

Food Processing Industries' Ventilation

Ask for the technology leader
in the ventilation of large scale
kitchens



From Emissions Control to Hygiene and Teams' Wellbeing, Halton has the Solutions!

Food processing facilities have the most specific and unique cooking equipment out of the food industry, and this sector would appear to have little in common with commercial kitchens.

And yet, the parallels with commercial kitchens and the expertise and deep understanding Halton has developed in over 50 years in ventilation in general, and in large scale kitchens in particular, have contributed to providing unique solutions for food industry processes.



Typical Challenges

Food industries' manufacturing processes are characterized by atypical cooking equipment for both their size and capacity, their power requirements. They are typically custom designed and often without clear ventilation specifications.

These processes are also often based on a unique type of cooking, with strong use simultaneity but variable operating paces.

What sets these processes apart?

- They generate significant loads of heat, mixed with as large volumes of smoke, steam and grease.
- Due to the cooking equipment physical size, especially their height, and lifting mechanisms or conveyors, the exhaust systems are often installed higher.
- The relationship of the size and location of the ventilation system makes it more challenging to efficiently remove the pollutants.
- They Generally require modification of the shape and dimension of the system.
- Hygiene is a critical factor in emissions when the food processing facility operates near residential neighborhoods.
- Thermal, visual and acoustic comfort of the production teams, and in general the Indoor Environment Quality, is most of the time a real challenge.



Expertise and the ability to manufacture unique solutions are at the heart of our innovations in ventilation

INNOVATION

Food processing projects are as unique as the food they produce and require calculation methods that are not just extrapolating traditional commercial kitchens exhaust airflow rates. A keen understanding of how the air behaves and how the thermal plumes expand from the equipment is required to provide the right airflow recommendations.

In addition, the selection of the exhaust system design, installation provisions, and its dimensions are critical to a successful operation. The supply must be carefully considered so drafts do not degrade the working conditions or the final exhaust efficiency.

EXPERTISE

The critical points in the food processing field are **Innovation, Expertise, and Customization** and those elements are all part of Halton's DNA.

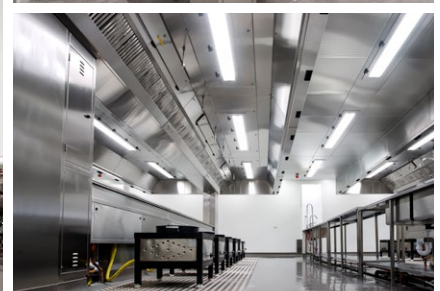
CUSTOMIZATION

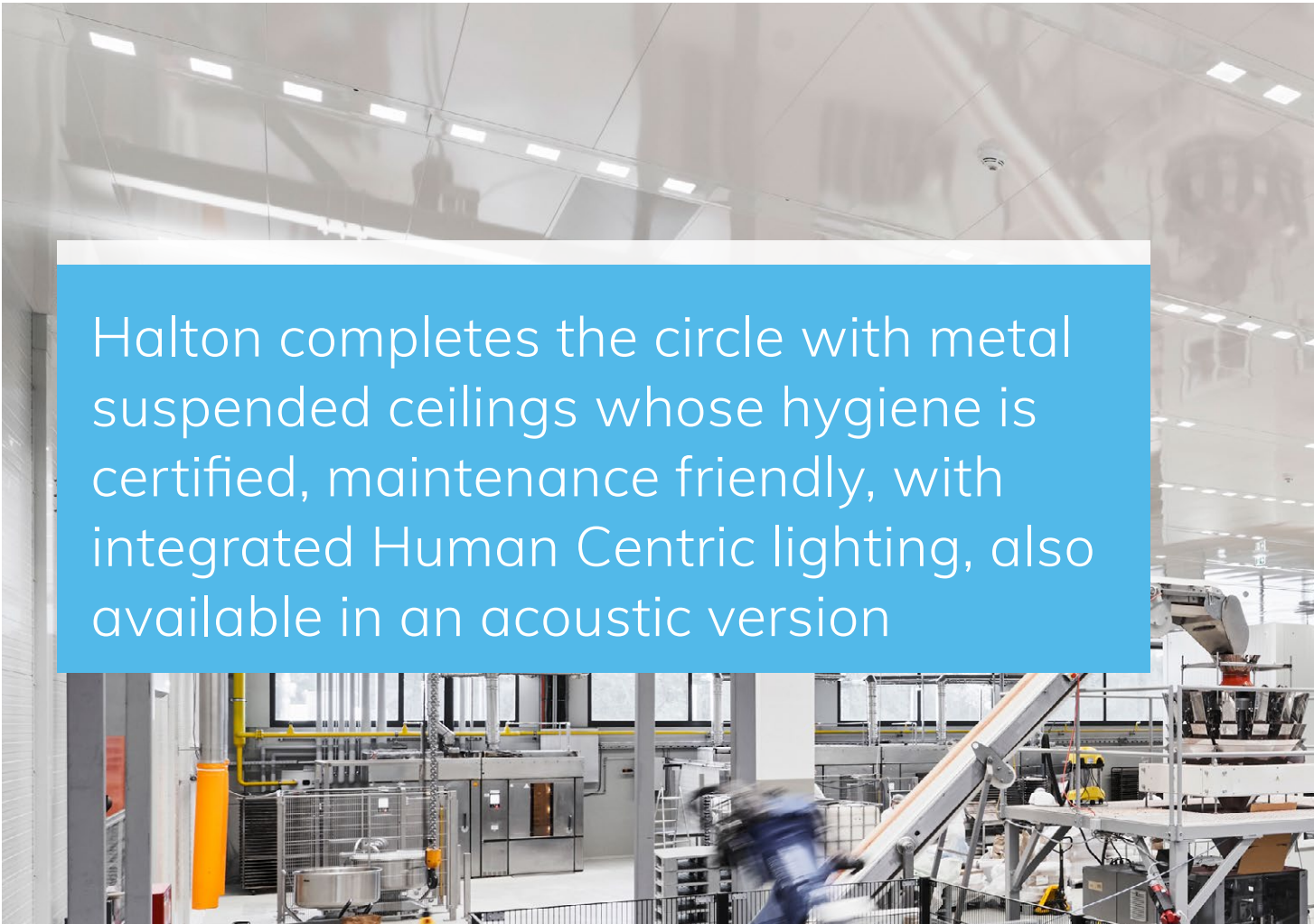
- Halton has innovative technologies that have proven their efficiency in commercial kitchen ventilation.
- Halton can adapt its innovations and customize its products to address food processing challenges.
- Halton has 50 years of expertise in cooking processes and innovative kitchen ventilation solutions.
- Halton has 8 Innovation Hubs, and advanced R&D means to carry out tests if projects need it.



Halton provides ventilation solutions that fulfill your processes' requirements

- Products and solutions HACCP certified.
- Heat load based calculation tools for the exhaust airflow rates.
- M.A.R.V.E.L. airflow optimization technology address the variability of the needs for specific processes.
- Significant energy savings on air conditioning.
- Solutions for the neutralization of the grease and odors released by the cooking appliances which allows the use of sustainable heat recovery.
- Low velocity supply air solutions for a better thermal comfort and working conditions.
- Global packages including air handling units.
- Maintenance friendly solutions.
- Remote monitoring and smart services, enabling delivering the lowest failure rate and lowering the maintenance cost.





Halton completes the circle with metal suspended ceilings whose hygiene is certified, maintenance friendly, with integrated Human Centric lighting, also available in an acoustic version



Hygiene extended to the whole manufacturing spaces' ceilings

Halton has such experience in manufacturing ventilated ceilings, that we logically designed a hygienic suspended metal ceiling as a perfect extension of the ventilation solutions, with the strongest stability, maintenance and cleaning requirements.

Halton's hygienic ceiling first significantly limits the build-up of contaminants on its surface. It facilitates regular cleaning operations without being a source of contaminants. The paint has been carefully selected to get a high mechanical, chemical and biological resistance, to not release particles, gas, or favor the proliferation of fungi or bacteria. All this is certified by a third party.

It also allows for easy access to the ceiling void for maintenance.



Quality control combined with the best visual and acoustic comfort

Halton Skyline is a LED technology specifically developed for commercial kitchens. To name just a few of its benefits, it respects the color and texture of the raw ingredients or food being processed. It also provides high lighting levels, without dazzling the team's to help in the quality control of the final products or cleaning operations. Its Human Centric version dramatically improves the teams' Wellbeing.

As with any other component integrated in Halton's hygienic ceiling, Skyline light fittings are mounted flush for more efficient cleaning.

To improve significantly the acoustic comfort and speech intelligibility, Halton's hygienic ceiling can be equipped with detergent resistant acoustic panels.

Comprehensive solutions that add value to your industries manufacturing processes

1 Hygiene and safe operation thanks to highly efficient supply and exhaust solutions

Halton has solutions to prepare and diffuse the most hygienic fresh air in the processing areas. This directly contributes to not degrading the cooking quality, to improving the equipment's output and the working conditions of the production teams.

Our extract solutions efficiently remove the high loads of heat, grease, smoke and steam released by all processes. This mitigates hygiene and safety risks due to condensation or to particles falling back on the floors, the equipment or the foodstuffs.

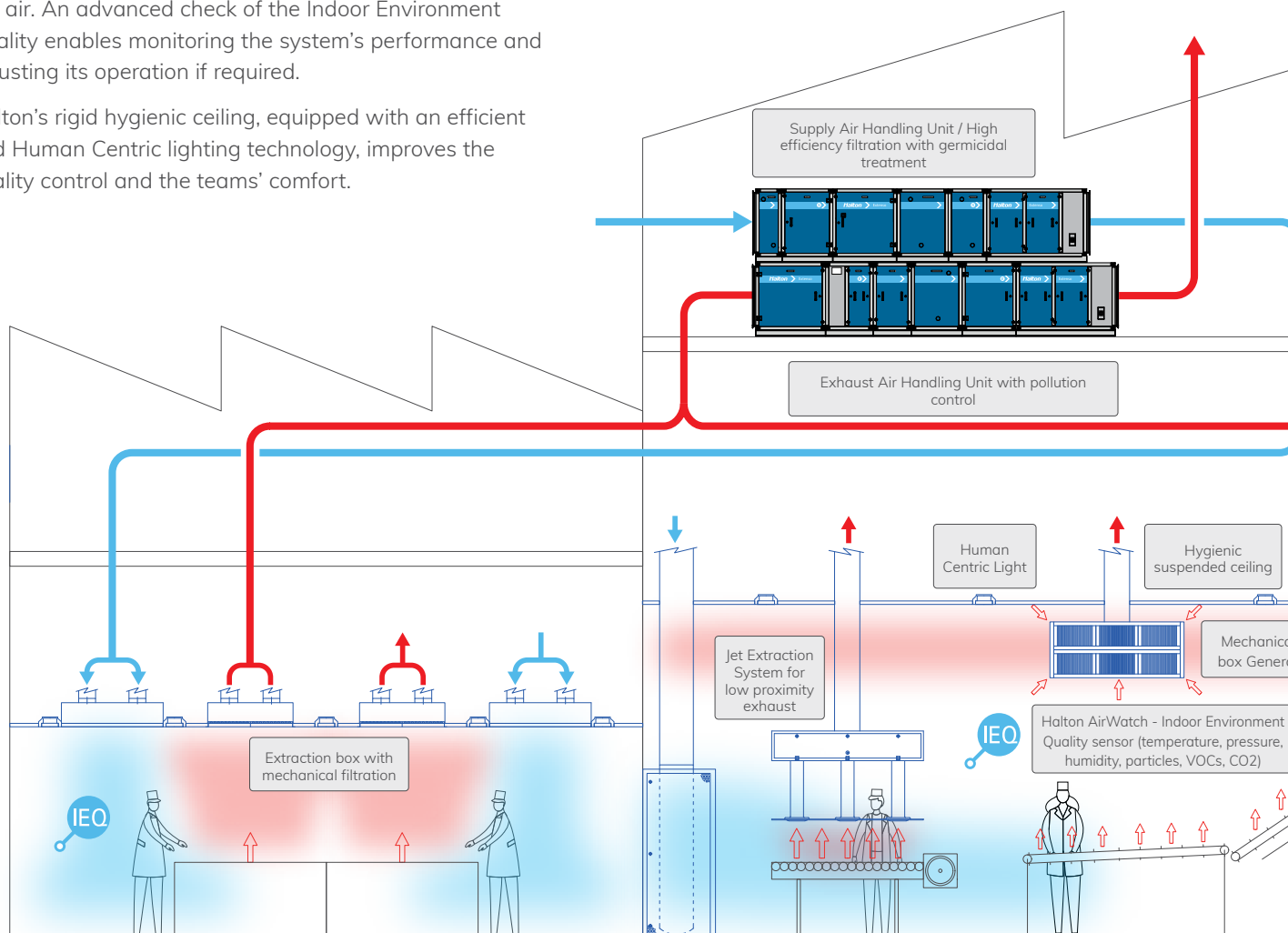
By keeping the right balance between exhaust and supply at all times, we prevent cross-contaminations of the air. An advanced check of the Indoor Environment Quality enables monitoring the system's performance and adjusting its operation if required.

Halton's rigid hygienic ceiling, equipped with an efficient and Human Centric lighting technology, improves the quality control and the teams' comfort.

2 Operating savings thanks to advanced airflow optimization solutions and automatic cleaning systems

Halton is recognized for its solution to optimize the ventilation levels depending on the cooking processes' activity. You benefit from significant energy savings as well as operational safety.

High efficient mechanical filtration, equipped with automatic cleaning technologies, and monitoring of the deposition level inside the ductwork ensures cleaning operations are applied when necessary. This allows for cost-effective planned maintenance.



Address all challenges of food processing' ventilation and hygiene

3 Reduced environmental impact with pollution control solutions designed for cooking operations

Halton's pollution control technologies address strict environmental demands by neutralizing the grease and most VOCs (Volatile Organic Compounds) released by the cooking processes that are too small to be captured by the mechanical filtration.

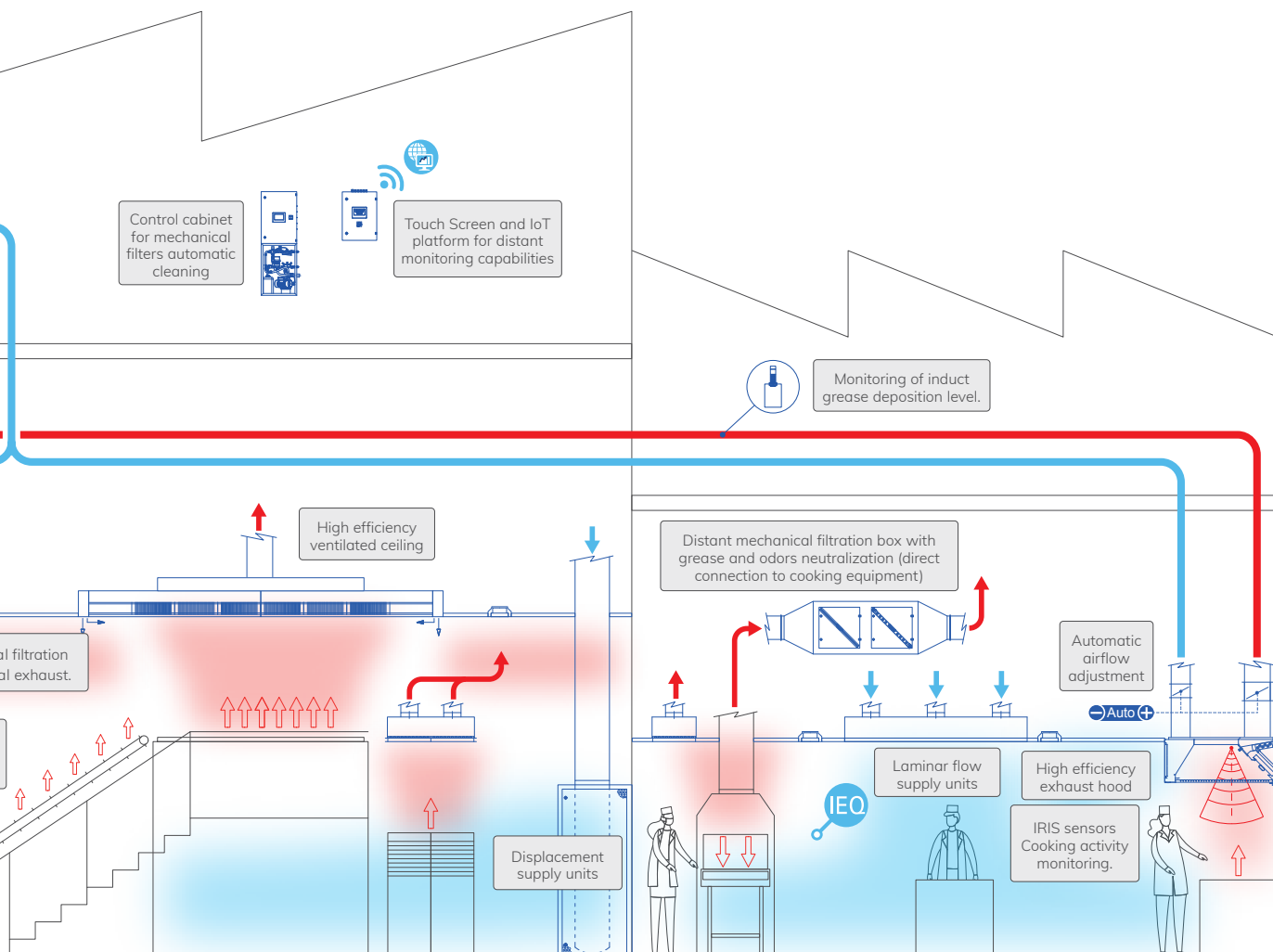
This dramatically reduces the ventilation ducts' grease deposit formation to a bare minimum. It also drastically reduces the odors carried by air to a minimal level that can negate discharging near sensitive areas, property lines or fresh air intakes.

4 Peace of mind thanks to advanced remote monitoring capabilities and smart services

Halton Connect is a state-of-the-art IoT (Internet of Things) platform whose core is an advanced cloud-based portal. It enables 24/7 remote monitoring of the solutions designed for food processing facilities.

It enables the best predictive maintenance. The risk of ventilation down-times, with their high financial consequences in food processing, is considerably reduced.

Maintenance visits are planned depending on the actual needs and optimized replacement parts use.



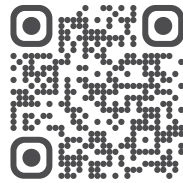
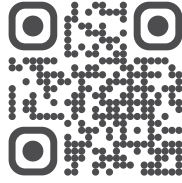
Notes

Handwriting practice lines consisting of 20 horizontal dotted lines.

Notes

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