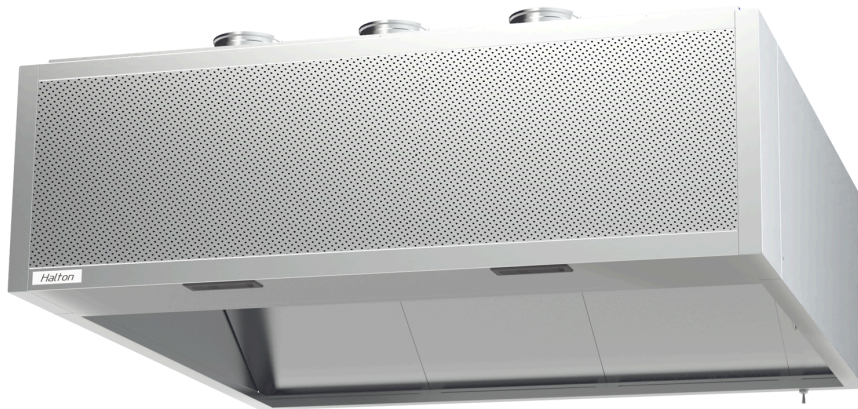


# KVD

## Hood for dishwashing areas with supply air

◦ For dishwashers ◦ Integrated low velocity makeup air



Product certification(s)



### Main technologies and options



**Special dishwashing areas**  
Minimises condensation in ductwork



**Integrated low-velocity makeup-air**  
Better comfort and capture efficiency



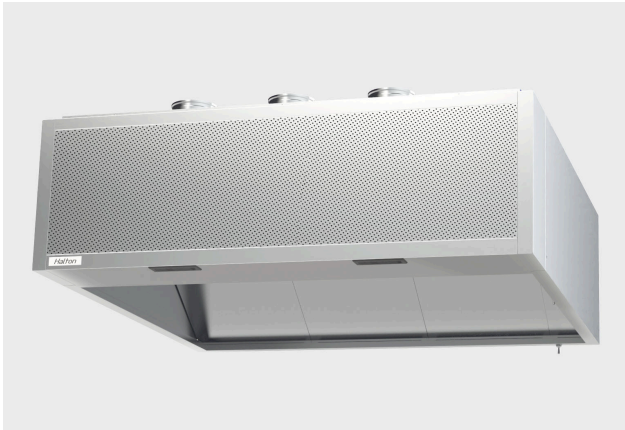
**M.A.R.V.E.L. compatible**  
Can operate at constant airflow on a variable exhaust ductwork

### Recommended combinations



**Save energy and improve staff's comfort** <> **Extend M.A.R.V.E.L. airflow and energy optimization technology to the dishwashing area (on two speeds control base)**

## Description and main technologies



### Applications

Halton steam hoods are suitable for dishwashing areas and, in general, all applications where grease filtration is not the primary requirement.

Fully compatible with *M.A.R.V.E.L.* airflow and energy optimization technology, they ideally complement Halton's Capture™ Jet hoods and ventilated ceilings, especially for [LEED](#) (1), [BREEAM](#) (2), [DGNB](#) (3), [RE2020](#) (4) etc. projects.

### About dishwashing areas

The dishwashing areas are often considered as secondary. And yet, if some provisions are not taken, the working conditions inside can easily become a nightmare and hygiene of the kitchenware after cleaning can also be compromised.

Dishwashing areas are indeed characterised by important heat and humidity loads, not only coming from the washing equipment but also from the clean kitchenware that generally continue to cool down and dry in the space. Germs and bacteria coming from guests' plates and trays as well as detergent constitutes additional pollutants. Noise of the equipment should also be taken into account.

### Description

KVD hoods are designed to remove the steam released by dishwashing equipment. They are equipped with specially configured deflectors to separate the moisture from the extracted air.

KVD hoods are also equipped with a low-velocity makeup air built into the front face.

### Main features and benefits

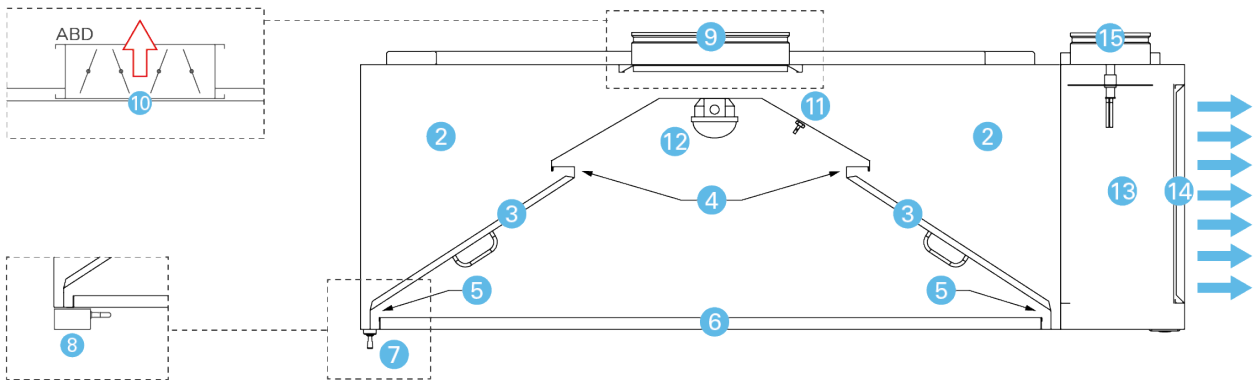
- Construction compliant with NF EN 16282-2 (5).
- Fully compatible with a *M.A.R.V.E.L.* airflow and energy optimization system used for the cooking areas, if ductwork is shared.
- Front Capture Jet™ on KVD as an option for a better steam capture.
- Better hygiene thanks to less condensation in the extract ducts.
- Deflectors removable without tool, of max 500 mm width to be easy to clean in a dishwasher.
- Surface LED light fitting (IP54, IK10). DALI compatible power supply as an option.
- Better capture efficiency and comfort for the staff thanks to a low-velocity diffuser built into the front.
- 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.

### About Dishwashing areas' ceilings



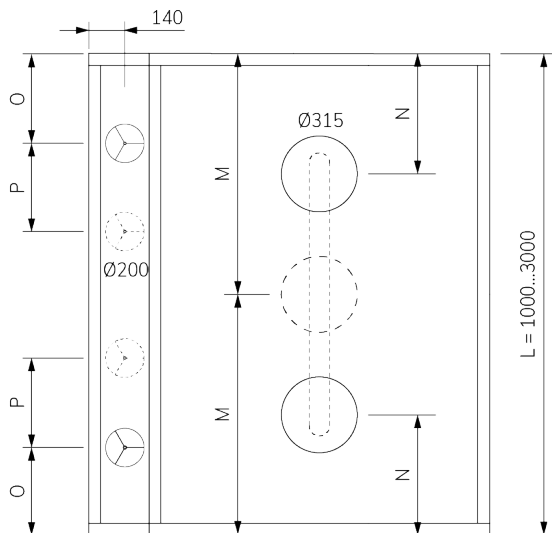
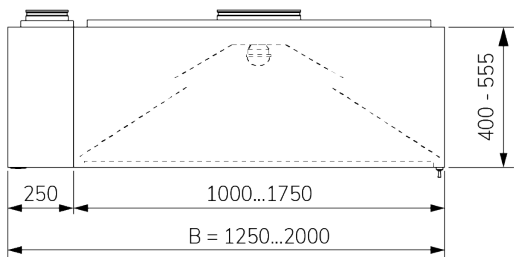
Halton's hygienic and rigid suspended Ceiling (HSC) has been specifically designed for areas with strict hygiene requirements, such as dishwashing areas. It distinguishes itself not only by a high cleanability and stability over time, but also by materials and provisions that greatly limit the build-up of potential contaminants on its surface. [More information about HSC.](#)

## Construction



1. Visible outer envelope in stainless steel AISI 304 (1,0 mm).
2. Exhaust plenum.
3. Removable deflectors (one being equipped with handles).
4. Upper baffle chicane.
5. Bottom baffle chicane.
6. Condense channel.
7. Condensates drain.
8. Collection tray as an option.
9. Exhaust connection(s) and sliding damper(s).
10. When the hood is connected to a ductwork serving other hoods equipped with M.A.R.V.E.L. energy optimization technology (MRV), the sliding damper is replaced by ABD automated slim balancing damper or alternatively with a Constant Air Volume.
11. T.A.B.™ (Testing And Balancing) pressure port(s) for quick airflow calculation during ductwork balancing operations.
12. LED light fitting 20 or 36W, IP54, IK10.
13. Makeup air plenum.
14. Perforated front face with honeycomb structure for a low velocity makeup air.
15. Supply air connection and adjustment damper (type MSM).

# Dimensions



[mm]	1x	2x	3x	2x	4x
L	M	N	M, N	O	O, P
1000	L/2	-	-	-	-
1500	L/2	375	-	450	-
2000	L/2	500	-	450	450, 500
2500	-	500	L/2, 500	450	450, 500
3000	-	500	L/2, 500	-	450, 500

- Above 3100 mm, hoods are an assembly of separate sections to make transportation and site handling easier.
- Number of connections to be determined based on the sections length and on the calculation of the airflow rates.
- Rectangular connections on request.

## Green Steel label



### Manufactured with decarbonized stainless steel (option)

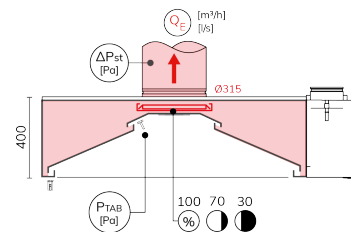
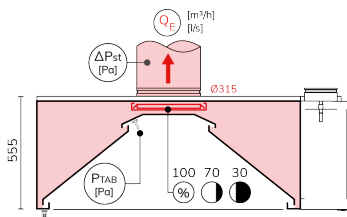
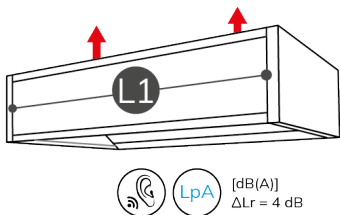
Halton's innovations are recognized for significantly improving its customers' carbon footprint from day one of operation. However, sustainability and low environmental impact require manufacturing these solutions with the lowest possible carbon footprint.

**As of the second half of 2024, and initially for Europe,** Halton progressively offers the possibility to manufacture its Capture Jet™ hoods with decarbonized stainless steel as an option.

**CO<sub>2</sub> emissions reduced by 60%!** This is the carbon footprint average reduction achieved for this green steel, with the same mechanical properties. Per ton, it represents 850 kg CO<sub>2</sub> less or the equivalent of 4595 km with a thermal car, 5600 km for a medium-haul plane or 423636 km with the French fast train, powered with decarbonized electricity (1).

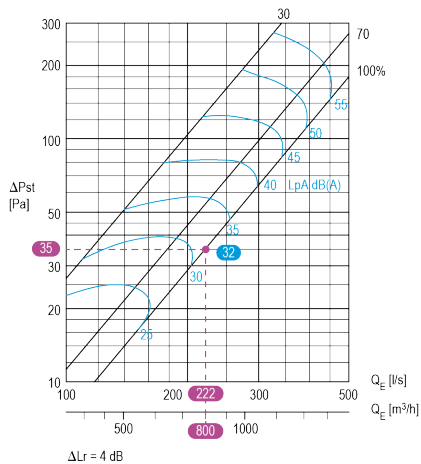
(1) According to the ADEME ([The French Agency for Ecological Transition](#)) resource site which popularizes and promotes environmental data.

# Pressure losses and sound levels (exhaust)



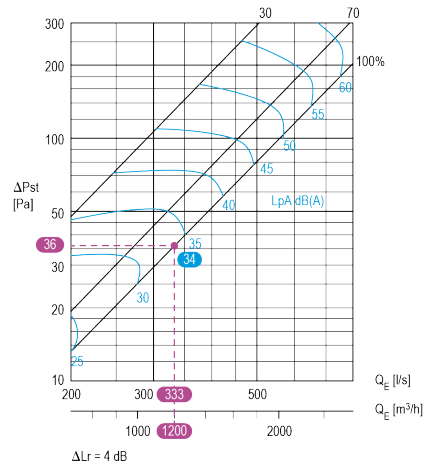
L1 = 1000 mm

$\Delta P_{st}$   $L_{pA}$   $f$   $Q_E$  %



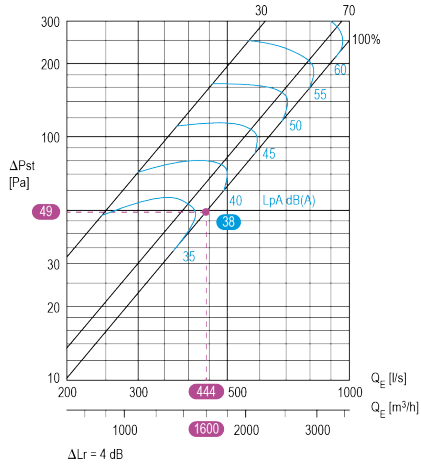
L1 = 1500 mm

$\Delta P_{st}$   $L_{pA}$   $f$   $Q_E$  %



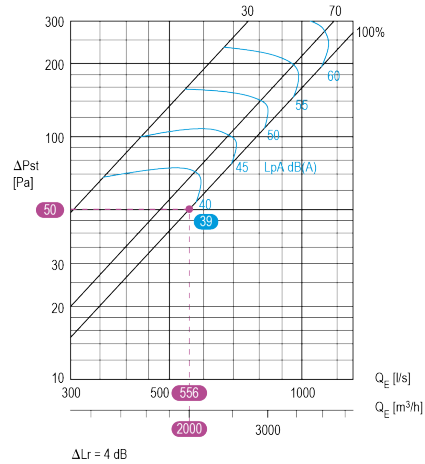
L1 = 2000 mm

$\Delta P_{st}$   $L_{pA}$   $f$   $Q_E$  %



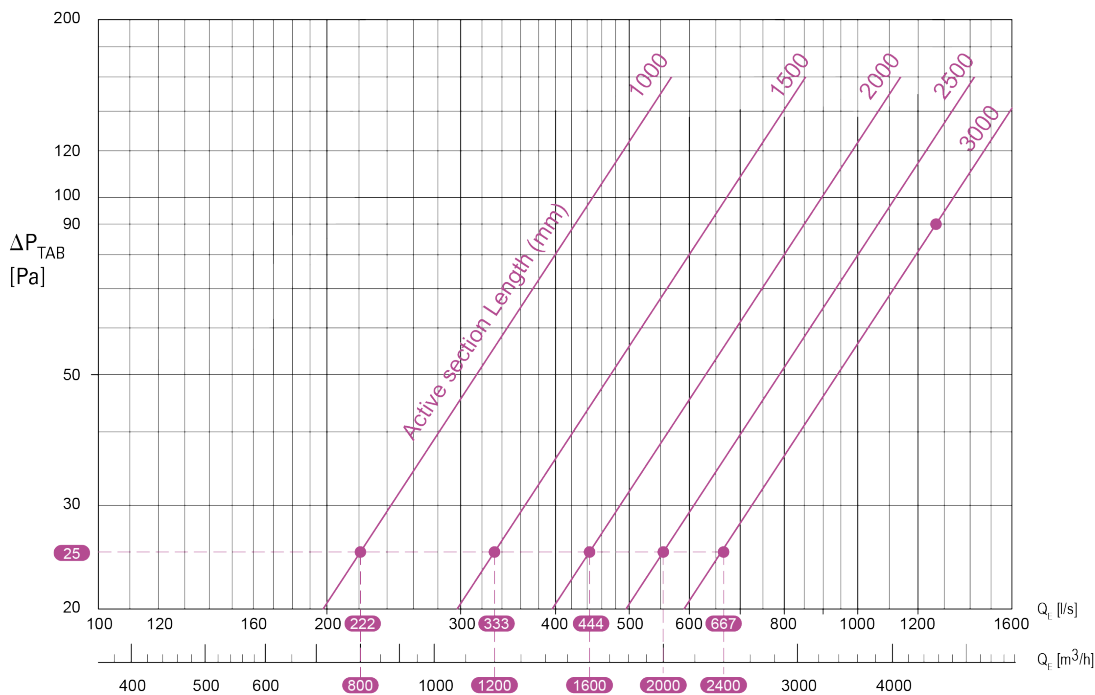
L1 = 2500 mm

$\Delta P_{st}$   $L_{pA}$   $f$   $Q_E$  %



### Airflow measurement (T.A.B.™ reading or use of hood k factor)

$$Q_E = f \cdot P_{TAB} \cdot L1$$



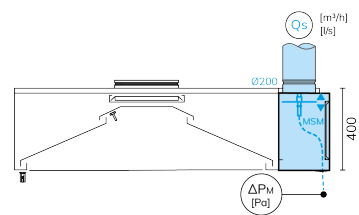
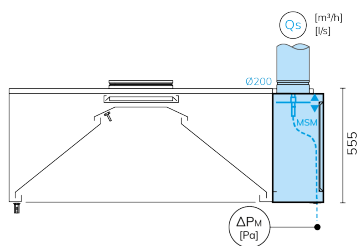
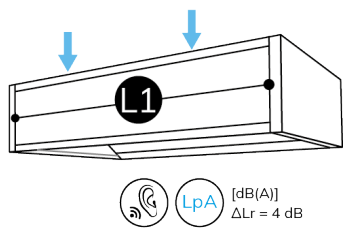
$$Q_E = k \cdot \sqrt{P_{TAB}}$$



$$Q_E = k \cdot \sqrt{P_{TAB}} \text{ [Pa]}$$

L [m]	k [m³/h]	k [l/s]
1000	161	44,7
1500	241,5	67,1
2000	322	89,4
2500	402,5	111,8
3000	483	134,1

# Pressure losses and sound levels (supply)



$Q_s$   $f$   $\Delta P_M$   $\frac{L_p A}{\Delta L_r}$

**MSM160**  $Q_s = \sum Q_{s_i}$  (MSM 2.4)

$Q_{s_i}$  (MSM 2.4) [l/s] =  $21.9 \times \sqrt{\Delta P_{M_i}}$  [Pa]

$Q_{s_i}$  (MSM 2.4) [m³/h] =  $78.8 \times \sqrt{\Delta P_{M_i}}$  [Pa]

**MSM200**  $Q_s = \sum Q_{s_i}$  (MSM 2.4)

$Q_{s_i}$  (MSM 2.4) [l/s] =  $32 \times \sqrt{\Delta P_{M_i}}$  [Pa]

$Q_{s_i}$  (MSM 2.4) [m³/h] =  $115.2 \times \sqrt{\Delta P_{M_i}}$  [Pa]



# Suggested specifications

## KVV - KVD

The hoods shall be Halton brand - range KVV / KVD.

This range is designed to remove the steam released by dishwashing equipment.

- KVV is the extract-only model.
- KVD is equipped with an integrated makeup air system on the front.

The hoods shall be supplied ready to be installed. All technologies and systems shall be delivered fully pre-wired.

The following specifications shall be fully observed.

### Exhaust airflow rates

- The exhaust airflow rates shall be according to the manufacturer recommendations.
- Any modification of the exhaust devices' installation height or of the input power, type and dimensions of the cooking appliances shall be brought to the attention of the manufacturer as they all significantly impact the exhaust airflow rates.

### Makeup air design

- The makeup air design, especially the diffusers type, size, and location as well as the means to get a correct balance between exhaust and supply, shall be entrusted to the manufacturer. It impacts the exhaust airflow rates, the capture efficiency and is also key to preventing cross-contaminations.
- The makeup air shall be as much as possible managed by way of the diffusers integrated in the hoods' front. If their capacity does not cover the total needs of the kitchen, the additional diffusers shall be of laminar-flow type.

### Construction

- The construction shall be compliant with NF EN 16282-2.
- Constructed from 1.0 mm AISI 304 (DIN EN 1.4301) stainless steel, with a 320 grit on the visible side.
- The joints of the lower edges shall be fully welded for better robustness, cleanability and a better aesthetic.
- The exhaust plenums shall be equipped with specific deflectors to separate the steam from the extracted air. They shall not be wider than 500 mm to be easy to remove and clean in a dishwasher.
- The exhaust plenums shall be equipped with sliding balancing dampers and with T.A.B.™ pressure tap for quick airflow measurement.

### [Option] Compatibility with the kitchen's airflow optimization

- The hood shall be compatible with the M.A.R.V.E.L. airflow optimization technology which equips the kitchen.
- To that purpose each hood section shall be equipped with one ABD balancing damper configured to provide a constant exhaust airflow whatever the exhaust needs of the kitchen. [Option] It shall be possible to reduce the airflow rate by the mean of switch or a timer.
- [Alternative] The hoods shall be equipped with a mechanical CAV (Constant Air Volume) damper to keep the exhaust airflow constant.

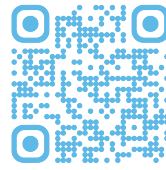
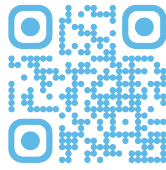
### Light fittings

- The hood shall be equipped with an IP66 surface LED light fitting. Its Colour Rendering Index (CRI) shall be at least 80.
- The illuminance on the working surfaces shall be 500 lx.
- [Option] The light fitting shall be dimmable (1-100%) with one or several switches.


### [option] Light fittings


- The ventilated ceiling shall be equipped with flush-mounted light fittings, constructed from aluminium and equipped with Halton Skyline LED wide-beam spotlights, which are glued flush.
- The illuminance on the working surfaces shall be at least 500 lx.
- The spots shall provide a uniform light, with good balance between the direct and diffuse components, to make forms and textures clearer and richer in contrast without dazzling the staff.
- They shall have a color temperature of 4000K and a Color Rendering Index (CRI) of at least 83.
- The LEDs and drivers lifetime shall be at least 50,000 hours. The drivers shall be DALI compatible. The spots' efficiency shall be at least of 105 lm/W.
- The spots shall be closed by a seamlessly glued safety glass plate for a better hygiene and ease of cleaning. Its protection against water spraying shall be IP54. The glass shall be fire-rated A1 i.e. non-flammable according to EN 13501-1.
- As standard, the power supplies shall enable switching on/off or dim the light (1-100%) with one or several switches.
- [Option] A specific DALI user interface, with scenario and zoning functions, shall be used to control the light fittings.

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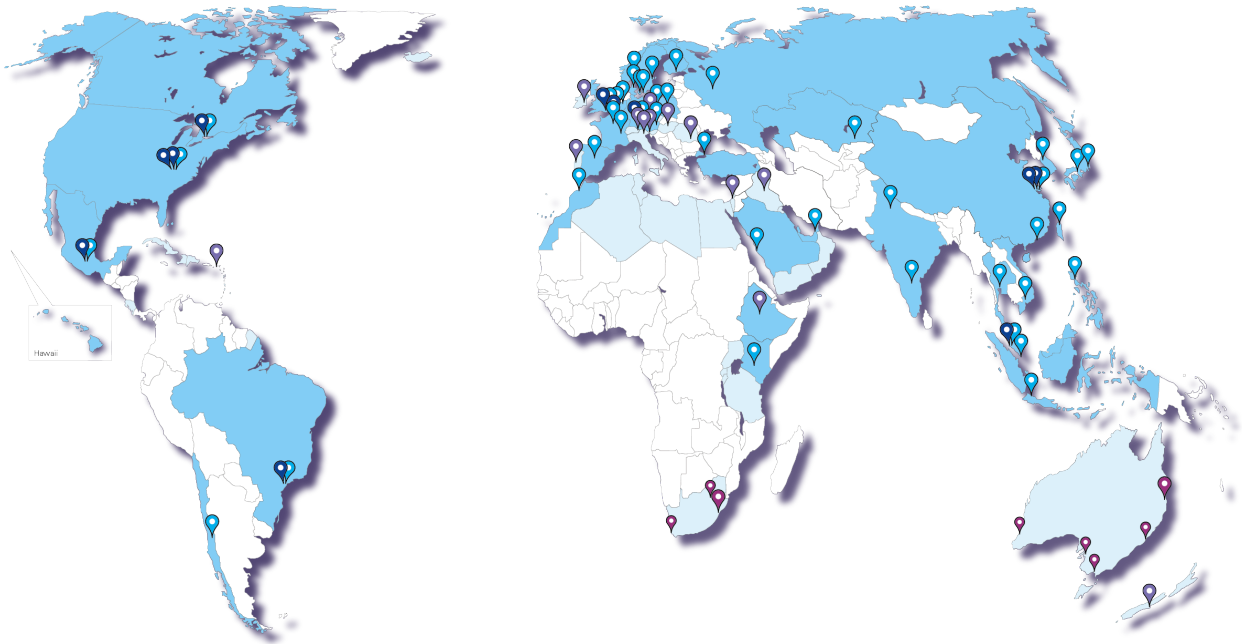
## Halton Manufacturing and Sales Facilities in the world

 Sales and service centers

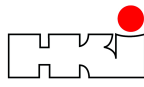
 Representatives

 Factories

 Manufacturing licences



## Halton Foodservice partnerships



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