

À la carte

Italian "fast food"

In the centre of Milan near Corso Magenta and the "Fashion district" which is the location of Armani, Valentino, Versace and all the other famous designers, an excellent Halton hood installation is working for improved indoor air quality...

The project was a challenge for kitchen ventilation design! A fireplace to prepare chicken and a variety of meats is the leitmotif of this Italian "fast food" where no food is pre-cooked and everything is prepared in front of the customer in order to offer high quality meals without losing the traditional touch.

The main project specifications were designed and managed by Ariatta Engineering, a Milan-based Consultancy Company. A few of the most challenging aspects comprise: the high loads generated by burned wood and radiant steel plates around the spit; the cooking area completely open to the dining area where the air conditioning is provided; clean exhaust air to avoid grease deposits and odour on the roof in a very densely populated area...

Everything is working well! The high filter efficiency is guaranteed by Halton KSA multicyclone extractors. Additional mesh filters in the exhaust spigot stop the greatest particles from the burned wood. Furthermore, a frequency converter limits the exhaust airflow during the fire ignition in order to avoid large flames. The Halton team, who followed this project from the outset through to the restaurant opening, wanted to explore the possibility of accurately measuring the exhaust airflow of the hoods and regulate it with dampers.

Especially for the VIP's, Spiedo has reserved a small lounge comprising a few seats with a great view of the kitchen where more Halton Capture Jet hoods make life easier for the chefs. The hoods ensure the maintenance of the perfect temperature in the kitchen and it would appear that they work as the perfect scenery too!

Giovanni Pettener
Soltec Srl

Events

The brand-new Halton Foodservice Training Centre

Halton Foodservice is delighted to present to its customers and partners the brand-new Foodservice Training Centre located at the Halton France headquarters, Béthune.

The Training Centre has been built for Halton partners to acquire knowledge on Professional Kitchen Ventilation design and solutions. The



kitchen equipment and Ventilation systems installed in the Centre enable the visualisation of the Capture Jet technologies and the capture efficiency as well as the real-life tests for comfortable Indoor Air for Foodservice Facilities. The latest innovations of the Kitchen Ventilation – Capture Ray system, Down Draft unit, Capture Bar... - can also be tested in the Centre.

If you need to solve your Kitchen Ventilation problems, please contact Halton Foodservice; our mission is to help you improve the effectiveness of your operations by using Indoor Air technology!



Next Issue

- Reasonable capture and containment efficiency
- Hidden loss of Productivity



Exhibitions

Halton participated to SODEX 5-9 May 2004 in Istanbul, Turkey. Halton team thank the customers for their interest in Demand Based Indoors and Ventilated Ceiling Technology conferences hold during the show.



Editorial information

A LA CARTE Halton Foodservice Customer Magazine
Editor in Chief: Olli Sipilä
Technoparc Futura, B.P. 102
62400 Béthune, France
Tel: + 33 321645500 Fax: + 33 321645510
olli.sipila@halton.com
Editorial Team: Rick Bagwell, Steffen Böhm, Rich Catan, Georges Gaspar, Risto Kosonen, Andrey Livchak, Heli Lobel, Derek Schrock, Jeff Simpson, Rabah Ziane
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Halton Foodservice Contact Persons

Baltic countries: Jüri Russe, Tel: +358 98254000
juri.russe@halton.com
Belgium: Etienne Poncelet, Tel: +32 16400610
etienne.poncelet@halton.be
Denmark: Jan Ovesen, Tel: +45 86922855 jo@halton.dk
Finland: Harri Huhtamäki, Tel: +358 98254000
harri.huhtamaki@halton.com
France: Denis Girard, Tel: +33 145158000
denis.girard@halton.com
Germany: Steffen Böhm, Tel: +49 3067894507 steffen.boehm@planet-interkom.de
Malaysia : Georges Gaspar, Tel : +603 3176 39 60
georges.gaspar@halton.com.my
Norway: Knut Olav Knudsen, Tel: +47 23266300
knutolav.knudsen@halton.com
Poland: Tomasz Palka, Tel: +48 226728581
tomasz.palka@halton.com
Sweden: Magnus Lindholm, Tel: +46 84463900
magnus.lindholm@halton.com
The Netherlands: Piet Bouma, Tel: +31 306007060
piet.bouma@halton.nl
U.K.: Jeff Simpson, Tel: +44 1376507000
jeff.simpson@halton.com
USA: Rick Bagwell, Tel: +1 2702375600
rbagwell@haltoncompany.com
Other countries: Petri Juosila, Tel: +358 5740211
petri.juosila@halton.com



Inside this Issue :

- High efficient filtration – better hygiene in the kitchen
- Marriott International : The hotel chain that is creating a new concept
- Open Kitchens – An innovative approach and innovative ventilation solutions

From The President's Desk

Fat free !

"Fat free" is the goal of most dieters. Yet most cooking includes some sort of oil and fat and unfortunately we cannot keep the exhaust duct "fat free". Mechanical extractors are only able to capture the largest grease particles due to the limitations of inertial separation of grease from the air stream. Grease in vapour form is not extracted at all due to its low mass. This smaller grease particles and vapour will accumulate in the duct work and extract system.

Grease that accumulates in the hood plenum, ductwork, fan or on the roof causes major problems for a foodservice operation. Hygiene is compromised, the risk of fire is increased and damage to the fan and the roof can also occur. Cleaning the exhaust system is an expensive exercise and can even be neglected completely.

The Halton Capture Jet concept was developed from the very beginning with the grease extraction efficiency in mind. We developed the most efficient mechanical grease extractors (KSA) on the market to minimize these problems. The Capture Jet is now also available with ultraviolet technology (Halton Capture Ray). This technology converts grease to an inert fine powder and the duct work and fans grease free, or as we dieters like to say "FAT FREE"!

Halton technology helps with your exhaust system but for your own fat free diet there is no short cut.

Fat free greetings,
Olli Sipilä
President Halton Foodservice

Customer's Voice

Marriott International: the hotel chain that is creating a new concept

It is quite common nowadays for the kitchen to form an integral part of the restaurant dining area. Cooking is no longer something done behind closed doors, but takes place in front of customers, almost like a show. Equipment and ventilation systems have to meet new requirements to prevent excessive heat and cooking smells from migrating into the restaurant dining area while at the same time improving comfort in both areas.

The West-India-Quay project introduces a new cooking concept in London! Designed for the Marriott International hotel chain by the British consultant, Cini-Little, in close collaboration with Halton Foodservice, this is a new concept comprising an open kitchen with a barbecue grill at the self-service counter (cooking demonstration).

To satisfy the wishes of the project architect, the kitchen layout precluded the installation of an exhaust hood in the ceiling for aesthetic reasons.

By taking these aspects into account and working closely with the consultant and the end customer, Halton Foodservice developed a down flow unit that extracts the polluted air through the lower part of the equipment. Based on the effectiveness of the Capture Jet system, KSA multi-cyclone filters and Halton's Capture Bar system, the new extraction system ensures maximum comfort for customers and kitchen staff. The London Marriot International opening is planned for spring 2004.

Rabah Ziane
System Expert
Halton Foodservice

Consultant : Andrew Mc Millan - Cini Little
Marriott: Pieter Mooy, Regional Vice president, Engineering,
Jean-Paul Nel, Regional Vice president, Operations
Project Management: Halton Products Ltd

What's new ?

Open kitchens – An innovative approach and innovative ventilation solutions

Indoor air quality is a determining factor in the comfort and productivity of staff as well as on the well-being of customers and their tendency to relax over a pleasant dinner.

A ventilated ceiling provides an alternative ventilation solution in an open kitchen where the aesthetic aspect is important, ceiling height is limited and where thermal loads are relatively low. To complement this solution and to meet the requirements for extracting pollutants and thermal loads produced by a powerful grill or hotplate located in a restaurant dining area, Halton Foodservice developed a new ventilation system that ensures improved comfort for diners and staff alike by reducing their exposure to impurities.

The efficiency of this new down flow unit is based on three unique Halton technologies:

- 1) Capture Jet technology
- 2) highly efficient grease filtration using KSA multi-cyclone filters, and
- 3) the Capture Bar system.

Highly efficient filtration

An efficient extraction system is the key to a pleasant environment. The new down flow unit is composed of an air extraction system fitted with mechanical KSA grease filters located round the edges of the grill.

The unique design of the KSA filter enables the grease to be separated from the air by centrifugation. The extraction efficiency rate is 95% of grease particles of 10 microns and over. With its many individual spiral chambers, the KSA filter has a very large open surface area compared to traditional grease filters. This incurs less pressure loss, thus reducing the energy requirements of extractor fans and the noise pollution created by extraction.

Polluted air is extracted through the lower part of the down flow unit, through the base. Grease is collected in a container underneath the extraction unit. Thermal insulation of the outer casing of the extraction unit reduces convection and thus contributes to improved comfort levels.

Capture Jet technology

A gentle flow of air introduced at high speed into the central part of the extraction unit is blown in the direction of the grease filters in the form of Capture Jets. These sweep the thermal loads and pollutants towards the extractor. The Capture Jets maintain extraction efficiency irrespective of environmental turbulence and prevent the increase of pollutants and excess heat in the area concerned. They cool the equipment and thus reduce radiated heat.



Capture Bar system

The Capture Bar system operates by means of an air curtain and a fresh air supply unit integrated into the apparatus. A jet of air blowing through the upper surface of the grill forms a curtain of air that prevents smoke and smells penetrating the occupied area by directing them towards the extractor.



FCSI Asia-Pacific Chapter: Halton is Dragon Sponsor!

This year the FCSI Asia-Pacific chapter was held in Singapore during the FHA 2004 (Food and Hotel Asia) exhibition. The theme of one of the conferences was Air and Water. In relation to that theme, Tim Smallwood, Director of FCA (Foodservice Consultant Australia) and chair of the FCSI Asia-Pacific kindly asked Halton to present the benefits of the UVC technology applied to kitchen ventilation.

It was with great pleasure that Halton introduced its latest development in this area with its Capture Ray system combined with the Capture Jet technology and the high efficiency KSA filter. It looks like this presentation attracted a lot of interest.

The Asian cooking process often generates a lot of problems as far as ventilation, grease, fire hazards, cooking odours and hygiene are concerned and these problems can be addressed using the Halton Capture Ray system. The audience comprised almost 100 people including foodservice consultants, Hotel and restaurant owners, foodservice contractors and other foodservice related business companies.

As already carried out by Halton in the USA and Europe, Halton Malaysia decided to be a sponsor too for the first time in order to support the actions of FCSI in the Asia-Pacific area.

Besides the USA and Europe, Halton is now one of the leading kitchen ventilation manufacturers in the Asia-Pacific area with a list of more than 200 prestigious references within the hotel and flight catering industry.

Georges Gaspar
General Manager Halton Malaysia

Did you know that...?

Highly efficient filtration – better hygiene in the kitchen

The role of an extraction system is to ensure the efficient extraction of heat emissions and pollutants generated by cooking equipment.

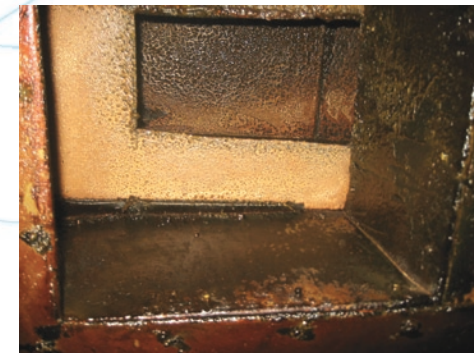
Once trapped, these pollutants must be removed. They must undergo one or several filtration stages depending on the level of cleanliness desired in relation to the level of emissions. This latter relates directly to environmental protection and neighbourhood concerns and, of course, to current regulations.

The aim of the filtration process is to extract the maximum number of grease particles to prevent their accumulating in the extraction ducts, the fan and the surrounding roof area. Accumulated grease creates an environment conducive to the growth of bacteria and other moulds, and increases the risk of a fire spreading in the kitchen. It is therefore strongly advisable to choose grease filters for hoods on the basis of their effectiveness.

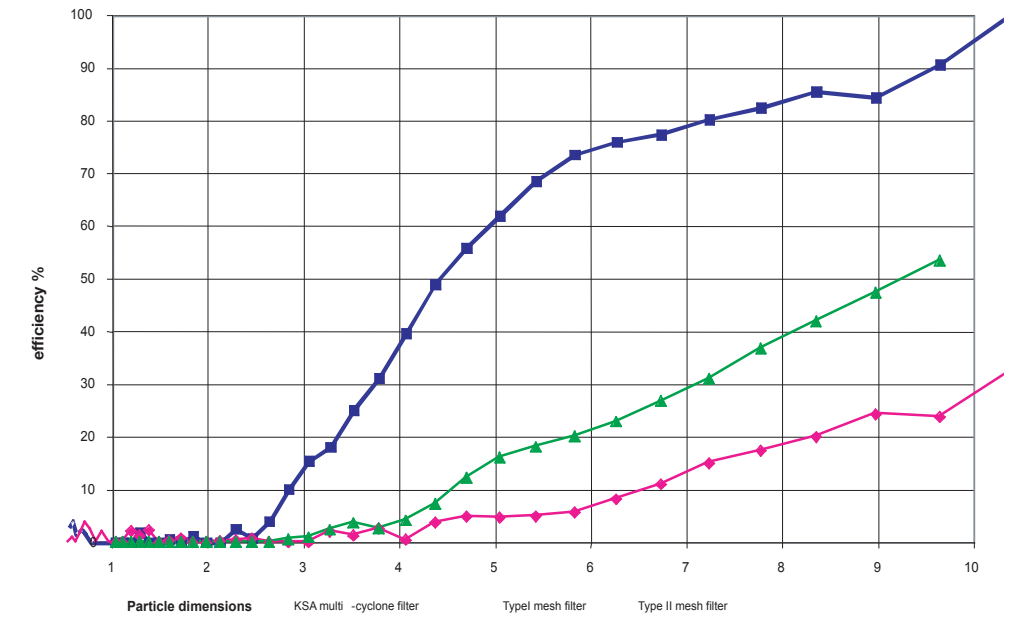
There are different types of filter on the market at present. A recent comparative study (VTI; according to VDI standard 2052) demonstrated that the so-called "cyclone" filters are up to twice as effective as the so-called baffle filters.

Most grease filters are not or not very effective on small size particles (less than 5 microns). In terms of making valid comparisons, it is therefore important to define filtration efficiency in relation to particle size.

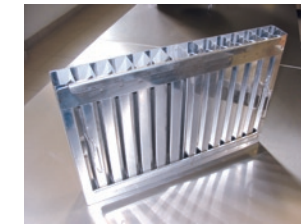
Moreover, it is important to clean the filters and the hood extraction chamber regularly. In fact, the cleaner the filters, the more effective they are. Some manufacturers have developed automatic water wash systems designed to wash the filters using pressurized hot water and detergent. Washing and rinsing cycles can be programmed from an electronic control cabinet. An "automated" filter washing system enables



Grease deposits in the ducts of a ventilation system where filtration is inefficient.



Grease particles ≥ 5 microns, eliminated by the multi-cyclone filter Air flow 540 m³/h



KSA multi-cyclone filter



Type 1 baffle filter



Type 2 baffle filter

kitchen staff to devote their time to their individual jobs, while at the same time they can be sure that the filters are clean.

An extraction system with automatic filter wash does not of itself provide an effective solution to the accumulation of grease in the ducts and the fan. Grease produced during the cooking of food actually takes two forms: solid, in the form of particles which are partially trapped in the grease filter, and gaseous, in the form of grease vapour which cannot be trapped in any filter. The ratio of particles to grease vapour varies considerably according to the type of food being cooked, the type of fat used, cooking methods and the type of equipment used.



Interior of a hood fitted with KSA filters 18 months after installation.

Grease vapour then cools as it passes through the extraction system, and, by solidifying, it contributes in large part to the clogging up of the extraction ducts and the fan.

Nowadays there are several techniques designed to eliminate this grease vapour and the small size particles not trapped by filters. One of them merits particular attention on account of its innovative nature, namely the so-called "ultra-violet" technology recently awarded a prize at the last Equip'hotel exhibition (APRIA prize, Halton). The technology consists in subjecting the polluted air to ultra-violet rays, more precisely UVC rays.

Hygienic kitchen ventilation is not as simple as it seems. An air-conditioned kitchen, with highly efficient Capture Jet hoods with multi-cyclone filters, a low volume air diffuser, an automatic water wash system and perhaps an ultra-violet system would undoubtedly provide better results in terms of hygiene and the comfort of the occupants, both of which often go hand in hand, while also addressing the environmental protection aspect.

Georges Gaspar
General Manager
Halton Manufacturing Sdn. Bhd.