

# KVL

## Capture Jet™ Backshelf Hood



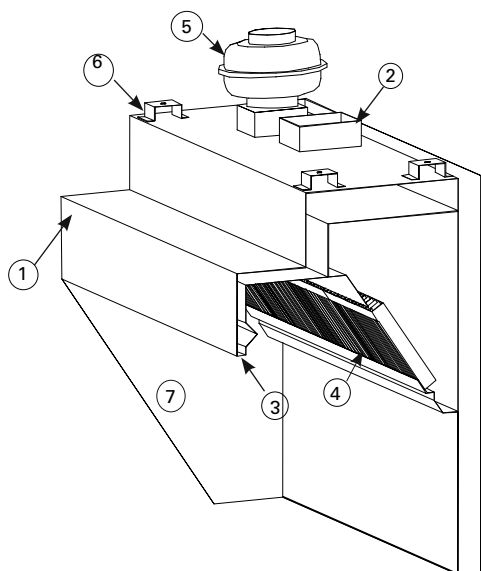
The KVL model of Capture Jet™ hood is a highly efficient kitchen ventilation hood that removes contaminated air and excess heat emitted by cooking equipment, helping to provide a comfortable and clean environment.

The KVL uses the advanced Halton Capture Jet™ technology to improve the capture and containment of the airflows generated by the cooking equipment.

Overall exhaust airflow rates can be reduced up to 30% compared to traditional hood models. The Capture Jet™ technology is based on the high entrainment efficiency of a compact, high-velocity capture air 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.

- Improved indoor air quality with reduced energy use. Halton Capture Jet™ with Side-Jet technology 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 8 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 dimming is available for Capture Jet hoods. Dimming is control by a knob on the switch panel or through Halton HMI Touch Screen.
- Stainless steel, welded design.

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
6	Hanging brackets
7	Double wall construction

## Construction

The KVL hood comprises 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 710 and be fabricated in compliance with NFPA-96, and shall bear the NSF seal of approval.

The exposed parts are manufactured from 18 ga. polished stainless steel.

The hood ends have double side wall construction. A concealed collection cup is fitted into the grease drain channel for easy removal of the grease and dirt 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 preventing effectively 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.

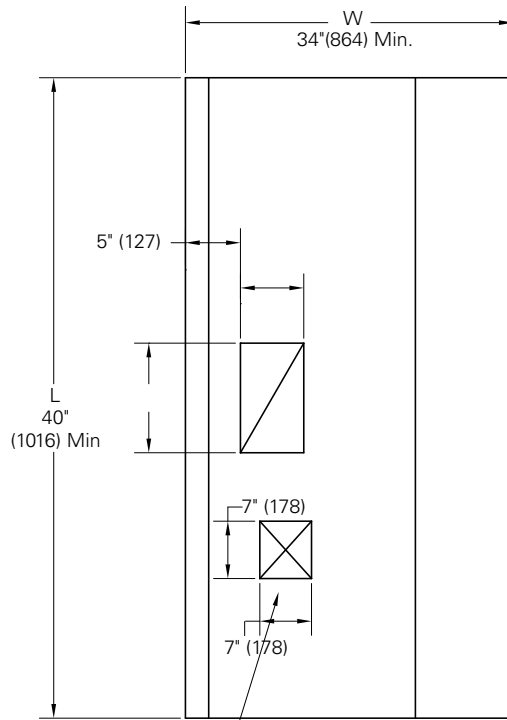
Capture Jet™ also compensate for the effect of the radiant heat emitted by the cooking appliances.



## Modifications/Options:

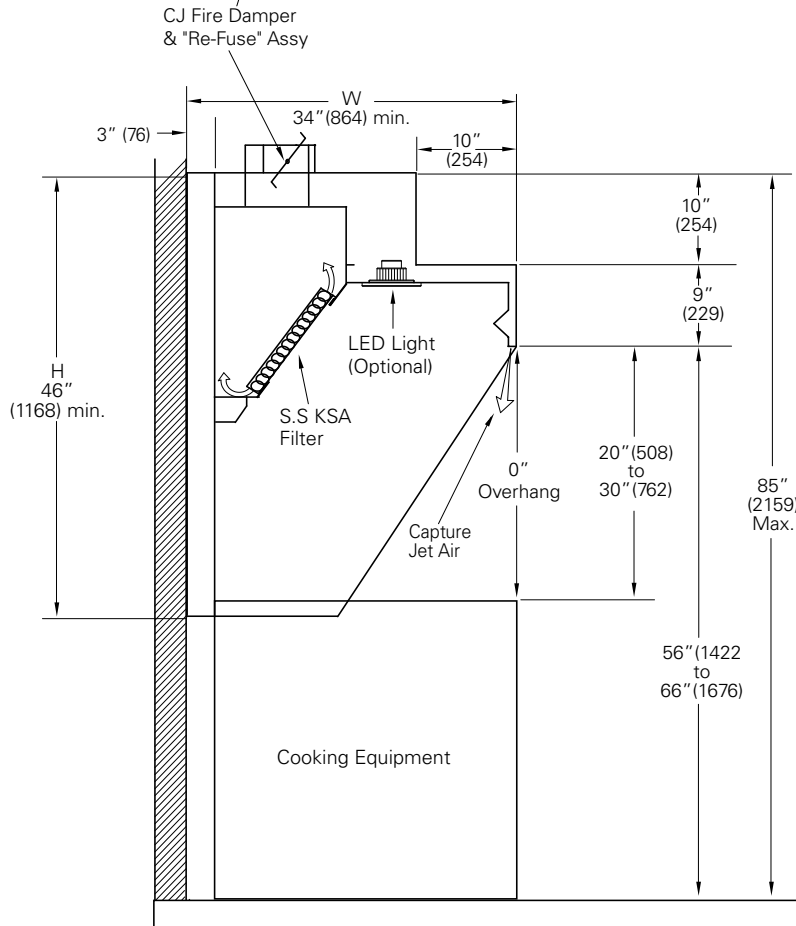
- Switch Panel
- Fire Protection
- Backsplash
- LED Light Fixtures
- LED Dimmable Lighting
- Ceiling Closure Panels
- Capture Jet Intake Location (Top)
- Powder Coating in a Variety of Colors
- Listed Exhaust Duct Balancing Damper
- Custom/Design Stainless Steel Exterior Textures and Finishes
- M.A.R.V.E.L.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

# Dimensions - **KVL-P** Backshelf Hood with Plateshelf



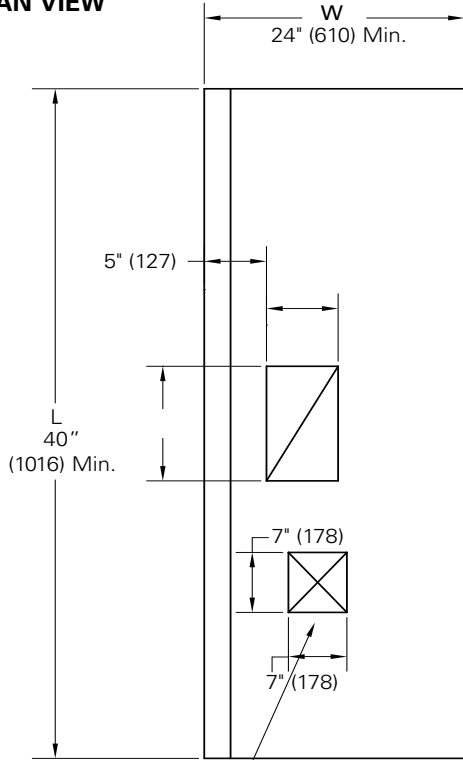
Wall Model	Inches
Length	40...192
Width	34...36 (including 3" standoff)
Height	46" min.

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



# Dimensions - KVL-U Backshelf Hood with Underhang

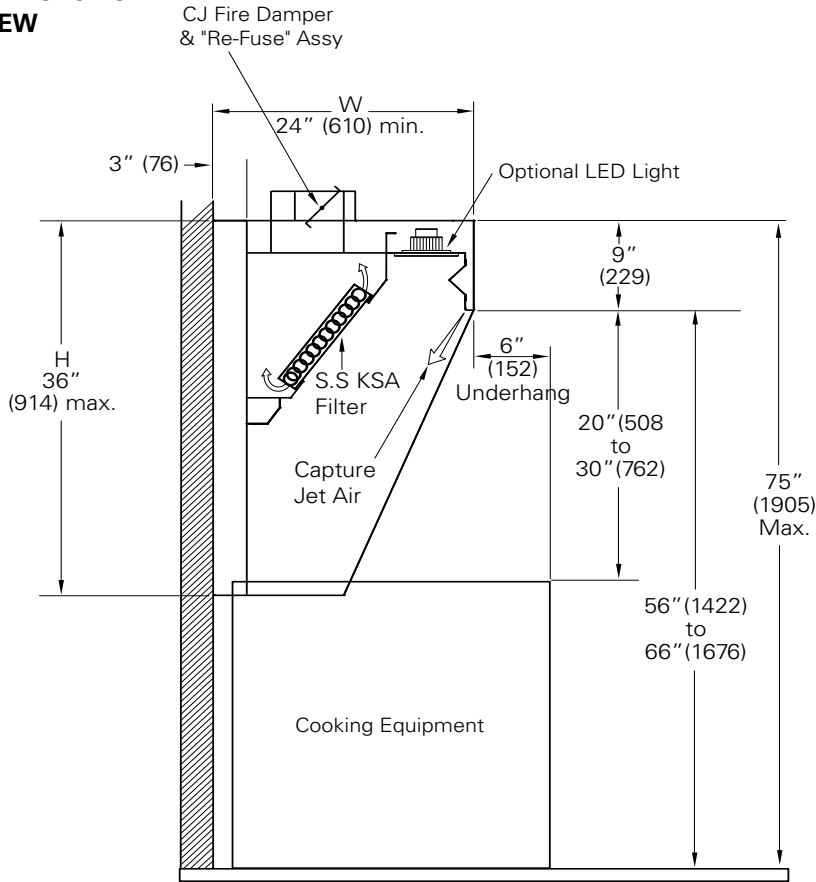
## PLAN VIEW



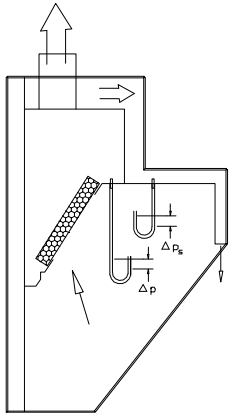
Wall Model	Inches
Length	40...192
Width	24...36 (including 3" standoff)
Height	36...48"

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



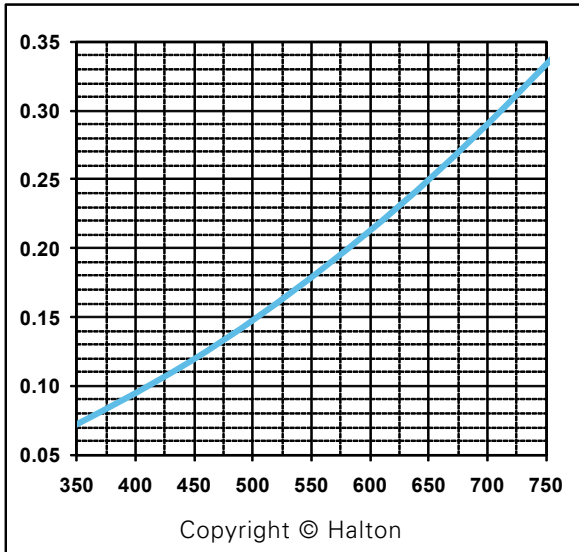
## Balancing of Capture Jet™ Hoods



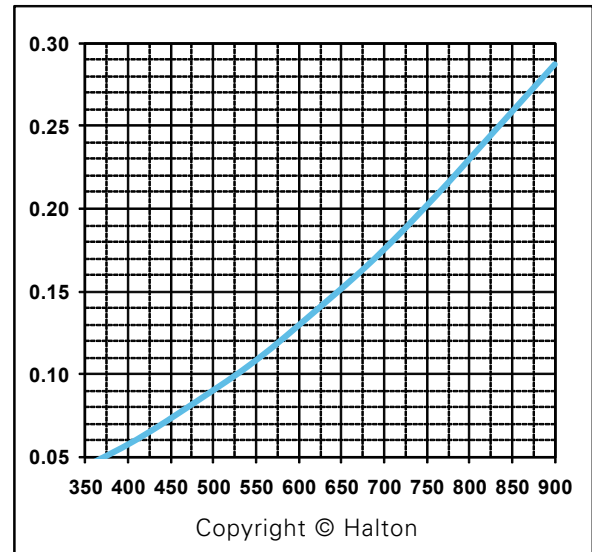
The capture jet and exhaust air flows are easily and accurately determined by measuring the pressure difference from the T.A.B.™ ports mounted in each plenum. Corresponding air flows can be read from the diagrams provided.

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.

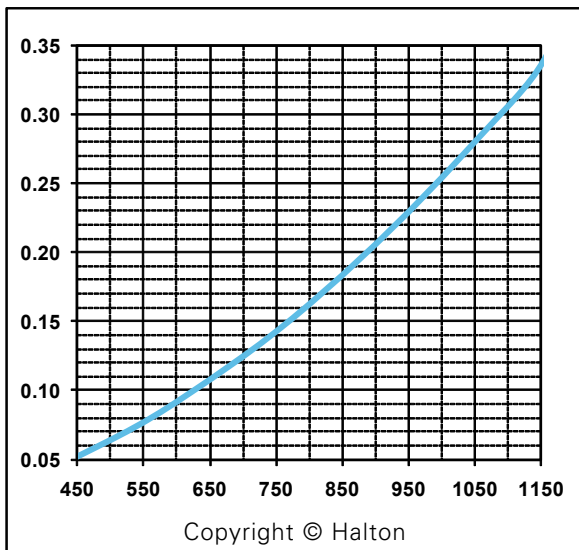
### 2 Filters



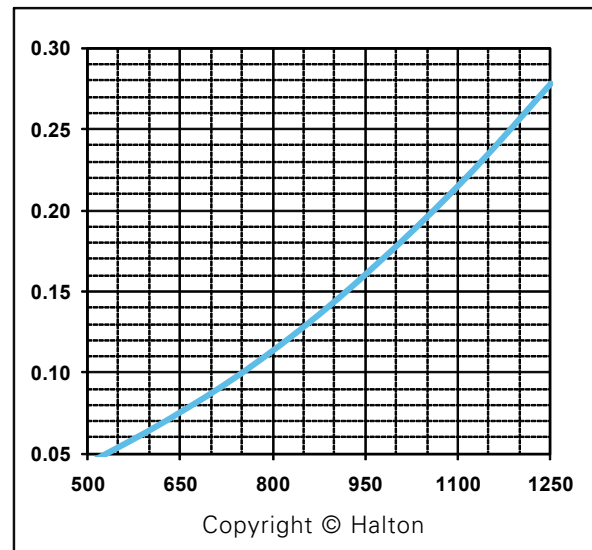
### 2.5 Filters



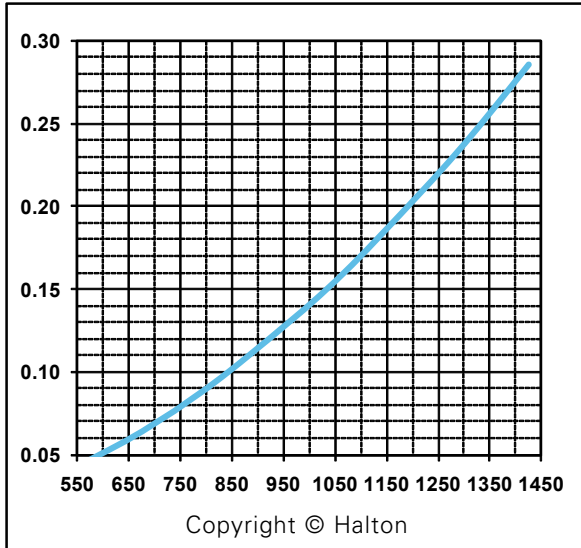
### 3 Filters



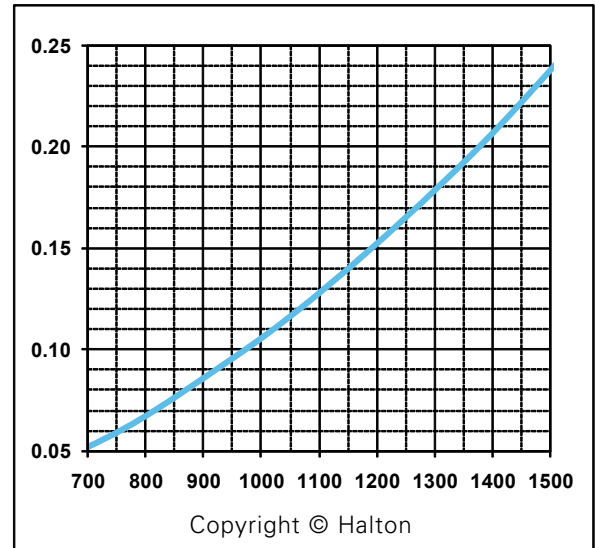
### 3.5 Filters



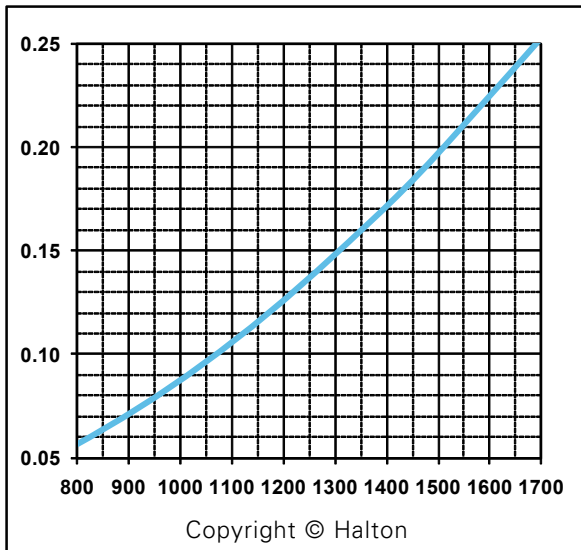
#### 4 Filters



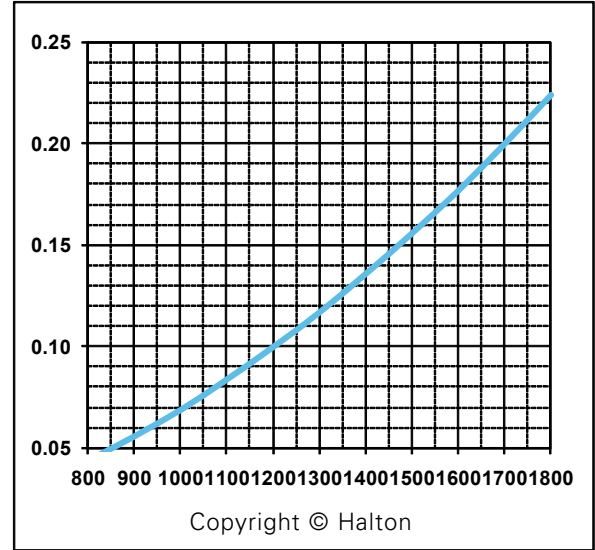
#### 4.5 Filters



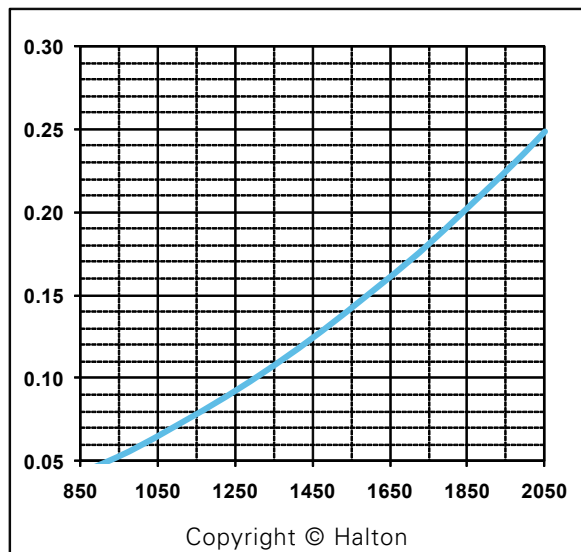
#### 5 Filters



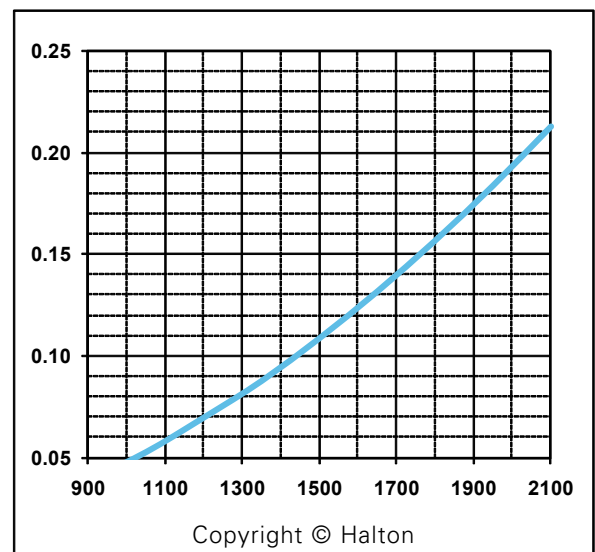
#### 5.5 Filters



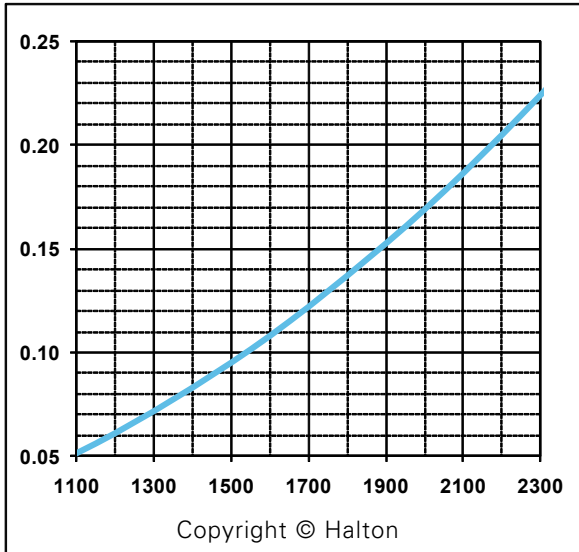
#### 6 Filters



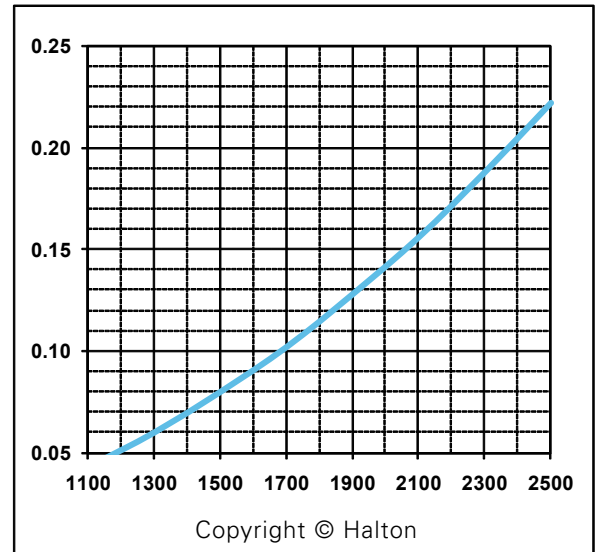
#### 6.5 Filters



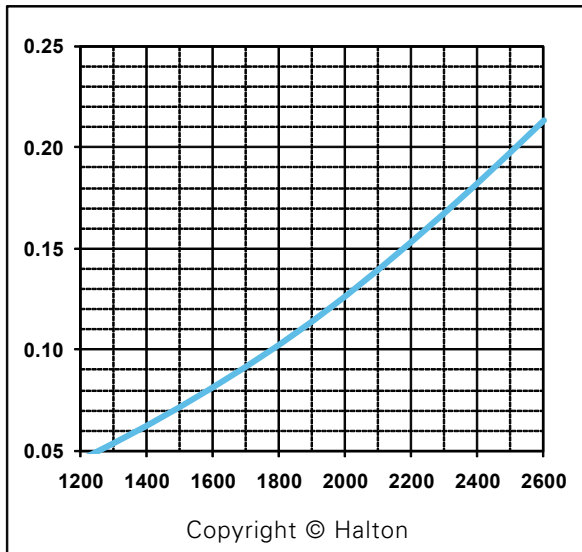
### 7 Filters



### 7.5 Filters



### 8 Filters



## 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 include convective heat calculations based on the input power of the appliance served.

### Capture Jet™ System

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™ air shall be introduced through a special discharge panel and shall not exceed 10% of the calculated exhaust airflow. The Capture Jet™ discharge velocity will be a minimum of 1500 feet per minute. Slot or grille type discharge shall not be used. The Capture Jet™ shall be externally mounted with a speed control and will require a fire damper with electronic 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.

### Light Fixtures

Optional hood lights shall be U.L. Listed 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 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 can be supplied (optional). Control panel 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.

### 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 automan and cabinet, and a mechanical 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.

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)