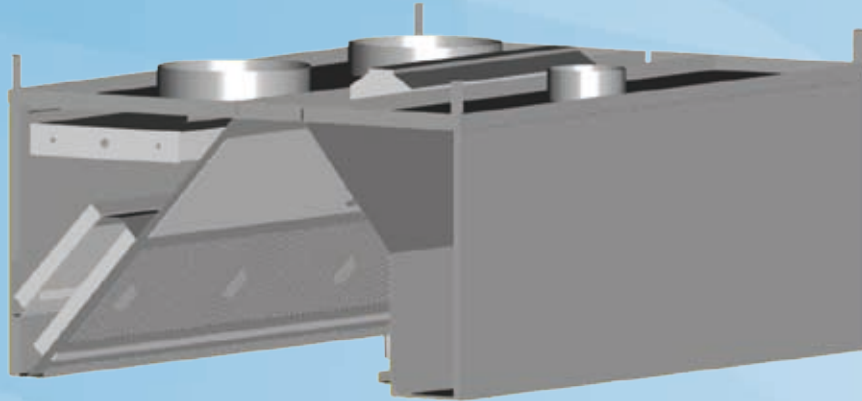


# UVI

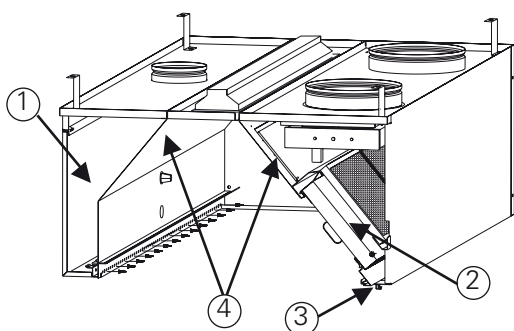
## Capture Jet Canopy with UV-technology



Nowadays air quality is becoming a major concern. Many kitchens will require emissions control in their exhaust systems to comply with growing demands for environmentally-friendly operation.

The Capture Jet range of hood systems with the Capture Ray technology provides solutions for a variety of commercial food service ventilation applications over virtually any cooking process. Based on Halton's patented high efficiency Capture Jet™ solution and advanced mechanical KSA filter technology, the Capture Ray features keep the plenum and duct virtually grease-free and reduce part of the cooking odours and emissions.

- Integrated Capture Ray Ultraviolet cassette with complete controls and safety features
- High-efficiency Capture Jet technology reduces the exhaust airflow volume required
- Capture Ray Ultraviolet cassette with integrated controls and safety
- Individually adjustable personal supply nozzles located in the front supply plenum help to reduce the effects of the radiant heat given off by the cooking equipment (optional)
- Heat load design method
- ASTM 1704 validated performance
- Easy access to UV cassettes for maintenance
- Stainless Steel Model KSA 'Multi cyclone' high-efficiency grease filters - \*UL and \*\*NSF -classified
- Supplied as standard with lighting, balancing dampers on both supply and exhaust air connections and Integral T.A.B. Testing & Balancing taps for simple and accurate field balancing
- CE-certified control panel for UV operation
- Stainless steel welded construction (AISI 304)



## Construction

The exposed part of the hood is made of stainless steel. The joints of the lower edge have a fully-welded construction. The Capture Jet is introduced through a special discharge panel (1). Grease and dirt extracted by the KSA multi-cyclone filters (2) can be removed from the canopy either by a drain tape or by emptying the collection tray (3).

The air flow through the Capture Jet air chamber is

determined by the integral T.A.B (Testing and balancing) ports mounted in the hood (4).

The Capture Ray system is installed in a plenum, which has been studied in detail using computational fluid dynamics (CFD) to ensure optimum results.

The Capture Ray control panel is designed to operate the UV lamps only under safe conditions and to give a warning in the case of lamp failure, fan failure, other operational failure or expiry of lamp lifetime. Lifetime of one UV lamp = 8000h.

## DIMENSIONS

UVI	mm
Length	1150....3000
Width	1100....1700 2200....3400 for Island model -Two sections
Height	555 555 back / 400 front

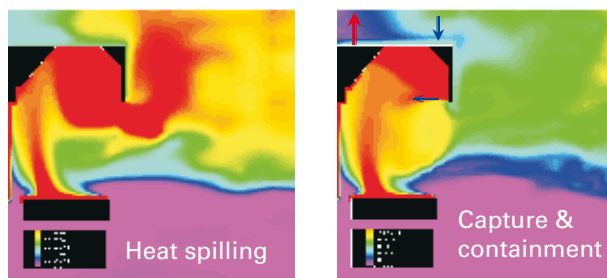
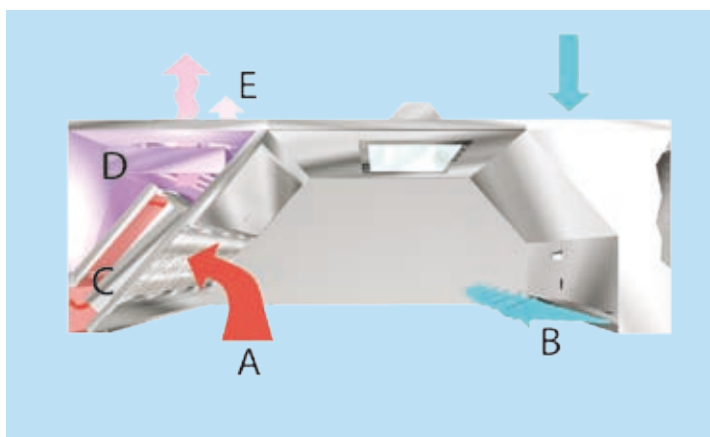
## QUICK DATA

Hood length (mm)	Short Cassettes	Long Cassettes	Number of Collars	Max air flow (m <sup>3</sup> /h)
1150 to 3000	1	0	1	1500
1900 to 3000	0	1	2	2000
2250 to 3000	2	0	2	3000

Halton HELP™ computer design program for exhaust airflow and kitchen air conditioning load calculations

\*UL = Underwriters Laboratories (UL is an independent organization founded by the insurance industry in the USA which gives approvals to safety-tested products)

\*\*NSF = National Sanitation Foundation (promoting hygiene and sanitation in the USA)



## Function

The canopy positioned above the cooking equipment collects the warm air and contaminants (A). The Capture Jets (B) direct the air towards the KSA grease filters (C) where the impurities and grease particles are separated from the exhaust air using the cyclone separation principle.

Behind these and inside the hood are a series of

ultraviolet lamps (D). The grease vapour and effluents that are not collected by high-efficiency filters pass over the lamps. This causes a chemical reaction that destroys the grease and converts it into carbon dioxide and water vapor. The chemical action carries over into the duct (E) and helps keep the duct and exhaust fan clean.

## Accessories

- General supply (GS)
- Cover Boards – where canopies are below ceiling level
- Infill Panels
- Blind Filter in stainless steel
- Integrated light fixture – IP65 (high temperature)
- Exhaust / supply roof in stainless steel
- UV cassettes 950 (small) / 1700 mm (long)
- KSA grease filters

## Wiring diagram

Supplemental instructions are included detailing the job-specific electrical wiring requirements for the control panel(s) and hood(s). If these cannot be found, please contact the factory prior to doing any electrical work.

**DIMENSIONS (mm)**

UVI – 1- Wall model	
L	1150.....3000
B	1100.....1700
H	555 or 555 back / 400 front
D1	160
D2	315
G	220
C	180

Note: The dimensions above are for modular sections only; larger canopies are assembled using a combination of separate modules, which makes transportation and site handling easier.

Light	
A	115
P	190
F	190
E	390 (B ≤ 1100), 490 (B > 1100)
I	680 (L < 1400, 2x18w), 1285 (L ≥ 1400, 2x36w)

**LOCATION OF CONNECTIONS (mm)**

For typical sizes

L	*M	Exhaust		Supply
		2x315	1x315	1x160
		*K	*J	J
1500	375	750	L/2	750
2000	500	1000	L/2	1000
2500	500	1500	L/2	1250
3000	500	2000	L/2	1500

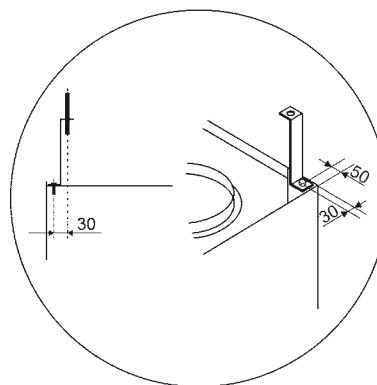
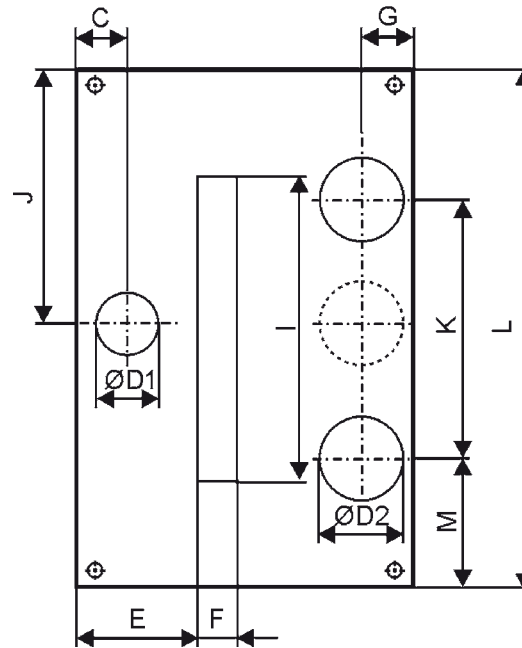
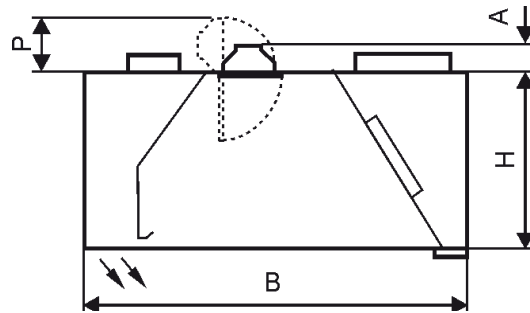
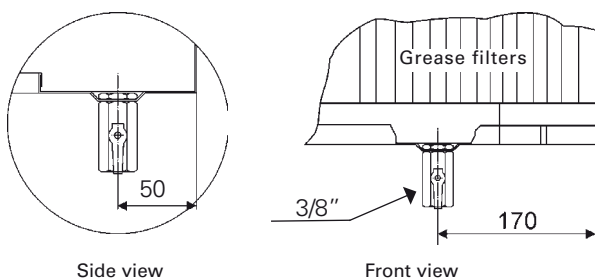
Note: \*Location of connections may vary depending on configuration of the lamp for better efficiency.

**WEIGHTS (KG)**

555 mm

L/B	1100	1300	1500	1700
1500	89	94	99	104
2000	110	115	120	126
2500	145	152	158	165
3000	150	159	169	177

**Position of Drain tap, when fitted**



## Suggested specifications

### General

Kitchen canopies are constructed from stainless steel meeting AISI 304 material specifications. Kitchen canopies are supplied complete with outer casing/main body, supply air plenum, pressure measurement taps, supply and extract air spigot connections with damper plates, installation hatch, fluorescent light fixture, Capture Jet™ air nozzles, grease filters, perimeter drain channel, drain tap, adjustment wires for supply air and hanging brackets.

### Outer casing/Main body

Outer casing panels are constructed of stainless steel sheet meeting AISI 304 specifications in a brushed satin finish. Each joint is spot welded, riveted or machine stitched. The canopy is provided with a full-perimeter condensing channel and with crush-folded sloping edges which have been properly deburred. The joints of the lower edge are fully welded, avoiding harmful dripping of water.

### Supply Plenum Area

The supply air plenum is insulated with an M0 sealed glass wool slab of density 95Kg/m<sup>3</sup>. The supply air plenum is provided with access by removing the main casing front panels.

The inner panels are constructed from stainless steel sheet meeting AISI 304 specifications, with a plain mill finish. The plenum roof panels are constructed of 0.75 mm thick hot-dipped galvanized sheet steel.

### Capture Jet

The hood is designed using Capture Jet technology (Halton-patented) to reduce the exhaust air flow volume required and to increase the capture and containment efficiency of the canopy, while reducing energy consumption.

It works by utilizing the higher entrainment efficiency of a fast, compact capture air(tm) jet to maximize the induction of room air into the canopy at the critical front face area, reducing the amount of air that normally 'spills' out into the kitchen and onto the chefs below.

### Pressure Measurement Taps

The pressure measurement taps are located on the inside canopy on the supply air side and on the extract air side.

### Grease Filters

Grease filters are supplied in modular size, 500 x 330 x 50mm, and are removable via two folding handles. The grease filters are made of stainless steel meeting AISI 304 specifications and are NSF and UL-classified. High grease filter efficiency is achieved by a unique form (Halton-patented) of filter honeycomb, which causes a spiraling of the airflow inside the honeycomb.

### Spigot Connections

The spigot connections for the supply and extract air are made of hot-dipped galvanized sheet steel and are supplied with a sealing gasket and air flow-balancing damper plate made of hot-dipped galvanized sheet steel. The exhaust damper is adjustable and access to it is via the removal of the KSA grease filters. The supply air damper is adjustable via high tensile stranded wire cables.

### Fluorescent Light Fixture

Each canopy is provided with a 2 x 36 W fluorescent light fixture to provide approximately 500 lux at the working surfaces of the cooking appliances. The light fixture suits a single phase 240V supply and is constructed to meet the IP65 protection standard. The ballast and capacitor are located within the light fixture housing. The fluorescent fitting is 1200 mm long. The light fittings are hinged to allow access to the canopy roof. A 1 mm<sup>2</sup>, 3 core electrical cable connecting the light fittings to a conduit box containing multiple connectors is provided.

### Access Hatch

Each canopy is provided with an access hatch of stainless steel meeting AISI 304 specifications with a plain mill finish, surrounded by a tempered glass light diffuser. The heat tolerance of the glass is -40 to +300 °C. The hatch is hinged and held in position by screws.

### Capture Ray

The system includes one stainless steel plenum to house the ultra violet light cassettes.

The hood is complete with a control panel indicating the total hours of operation, safety alarms, security on exhaust fan failure.

There are two kinds of UVC cassettes:

- one short, which is 156W, 950 mm long
- one long, which is 316W, 1700 mm long

The control panel of the UVC lamp suits a single phase 230VAC/50 Hz supply and is constructed to meet the IP65 protection standard. The ballast is located within the UVC light fixture housing.

The plenum includes a hinged access door for ease of maintenance and replacement of UV bulbs. The cassettes are mounted on a rack and are easily removable by disconnecting the electrical connectors on the cassettes end. The door comes equipped with safety switches. If the door is not secured in the closed position, the system will not operate.

The control panel is connected to the electrical box of the fan via a relay which detects any electrical fan failures. The system will not operate, if the fan does not work. The fan is not supplied by Halton.

The hood manufacturer supplies a master electrical panel consisting of overload protection, a main disconnect switch, terminal block wiring and control circuits that are pre-wired and contained in enclosures.