

AOM Design

AOM Design Team has the expertise and the experience to support commercial kitchen exhaust design and specification works



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Certificate of Analysis

Tested system & condition:

Efficiency Testing of AOM FILTRAIR™ Technology
1 x AOM hood type HCF-Series (single pass ESP filtration)
Airflow 1215 l/s
3 x AOM honeycomb filters type HS02 495 x 495 mm (405 l/s each) at air velocity of 2m/s.
3 x AOM ESP full cells.
Cooking process type 4 (as per AS 1668.2-2012)

Test Date: 29 May 2014

Requested by: AOM Air & Odour Management Australia

Particle size (volume average, micron):

Exhaust without treatment:	12.71
Exhaust with Honeycomb only:	7.53
Exhaust with Honeycomb & electrostatic precipitators (single pass):	0.74

Detailed size and distribution refer to Fig 1, attached on the next page.

Conclusion:

AOM FILTRAIR™ Technology which includes honeycomb filters and electrostatic precipitators (single pass system) can effectively remove more than 98% of smoke and/or grease particles from commercial kitchen exhaust systems.



ENGINEERING BULLETIN

Reference No: General fire risk to commercial kitchen filtration plants
Date: 01.03.2017
Product Range: All type of filters used in filtration of grease

Introduction

The risk of fires originating from a commercial kitchen exhaust system is important. In the past few years, high profile restaurants have been subject to fires which have been reported in the press as per some of these following examples:

- <http://www.smh.com.au/nsw/porteno-fire-started-in-the-flue-above-the-famed-bbq-pit-investigators-say-20150110-12l9p.html>
- <http://www.dailytelegraph.com.au/news/nsw/fire-rips-through-rockpool-bar-grills-kitchen/news-story/335f0e95b4d8338814757d3a4a014c>
- <http://www.abc.net.au/news/2016-11-11/wool-shed-pub-at-docklands-on-fire/8018410>
- <http://www.gourmettraveller.com.au/restaurants/restaurant-news-features/2016/10/melbournes-rosas-kitchen-has-closed/>

In certain cases, it has been asked of AOM to fully equip a commercial kitchen with high efficiency grease filtration equipment at the pressure of their insurance companies who were prepared to put a halt to their premiums.

The reasons behind the fires are relatively clear and are tied to a build-up of grease in the exhaust hoods and ducting which is highly flammable and an ignition of the grease either through the cooking equipment (flames, sparks) or by electrical contact points (fan).

Risks and requirements of filtration equipment

AOM Australia has stated the need to:

1. Ensure that preliminary grease filtration equipment complies to AS1668.2-2012 section E5 Kitchen Exhaust Hoods Incorporating Grease-Removal Filters. Hoods shall incorporate a device that will impede the process of grease within the airstream in accordance with the following (a) Filter

AOM Australia teams have vast industry experience in commercial kitchen exhaust and filtration projects. We are happy to share this know-how and expertise with Engineers, Contractors and Shop fitters to be able to best select, specify and purchase the right exhaust and filtration equipment.

AOM is able to prepare equipment performance statements allowing for non-compliant discharges using “worst case scenario” efficiency testing (Type 4 cooking style as per AS1668.2-2012). The performance statements are backed by independent research and testing results.

AOM’s website also contains support resources including:

- Independent Testing, Research and Certification Results
- Engineering Bulletins
- Project Examples

AOM Australia together with the University of Sydney has been awarded a CSIRO research grant to review and test a range of kitchen exhaust filtration equipment against the different cooking styles defined in AS1668.2-2012.

This will reinforce the capacity of Engineers to select the appropriate equipment based on the requirements of individual projects.

Key Clients



AOM was specified as the sole supplier of kitchen exhaust and filtration equipment including INTAIR automated systems for all tenancies in the On The Point – Point Fraser redevelopment in Perth. The tenancies are located on a pier over the Swan River, meaning that kitchen exhaust discharge was non-compliant.