocking system it will be by air pressure switches within the ducting which will interlock with the GIS control panel and a gas solenoid valve, with a front facia emergency stop and fault identification lights. The fan controls would be interlocked to each other and monitored to provide gas interlocking and pressure proving in accordance with BS 6173:2001. The panel would be provided with a knock off touch pad on the fascia, and allowances to provide a further two remote knock off buttons, allowing a switch to be placed in proximity to each kitchen entry/exit point.

All work shall be carried out in accordance with the requirements of the relevant

Regulations and Bylaws of the Local Authorities and relevant Acts of Parliament.

Instruct the site manager / caretaker and cook manager on the operation of the system.

**Material Standards & Workmanship**

All materials supplied under the contract shall be of the best quality and shall comply with the relevant current British Standards. All work shall be installed in accordance with good practice and workmanship in accordance with the relevant current British Standards and Codes of Practice.

The ventilation installation will be in full compliance with HVCA Specification DW 172. The ductwork installation within will also be in full compliance with HVCA specification DW 144

**Test certificates: -**

Electrical test certificates are required for all new electrical installations. Gas test certificates are required for the new gas Installation; these will be provided by your own subcontractors.

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