



## AOM CERTIFICATE OF PERFORMANCE – HC SERIES HOODS

AOM HC Series Hoods are certified to meet the requirements of a Type 7 proprietary hood as per AS1668.2-2012 Section 3.6 (see attachment).

The basis for *these designs is to lower energy costs by reducing exhaust air requirements.*

AOM HC Series Hood airflows are therefore calculated using the German Guideline VDI 2052 *Ventilation equipment for kitchens.*

**AOM HC Series hood airflows cannot be applied to standard hood as these would not be complaint to AS1668.2-2012.**

AOM has designed the hoods so as to equip them with high efficiency filtration equipment when this is a requirement. The filtration equipment (FILTRAIR) is composed of three filtration steps as follows:

1. Stainless steel honey comb filters which filters the large grease particles.

These filters have been tested and certified to meet AS 1530 Methods for fire test on building materials, components and structures, Part 1 1994: Combustibility test for materials (see attached). These filters met the requirements of UL 1046.

**These filters ensure that the AS1668.2-2015 requirements under section 6.2.9 *Flame and Spark Arrestance are met: devices that prevent the spread of flames in accordance with UL 1046 shall be incorporated into kitchen exhaust hoods (or filtration systems).***

2. Electrostatic filtration which filters the smaller grease and smoke particles.

Electrostatic filters are and proven and widely used filtration method for kitchen exhaust. ASHRAE Systems & Equipment 1996 testing results concluded that "Electronic air cleaners can be highly efficient filters using electrostatic precipitation to remove and collect particulate contaminates such as dusts, smoke, and pollen. The designation electronic air cleaner denotes a precipitator for HVAC air filtration. This type of air cleaner can remove and collect contaminates with an average efficiencies up to 98%, when tested in accordance with ASHRAE Standard 52.1.

3. Ozone generation for subsequent odour control using the AOM ozone generator which is situated outside of the airflow and injects ozone into the exhaust air system.

Independent odour emissions testing of AOM Electrostatic filtration and Ozone injection equipment installed at a McDonald's restaurant by a NATA-Accredited TOU Sydney Laboratory to AS/NZS4323.3:2001 Standard found that the AOM system had:

- A lower limit odour destruction efficiency of 69%
- An upper limit odour destruction efficiency of 86.6%
- A mean odour destruction efficiency of 79.6%

The AOM FILTRAIR system is currently the only in hood system on the market that has been tested and certified by a recognised Australian agency to filter commercial kitchen exhaust. The University of Sydney carried out efficiency

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testing on a Type 4 cooking exhaust as per AS1668.2-2012: *High grease, medium heat producing equipment such as countertop barbecues and gas fired deep fat fryers.*

Results concluded that *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 (see attachment).*

The tests were conducted on a single pass electrostatic filtration setup and concluded that *after the treatment with AOM Australia's combined Honeycomb and electrostatic precipitator filter, almost all smoke and grease particles (>2 micron) have been eliminated from the exhaust.*

Tests were also carried out on a double pass setup (two electrostatic filters in series) and results were situated out of the testing protocol range (range was between 0.5-900 micron).

The laboratory test results have been confirmed by in-situ tests. Independent test were carried out during high volume cooking sessions (lunch) at a heavy type 4 cooking tenancy (gas chargrilling of steaks, meat, burgers, bacon). Particle sampling was undertaken before and after an AOM EAN Series electrostatic precipitators with a face velocity of 2.5 m/s and concluded:

*These results indicate that the kitchen exhaust treatment systems tested are in our opinion capable of achieving an equivalent filtration efficiency of at least 98%. This is assuming regular maintenance is carried out to ensure the systems are operating correctly.*

These independent testing results place AOM Australia at the forefront of kitchen exhaust filtration in Australia and New Zealand. No other kitchen exhaust hood on the market is able to independently certify a filtration efficiency to kitchen exhaust airflows. With the filtration equipment situated within the exhaust canopy, kitchen exhaust emissions are filtered at the source of the contamination.

**It can therefore be stated that when an AOM HC Series hood is installed and when the equipment is serviced and maintained following AOM recommendations, the kitchen exhaust hoods meet the requirements of a kitchen exhaust engineered solution as per AS1668.2-2012 and may allow, on a case per case basis, to achieve horizontal discharge of kitchen exhaust.**

A handwritten signature in black ink, appearing to read 'Sven Bolomey', is written over a horizontal line.

Air and Odour Management Australia  
Sven Bolomey, Managing Director

Note: Defined testing ranges follow typical particle sizes for the exhaust emissions from kitchen exhausts as defined in AIRAH Technical Bulletin 2016: Fire Safety Kitchen Hood Exhaust Systems:

- Smoke: up to 0.5 micron
- Grease steam: 0.5 – 6 micron
- Grease splatter: greater than 6 micron

All test report are available upon request.

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# Certificate of Approval

This certificate confirms that the company below complies with the following standard:

Company Name	<b>Air &amp; Odour Management Australia (AOM)</b>	Client ID	<b>101837</b>
Company Other Name	<b>Technics Security Australia Pty Ltd</b>	Type of Certification	<b>Product Certification; System 5</b>
Certification Standard	<b>AS 1668.2-2012 : The use of ventilation and air-conditioning in buildings - Appendix E Kitchen exhaust hoods – design, construction and installation</b>		
Certification Review Date	<b>29/01/2013</b>	Certification Expiry Date	<b>29/01/2018</b>
Certificate Issue Date	<b>14/10/2013</b>	Certificate Last Update Date	<b>8/10/2013</b>

**APPROVED COMPANY/SITE ADDRESS(ES):**

**22/54 Beach Street Kogarah 2217 NSW Australia**

This certification remains valid until the above mentioned expiry date and subject to the organisation's continued compliance with the certification standard, and Global-Mark's Terms and Conditions. This Certificate of Approval remains the property of Global-Mark Pty Ltd, Company Number: ACN.108-087-654.



**Certification Manager**



Model(s) on which the Global-Mark logo may be applied by the certificate holder as a declaration of compliance by the certificate holder:

Model Identification	Model Name	Brand Name	Product Description/ Attributes	Date Approved
HCES	HCES	AOM	Proprietary type7 Exhaust hood with or without supply air plenum	8/10/2013
HCOS	HCOS	AOM	Proprietary type7 exhaust hood with ozone generator and with or without supply air plenum	8/10/2013
HCFS	HCFS	AOM	Proprietary type7 exhaust hood with electrostatic filters and with or without supply air plenum	8/10/2013
HCFOS	HCFOS	AOM	Proprietary type7 exhaust hood with electrostatic filters, ozone generators and with or without supply air plenum	8/10/2013
HCFDS	HCFDS	AOM	Proprietary type7 exhaust hood with electrostatic filters (double pass) with or without air supply plenum	8/10/2013
HCFIS	HCFIS	AOM	Proprietary type7 island exhaust hood with electrostatic filters and with or without air supply plenum	8/10/2013
HCD	HCD	AOM	Proprietary type7 dishwasher hood	8/10/2013

**Comments:**

HC series of proprietary type 7 exhaust hoods.

Models: HCES, HCOS, HCFS, HCFOS, HFDS, HCFIS, HCD incorporating filters AOM - Part number HS01, HS02, HS03 or HS04.

**Conditions:**

1. Each appliance design must be approved and certified by the manufacturer in accordance with the AOM procedures,
2. Each appliance must be type tested by the manufacturer in accordance with the AOM procedures,
3. Must be installed and commissioned in accordance with AOM Installation Instructions dated 01/10/2013 by AOM trained and approved agents.

**End of the document**



**Certification Manager**

