

# M.A.R.V.E.L. as a Service (MaaS)

The first demand-controlled ventilation system as a service for commercial kitchens



# M.A.R.V.E.L. MaaS, the first demand as a service for commercial kitchen

M.A.R.V.E.L. is a state-of-the-art airflow optimization technology. Awarded 5 times, it is specifically designed for the ventilation of commercial kitchens.

The smallest airflow reduction of the ventilation system means savings on the energy required to transport, filter, cool or heat the air. **M.A.R.V.E.L. excels in reducing the airflows and generates unrivalled operational savings.**

Such technology is at the heart of the sustainability and environmental responsibility approaches.

**M.A.R.V.E.L. MaaS<sup>(1)</sup> is an all inclusive saving as a service offer.** It consists in delivering Halton's Capture Jet™ hoods or ventilated ceilings equipped with M.A.R.V.E.L., at a comparable investment level as without.

**M.A.R.V.E.L. MaaS makes M.A.R.V.E.L. benefits more conveniently available to more food service operators by minimizing the capital cost of the system.**



1

## Minimal investment

Save money while controlling your CapEx<sup>(1)</sup>

With M.A.R.V.E.L. MaaS, you get Halton hoods or ventilated ceilings, equipped with the most advanced airflow optimization technology, at almost the same price level as without.

You do not pay for the technology's components and advanced controls. You just pay for their installation and commissioning by our technicians and engineers in a fully transparent manner for you. This negligible investment is typically paid back in less than one year.

2

## Save energy and MONEY from day one

Immediately reduce your OpEx<sup>(2)</sup>

With M.A.R.V.E.L. MaaS the monthly service fee represents just an equitable part of the savings the system provides. So **you start reducing your energy bill on the operation of your kitchen ventilation from day one and reduce your OpEx from day one.**

At renewal of the service contract, you further reduce your OpEx as the monthly fee is automatically reduced, whereas you continue saving as much energy, or even more.

# nd-controlled ventilation system ns



## 3 Transparency Advanced monitoring with Halton Connect

M.A.R.V.E.L. MaaS includes Halton Connect® IoT (Internet of Things) platform whose core is an advanced cloud-based portal. Among many other benefits, it enables 24/7 remote monitoring of the airflow optimization actually achieved.

As part of M.A.R.V.E.L. MaaS, you receive a monthly report on the **measured results with actual airflow savings**. The equation is simple: your money savings are strictly proportional to the airflows' reduction.

## 4 All-inclusive Halton Care predictive maintenance is included

Halton Care is a smart services offer supported by Halton Connect monitoring capabilities. It combines the best of the predictive maintenance and performance optimization.

## 5 Peace of mind Reliability and reduced predictable expenses

With M.A.R.V.E.L. MaaS, you continuously optimize your kitchen ventilation system operating costs and focus on your customers. Forget all the rest! We take care of it.

Expenses are predictable and easy to allocate between the kitchens/restaurants, regardless of the number.

- (1) MaaS M.A.R.V.E.L.as a Service
- (2) CapEx Capital Expenditure
- (3) OpEx Operating expenses

# Transparency and trust are our recurring values in our MaaS service contract

## 1 Project phase

### Savings estimation

At the earliest possible time during the project phase, a study is carried out by our engineers to assess the reduction of the ventilation airflows M.A.R.V.E.L. can generate.

The savings are strictly proportional to this reduction. The baseline used for this assessment is Halton Capture Jet™ hoods or ventilated ceilings **without M.A.R.V.E.L.**

## 2 Project phase

### Service offer

Based on the savings estimation and your preferred contracts initial duration (typically 5 years), a M.A.R.V.E.L. MaaS<sup>(1)</sup> service proposal is sent and adjusted.

**The final service contract determines the airflow reduction targets and a preliminary fee. The fee will be applied during the first 6 months of operation.**

**Good to know:** There's no revision clause linked to the evolution of the energy cost in M.A.R.V.E.L. MaaS contract. Your savings increase mechanically as these cost increases.

## 5 After 1 year operation

### Second fee adjustment

After the second 6 months period, our engineers provide a second detailed report, over one-year operation.

A second comparison with the initial targets carried out. The fee is then adjusted up or down. It will be applied during the rest of the service contract duration.

**Good to know:** In the unlikely event the reduction of the ventilation airflows is too far from the target, the contract can be terminated. Halton commits itself to transfer back the fees already received.

M.A.R.V.E.L. MaaS fees are lower than the savings it generates. Your OpEx<sup>(3)</sup> is reduced along with the original savings provided by the Capture Jet™ technology.

## 6 All contract duration

### All inclusive service

Halton Connect® premium and Halton Care premium maintenance contract are included in M.A.R.V.E.L. MaaS.

You can keep an eye on the airflow variations thanks to Halton Connect® web portal. We can adjust airflow rates remotely in case you have changed your cooking line or operations schedule.

**Good to know:** Our engineers still track all possibilities to improve your savings. The savings achieved entirely deduct from your OpEx.

## 7 Renewal

### Final fee reduction

At the end of the initial duration, the service contract can be renewed but **not without having significantly decreased the fee.**

**Good to know:** If you decide not to renew M.A.R.V.E.L. MaaS contract, the systems remain in place but they are deactivated.

# urrent theme for each M.A.R.V.E.L.

## 3 Project delivery

### M.A.R.V.E.L. MaaS start up

Halton Capture Jet™ hoods or ventilated ceilings are delivered on site pre-equipped with M.A.R.V.E.L. MaaS. The systems are commissioned by our technicians to ensure they operate at their optimum efficiency level from day one.

**Good to know:** You only pay for the commissioning of M.A.R.V.E.L., not for the components and controls. Your CapEx<sup>(2)</sup> is under control.

## After 6 months operation 4

### First fee adjustment

After 6 months of monitoring, our engineers provide a detailed report.

After comparing with the initial target, the fee is then typically adjusted up or down and is applied for a second period of 6 months.

**Good to know:** The result achieved by M.A.R.V.E.L. MaaS is typically higher than the target. The surplus savings on the first 6 months operation is for you.

M.A.R.V.E.L. MaaS airflows reduction reaches an impressive average of 45%<sup>(4)</sup> on top of the reduction achieved by the Capture Jet™ technology<sup>(5)</sup>.

(4) On March 2021, the 263 active hood sections equipped with M.A.R.V.E.L. and monitored via Halton Connect have saved 94,204,200 m<sup>3</sup> of air which corresponds to an impressive reduction of 45.2%.

(5) The Capture Jet™ technology equips all Halton hoods and ventilated ceilings. It is designed to improve their capture efficiency i.e., they already require less air volumes than traditional hoods even before M.A.R.V.E.L. enters into action.

## This is how a typical M.A.R.V.E.L. MaaS contract runs.

Discussion and adjustment to your specific needs remain at the heart of each contract.

Our sales managers and engineers are at your disposal to take your needs into consideration and prepare a preliminary study.

Contact us



(1) MaaS M.A.R.V.E.L. as a Service (2) CapEx Capital Expenditure (3) OpEx Operating expenses

# M.A.R.V.E.L. airflow optimization technology massive energy savings on kitchen

## The smartest and most efficient airflow optimization

M.A.R.V.E.L. is a state-of-the-art energy saving technology designed to adjust the kitchens' exhaust airflow rates. What makes it so different is that it does it in real time and above all, with the fastest response time, depending on the cooking activity. It also allows for independent operation of each zone of the kitchens. And with M.A.R.V.E.L., a zone can be as small as a hood section.

If only one cooking zone is operating, only the airflow required for that zone would be automatically adjusted. The others would continue to operate at a low flow rate.

M.A.R.V.E.L. has been proven to optimize the airflow rates to the lowest possible level.



## Up to **64%** reduction and more on exhaust airflow rates

To reach this impressive number, M.A.R.V.E.L. is systematically combined with the Capture Jet™ technology.

The reason is simple. Before talking about the airflow rates adjustment based on the cooking activity, better to be sure the hood or ventilated ceiling are able to remove a given amount of heat, steam, and smoke with the lowest airflow rate, without compromise on air quality.

This is what Capture Jet™ technology does. And combined with M.A.R.V.E.L. the reduction in airflow rates reaches an impressive 64% and more. This applies to the many small production cells of a ghost kitchen, to the unique cooking area of a central kitchen, and to any other kitchen type. Why would you operate with less?



# Technology generates savings' ventilation

## Even the smallest airflow reduction of the ventilation system means savings

The equation is simple. The least amount of exhaust coming out of a kitchen equates to the least amount of make-up air that has to come in.

The make-up air is always "treated". In some cases, the exhaust air has to be as well. In all cases, any airflow reduction contributes to reduce the amount of energy required to transport the air through all kitchens areas, to filter it, cool it and/or warm it up.

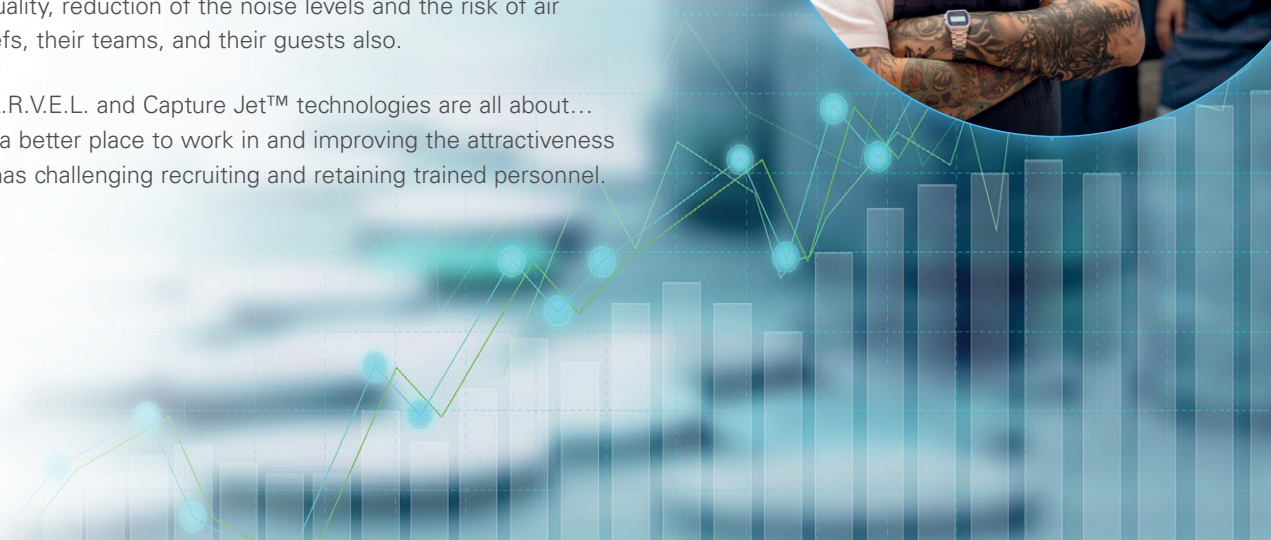
It is a fact the final energy savings depend on the weather conditions. **What is also a fact is that the energy savings strictly follow the "rhythm" of the exhaust airflow rate reductions. M.A.R.V.E.L. and the Capture Jet™ technology excel at reaching all the time the highest reductions.**



## The highest airflow reductions but without compromise on comfort.

If one speaks of exhaust airflow rates reduction while being able to remove the smoke, heat, and steam released by cooking, one also speaks about good air quality, reduction of the noise levels and the risk of air drafts for the chefs, their teams, and their guests also.

This is what M.A.R.V.E.L. and Capture Jet™ technologies are all about... making kitchens a better place to work in and improving the attractiveness of a sector that has challenging recruiting and retaining trained personnel.



# Halton Connect® & Care is a unique services for commercial kitchens

## Smart services are the key

Services are viewed as an expense, yet when ventilation and indoor environment quality technologies are maintained properly they reduce your cost overall! When equipment is neglected, issues are sure to increase, costing even more. Benefits of well maintained equipment are:

- Energy savings kept at a constant efficiency over time;
- Reduced use of spare parts and better availability when needed. Reduced cleaning costs;
- Prevent hidden and irreversible damage of equipment;
- Reduce sick leaves of the staff;
- Eliminate complaints from the neighbourhood;
- No lost revenue due to downtime;
- Increase hygiene and reduce fire risks etc.



## Halton Connect® cloud based web portal opens the way to 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 by Halton, allowing access to useful information along with powerful data analytics to the end users. It also provides crucial information to our engineers. In return, they can remotely and safely control all systems and their settings when required.



**This digital “two directions” technology opens the way to Premium Services that are vital to keeping the performance of the systems and technologies at the initial design level and during all their lifecycle. Even better! They enable continuous optimisation of your systems, resulting in even lower operating costs.**

(1) MaaS M.A.R.V.E.L.as a Service



# e offering of smart

## Halton Care service contracts embody the best of predictive maintenance and optimization.

Halton Connect® web portal is key for the end-users to appropriate the Halton solutions designed to improve their safety and comfort while saving at multiple levels. There starts the optimization!

Halton Connect® is also the core of Halton Care services offering. Status, warnings and alarms, custom data analytics, components lifetime, energy and water savings, forecasts are just some of the key information our engineers and service teams have access to, from anywhere, at any time. There continues the optimization and starts the predictive maintenance.

**In the end, Halton Connect® & Care services offering directly contributes to the highest value of ownership and to peace of mind.**



Halton Connect® & Care also opens the way to new kind of services such as M.A.R.V.E.L. MaaS<sup>(1)</sup>.





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