

KSR-M

Capture Jet™ low proximity hood

◦ Special fryers ◦ Freestanding model ◦ Capture Jet™ technology ◦ KSA aerosol separators ◦ Halton Skyline LED Lighting ◦ Integrated power supplies ◦ Optional flat-packed delivery



Product certification(s)



Components certification(s)



Main technologies and options



Capture Jet™ technology
Up to 48% reduction in exhaust airflow thanks to a better capture efficiency



KSA aerosol separators
Up to 95% efficient on 10 microns particles



HCL Halton Skyline
Daylight similar LED Culinary Lighting and human centric



Integrated power supplies
Sockets for electrical cooking appliances



Option for decarbonized stainless steel
An ecological and sustainable choice

Recommended combinations



Further increase the energy savings and improve staff's comfort <> Go for M.A.R.V.E.L. airflow and energy optimization technology



Don't risk bankrupt or business downtimes because of a cooking fire <> Go for FSS Fire Suppression System pre-installed from factory



Get peace of mind by adding one fire prevention layer <> Go for the Halton FireWatch and detect conditions favorable to cooking fires before it occurs



Optimize the ductwork cleaning costs and further improve your safety <> Go for KGS grease deposition level monitoring system for ductwork



Applications

Halton Capture Jet™ hoods and ventilated ceilings are all suitable for [LEED](#) (1), [BREEAM](#) (2), [DGNB](#) (3), [RE2020](#) (4) etc. projects, particularly when combined with M.A.R.V.E.L. airflow and energy optimization technology..

KSR hoods are ideally suitable for frying and grilling hubs equipped with medium-duty electric appliances. They are therefore more typically used for Ghost Kitchens or Quick Service Restaurants.

Description

The **Capture Jet™** technology enables significant reductions in airflow rates leading to savings on construction costs, mainly due to the reduced size of ducts and HVAC equipment. It typically pays for itself upon the startup of the kitchen or within few months. The energy savings it generates then directly contribute to an increase in profitability, while the staff benefits from improved working conditions.

KSR hoods are installed closer to the cooking appliances; The smoke, steam, and heat released are then captured more efficiently. The **Capture Jets** combined with a capture "at closest from the source" reduce the exhaust airflow rates to the lowest possible level.

KSR-M has on the back a services distribution unit that integrates the cooking appliances' power supplies. It can be delivered flat-packed for assembly on site when challenging access conditions.

Considerable energy savings

- The **Capture Jet™ technology** allows for up to a 48% reduction in exhaust airflow rates.
- The combination with M.A.R.V.E.L. airflow and energy optimization technology allows for reducing the exhaust volumes by up to an additional 44% on top of that of the **Capture Jet™** resulting in up to a **64%** total reduction.
- The energy savings on heating/cooling the makeup air then become massive (less air out, less air in!).

- The reduction of the draft risk and noise levels improves the working conditions for the staff.

Improved safety and maintenance savings

- KSA cyclonic aerosol separators constructed of stainless steel in compliance with EN 16282-6. They are up to 95% efficient on 10 microns particles or larger. Also certified UL 1046, NSF, and LPS 1263.
- KSA aerosol separators efficiently slow down the build-up of grease deposits in the exhaust plenums and ductwork that could otherwise constitute a serious hygiene and fire safety hazard. It also results in savings on the ductwork cleaning cost.

Other features and benefits

- Construction compliant with NF EN 16282-2 (5).
- Minimum space used. Integrated self-supporting structure.
- Integrated fan for the **Capture Jet™** technology. No additional duct is required.
- Capture Jets are automatically switched off when the hood is not used or operates at a minimum airflow.
- **Halton Skyline** (HCL) LED culinary light provides the best visual comfort while contributing to further improve safety and energy savings.
- When extended to the whole kitchen and surrounding areas, the Human Centric version of **Halton Skyline** (HCL) directly contributes to chefs' and their teams wellbeing.
- Exhaust airflow rates are determined using an EN 16282-1 based calculation method, which takes into account the loads of the cooking or dishwashing equipment, the makeup air strategy, the configuration of the hoods or ventilated ceilings, and their capture and containment efficiency.
- Capture and containment efficiency tested in accordance with the ASTM 1704 standard.
- Optional flat pack delivery to make transportation and handling easier, while remaining easy and quick to assemble on site.
- Services distribution on the back of the hood equipped with the electric plugs for the cooking appliances.
- Quick and easy commissioning. Hoods delivered "ready to install", with all accessories included, such as light fitting, T.A.B.™ airflow measurement taps, and dampers for quick balancing on-site.
- Sturdier and easier to clean (less parts and fewer joints). Stainless steel construction.

(1) LEED - Leadership in Energy and Environmental Design (2) BREEAM - Building Research Establishment Environmental Assessment Method (3) DGNB - German Sustainable Building Council (4) RE2020 - French Environmental Regulation 2020 (5) NF EN 16282-2 Equipment for commercial kitchens - Components for ventilation in commercial kitchens - Part 2 : kitchen ventilation hoods - Design and safety requirements (6) HACCP - Hazard Analysis Critical Control Point



Capture Jet™ technology

◦ High capture efficiency ◦ Energy savings



The *Capture Jet™* technology enables significant reductions in airflow rates leading to savings on construction costs, mainly due to the reduced size of ducts and HVAC equipment. It typically pays for itself upon the startup of the kitchen or within few months. The energy savings it generates then directly contribute to an increase in profitability, while the staff benefits from improved working conditions.

Benefits

- The *Capture Jet™* technology allows for up to a 48% reduction in exhaust airflow rates.
- No specific duct required for the Capture Jets. In addition to the reduction of the ducts and HVAC systems size, it reduces installation cost and the CapEx.
- It generates important energy savings on cooling/heating the makeup air (less air out, less air in!).
- The reduction of the draft risk and noise levels improves the working conditions for the staff.

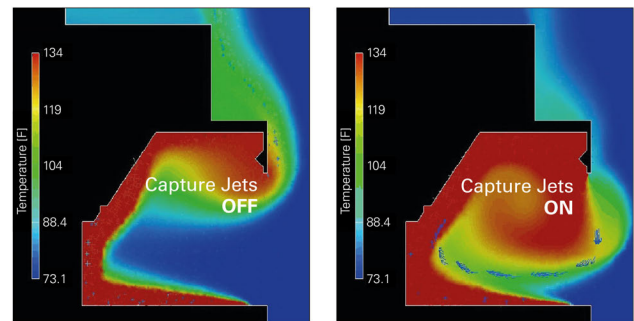
How does it work?

The Capture Jet™ technology is based on the use of one or several sets of aerodynamic nozzles, supplied with an extremely low airflow.

These nozzles form one or several air curtains. Carefully located and oriented, they prevent the grease, steam, smoke and heat etc. released by the cooking appliances from escaping and orient them toward the filters. It is this capture efficiency improvement that enables the ventilation volumes.

KSR-M hoods are equipped with single nozzles on the front.

KSR hoods are installed closer to the cooking appliances; The smoke, steam, and heat released are then captured more efficiently. The *Capture Jets* combined with a capture "at closest from the source" reduce the exhaust airflow rates to the lowest possible level.



Digital simulation on Capture Jets' efficiency. With Jets ON, the heat, smoke and steam do not escape from the hood containment volume.



KSA aerosol separator

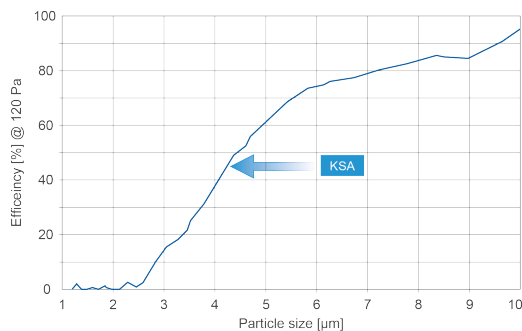
◦ Cyclonic effect ◦ Reduced cleaning costs ◦ Improved safety



KSA cyclonic aerosol separators efficiency limits grease and particles deposition inside the exhaust plenums of Halton's hood and ventilated ceilings and in the ductwork. They are a cost effective solution to reduce the duct cleaning costs while directly contributing to a better hygiene and fire safety.

Benefits

- KSA cyclonic aerosol separators constructed of stainless steel in compliance with EN 16282-6. Up to 95% efficient on 10 microns particles or larger with a reasonable pressure loss of 120 Pa.



Tests on KSA aerosol separators' efficiency carried out on a Halton hood exhaust plenum by VTT laboratory, according to VDI 2052 (part 1).

- KSA separators' flame-behaviour also complies with UL 1046 and LPS 1263 standards. They also have NSF (National Sanitation Foundation) hygienic and safe approval.
- Improved hygiene and fire safety thanks to fewer grease deposits in the ducts.
- Lower maintenance costs due to reduced cleaning frequency.
- Reduced noise levels and fans' energy consumption thanks to the low pressure loss compared to baffle filters.
- Improves the performance of UV-C Capture Ray™ technology due to its high extraction rate.

How does it work?

KSA cyclonic filters are composed of vertical honeycomb profiles, opened only at top and bottom part. This design forces the air to swirl in a similar way as a cyclone when the air goes up and down inside to escape.

The centrifugal effect is impactful, and continuous – a mechanism that traditional baffle filters do not have. Particles are thus projected against the honeycomb walls, resulting in better separation performance.



Visualization of the cyclonic effect inside the KSA aerosol separator's profiles (Schlieren test).

Halton Skyline

◦ Culinary and Human Centric light



Halton Skyline is the first LED lighting technology specifically developed for the needs of commercial kitchens, starting with staff's comfort. The light it provides is the closest possible to natural light thus offering many tangible benefits.

How does it work?

Halton Skyline is based on the use of two types of light sources, both equipped with the latest generation of highly efficient LEDs.

A broad beam spot (4000K - CRI of 83) - It is designed to provide a uniform and bright general lighting. For the most advanced Human Centric version, it is equipped with two sets of LEDs to make the color temperature varying from 2200 to 6500K. This enables creating daylight-similar sequences to offer lighting conditions that are Circadian rhythm-friendly, with

recognized biological and psychological benefits for the staff.

A focussed beam spot (2800K - CRI of 95) - It is used to further improve the lighting level and the color render of the food in strategic locations, above cutting machines or griddles for instance, or even the plating presentation area.

Halton Capture Jet™ hoods' light fittings are equipped with Halton Skyline broad beam spots (4000K colour temperature).

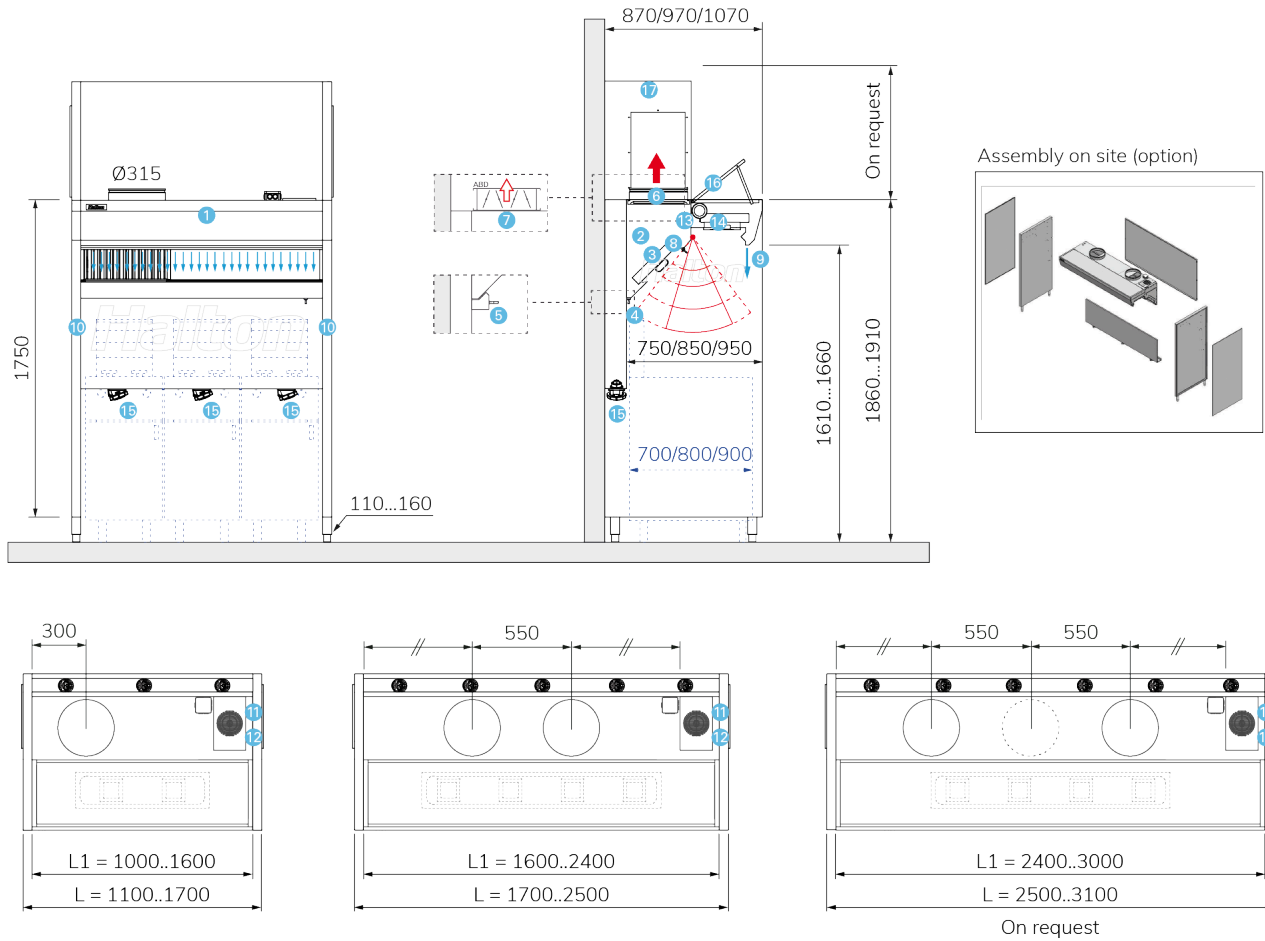
Benefits

- Very good illuminance levels and uniform light, with a good balance between the direct and diffuse components.
- Remarkably respects the natural food color and texture.
- Improved safety and best visual comfort, without alteration over time.
- Consumes up to 2,8 times less than fluorescent tubes while having a luminous efficacy of 120 lm/W.
- 50,000 hours lifetime for both the LEDs and the drivers.
- Saves the replacement of up to 125% of the fluorescent tubes, adding significant maintenance savings to the energy savings.

Integrated in Halton's suspended metal ceilings or thanks to standalone modules, Halton Skyline can be extended to the whole kitchen and beyond. It then opens the way to the most advanced and Human Centric lighting global solution.



Construction and dimensions

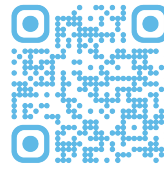
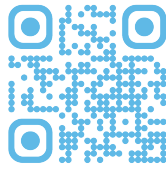


1. Visible outer envelope in stainless steel AISI 304 (1,0 mm).
2. Exhaust plenum.
3. KSA aerosol separators.
4. Condensates drain.
5. Collection tray as an option.
6. Exhaust connection(s) and sliding damper(s).
7. When the kitchen is equipped with M.A.R.V.E.L. airflow and energy optimization technology (MRV), the sliding damper is replaced by ABD automated balancing slim damper.
8. T.A.B.™ (Testing And Balancing) pressure port(s) for quick airflow calculation during ductwork balancing operations.
9. Front Capture Jet™ nozzles.
10. Double skin sides.


11. Integrated Capture Jet™ fan.
12. Capture Jet™ fan air inlet.
13. Halton Thermal Imaging sensor (used for the optional M.A.R.V.E.L. or FireWatch technologies). *
14. Halton Skyline LED culinary LED light fitting integrated on a flush-mounted access hatch.
15. Services distribution module equipped with electric plugs.
16. Maintenance access hatch.
17. [Option] stainless steel cover board with access hatches.


* M.A.R.V.E.L. or FireWatch options require controllers that are typically installed on the top of the light fittings.

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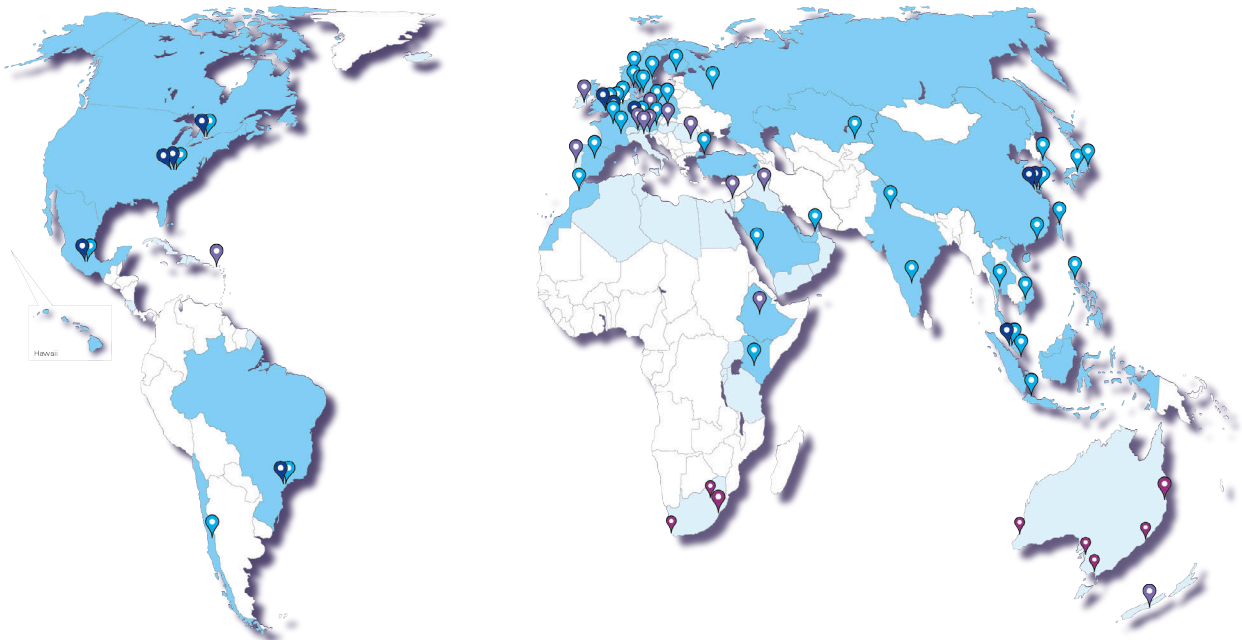
Halton Manufacturing and Sales Facilities in the world

 Sales and service centers

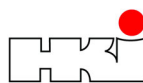
 Representatives

 Factories

 Manufacturing licences



Halton Foodservice partnerships



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