

Design and Access Statement

REPLACEMENT OF EXISTING KITCHEN EXTRACT DUCT AND VENTILATION SYSTEM

At Perugino Coffee House,
Ground and Basement of no.10 Tottenham Street, London W1

29/10/2015



1. Introduction

This statement has been prepared to accompany a planning application relating to the restaurant at no.10 Tottenham Street, W1, for Paul Tanousis (long leaseholder).

The establishment has recently been taken over by a new manager and so some refurbishment need to be carried out to the ventilation system. The kitchen is at basement level, and the food is moved using a dumb waiter to the ground level for serving.

The current ventilation system in the basement kitchen is old and requires replacing, and the new proposal involves the addition of a new duct on the exterior of the building to take waste air fumes to above the eaves height of the building. This will reduce the impact of noise and odours on the neighbours and the public outside, as well as being a more energy efficient system.

2. Existing

Currently, the existing kitchen cooking appliances vent via duct work on the ceiling of the basement room and extracts the waste air horizontally to the rear of the building, onto a public square, with the fumes being released at ground level. This is below the level of windows of the flats at upper levels in the building. This is not good for the residents as they are adversely affected by the noise from the fan and the smell of the greasy hot air.

The kitchen has a fresh air supply via mechanical and natural means, which will be maintained. Fresh and unadulterated air is ducted in from the front and rear of the building via a grilled air vent in the wall. Additionally, a mechanical system of a fan and a filter supplies fresh air from outside into the kitchen.

3. Proposed

The proposed new system will use the existing duct work in the basement kitchen but improve it in the following ways:

- A pre-filter (in the canopy) and a carbon filter (before final discharge) will be fitted to remove

grease from the system.

- A new, more powerful fan will be fitted in the place of the existing fan, mounted internally on the exterior wall before the duct work passes through to the outside. The fan comes in a double lined stainless steel box which will be supported on rubber mounts to act as a sound insulator.
- The fan will be fitted with a silencer to reduce the noise impact of the fan by 10dB(A).
- New stainless steel double wall insulated chimney flue Dia. 560 mm will discharge 1.0 m above eaves level to atmosphere

The system will be compliant with all the relevant building regulations and other British standards for safety and efficiency, and it will be installed by a competent installer.

4. Odour control

Filtration of the exhaust air will be provided by:

- A pre-filter: V Line panel filter (details in appendix)
- A carbon filter: Carbon Cell – activated carbon disposable cells (details in appendix)

5. Noise reductions

- Fan to be used: Helios Gigabox Insulated Square Centrifugal Fan (details in appendix).
- The fan will be fitted with a silencer. (details in appendix)
- Fan will be mounted inside the building, inside a double insulated box to reduce sound to outside
- Anti-vibrational mountings of rubber pads will be used to isolate the fan from the building

6. Maintenance and cleaning information

- The filters and pre-filters will be replaced regularly as per the suppliers specifications
- The grease traps will be cleaned regularly as per the suppliers specifications
- Internal ducts have access panels on the side at intervals of 300mm for cleaning and maintenance
- The mechanical ventilation systems will be maintained in efficient working order in accordance with the manufacturer's/installer's instructions.

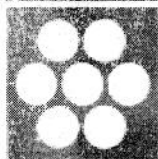
7. Design impact

The rear façade of the building is currently covered with scaffolding so it is not possible to show a photograph of the existing back wall. However, the ducting has been designed to have as minimal visual impact as possible on the wall of this Victorian brick building, as shown in drawing no2, rear elevation.

The wall is visible from the public square to the North of the building, where people tend to sit on benches to escape the noise and bustle of Tottenham Court Road.

The new duct is identical to an existing duct to the rear of the building next door, the Fish and Chip restaurant at no.12 Tottenham Road. So we believe it will not spoil the look of the building overall to install this ducting which is vital for the safe and efficient running of the restaurant.

As no changes are being made to the nature of the establishment or the external appearance of the restaurant, the proposal would not unduly harm the retail character of the shopping frontage, increase significant pedestrian traffic during shopping hours nor affect the adjoining properties in any adverse manner.



VL4-2424

V Line Panel Filter 24x24x4

Description/Application

V Line - Disposable pleated panel filters

Description

Disposable pleated panel filter made with both a water resistant card frame and retaining face. The V Line panel filters use a flame retardant, 100% thermally bonded polyester filter media backed with an expanded galvanised steel mesh.

Application

General heating and air-conditioning.

As a pre-filter to bag filters.

Specification

EU Grade

G4

Efficiency (>95%)

5 Micron

Capacity

Rated Capacity (CFM): 2018

Rated Capacity (M³/hr): 3430

Resistance

Initial Resistance: 1"/25MM: 40Pa 2"/50MM: 40Pa 4"/95MM: 40Pa

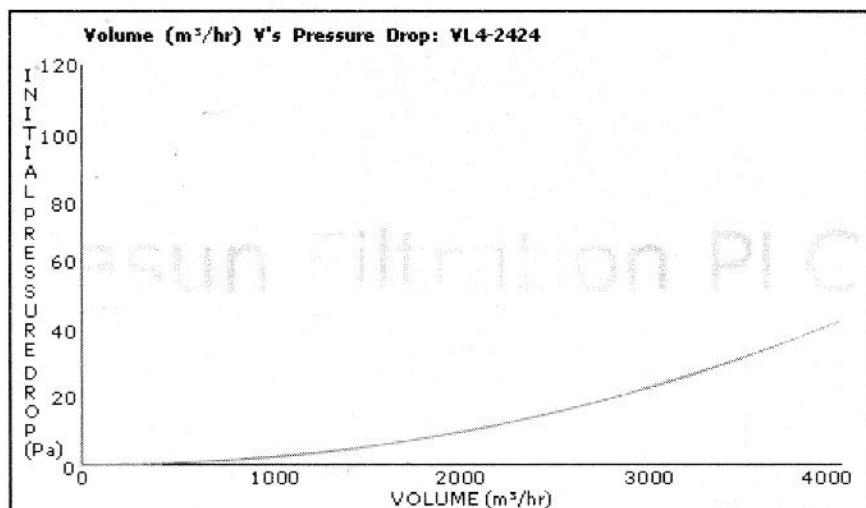
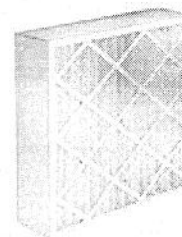
Final Resistance: 1"/25MM: 150Pa 2"/50MM: 150Pa 4"/95MM: 150Pa

Dimensions

Nominal (Inches): 24x24x4

Actual (mm): 594x594x95

Visual



Description/Application

Carbon Cell - Activated carbon disposable cells

Description

Constructed in a V formation, our disposable carbon filters offer very low pressure drops. Our disposable carbon filters are made using a strong galvanised steel frame and granules of activated carbon bonded together to form a carbon panel.

Application

Specification

EU Grade

208EA

Efficiency (>95%)

Capacity

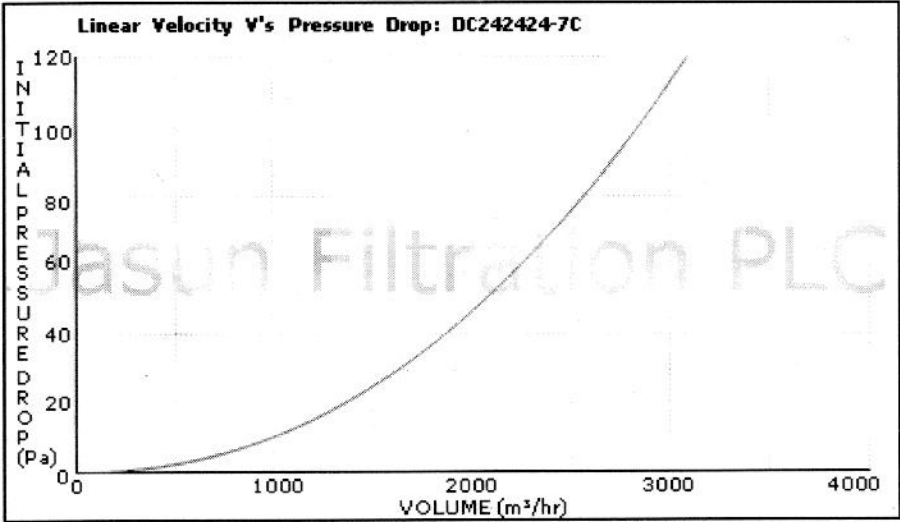
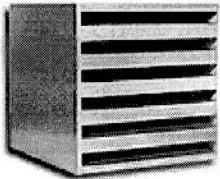
Resistance

Dimensions

Nominal (Inches): 24x24x24

Actual (mm): 594x594x597

Visual



FAN DATA SHEET

FAN DETAILS

Fan Type: Helios Gigabox Insulated Square Centrifugal Fan
Fan Code: GBW 500/4

Size: 670 x 670 x 670 mm overall
Speed: 1330 rev/min
Elec. Supply: 230V 50Hz 1 phase
Motor Rating: 1.7 kW
Motor Current: 7.5 Amp
Breakout Sound: 45 dB(A) at 4m

Air Performance: 2.45 m³/s at free air
1.2 m³/s at 500 Pa

Suitable Controller: TSW 7.5

SILENCER DETAILS

Silencer Type: Rectangular to match GBW 500/4 x 900 long
Silencer Code: SIL500/4
Performance: 10 dB(A) reduction in-duct