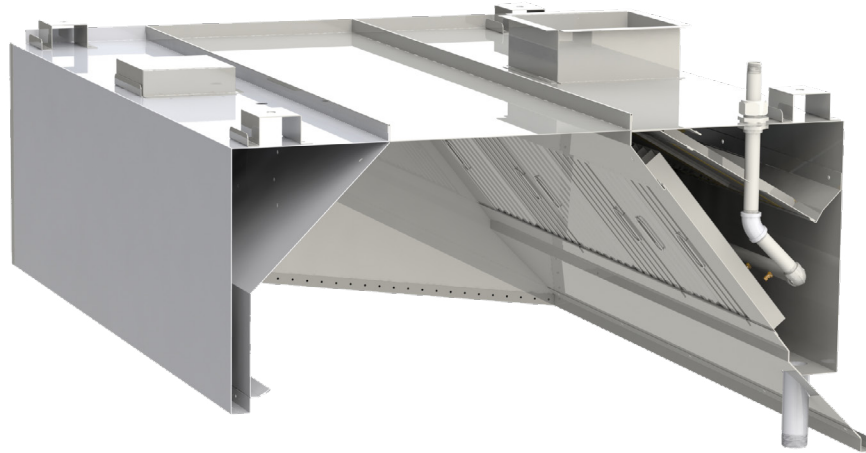


# KVE-CM

## Capture Jet™ Hood with Continuous Mist

• Capture Jet™ technology • KSA cyclonic filters • Halton HCL Culinary lights • Continuous Mist technology

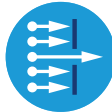


Component certification(s)

### Main Technologies and options



**Capture Jet™ technology**  
Up to 40% reduction in exhaust airflow thanks to a better capture efficiency.



**KSA cyclonic filters**  
Up to 95% efficient on 10 microns particles.



**HCL Culinary lights**  
provide the best visual comfort while contributing to improved safety and energy savings.



**Continuous Mist technology**  
Reduces fire risk by cooling air and capturing sparks and grease.

### Recommended combinations



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



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



Improve operator or chef comfort > Comfort Jet for a more comfortable cooking environment.



Establish restaurants in premium locations and increase profitability > PolluStop pollution control units and reassure neighborhood.



**Halton SafeGuard offers a comprehensive solution >**  
Ventilation efficiency, air quality, fire safety, remote insights, and system longevity—all in one smart package, that includes:



**M.A.R.V.E.L. Demand Control Kitchen Ventilation (DCKV):**  
Real time airflow reduction in ventilation volumes.



**Halton FireWatch:**  
Continuous fire risk detection for rapid response and improved kitchen safety.



**Halton AirWatch:**  
Dynamic indoor air quality monitoring for optimized ventilation and staff comfort.

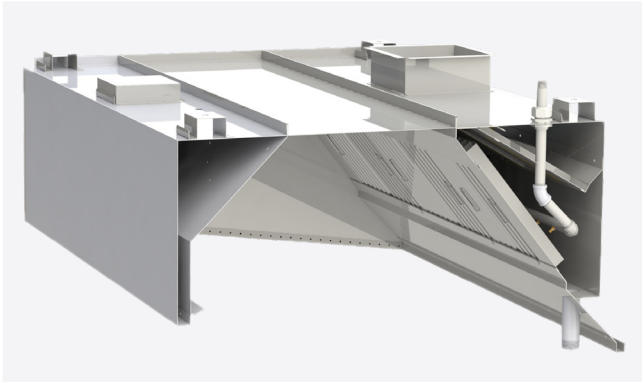


**KGS Kitchen Grease Duct Sensors:**  
Monitors grease deposit levels in all ductwork.



**Halton Connect Monitoring:**  
Cloud-based control platform with distant monitoring capabilities. <sup>(1)</sup>

(1) The access to Halton Connect™ web portal is included in the 1-year warranty period. After this period, it is subjected to one of the Halton Care service offers.



Halton's Continuous Mist technology provides solutions for a variety of commercial food service ventilation applications over solid fuel cooking processes. Based on Halton's patented highly efficient Capture Jet™ solution and advanced mechanical KSA filter technology, the Continuous Mist feature focused on exhaust temperature reduction and ember carry over elimination. The Continuous Mist system is built into the hood's exhaust plenum.

The KVE Capture Jet™ hood is a highly efficient kitchen ventilation hood that removes contaminated air and excess heat emitted by cooking equipment, helping to provide a comfortable and clean environment.

The KVE hood uses the advanced Halton Capture Jet™ to improve the capture and containment of the effluent generated by the cooking equipment. Overall exhaust airflow rates can be reduced up to 40% compared to traditional kitchen hoods.

The Capture Jet™ hood is based on the high entrainment efficiency of a compact, low velocity jet. The capture air jets efficiently induce ambient air at the critical open sides of the hood, minimizing the spillage of the contaminated air and maintaining good air quality in the chef's work area.

### Considerable energy savings

- The Capture Jet™ technology allows for up to a 40% 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 24% 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!).

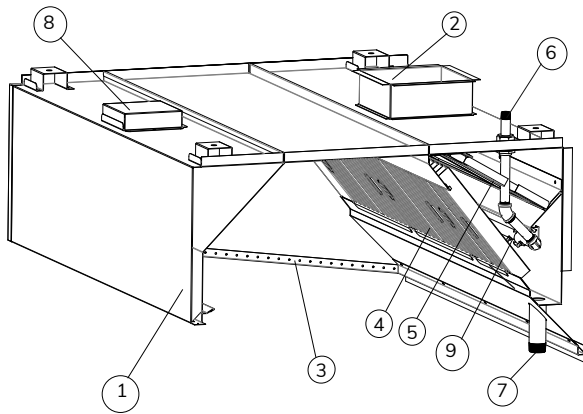
### Application

- Restaurant kitchens
- Industrial kitchens
- Fast food kitchens
- Pizzerias or bakeries with ovens
- Catering or event kitchens
- Institutional kitchens (hospitals, schools, universities)
- Culinary schools
- Airport or mall food courts (over cooking stations)
- Stadium or arena concession kitchens
- Resort or spa kitchens (high-end dining facilities)
- Military or government facility kitchens
- 4-5 star hotel and restaurant kitchens

### Other features and benefits

- Improved indoor air quality with reduced energy use. Halton Capture Jet™ reduces the exhaust airflow rates required and improves the capture and containment efficiency of the hood.
- Continuous mist spray
- High efficiency grease filtration using UL and NSF classified Halton KSA multi-cyclone filters for removal of up to 95% of particles with a size of 10 microns per ASTM F2519.
- T.A.B.™ (testing and balancing) ports, which allow accurate and effective commissioning.
- Standard HCL Culinary lights.
- Optional LED dimming is available for Capture Jet hoods. Dimming is control by a knob on the switch panel or through Halton HMI Touch Screen.

NOTE: Factory must be advised of any special requirements of the Authority Having Jurisdiction at time of quote.



### Part

### Description

1	18 Ga. Stainless steel
2	Exhaust duct collar
3	Capture Jet air
4	KSA grease filters
5	Mesh Filters
6	¾" Cold Water Inlet
7	2" Drain
8	Capture Jet Fan
9	Mist Nozzle Manifold

## Construction

The KVE hood combines Capture Jet™, light fixtures, airflow measurement T.A.B. ports and KSA grease filters. The hood shall bear ETL or UL label. The ETL/UL listed range hood without exhaust fire damper per standard UL 710 and be fabricated in compliance with NFPA-96, and shall bear the NSF seal of approval.

The hood has double side wall construction. A 2" drain pipe is fitted into the grease drain channel for easy removal of the grease extracted by the KSA multi-cyclone filters.

## Dimensions

KVE-CM	inches
Length	48....168
Width	42....84
Height	24....30

## Modifications & Options

- Closure Panels - for canopies below ceiling level
- Backsplash
- Side Skirts
- KFR - Filter Removal Tool
- LED Dimmable Lighting
- MEP - Master Electrical Panels
- Comfort Jet for chefs and operator comfort
- Face or Remote Mounted Switch Panels
- Factory Prepiped Fire Protection
- Listed Exhaust Duct Balancing Damper
- Hood Mounted Fire Cabinet
- M.A.R.V.E.L. Demand Control w/VFD by Halton
- Halton SafeGuard including M.A.R.V.E.L. Demand Control Kitchen Ventilation, Halton FireWatch, Kitchen Grease Duct Safety Monitoring System, Halton AirWatch and Halton Connect Monitoring and IoT cloud data storage

## Dimensions

KVE - Wall model	inches
Length	48....168
Width	42....84
Height	24....30

Noted in drawings as:

L = Length

W = Width

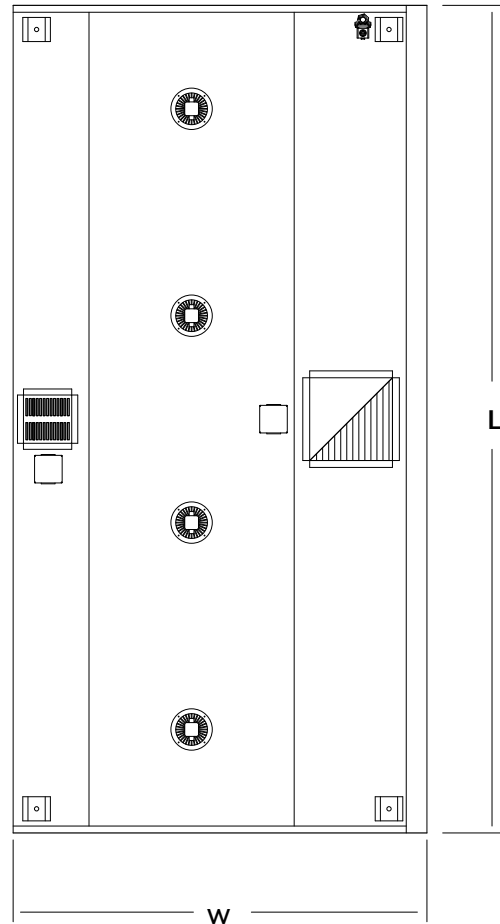
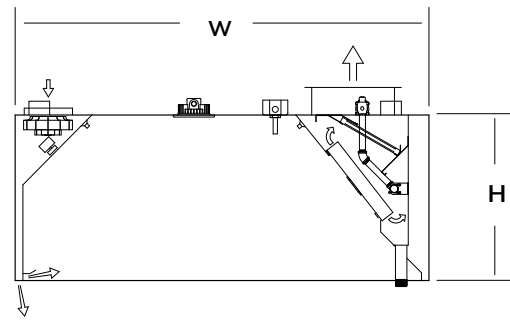
H = Height

## Weight (lb)

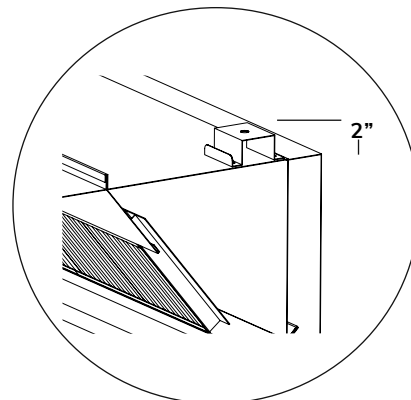
18 ga.

Estimated Crated Shipping Weight	inches	Weight
Width	48"	75 lbs / ft.
Width	54"	80 lbs / ft.
Width	60"	85 lbs / ft.

\*Larger Widths – Consult Factory for weight



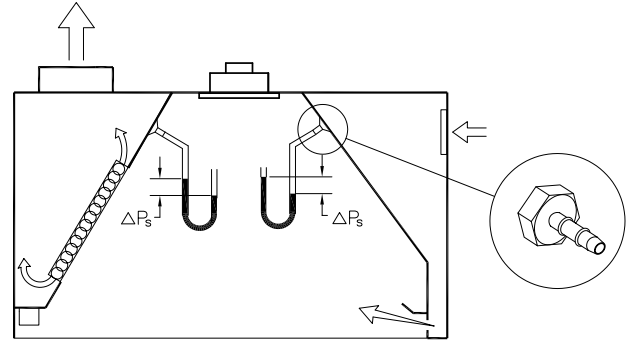
Mounting bracket 2" high (52mm)



## Balancing of Capture Jet™ Hoods

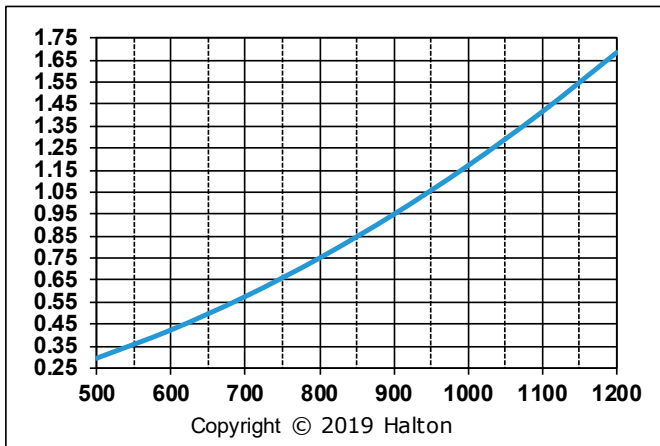
The Capture Jets™ and exhaust air flows are easily and accurately determined by measuring the pressure difference from the T.A.B. ports mounted in each plenum. Corresponding air flows can be read from the diagrams provided.

All T.A.B. readings assume cold conditions. To adjust for an exhaust temperature of 110 °F, multiply the readings by a factor of 0.93.

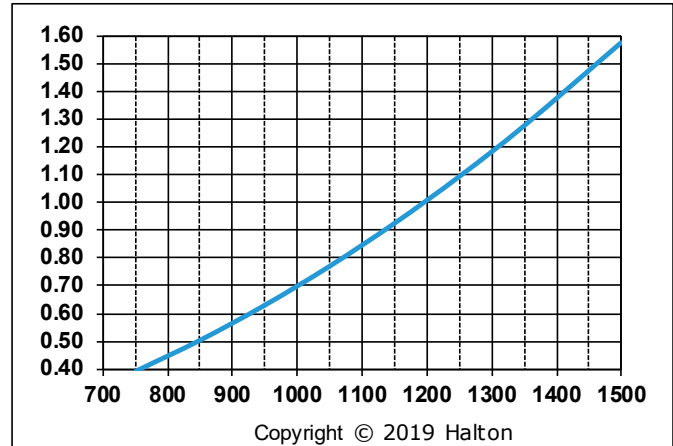


Exhaust air flow vs. pressure differential

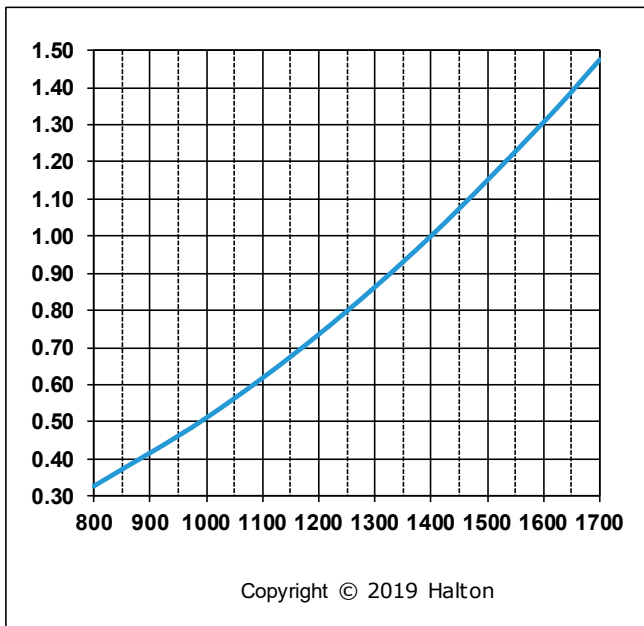
KVE-CM - 2 Filters



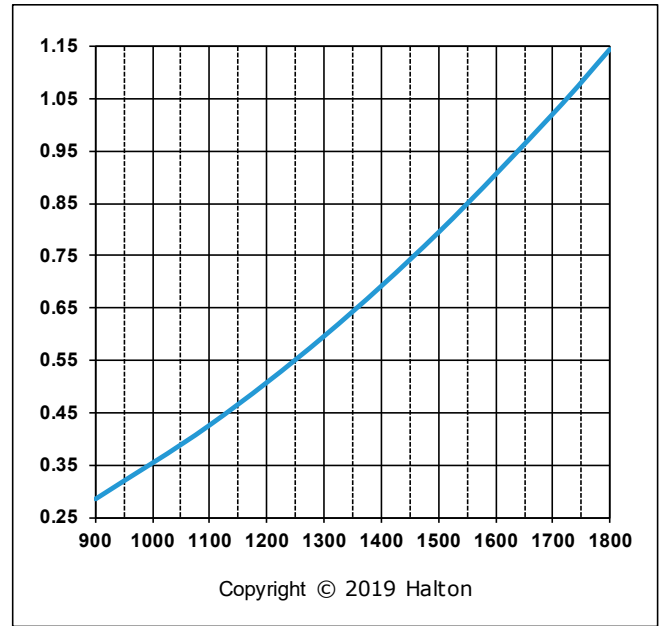
KVE-CM - 2.5 Filters



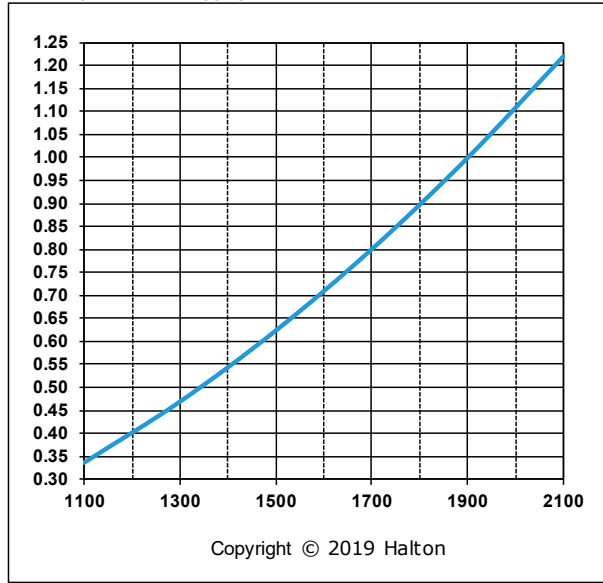
KVE-CM - 3 Filters



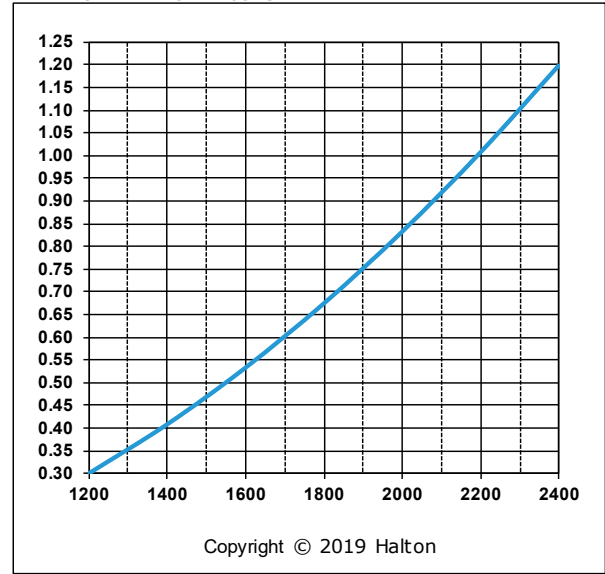
KVE-CM - 3.5 Filters



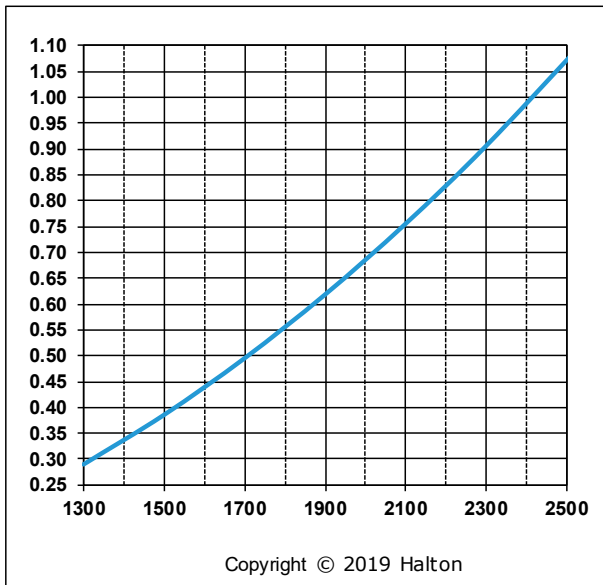
**KVE-CM - 4 Filters**



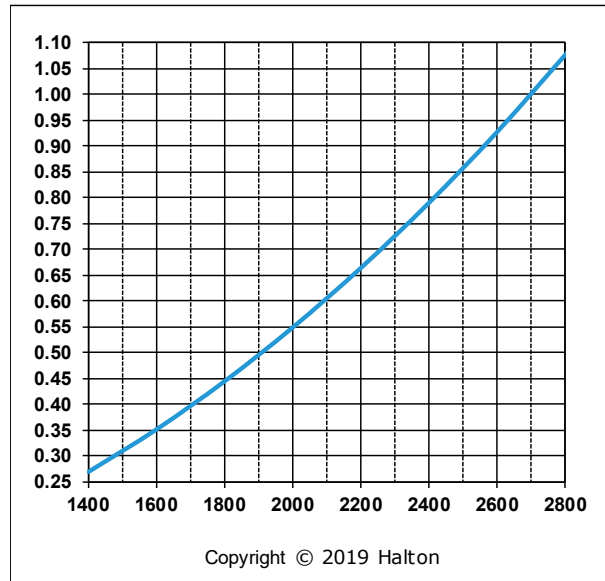
**KVE-CM - 4.5 Filters**



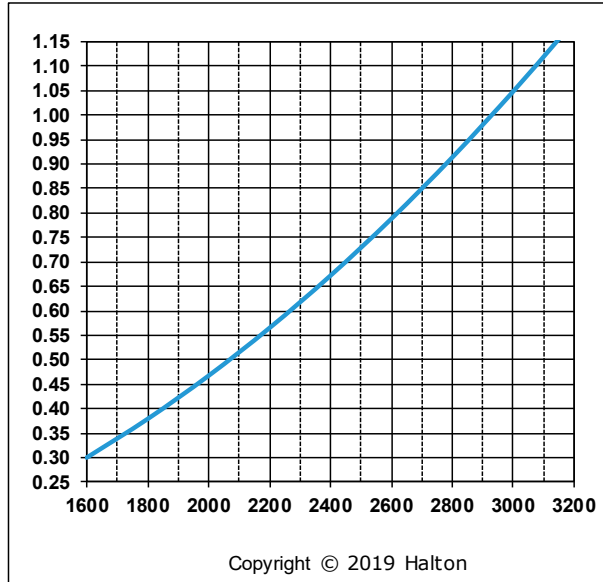
**KVE-CM - 5 Filters**



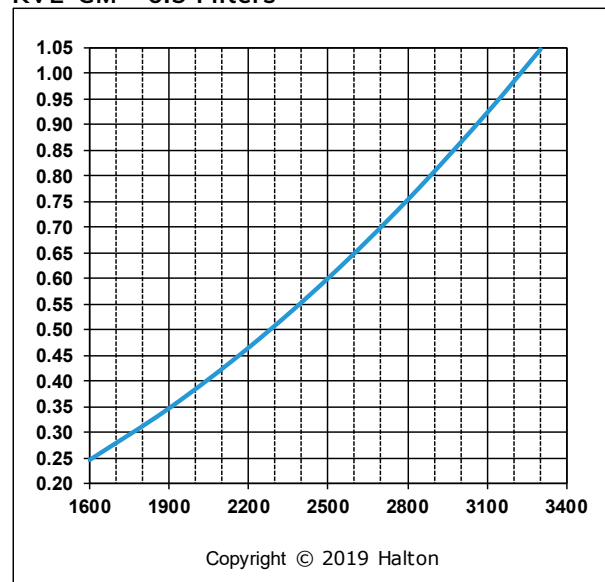
**KVE-CM - 5.5 Filters**



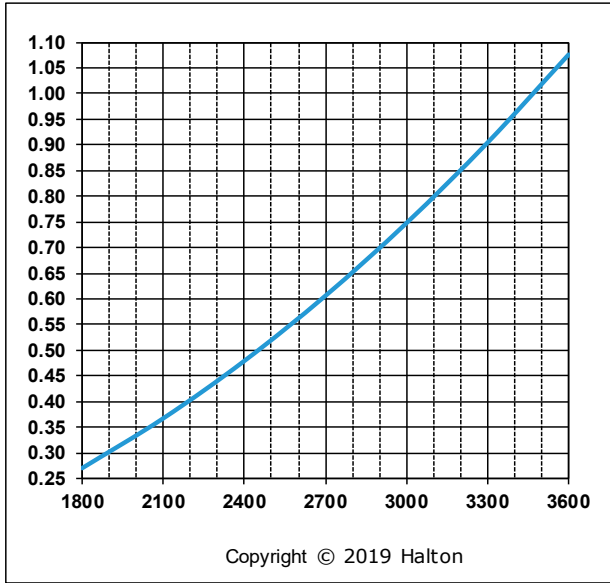
**KVE-CM - 6 Filters**



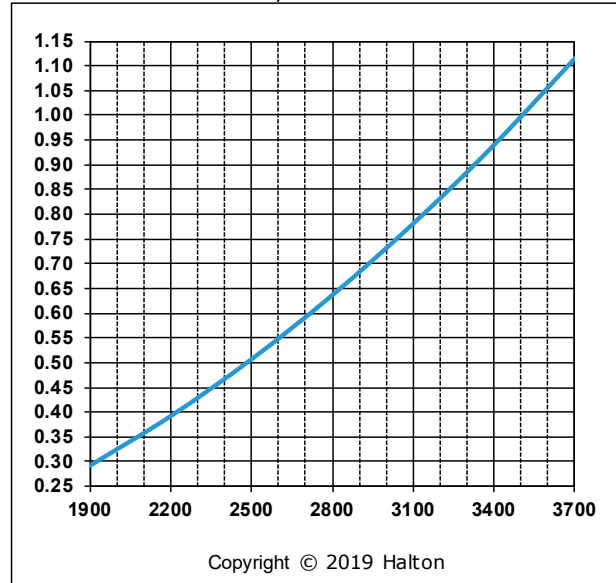
**KVE-CM - 6.5 Filters**



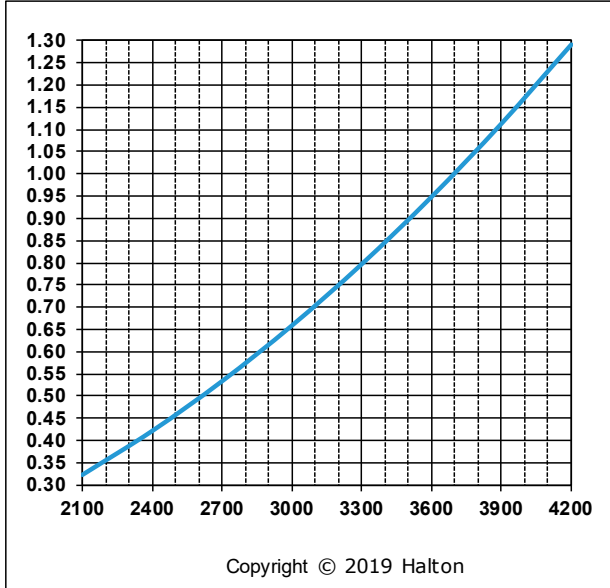
**KVE-CM - 7 Filters**



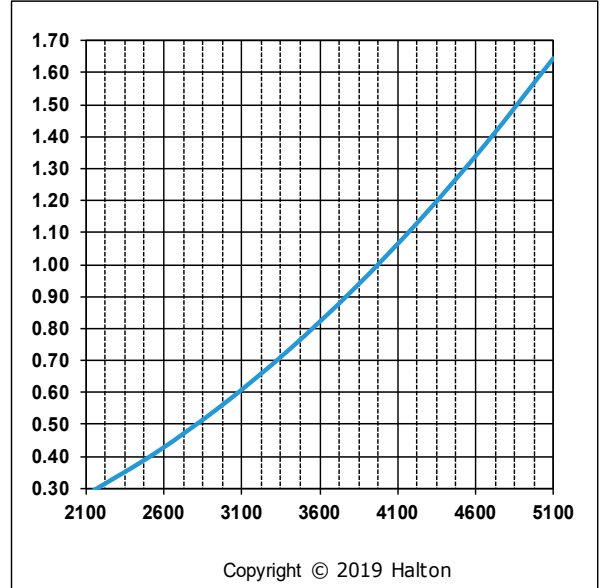
**KVE-CM - 7.5 Filters, 2 Collars**



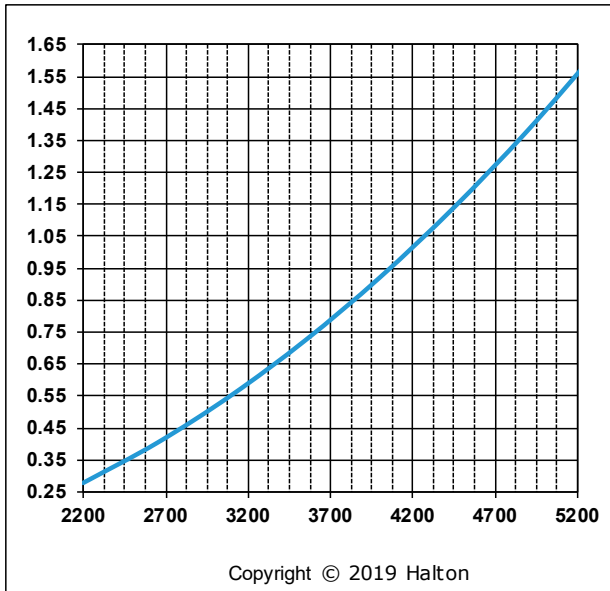
**KVE-CM - 8 Filters**



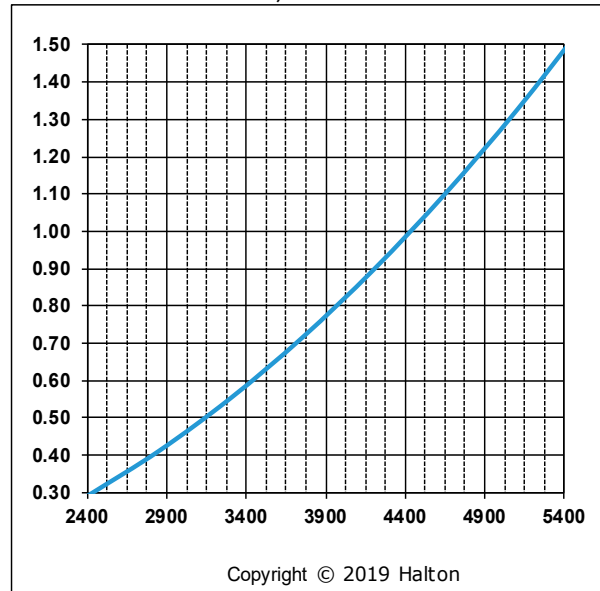
**KVE-CM - 8.5 Filters, 2 Collars**



**KVE-CM - 9 Filters**



**KVE-CM - 9.5 Filters, 2 Collars**





## Suggested specifications

### General

Kitchen hood inner liner shall be constructed from 18 gauge stainless steel where exposed. The kitchen hoods shall be supplied complete with outer casing/main body, inner liner, exhaust duct, pressure measurement T.A.B. ports. Outer casing panels shall be constructed of stainless steel with a brushed satin finish. Each joint shall be welded and liquid tight, avoiding harmful dripping of condensation.

All exposed welds are ground and polished to the original finish of metal. Canopy ends shall be double sided wall construction (no single wall hoods permitted).

### Exhaust

The required exhaust airflow calculations will be based on the input power of the appliance served.

### Capture Jet™

The hood shall be designed with Capture Jet™ technology to reduce the exhaust airflow rate required, and to improve the capture and containment efficiency of the hood, while reducing energy consumption. Slot or grille type discharge shall not be used. The Capture Jet™ fan shall be internally mounted with a speed control and will not require a fire damper or shut down in fire mode.

### T.A.B. Ports

The airflows through the extractors and the Capture Jet™ air chamber are to be determined through the integral T.A.B. (Testing and Balancing) ports mounted in the hood. The airflows are to be determined by the pressure vs. airflow curves supplied by Halton.

### Grease Filters

The hood shall be equipped with KSA multi-cyclone stainless steel grease extractors. The KSA filters shall be NSF and UL classified. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of w.c at flow rates approved by U.L. for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

### Continuous Mist Feature

A cold water manifold and mist nozzles shall be strategically placed to supply a continuous cold water mist in the interior exhaust plenum of the hood during normal fan operation. All water manifolds shall be stainless steel tubing. Spray nozzles shall be machined brass for cold water mist.

### [Optional] Light Fixtures

Hood lights shall be U.L. Listed LED fixtures, suitable for grease hoods. 20 Watts per fixture, 50 foot candles at cooking surface. Option: Recessed fluorescent, recessed incandescent or incandescent globe type lighting. The lighting shall be suitable for single phase power supply. Dimmable LED option is available. Standalone Hood based dimming control on the switch panel. When M.A.R.V.E.L. controls are used, all hoods connected to the system can have the light intensity adjusted through the HMI touch screen simultaneously.

### Control Panel

The master electrical panel consisting of one starter per motor with overload protection will be supplied. Control panel to hood, or remote mounted (for constant volume systems). M.A.R.V.E.L. controlled systems come with an HMI touch screen to monitor variable volume operation and incorporate the use of V.F.D.'s to control fan operation.

### Fire Suppression System

The kitchen hood fire extinguishing system shall protect the kitchen hood against grease fires by a completely automatic fire control system, which consists of wet chemical. The fire detection system shall be capable of detecting fire in the hood, duct, or surface equipment and shall automatically discharge liquid extinguishing agent into the plenum chamber, exhaust duct collar, and cooking appliance areas to ensure against re-ignition or re-flash. System components shall include a spring-loaded fusible link detector, wall mounted emergency pull stations, wall mounted actuator and cabinet, and a mechanical or electric gas valve installed in the gas line serving the cooking equipment. System installation shall be made by an authorized representative of the system manufacturer and conform to U.L. 300 requirements and local codes.



### HCL Halton Culinary Lights

Each hood shall be equipped with Halton Culinary LED Lights (HCL). Constructed from stainless steel frame and Aluminum housing, the light fitting comprises flush-mounted broad beam spots with a diffusion angle of at least 80°. Each light is comprised of a patented mixing chamber and a specific reflector. Both shall provide a good balance between direct and diffuse light components without dazzling the staff to mitigate eye fatigue. The shielding angle shall exceed DIN 12464-1 requirement and be at least 30°. The illuminance on the working surfaces shall be code required 50-foot candles at the cooking surface with a CRI Color Rendering Index greater than 80. The wattage per fixture will be 14W. The LED's lifetime shall be 50,000 hours. The internal power supplies shall have at least the same lifetime. They shall enable switching on/off or dimming the light (0-100%) with one or several switches.

### [Optional] Halton Comfort Jet

(add on face-mounted plenum -factory installed)

Halton's Comfort Jet plenum will be fabricated from the same material as the Halton hood it is installed on. Exposed external seams shall be ground and polished to match the original hood finish. Comfort Jet plenum is an optional add-on accessory and will follow the UL Listing of the Halton hood.

The Comfort Jet will include an active internal fan that will provide comfort air for the hood operator. The comfort air will be introduced through specially designed and tested adjustable diffusers, allowing the operator to optimize their comfort based on their cooking position. The diffusers will have adjustments in four directions, while not imposing any disruption to the cooking appliance's plume of heat or particulate.

The volume of airflow may be adjusted to suit the operator.

### [Optional] Halton SafeGuard

Provide a fully integrated commercial kitchen ventilation system manufactured by Halton, known as Halton SafeGuard, which includes: Halton Capture Jet hoods, M.A.R.V.E.L. demand-controlled kitchen ventilation, Halton FireWatch™ cooking surface and exhaust air duct temperature monitoring, Halton AirWatch™ indoor environment quality sensors, kitchen grease duct safety monitoring system and a centralized control platform with Halton Connect, cloud connectivity with remote monitoring capabilities. The system shall be factory-tested, UL 710 listed, and fully compliant with NFPA 96 and ASHRAE 90.1 standards. Hoods must be made of stainless steel, feature HCL or LED lighting, and accommodate fire suppression nozzles. The system shall dynamically adjust airflow based on cooking activity, thereby reducing exhaust and supply air requirements by up to 64% and integrate with BMS via BACnet/IP or MSTP. Final installation must include commissioning by a certified ASA representative who will also provide operator training.

### [Optional] M.A.R.V.E.L. (Demand Control Kitchen Ventilation)

Capture Jets™ hoods when used in combination with M.A.R.V.E.L. Demand Control Ventilation system shall optimize energy performance of the system by independently modulating the hood exhaust based on cooking activity. The reduction in fan energy as well as operating cost during non-peak or idle appliance use provides capture and containment of the heat load also ensuring a comfortable work environment.

The company has a policy of continuous product development, therefore we reserve the right to modify design and specifications without notice.

For more information, please contact your nearest Halton agency. To find it: [www.halton.com](http://www.halton.com)