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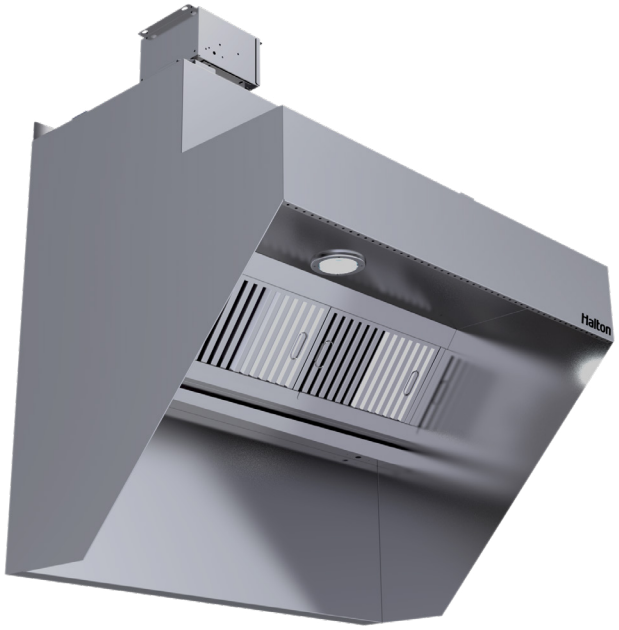
# KVL
## Capture Jet™ Backshelf Hood

◦ Capture Jet™ technology ◦ KSA cyclonic filters ◦ Halton HCL Culinary lights




Intertek

NSF

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.

## 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.

**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. (1)

(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.

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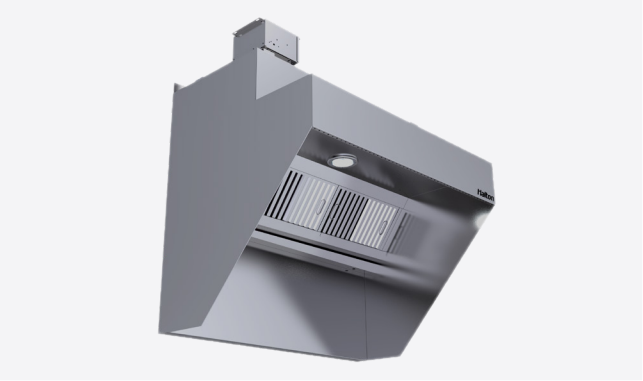


The KVL model of Capture Jet™ hood is a highly efficient kitchen ventilation hood that removes contaminated air and excess heat emitted by cooking equipment, helping to provide a comfortable and clean environment.

The KVL uses the advanced Halton Capture Jet™ technology 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 hood models. The Capture Jet™ technology is based on the high entrainment efficiency of a compact, low velocity jet. The capture air jets efficiently induce ambient air at the critical front face area 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!).

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

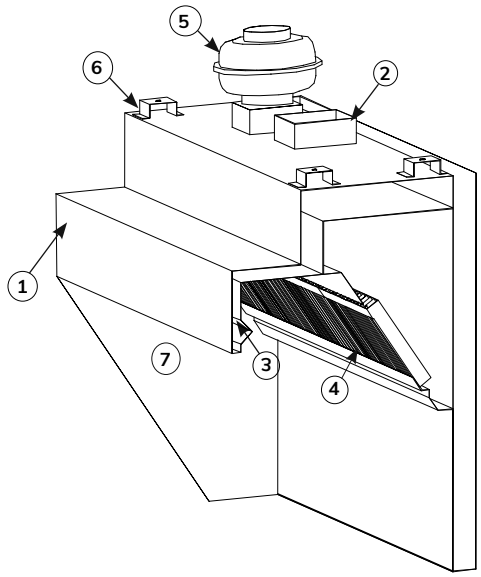
## Application

- Restaurant kitchens
- Industrial kitchens
- Fast food kitchens
- 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.
- High efficiency grease filtration using UL and NSF classified Halton KSA multi-cyclone filters with a particulate extraction efficiency of 92% on particles with a diameter of 10 microns per ASTM F2519.
- H.E.L.P.™ computer design program for exhaust airflow and kitchen air conditioning load calculations available.
- UL and ULC Listed for 400˚ and 600˚ cooking surfaces.
- T.A.B.™ (testing and balancing) ports, which allow accurate and effective commissioning.
- Optional LED light fixtures
- Optional LED puck lights and LED dimming is available for Capture Jet hoods. Dimming is controlled 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 | Capture Jet fan (may be external as shown or internal) |
| 6 | Hanging brackets |
| 7 | Double wall construction |

## Construction

The KVL hood comprizes of Capture Jet™ technology, airflow measurement T.A.B. ports and KSA multi-cyclone 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 ends have double side wall construction. A collection cup is fitted below the grease drain channel for easy removal of the grease extracted by the KSA multi-cyclone filters.

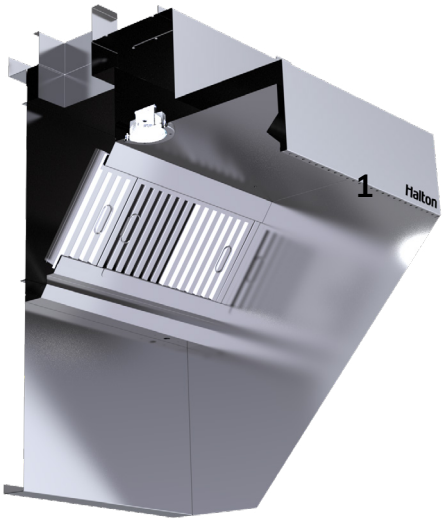
## Function

The Capture Jets (1) are directed vertically from the bottom of the front edge of the canopy creating an air curtain for the contaminated air rising from the cooking surface.

The containment volume is increased and the capture and containment efficiency is significantly improved by the combined effect of the exhaust arrangement in the back of the hood and the Capture Jet™ air curtain effectively preventing the spreading of contaminants to the occupied zone.

The Capture Jet™ air curtain in the KVL operates effectively even in conditions where horizontal, turbulent air currents are occurring in the kitchen.

Capture Jet™ also compensates for the effect of the radiant heat emitted by the cooking appliances.




## Modifications/Options:

- Switch Panel
- Fire Protection
- Backsplash
- LED puck Light Fixtures
- LED puck Lighting Dimmable
- Ceiling Closure Panels
- Capture Jet Intake Location (Top)
- Powder Coating in a Variety of Colors
- Listed Exhaust Duct Balancing Damper
- Custom/Design Stainless Steel Exterior Textures and Finishes
- 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
- M.A.R.V.E.L. Demand Control w/ VFD by Halton

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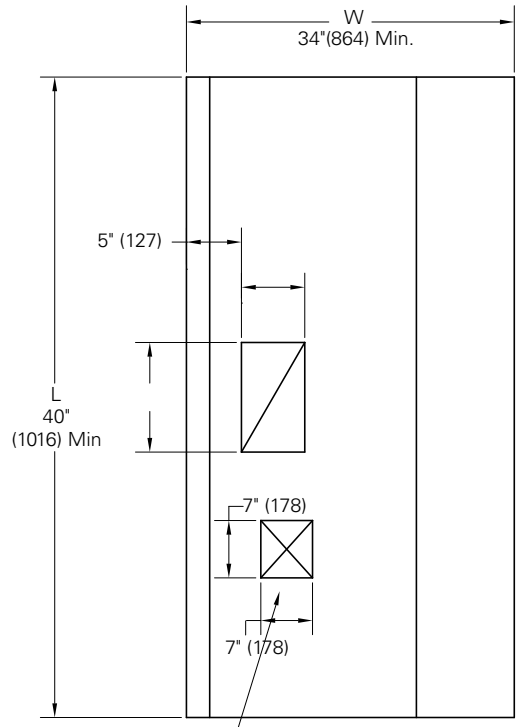
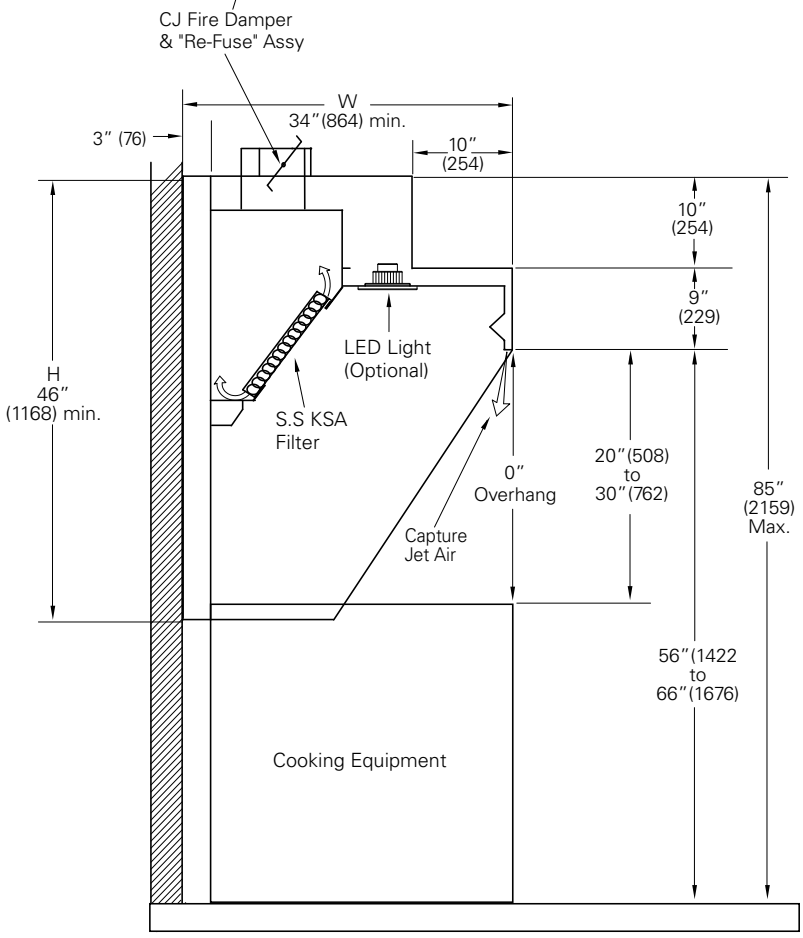
# Dimensions - KVL-P Backshelf Hood with Plateshelf




| Wall Model | Inches |
|---|---|
| Length | 40...192 |
| Width | 34...36 (including 3" standoff) |
| Height | 46" min. |

| Weight | Inches | lbs/per lin.ft. |
|---|---|---|
| Width | 36" | 70 lbs./lin.ft. |



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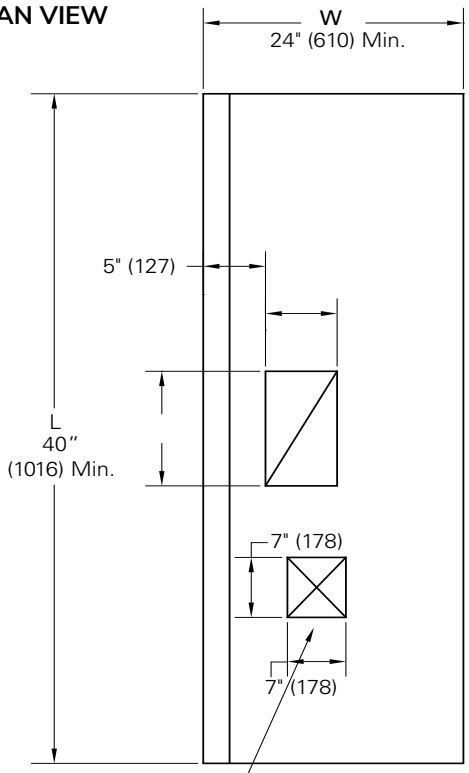
# Dimensions - KVL-U Backshelf Hood with Underhang

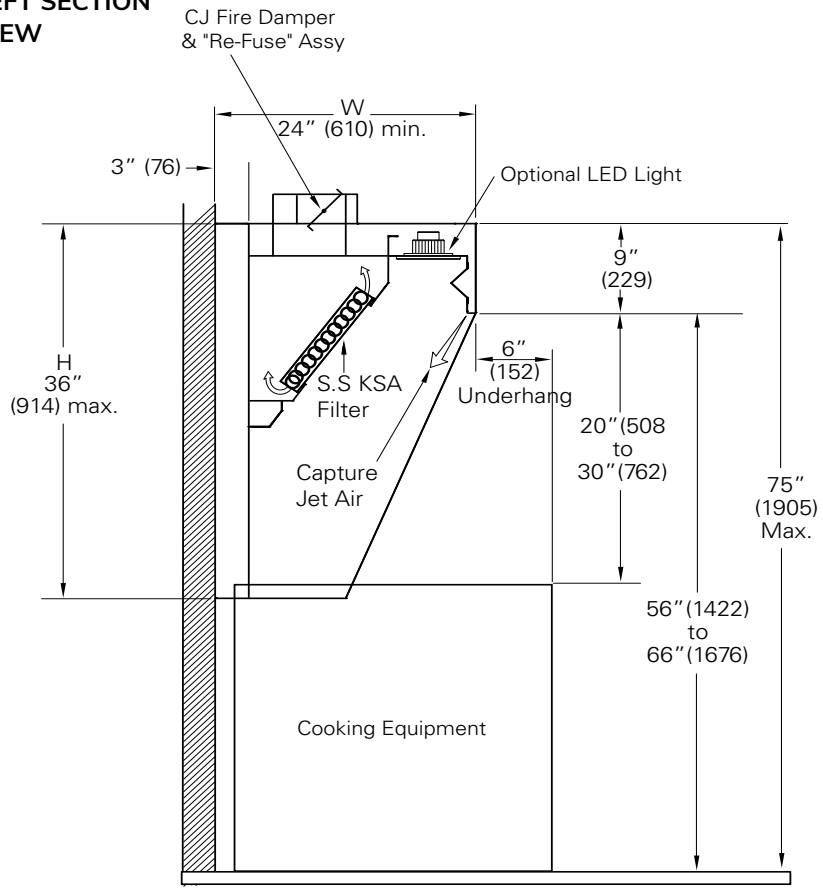
**PLAN VIEW**




| Wall Model | Inches |
|---|---|
| Length | 40...192 |
| Width | 24...36 (including 3" standoff) |
| Height | 36...48" |

| Weight | Inches | lbs/per lin.ft. |
|---|---|---|
| Width | 24" | 55 lbs./lin.ft. |
| Width | 30" | 60 lbs./lin.ft. |
| Width | 35" | 65 lbs./lin.ft. |

**LEFT SECTION VIEW**



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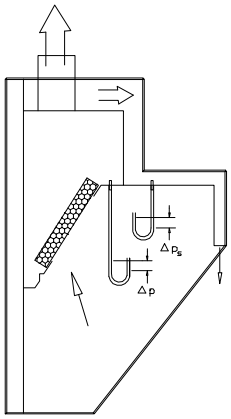
## Balancing of Capture Jet™ Hoods




The Capture Jet™ and exhaust air flows are easily and accurately determined by manually 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.

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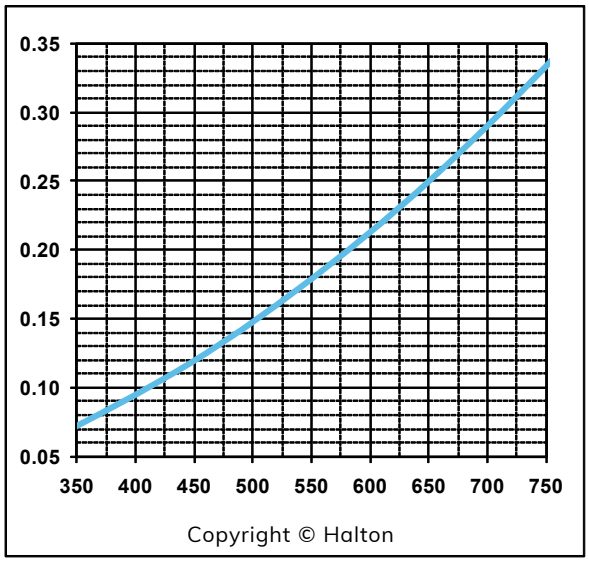


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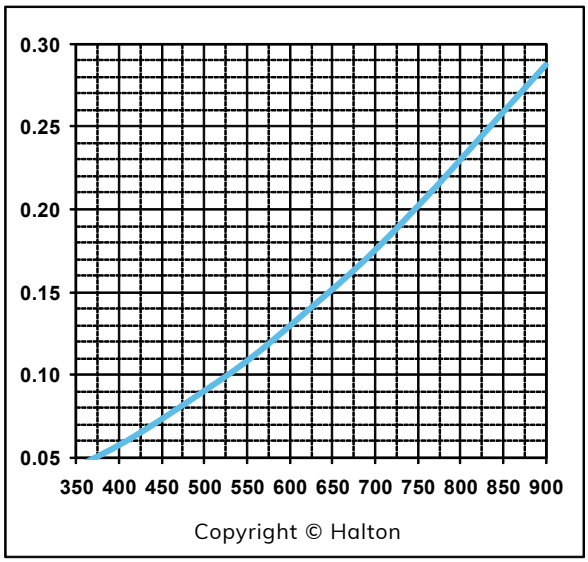


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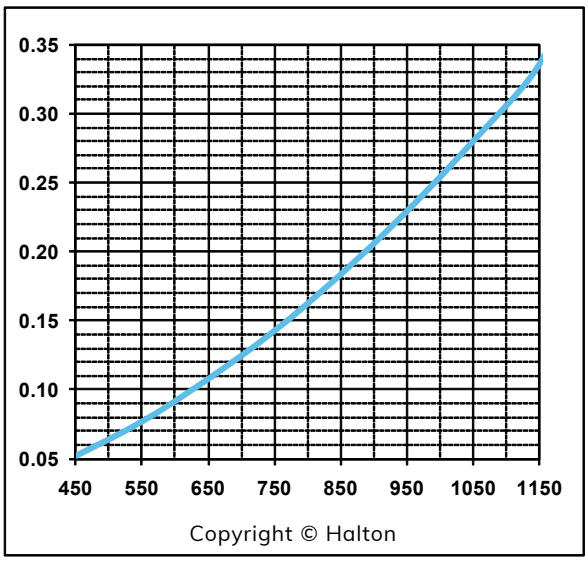


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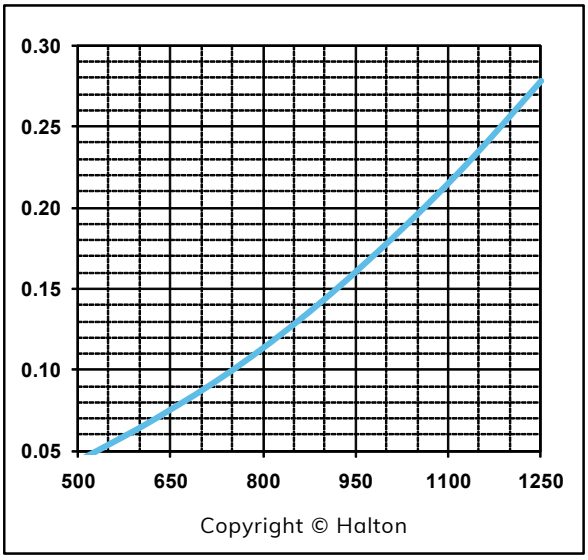

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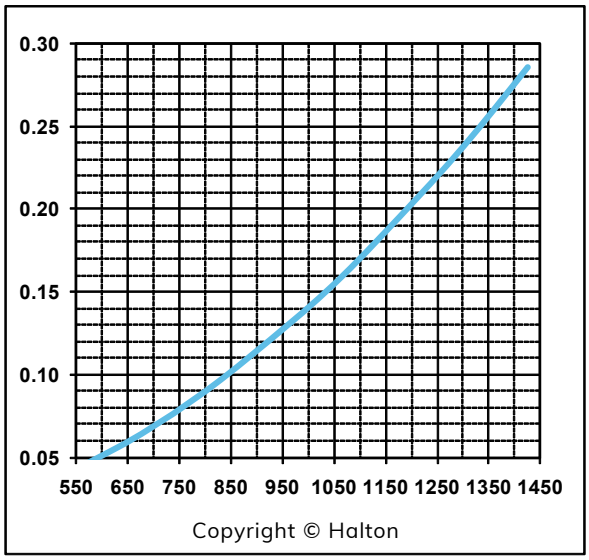


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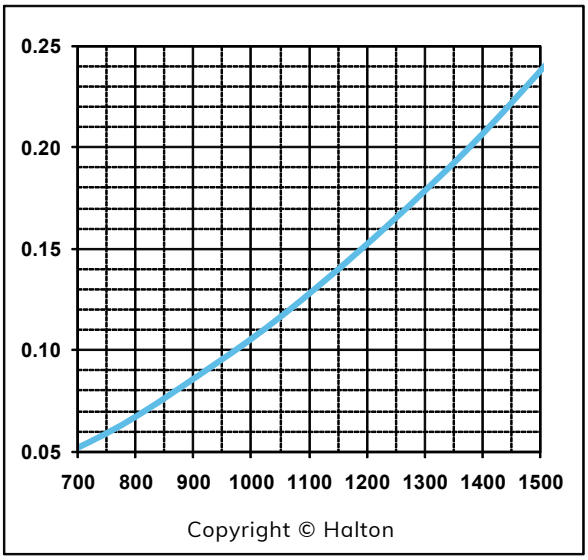


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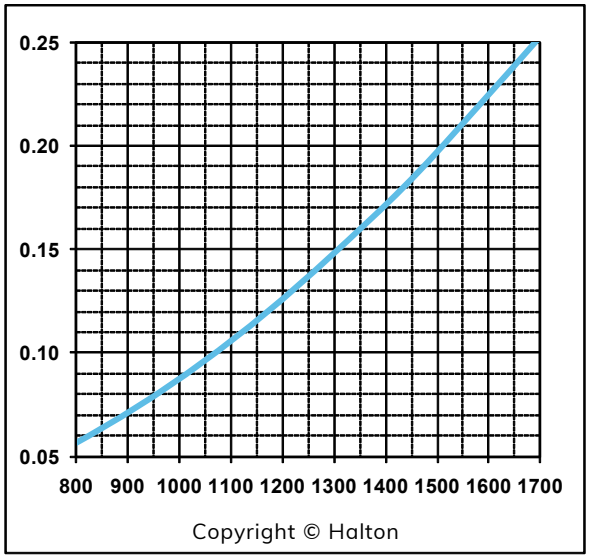


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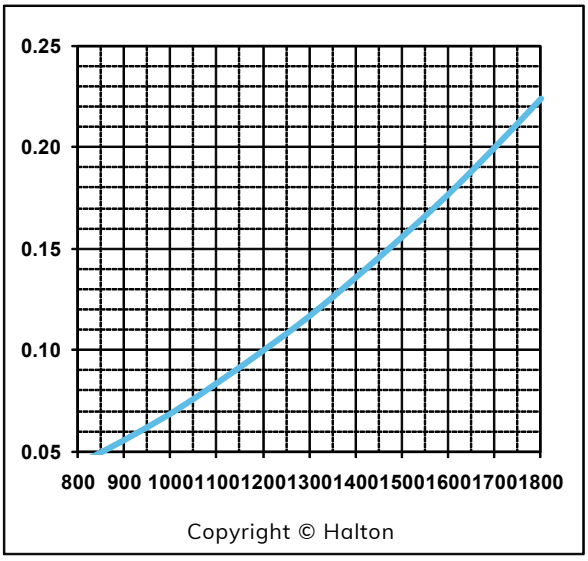


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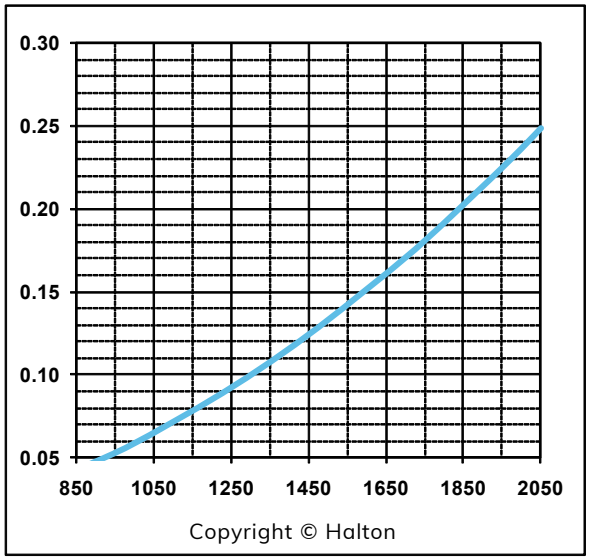


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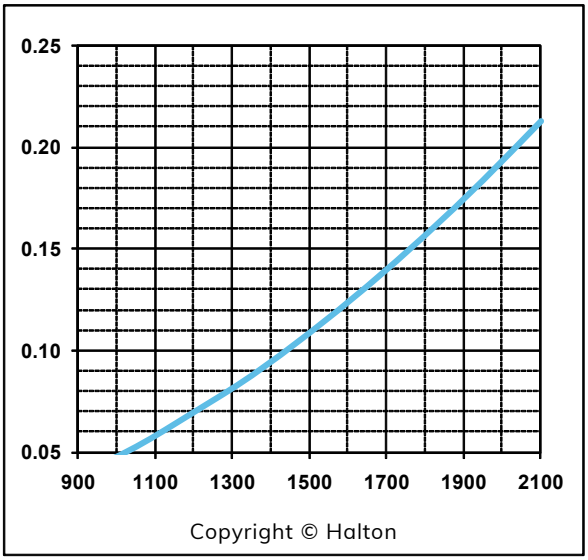

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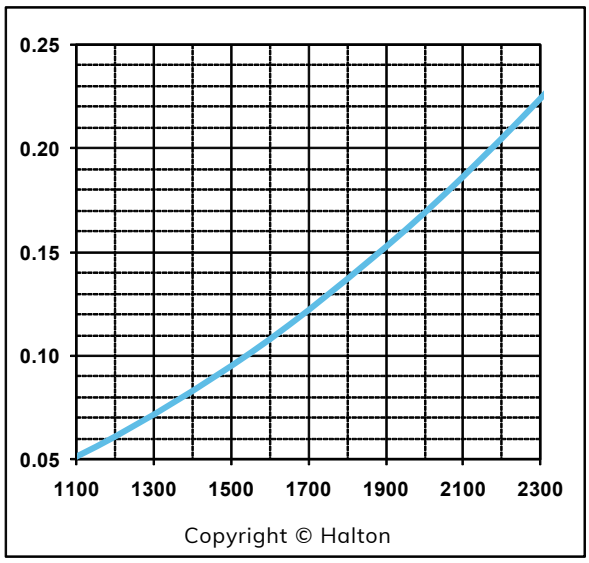


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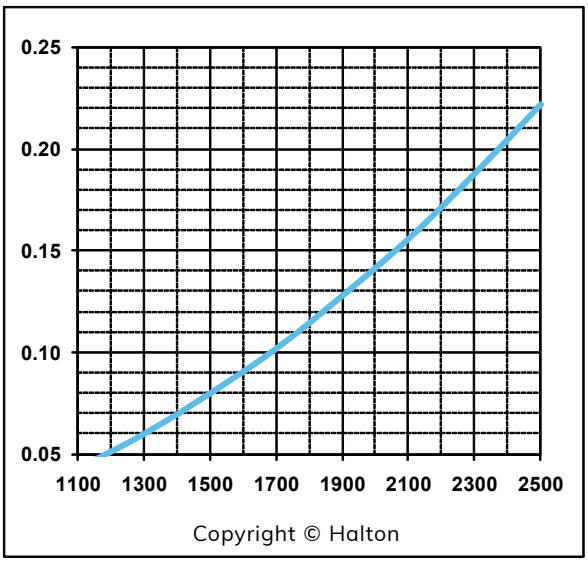


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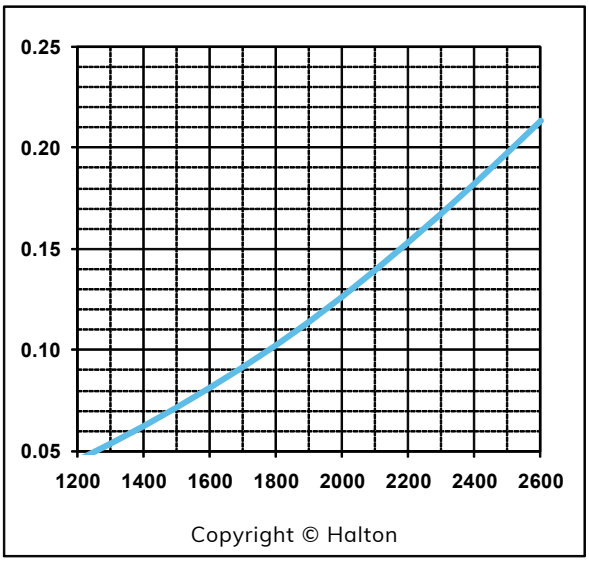

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# Suggested specification

## 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 exhaust airflow will be based on the convective heat generated by the appliances underneath each hood system. Submittals shall contain required exhaust airflow calculations based on the input power of the appliance served.

## Capture Jet™ Technology
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. The Capture Jet fan may be externally mounted with a speed control and will require a fire damper with fusible link to accommodate fire mode. Capture Jet fan may alternately be internally mounted with no required fire damper.

## 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.

## Light Fixtures
Optional hood lights shall be U.L. Listed puck LED fixtures, suitable for grease hoods. 20 Watts per fixture, 50 foot candles at cooking surface. The lighting shall be suitable for single phase power supply. Dimmable LED option is available. Standalone hood based dimming control to be on the switch panel. When SafeGuard 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 can be supplied (optional). Control panel to be hood or remote mounted (for constant volume systems). Halton SafeGuard with 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.

## Grease Extractors
The hood shall be equipped with KSA multi-cyclone stainless steel grease extractors. The KSA filters shall be NSF and UL classified. The particulate extraction efficiency is 70% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns per ASTM F2519. The pressure loss over the extractor shall not exceed 0.70 inches W.C. at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

## 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 UL 300 requirements and local codes.

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

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## [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.



For more information, please contact your nearest Halton agency.

To find it: www.halton.com



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