

Kitchen Ventilation Design Proposals

1.0 Introduction

All work is carried out in accordance with the latest relevant British and European Standards, statutory Regulation and Byelaws together with the following publications:

- CIBSE Codes and guides to current practice
- Water Authority Byelaws
- HVCA – DW143 Practical Guide to Ductwork Leakage Testing
- HVCA DW144 Specification for Sheet Metal Ductwork
- HVCA DW172 Guide to Good Practice for Kitchen Ventilation Systems
- HVCA – RUAG70 Guide to Good Practice Refrigeration
- The Building Regulations
- Gas Safety (Installation and Use) Regulations 1998

All plant, ducts, pipe cables etc. shall be adequately protected against accidental damage corrosion and external environment and shall be capable of safe decontamination and removal in the future without disturbing other services. Pipes and ducts shall be adequately sized, kept as short as practicable, leak-proof with a minimum number of joints and have provision for routine maintenance. All facilities shall be designed to prevent the ingress or egress of rodents, vermin, and insects.

The duct will be fixed to the shell of the unit using anti-vibration fixing mounts and under no circumstances will flexible ductwork be used other than the fan connections

The HVAC contractor shall supply the client with system design drawings, prior to manufacture and installation

For projects in England and Wales, the HVAC contractor shall also demonstrate compliance with Building Regulations Approved documents L2A & L2B. This will include:

(a) systems in accordance with Non-Domestic Heating, Cooling and Ventilation compliance Guide (2006)

(b) Provision of commissioning certificates including air leakage tests on the ductwork

Fire/smoke dampers shall be installed in all fire compartment walls to Building Control requirements

The HVAC contractor shall ensure that externally the ductwork conforms to the supplied drawings in terms of its route, height and termination. These drawings will have formed part of our Planning Approval and must not be deviated from without express permission from the Project Manager

Upon completion of the installation, all shall be fully tested and proved including airflows. The contractor shall produce an Operating and Maintenance Manual which shall contain details of all equipment supplied, a record drawing of the complete mechanical services installation and copies of all Test Certificates. It shall contain a Maintenance Schedule based on the manufacturer's recommendations.

2.0 Extraction/Ventilation Systems

A new ventilation/extraction system will be provided to remove steam, cooking odours and grease-laden air. In most cases, natural ventilation is insufficient and an extract duct with a fan and filters will be required to ventilate cooking fumes and remove odours without causing a nuisance to neighbouring properties.

Dedicated make up air system to be approximately 85% of the extract flow rate.

Minimum air change rate of 40 per hour.

Velocity requirements – min of 0.3 m/sec to 0.5 m/sec at the canopy and a minimum of 10 m/sec at the roof discharge.

Grease filtration shall be provided as part of the canopy.

Discharge the extracted air in accordance with CIBSE guidance.

Grease filters ensure that grease is removed from the cooking fumes. These filters should be incorporated into the cooker hood and should be easily removable for cleaning before they become clogged.

Carbon filters are also required and are essential when preparing fried foods and/or foods with strong odours in a food premises close to residential or office properties.

Carbon filters should be fitted internally to the ductwork, after the grease filters.