

1. Kitchen Ventilation Systems Description

1.1 Kitchen Extract Ventilation System

The kitchen cookline, or list of all electric cooking equipment, is listed on the Extract Calculations sheet, and using the Thermal Convection method, an extract volume of 1.648, rounded up to 1.7m³

The EMA Survey and report/RA for the kitchen extract ventilation system, would indicate a low level of odour control required, so a Purified Air UVO-1000 module has been designed into then system, located at the canopy

The extract fan would be a Flakt Woods Estoc Targe (Powerbox) model

80-500-3, high temperature rated with the motor out of the airstream, and with an external pressure availability of 350pa, however, once the final ductwork route has been established/confirmed, the system pressure should be recalculated, if different from the design drawing layout,

The fan should have a high temperature rated sound attenuator at the outlet of the extract fan, within the roof void

The fan should have a speed controller.

Extract ventilation ductwork, would be manufactured and installed in accordance with the HVCA DW172 specification for commercial kitchens, with sufficient access and cleaning doors, and would be 2 hour fire rated by the application of FireMac FM120, with all suitable flange cleats and supports.

The main ductwork would be 500mm x 400mm giving an extract velocity of approx. 8m/s

The ductwork from the exhaust silencer would reduce to 355mm dia, giving an exhaust velocity of between 15 and 16m/s and the exhaust terminal would be a vertical discharge jet cowl with integral rain gulley and drain.