

## UVF

Capture Jet™ canopy combined with Capture Ray™ technology and low velocity supply



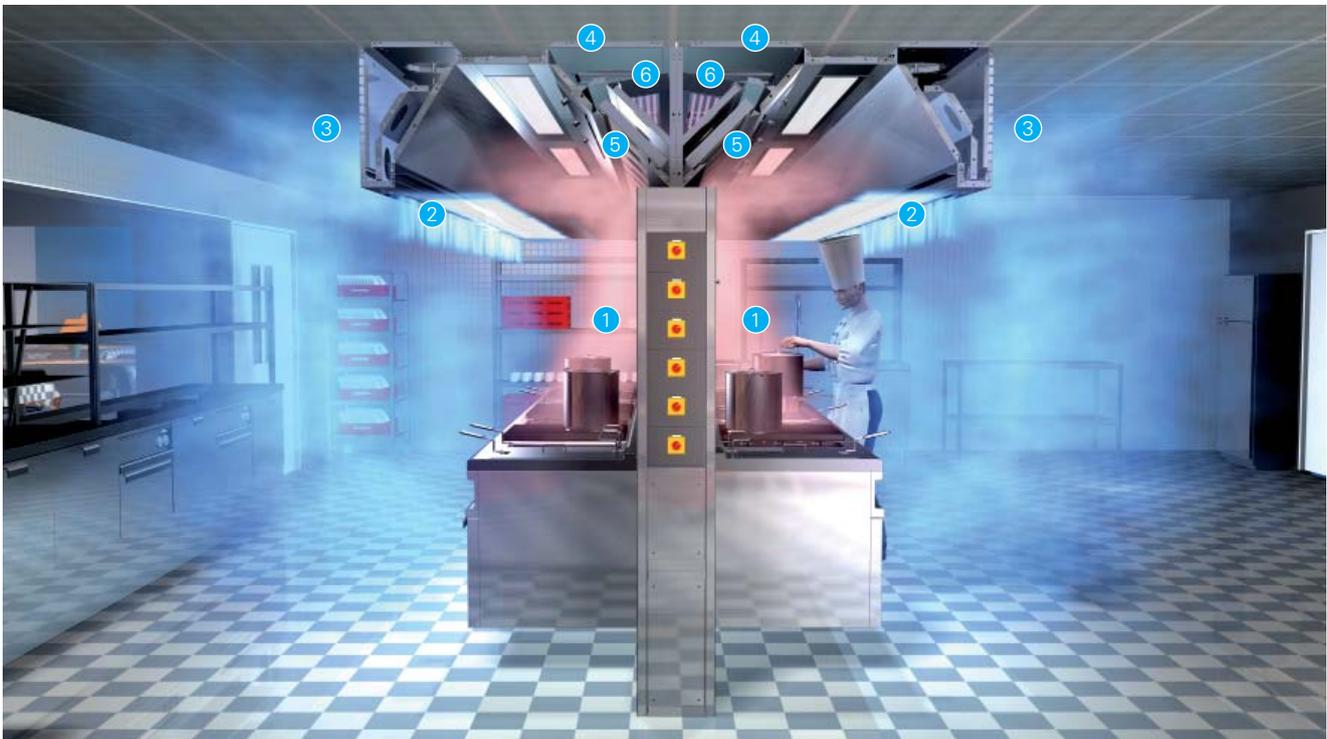
- **HACCP\* certified (PE-567-HM01I).**
- **30 to 40% reduction in exhaust airflow rates thanks to the Capture Jet™ technology.**
- **Double stage filtration with KSA multi-cyclone filters (UL, NSF and LPS 1263 classified).**
- **Neutralization of the remaining grease particles and vapours (Capture Ray™ technology).**
- **Duct cleaning costs significantly reduced and enhanced fire safety due to the absence of grease deposits.**
- **Prevention of the build-up of grease deposits, which pose a serious hygiene and fire hazard.**
- **Significantly reduces odours in exhausted air.**
- **Draught-free integrated supply air system for enhanced smoke capture and comfort.**
- Integrated Capture Ray™ Ultraviolet cassette with complete safety features.
- Plug and Play CE-certified control system with Halton's LCD Touch Screen as optional user interface.
- Performance tested independently in accordance with the ASTM 1704 standard.
- Exhaust airflow rates based on ASTM performance and a calculation method of the real heat loads.
- Accurate and effective commissioning due to "ready to install" standard delivery packages.

Indoor and outdoor air quality is becoming a major concern. Many kitchens will require emission control solutions in their exhaust systems to comply with growing demands for environmentally-friendly operation.

The Capture Ray technology keeps the plenum and duct virtually grease-free and reduces part of the cooking odours and emissions. It is based on the use of Ultraviolet lamps (UV-C) which neutralises grease vapours and particles.

The UVF canopy with the new generation of peripheral, vertical and horizontal Capture Jet™ technology is a highly efficient kitchen ventilation canopy that removes contaminated air and excess heat emitted by cooking equipment, while delivering compensation air to the kitchen at low velocity. Overall, the system requires 30% to 40% less exhaust air volume than traditional canopies to remove an equal heat load.

\* Hazard Analysis Critical Control Point



### Operation and Description

Cooking equipment generates large plumes of hot air, loaded with grease particles, grease vapours, water, and odours. These plumes or convective flows (1) naturally rise toward the kitchen ceiling.

The combination of the peripheral, horizontal and vertical Capture Jets (2) with the low velocity air supply (3) allows convective flows to rise freely and be removed by the extraction plenum (4) as quickly as possible. The profile of the inside of the canopy in association with the action of the Capture Jets allows effective containment of both regular and sudden outputs of smoke or steam. The Capture Jet™ technology, the low velocity supply and the internal shape of the canopy ensure the best capture and containment capacity thus reducing the exhaust airflows by 30% to 40%.

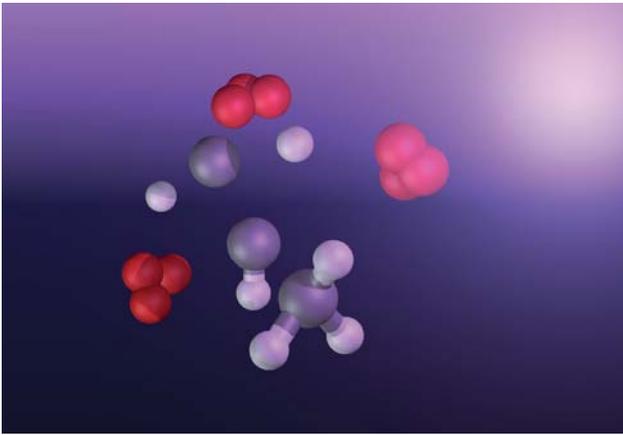
The UVF kitchen canopy is equipped with the Capture Ray technology. After capture, the convective plumes generated by the cooking appliances go through a double stage filtration (5) with multi-cyclone filters. The largest grease particles are removed. UV light and ozone generated by the UV-C lamps (6) neutralize the remaining grease particles and vapours. The efficiency

of this neutralization reaction is directly linked to the quantity of exhaust air and the size of the grease particles. The Capture Ray technology is therefore always most effective when combined with the Capture Jet™ technology and the multi-cyclone KSA filters.

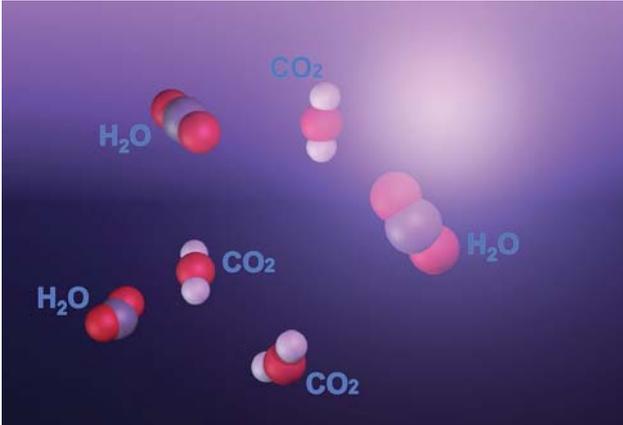
The UVF kitchen canopy comprises a supply fascia unit (3) with control damper type MSM, a Capture Jet™ unit with front and side jets, a Capture Jet™ centrifugal fan, an IP65 light fitting, adjustable supply and exhaust dampers, airflow measurement taps and KSA grease filters. All visible parts of the canopy are manufactured from polished stainless steel AISI 304. Joints on the lower edge are fully welded.

Testing And Balancing (T.A.B.™) taps for flow measurement are fitted to the exhaust, supply and Capture Jet™ supply air plenums.

The new Capture Ray product range is manufactured in modular sections. Large canopies are assembled using a combination of separate modules without any sides and beams between the modules.



Photolysis is photodecomposition which is a chemical breakdown of the grease molecules by photons.



Ozonolysis is the oxidation of the Volatile Organic Compounds (VOC) and part of the odours by the ozone generated by the UV-C lamps.

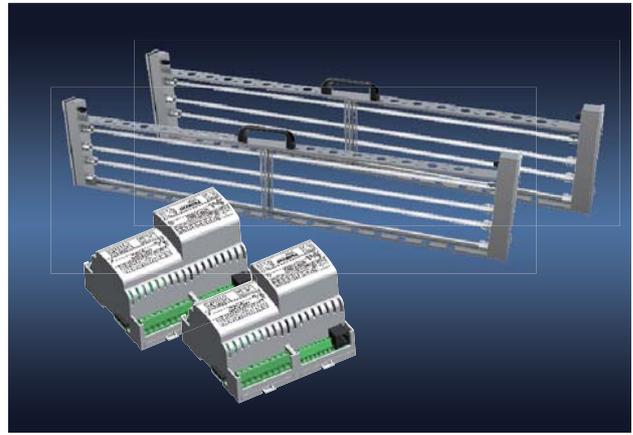
### Capture Ray UV Grease Removal Technology

- Ductwork cleaning costs are reduced due to the absence of grease deposits.
- Heat recovery feasibility, efficiency and payback time are improved due to lower maintenance needs
- Significantly reduces odours in exhausted air.

The Capture Ray technology limits the grease deposits in the canopy and exhaust ductwork and reduces the emission of odours at discharge.

The UV neutralization operates in two simultaneous actions. The Photolysis is the direct effect of the UV-C radiation (light). Photolysis works by photodecomposition which is the chemical breakdown of the grease molecules by photons.

The parallel action to Photolysis is Ozonolysis; This is the oxidation of grease molecules by Ozone that is generated by the lamps. As Ozone is a gas it is carried with the airflow, therefore the oxidation is present in the ductwork as well as the UV chamber.



UVF/1104/UK

### Integration of UV lamps and UV control system

- UV control system of a compact size with increased performance to remove the need for a control cabinet.
- Integrated Capture Ray™ Ultraviolet cassette with complete controls and safety features.
- Easy and totally safe access to UV cassettes for maintenance.
- Plug and Play CE-certified control system

The Capture Ray™ canopies are equipped with high efficiency UV lamps of a 13,000 hours lifetime. They are integrated in a light stainless steel cassette, equipped with fast connectors and an ease of grip handle. The collection of the cassette for the regular UV lamps cleaning is fast and facile.

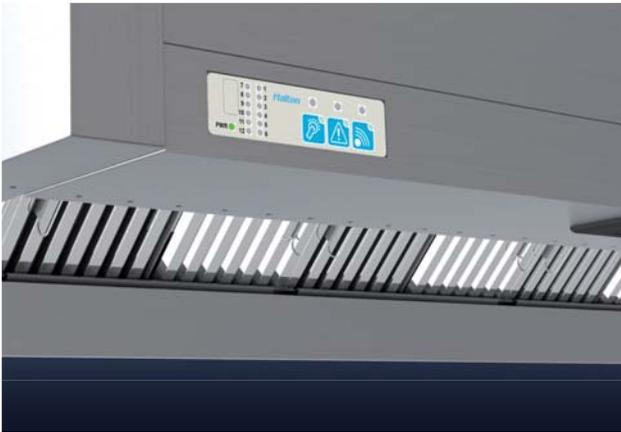
The access door to the UV lamps and every filters are controlled with maintenance free magnetic proximity switches. Therefore UV lamps will turn off immediately if a filter is removed or door opened. This prevents any exposure to direct UV radiation.

The control system is based on Halton Foodservice Control Platform (FCP) controllers and relays any faults within the system, including:

- Filter removed or UV door open
- UV lamps life time exceeded or ballast fault
- Low pressure alarm (or airflow)
- Communication error between unit.

Halton Foodservice Control Platform (FCP) includes auxiliary modules and additional features, like:

- SMS/GSM modem for remote maintenance;
- BMS (Building Management System) connectivity;
- External input, such as fire alarm & remote shut-down.



### UV console (standard user interface)

- Compact and aesthetic interface
- Simply displays the status of the UV system and potential alarms with LEED indication lights
- Identifies the canopy section concerned by an alarm or maintenance need
- Settings and statuses of the system accessible and editable with a PDA

The UV console is the user interface of the Capture Ray™ technology. It is typically aesthetically flush mounted on the lower edge of one of the canopy sections equipped with UV racks. It can be also integrated in a separate box installed in the kitchen.

The UV control system checks the correct operation of the UV lamps. In the contrary case, the UV console displays specific alarm(s) with its LED indication lights. By pressing push buttons, the combinations of the light signals displayed allow a precise diagnostic as well as the identification of the canopy section(s) concerned. The settings and statuses of the UV system are in addition accessible and editable with a PDA (Personal Digital Assistant) by the mean of the bluetooth port of the UV console. Information assessable includes then, among others:

- Live air volume & pressure
- Actual UV working hours for individual ballasts.
- Access to reset working hours for replaced lamps.



### LCD Touch Screen (Optional universal user interface)

- Totally intuitive and ease of use visual navigation
- Allows the system to be used by the kitchen staff without specific training
- Make the commissioning settings easier and faster
- Universal conception to manage all technologies of Halton's High Performance Kitchen concept separately or at the same time

Halton's LCD Touch Screen has been developed for high ease of use by the staff, as well as during the installation and commissioning of the system by the contractor. It integrates the following functions:

- Naming of the different canopies equipped with the Capture Ray™ technology;
- Representation of the products with clear drawings allowing the potential alarms to be placed where they occur and statuses to be explicitly displayed;
- Access and modification of all the settings without PDA for a faster commissioning (with an access control)
- Possibility to manage easily additional functions provided by auxiliary modules to adapt the system to specific requirements (e.g. analog outputs or GSM module).

The LCD Touch Screen is fully compatible with all the other Halton technologies which can be combined with the Capture Ray™ technology:

- M.A.R.V.E.L. Demand Controlled Ventilation system;
- Pollustop ecology units;
- Water Wash technology.

# Touch Screen: The entire kitchen at your finger tips

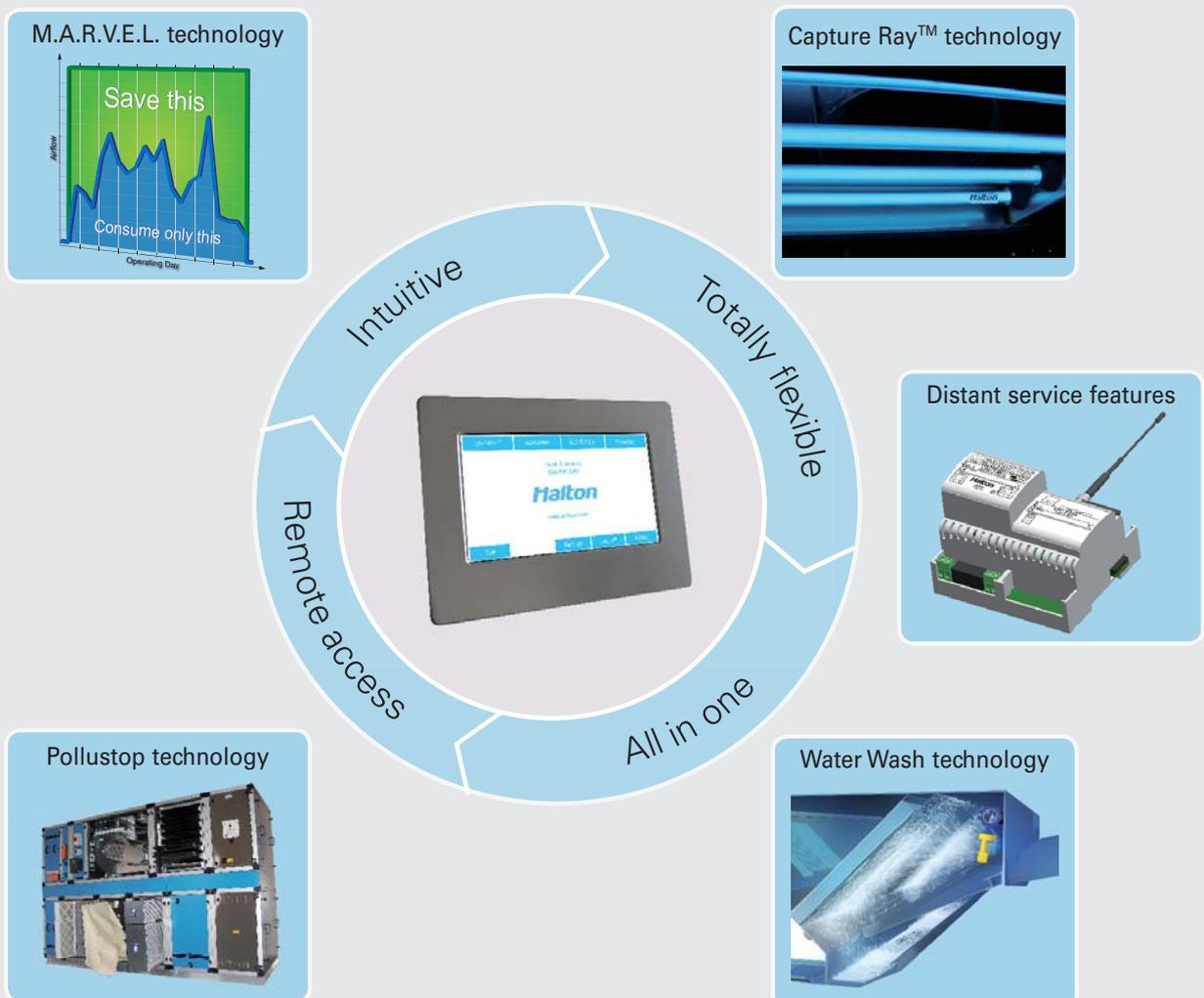
The Touch screen is key to Halton's Foodservice Control Platform (FCP). It has been developed to handle and manage all the innovative solutions of Halton's High Performance Kitchen (HPK) concept. Whatever the type and number of technologies installed in one kitchen, they will all be managed at the same time by a unique Touch Screen.

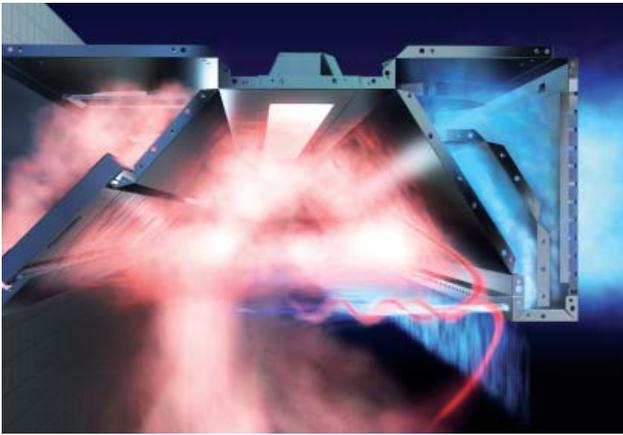
The modular concept of Halton's Foodservice Control Platform (FCP) and its high communication capabilities, provide total flexibility, as much for the initial installation as for the possibility to modify the system in the future (for strong customised projects).

Its remote monitoring capabilities facilitate the maintenance operations and make possible off-site monitoring as a perfect follow-up to the initial installation.

The Touch Screen interface has been developed to provide a fast and simple approach of the ventilation technical installations, even by non-professional personnel. The ventilation becomes as accessible as the other equipment in the kitchen to the staff.

Halton's Touch Screen: your energy savings, comfort and safety at your finger tips.





### Double and Peripheral Capture Jet™ Technology

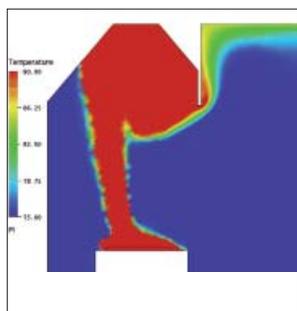
- Reduces exhaust airflows and energy consumption by 30% to 40% due to higher capture and containment efficiency.
- Enhances UV reaction efficiency due to lower exhaust airflow rates.
- Better indoor air quality and comfort.

The Capture Jets are a must in association with the Capture Ray technology. The lower the exhaust airflow rates, the lower the number of UV lamps, the higher the time exposure, the higher the UV efficiency.

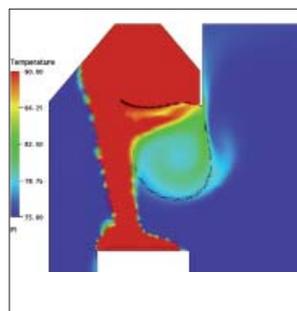
The Capture Jet™ technology consists of two sets of nozzles, one vertical and one horizontal.

- The horizontal nozzles push vapours back towards the filters.
- The vertical nozzles increase the containment volume and prevents vapours escaping from cooking areas.

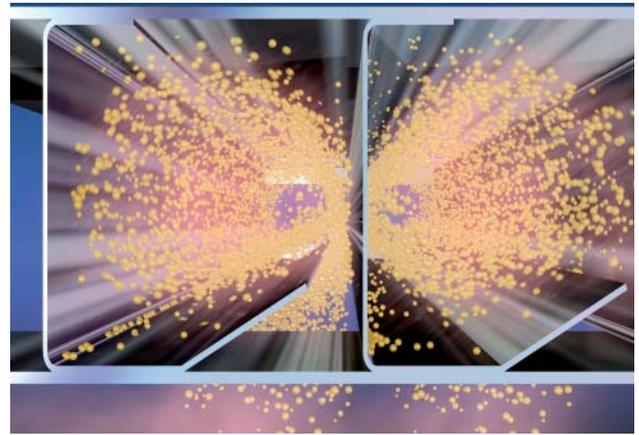
The bottom edge of the exhaust plenum is aerodynamically designed not to disturb the rising up of the thermal plumes, thus further improving the Capture Jets action.



WITHOUT Capture Jets Heat spilling



WITH Capture Jets Capture & containment



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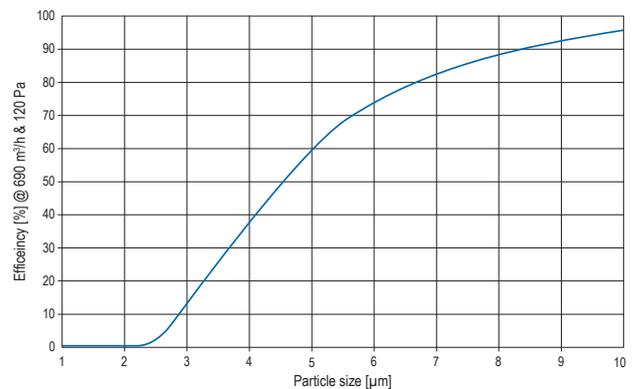
### KSA Cyclonic Filters

- Vital for the efficiency of UV-C neutralization process
- Minimisation of grease deposits in the ducts
- Enhanced hygiene and safety

The cyclonic filters are also a must in association with the Capture Ray technology. UV lamps are less efficient on large grease particles. Therefore, it is vital to have a high efficient first mechanical filtration before the UV.

The KSA cyclonic filters are composed of honeycomb profiles, which forces the air to swirl inside the profiles. The centrifugal effect is significant and, above all, continuous – especially in comparison to the action of traditional filters. Particles are thus pushed against the profiles. The collected condensation flows naturally towards the extraction plenum drains.

The KSA filters are 95% efficient in removal of 10 µm particles. They are UL-accredited as flame-resistant and have NSF hygiene and safety approval. Constructed from AISI 304 (1.4301) polished stainless steel.



Efficiency curve of the KSA cyclonic filters based on the VDI 2052 method (part 1) «Ventilation Equipment for kitchens. Determination of Capture Efficiency of Aerosol Separators in Kitchen Exhaust»



### Front Face Low Velocity Air Compensation

- Draught-free compensation control
- High comfort levels for users

The UVF front faces are designed to spread fresh air through the kitchen with the displacement principle, at a very low velocity. The absence of draughts not only helps to avoid dispersing convective flows from the cooking equipment but also guarantees comfort to the chef. The capture air plenum is thermally insulated using non-fibre-releasing material to prevent vapours from condensing on the inner face of the canopy above the cooking equipment.

Individual supply nozzles are adjustable to produce punctual small fresh air curtains near the cooking equipment, which helps to reduce the effect of the radiant heat given off by the cooking equipment.



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### Comfort Limit Height

- Total control of air quality in the work area
- Wellbeing and productivity

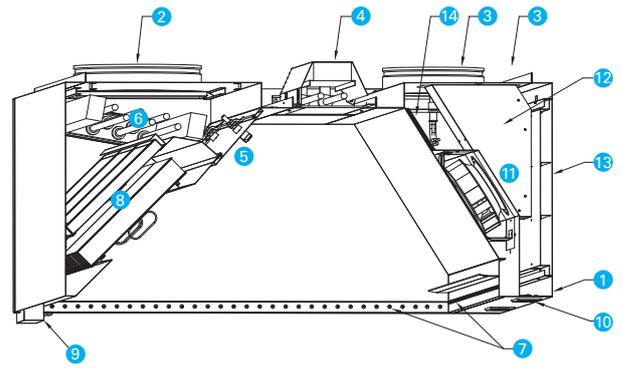
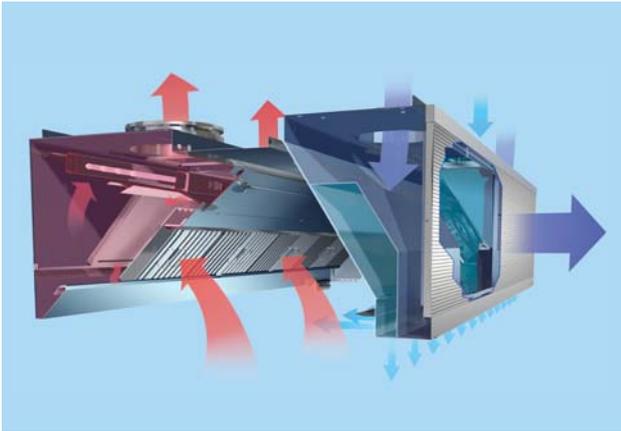
The front face low velocity supply allows the kitchen air to be renewed on the principle of air displacement. Fresh air naturally falls to the ground and fills the working area from that level. The absence of flow disturbances prevents this fresh air from spreading the convective flows generated by the cooking equipment. A comfort limit naturally appears in the kitchen's air levels through stratification. Below the limit height, air quality is optimal.

### Commissioning, Safety and Maintenance

- Components are easy to access and clean
- Maximum hygiene and maintenance

The Capture Jet™ canopies are designed to reduce the number of external stainless steel components thus reducing the number of joints to be cleaned for maximum hygiene. The joints of the lower edge are fully welded to be liquid-tight, avoiding harmful dripping of condensation. The bottom edge of the exhaust plenum is aerodynamically designed to limit the condensation risk and also improve the canopy efficiency. The hinged light lens allows for access above the canopy.

**DESCRIPTION**



CODE	DESCRIPTION
1	Outer casing – visible parts in stainless steel AISI 304
2	Exhaust air connection and adjustment damper
3	Supply air connection and adjustment damper (type MSM)
4	Light fixture with electrical junction box
5	Access hatch
6	UV lamps rack
7	Capture Jet™ nozzles

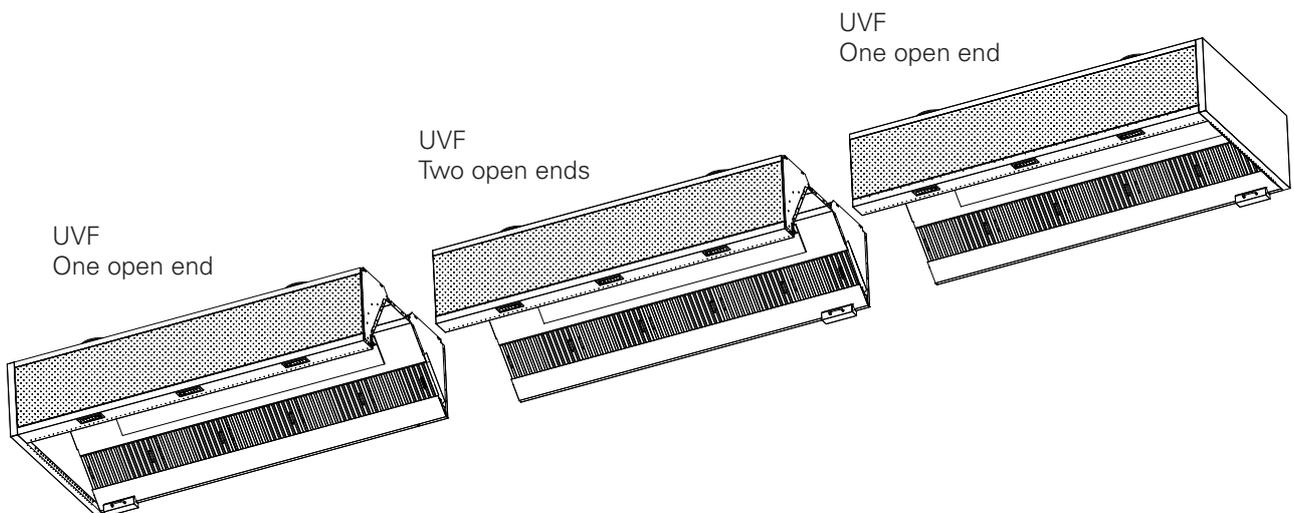
CODE	DESCRIPTION
8	KSA double stage filtration
9	Grease collection tray or drain tap
10	Personal supply air nozzles
11	Capture Jet™ fan
12	Capture Jet™ fan air inlet plenum
13	Perforated front face
14	Thermal insulation

**QUICK SELECTION DATA**

L1 (section length)	L	Recommended Exhaust air volume*		Recommended make up air volume		Capture Jet air volume (with width = 1300)	
		l/s	m³/h	H = 555	H = 400	l/s	m³/h
1500	1600	420 ... 570	1515 ... 2055	200 l/s or 720 m³/h	157 l/s or 565 m³/h	27	97
2000	2100	560 ... 760	2020 ... 2740	per linear metre	per linear metre	31	112
2500	2600	700 ... 950	2525 ... 3425	of section	of section	35	127
5000	5100	1400 ... 1900	5050 ... 6850	MSM 100% open	MSM 100% open	56	202
7500	7600	2100 ... 2850	7575 ... 10275	ΔPst = 48 to 52 Pa	ΔPst = 45 to 70 Pa	77	277
10000	10100	2800 ... 3800	10100 ... 13700			98	352

\* Minimum at a T.A.B.™ reading of 105 Pa (505 m³/h or 140 l/s per filter)... maximum at a T.A.B.™ reading of 190 Pa (685 m³/h or 190 l/s per filter)

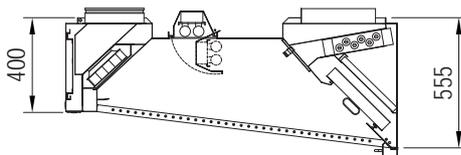
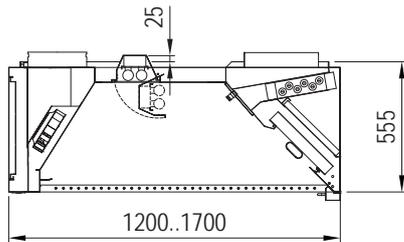
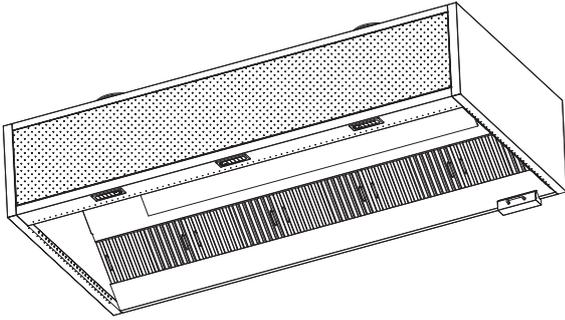
**ASSEMBLY OF MODULAR SECTIONS**



UVF - Capture Jet™ canopy combined with Capture Ray™ technology and low velocity supply air



**DIMENSIONS UVF (2 closed ends)**



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

**LOCATION OF CONNECTIONS (mm)**

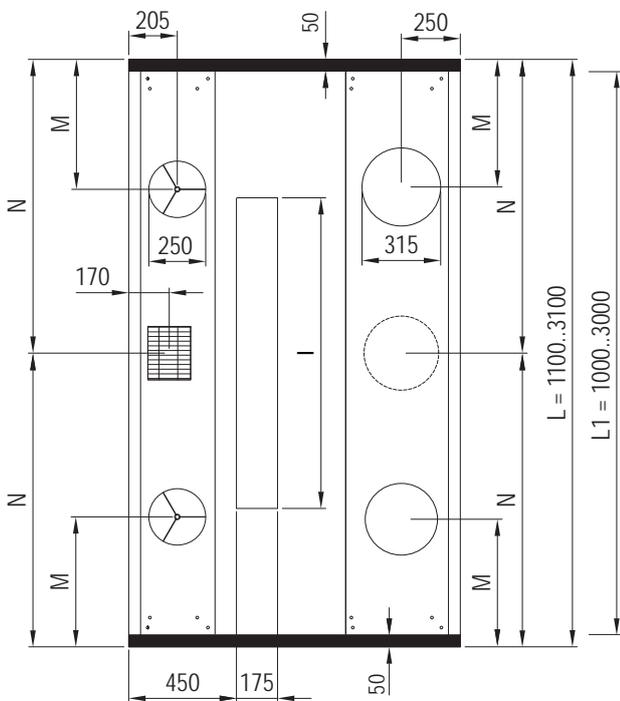
For typical sizes

L	Exhaust		Supply	Capture Jets	Light
	1 Ø315	2 Ø315	2Ø250	Ø160	I*
1600	N/2	M	M	N	I*
2100	L/2	500	500	L/2	1320
2600	L/2	500	500	L/2	1320
3100	L/2	500	500	L/2	1320

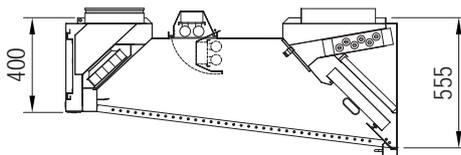
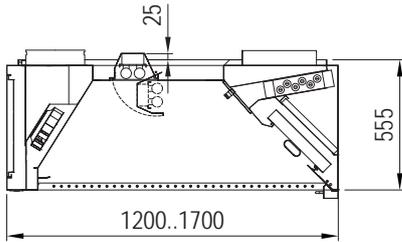
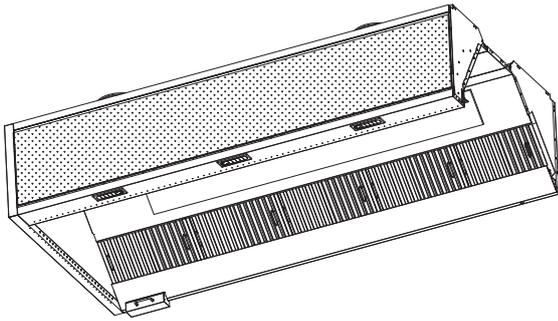
\* 720 (L1 <= 1500, 2x18W), 1320 (L1 > 1500, 2x36W)

**WEIGHT (h=555 mm, kg)**

L/B	1100	1300	1500	1700	1900
1100	101	106	112	122	128
1600	129	134	140	151	156
2100	161	167	172	184	190
2600	189	194	200	213	219
3100	216	222	227	242	248



**DIMENSIONS UVF (1 closed end)**



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

**LOCATION OF CONNECTIONS (mm)**

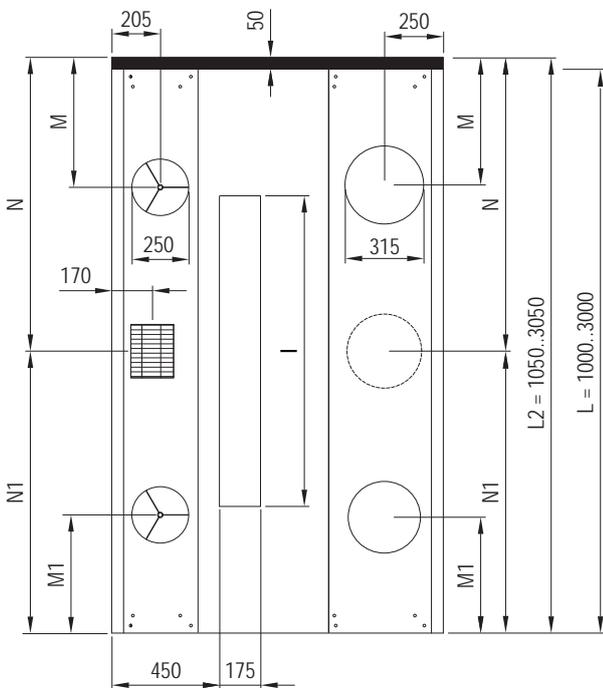
For typical sizes

L2	Exhaust				Supply		Capture Jets	Light
	1 Ø315	2 Ø315	2 Ø250	2 Ø250	Ø160			
1550	N	N1	M	M1	M	M1	N	I*
2050	L2/2+25	L2/2-25	375	325	375	325	L2/2+25	720
2550	L2/2+25	L2/2-25	500	450	500	450	L2/2+25	1320
3050	L2/2+25	L2/2-25	500	450	500	450	L2/2+25	1320

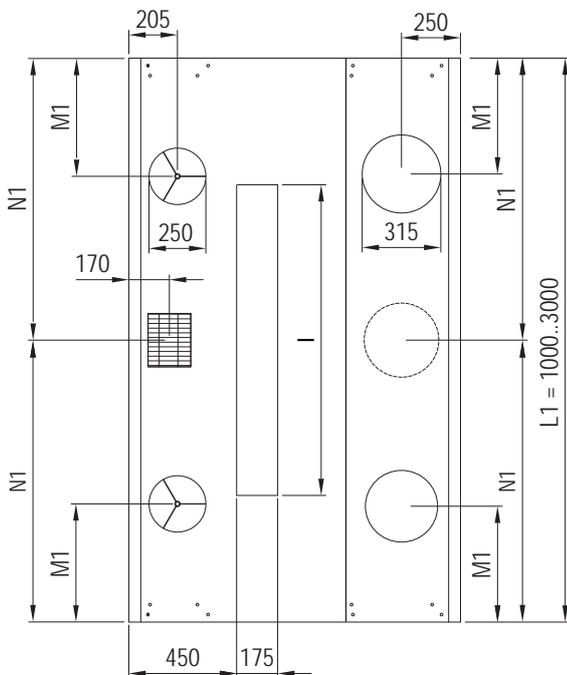
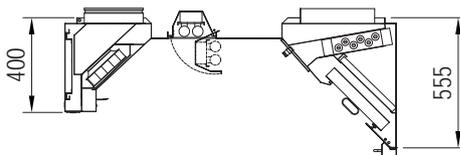
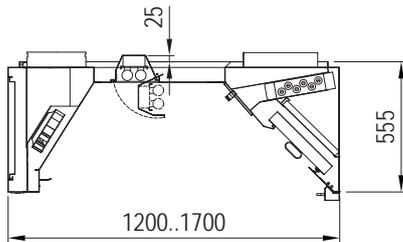
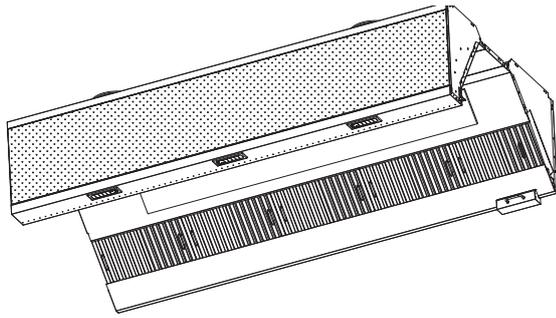
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2100	161	167	172	184	190
2600	189	194	200	213	219
3100	216	222	227	242	248



**DIMENSIONS UVF (2 opened ends)**



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

**LOCATION OF CONNECTIONS (mm)**

For typical sizes

L1	Exhaust		Supply	Capture Jets	Light
	1 Ø315	2 Ø315	2Ø250	Ø160	I*
1500	N1	M1	M1	N1	I*
2000	L1/2	325	325	L1/2	720
2500	L1/2	450	450	L1/2	1320
3000	L1/2	450	450	L1/2	1320

\* 720 (L1 <= 1500, 2x18W), 1320 (L1 > 1500, 2x36W)

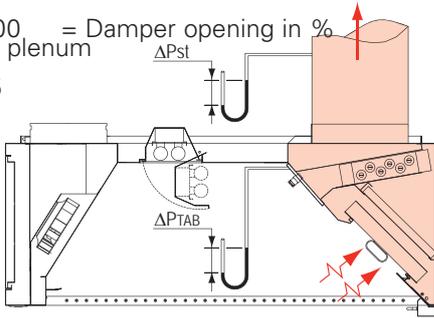
**WEIGHT (h=555 mm, kg)**

L/B	1100	1300	1500	1700	1900
1100	101	106	112	122	128
1600	129	134	140	151	156
2100	161	167	172	184	190
2600	189	194	200	213	219
3100	216	222	227	242	248

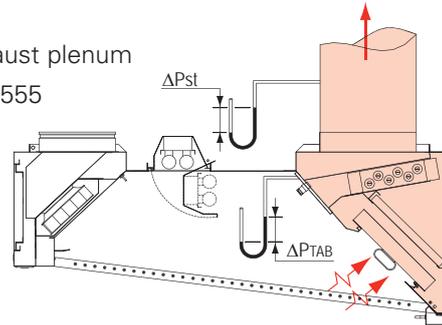
**EXHAUST Pressure drop, sound data and airflow measurement**

$\Delta P_{st}$  = Exhaust section static pressure loss  
 $\Delta P_{TAB}$  = T.A.B.™ pressure for airflow rate measurement

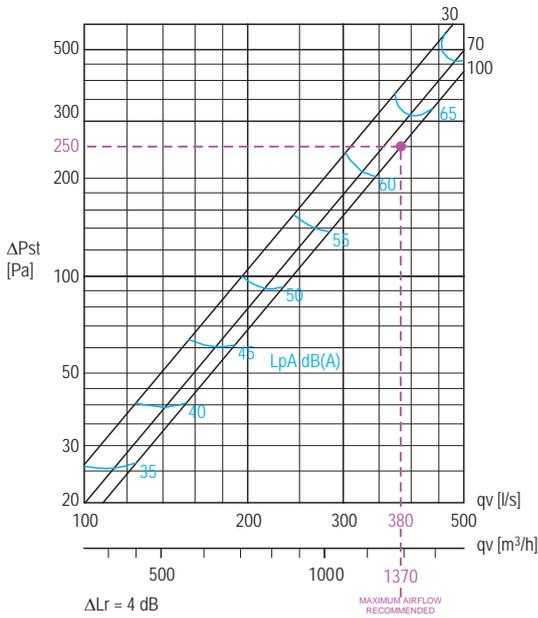
30, 70, 100 = Damper opening in %  
 Exhaust plenum  
 H = 555



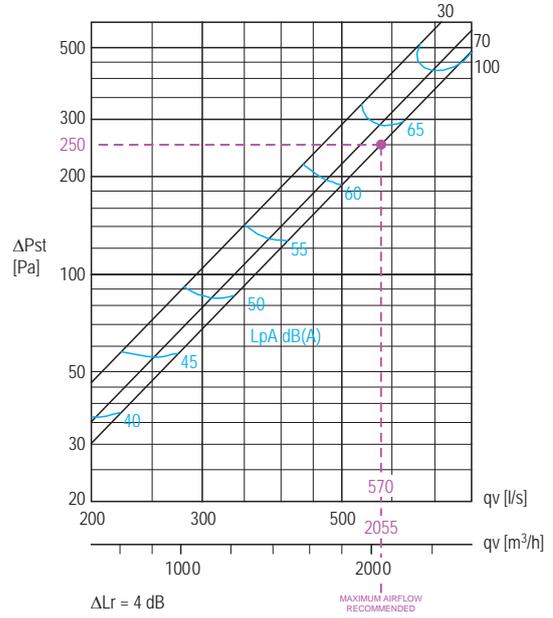
Exhaust plenum  
 H = 555



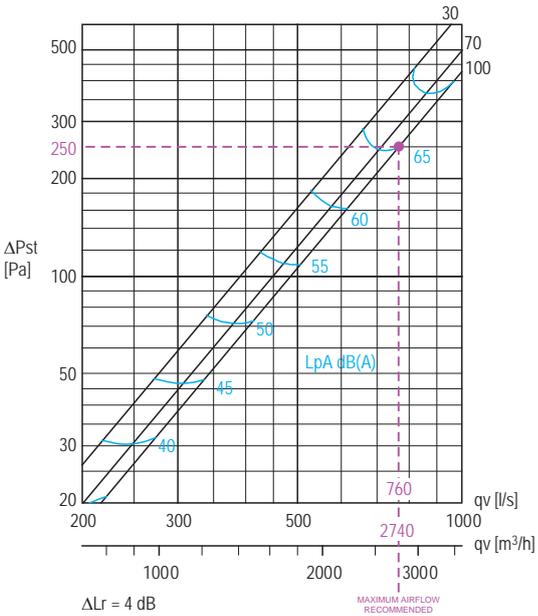
Section 1000 Static pressure loss and sound data



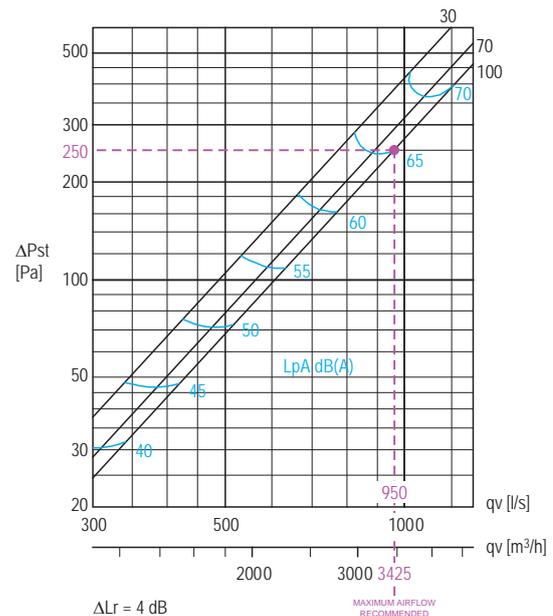
Section 1500 Static pressure loss and sound data



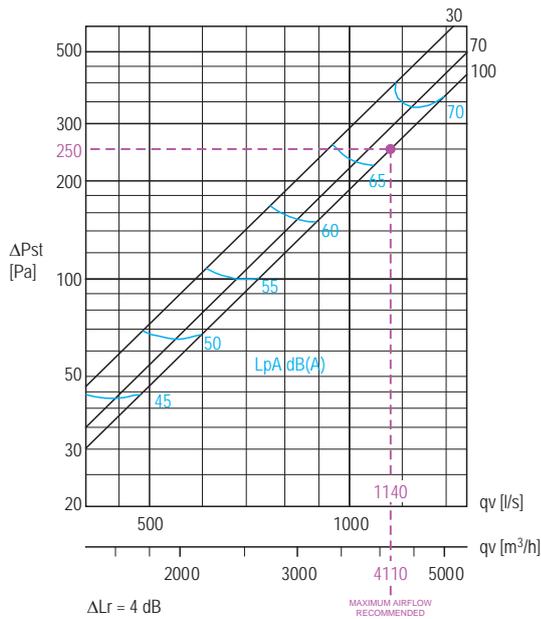
Section 2000 Static pressure loss and sound data



Section 2500 Static pressure loss and sound data

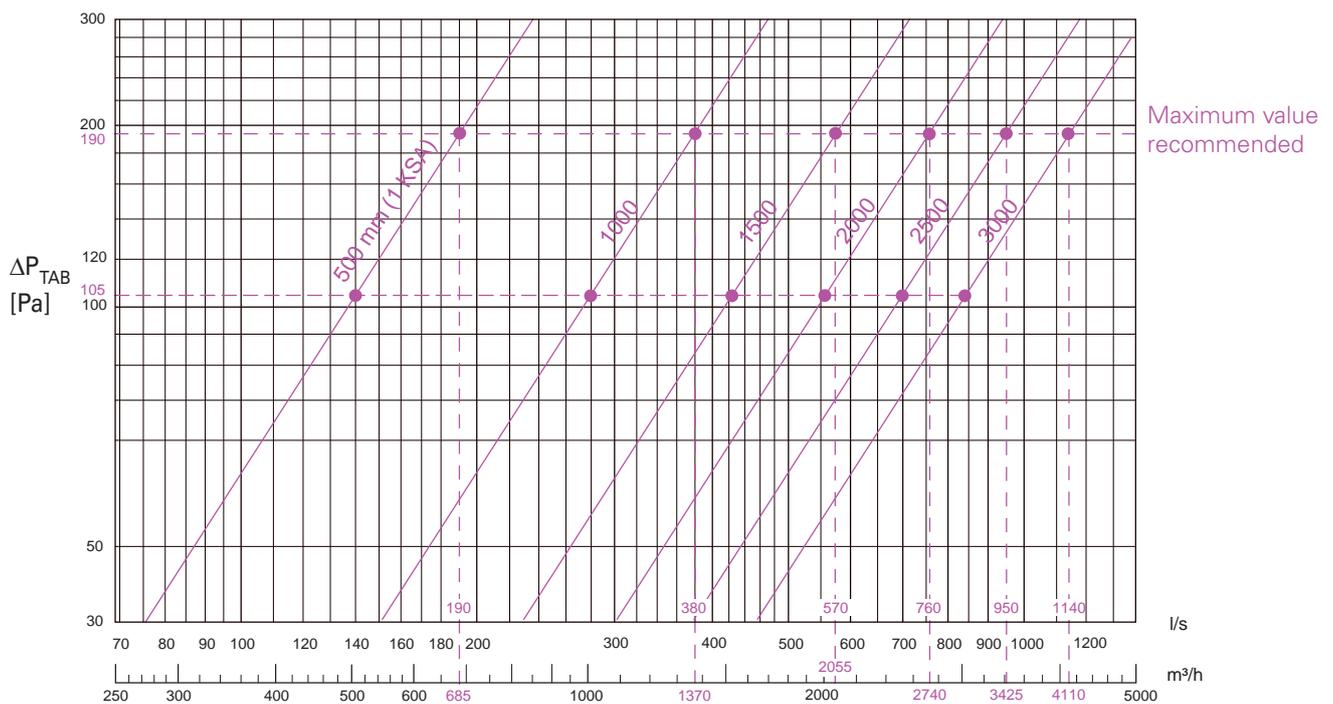


Section 3000 Static pressure loss and sound data



Exhaust airflow rate measurement with T.A.B.™ ports

Recommended pressure T.A.B.™ 105-190 Pa



Exhaust airflow rate measurement using k factors

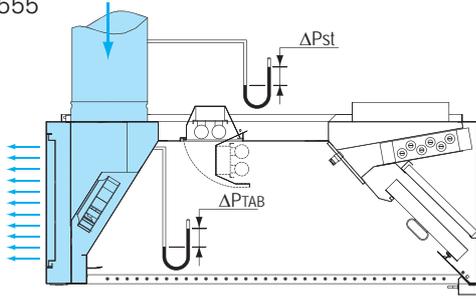
KSA (Number of filters)	k factor [m³/h]	k factor [l/s]
1	49,7	13,8
2	99,4	27,6
3	149,1	41,4
4	198,8	55,1
5	248,5	68,9
6	298,2	82,7

With the T.A.B.™ pressure measurement, it is also possible to check the exhaust airflow with the following formula:

$$q_e = k \times \sqrt{\Delta P_{TAB} \text{ [Pa]}}$$

**SUPPLY Pressure drop, sound data and airflow measurement**

Supply plenum  
H = 555

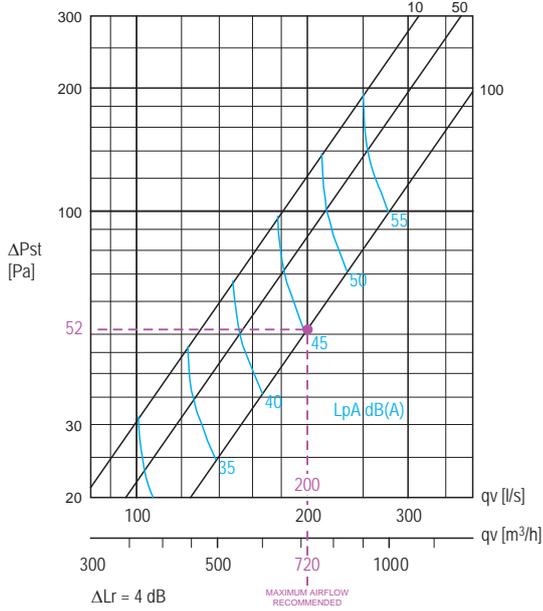


$\Delta P_{st}$  = Supply static pressure loss

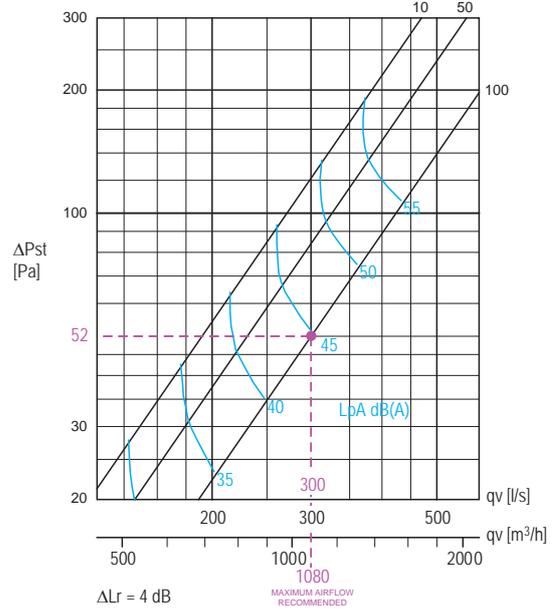
$\Delta P_{TAB}$  = T.A.B.™ pressure for airflow rate measurement

10,50,100 = MSM module opening in %

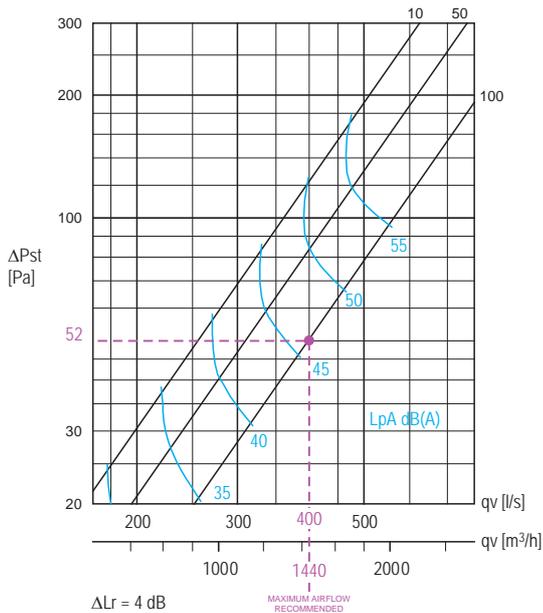
Section 1000 Static pressure loss and sound data



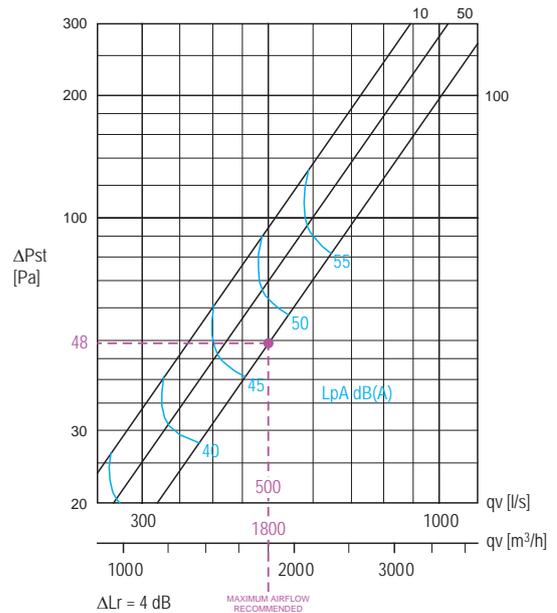
Section 1500 Static pressure loss and sound data



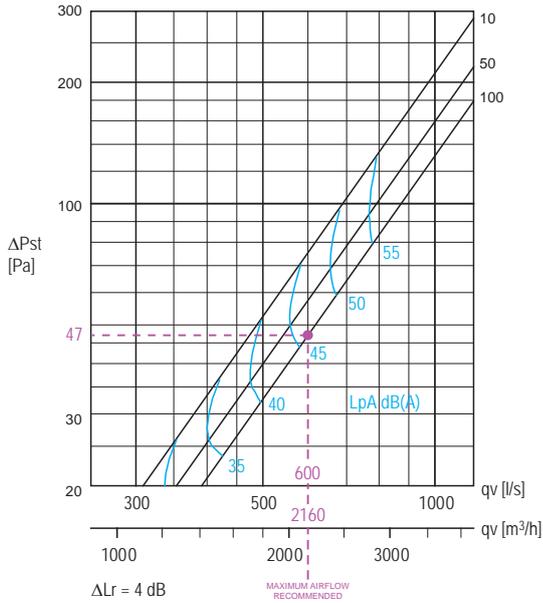
Section 2000 Static pressure loss and sound data



Section 2500 Static pressure loss and sound data

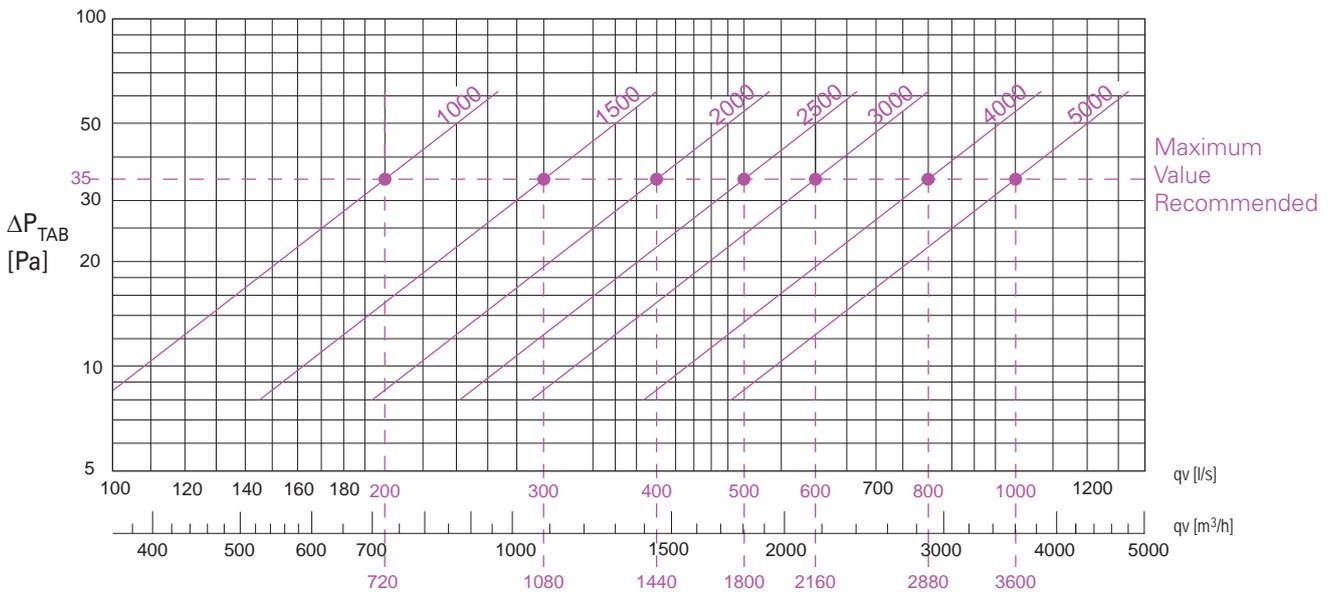


Section 3000 Static pressure loss and sound data



Supply airflow rate measurement with T.A.B.™ ports

Recommended pressure T.A.B.™ 35 Pa



Supply airflow rate measurement using k factors

With the T.A.B.™ pressure measurement, it is also possible to check the exhaust airflow with the following formula:  $q_s = k \times \sqrt{\Delta P_{TAB} \text{ [Pa]}}$

L1 (Length of section) mm	k factor [m³/h]	k factor [l/s]
1000	121,7	33,8
1500	182,6	50,7
2000	243,4	67,6
2500	304,2	84,5
3000	365,1	101,4

Supply airflow rate measurement using MSM

The supply airflow is balanced with MSM modules installed on each supply connection. Therefore, it is also possible to check the supply airflow by adding up the airflow of each MSM with the opposite diagram or using the following formula.

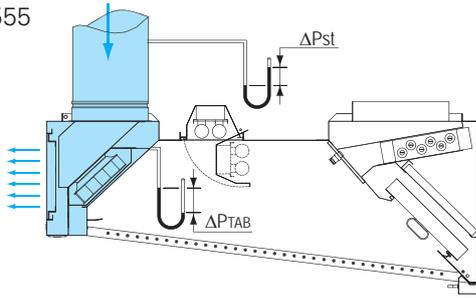
$$q_s \text{ [l/s]} = 51 \times \sqrt{\Delta P_m \text{ [Pa]}}$$

$$q_s \text{ [m³/h]} = 183,6 \times \sqrt{\Delta P_m \text{ [Pa]}}$$

**SUPPLY Pressure drop, sound data and airflow measurement**

Supply plenum

H = 555

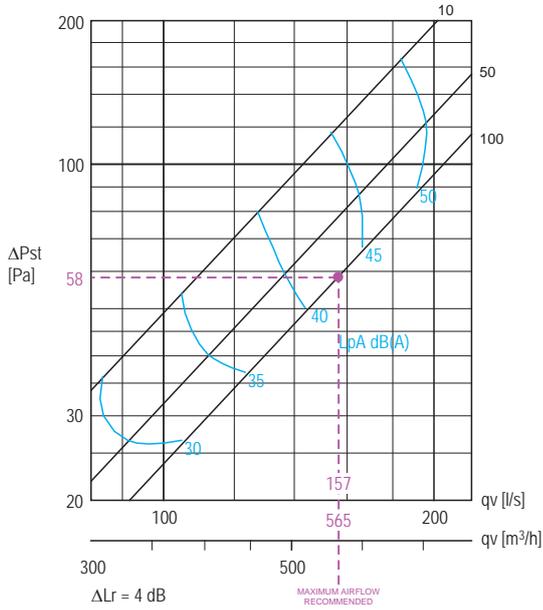


$\Delta P_{st}$  = Supply static pressure loss

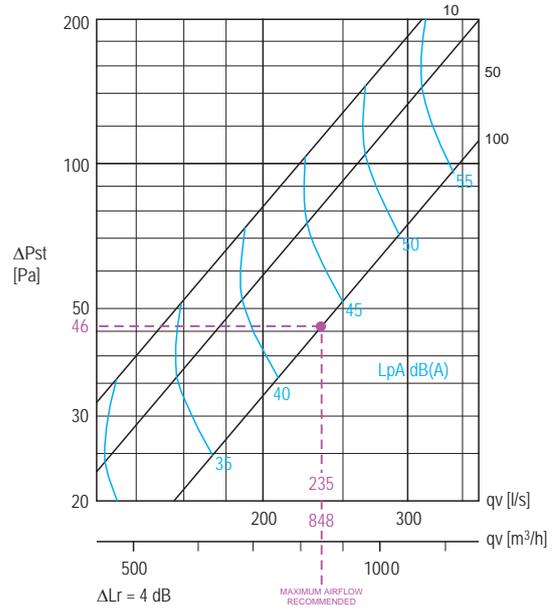
$\Delta P_{TAB}$  = T.A.B.™ pressure for airflow rate measurement

10,50,100 = Damper opening in %

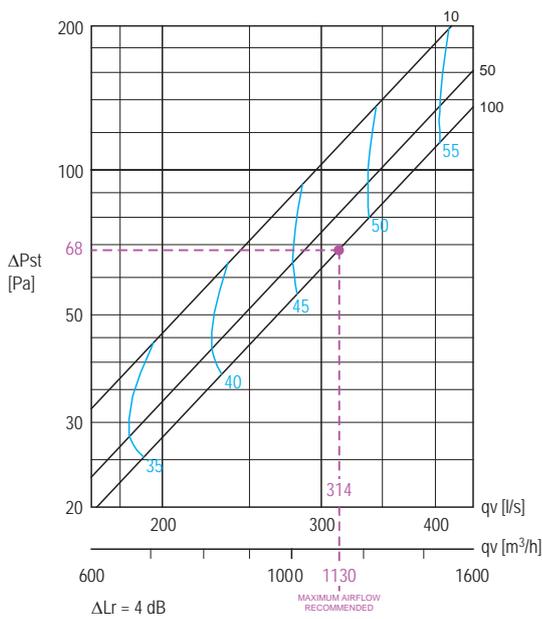
Section 1000 Static pressure loss and sound data



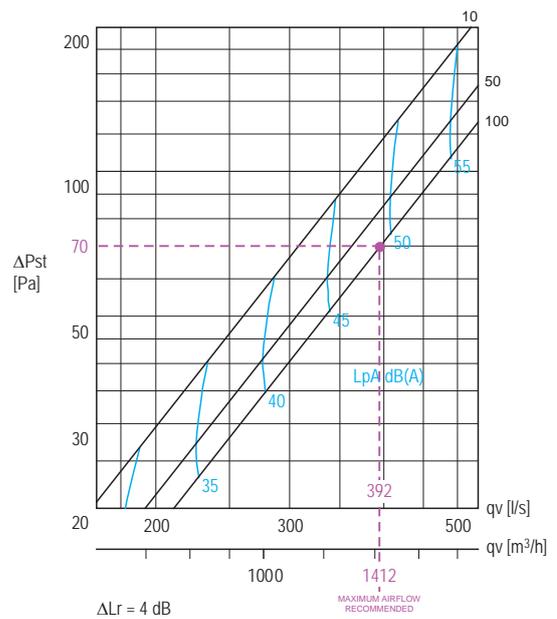
Section 1500 Static pressure loss and sound data



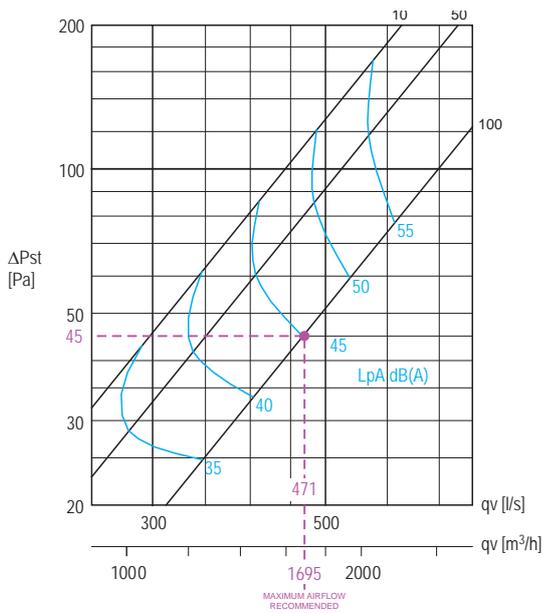
Section 2000 Static pressure loss and sound data



Section 2500 Static pressure loss and sound data

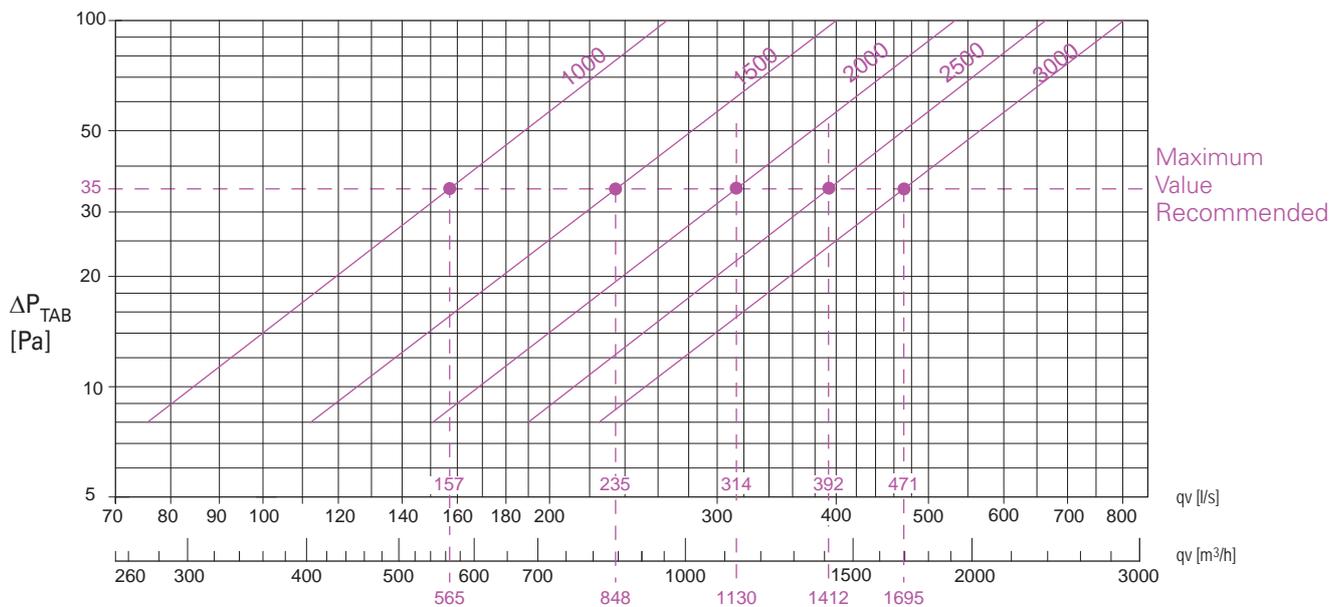


Section 3000 Static pressure loss and sound data



Supply airflow rate measurement with T.A.B.™ ports

Recommended pressure T.A.B.™ 35 Pa



Supply airflow rate measurement using k factors

With the T.A.B.™ pressure measurement, it is also possible to check the exhaust airflow with the following formula:  $q_s = k \times \sqrt{\Delta P_{TAB} \text{ [Pa]}}$

L1 (Length of section) mm	k factor [m³/h]	k factor [l/s]
1000	95,5	26,5
1500	143,3	39,7
2000	191,0	53,1
2500	238,7	66,3
3000	286,5	79,6

Supply airflow rate measurement using MSM

The supply airflow is balanced with MSM modules installed on each supply connection. Therefore, it is also possible to check the supply airflow by adding up the airflow of each MSM with the opposite diagram or using the following formula.

$$q_s \text{ [l/s]} = 51 \times \sqrt{\Delta P_m \text{ [Pa]}}$$

$$q_s \text{ [m³/h]} = 183,6 \times \sqrt{\Delta P_m \text{ [Pa]}}$$

## Suggested specifications

The kitchen canopy shall be constructed from 1.0 mm AISI 304 stainless steel and shall be supplied complete with Capture Ray technology, Capture Jet™ technology, high-efficiency multi-cyclone grease filters, pressure measurement taps, exhaust and supply air adjustment systems, and a fluorescent light fitting with installation hatch. The size shall be as indicated in the drawings. The canopy shall be HACCP certified.

### Capture Ray

- The system includes lightweight stainless steel UV lamps cassettes, directly integrated in the exhaust plenum, behind the double stage mechanical filtration. Cassettes are mounted on a rack and are easily removable by disconnecting the electrical connectors.
- UV cassettes shall be easily accessible for periodic lamp cleaning or replacement, without removing filters, using the door installed on the exhaust plenum.
- UV access door closing and filters presence shall be permanently controlled with maintenance-free magnetic proximity switches (automatic and immediate UV lamps switch off).
- Each UV canopy section is equipped with a plug and play UV module, integrated behind the light casing, ease of access using the light hatch. Each UV module shall communicate with a UV console as user interface, integrated in one of the canopy section. The control panel displays warnings or potential working defaults and shall be able to identify on which canopy section where they occur and, if needed, which ballast or lamps are concerned. Error or warning messages:
  - UV Access door open
  - One or several filters removed
  - Low pressure alarm (low airflow)
  - UV lamps default
  - UV lamps life time exceeded
  - Communication default.
- The UV control system shall be interlockable with a PDA, a computer or the Building Management System (BMS). As an option, it can be equipped with an additional module for:
  - SMS maintenance warnings
  - Additional features such as external alarm, fire safety functions or specific outputs.

### LCD user interface (Touch Screen)

- The LCD user interface shall be tactile to allow a fast and simple approach of all the systems and technologies, even by non-professional personnel. It shall manage all the technologies and systems which equip the canopies and provide general information about their statuses to the user, as well as a fast access to the different settings during the commissioning phase and maintenance operations. It shall be able to communicate with the Building Management System (BMS). The Touch Screen shall be integrated in a stainless steel box installed inside the kitchen.

### Outer casing

- Outer casing panels are constructed from AISI 304 stainless steel in a brushed satin finish, in a modular construction. The joints of the lower edge shall be fully welded to be liquid-tight, avoiding harmful dripping of condensation. All exposed welds are ground and polished to the metal's original finish.
- The bottom edge of the exhaust plenum should be aerodynamically designed (no flat surface).
- Canopy ends shall be of double-sidewall construction.

### Exhaust

- The exhaust airflow will be based on the convective heat generated by the appliances under each canopy. Submittal shall include convective heat calculations based on the input power of the appliances served.
- The canopy mounting height shall be in accordance with the drawings supplied, as a moderate increase in exhaust rate is required if the canopy is installed higher than designed.
- The spigot connections for extracted air shall be supplied with a sealing gasket and airflow balancing damper plate.

### Capture Jet™ with Side Jet technology

- The canopy shall be designed with Capture Jet™ technology and Side-Jet technology to improve the capture and containment efficiency of the canopy, not only at the front but also on the sides, therefore reducing the

exhaust airflow rate required and energy consumption. The Capture Jet™ air shall be introduced through a special discharge panel and shall not exceed 5% of the calculated exhaust airflow. The Capture Jet™ discharge velocity shall be a minimum of 8 m/s. Slot- or grille-type discharge shall not be used.

- The canopy shall be supplied with an integrated fan to provide the required airflow at the indicated static pressure to the Capture Jet™ nozzles. Therefore, an additional supply air system is not required to feed the Capture Jet™ technology.

#### Supply air plenum

- To minimise any draught's negative impact on canopy capture and containment and to guarantee a fresh and comfortable working environment, the compensation air shall be introduced into the space at the lowest practical velocity (less than 0.5 m/s). The front panel shall have a double-perforated structure to achieve uniform, low-velocity air discharge. This panel shall be easy to remove for cleaning and maintenance operations, and the supply chamber shall be insulated to avoid any risk of condensation.
- The spigot connections for supply air shall be supplied with a sealing gasket and with a supply control damper of MSM type.

#### Grease filters

- The canopy shall be equipped with a KSA multi-cyclone stainless steel grease filter. The grease removal efficiency is 95% for particles a diameter of 10 microns or larger, as tested by an independent testing laboratory. The filter shall be NSF and UL classified. Baffle or slot type grease filters shall not be used.

#### Testing & Balancing ports and airflow balancing

- The airflows are to be determined via the integral T.A.B.™ ports mounted in the canopy. The airflows are to be determined by the pressure vs. airflow curves supplied by Halton.

#### Light Fixtures

- Each canopy shall be provided with a fluorescent light fixture to provide approx. 500 lux at the cooking appliances work surface. The light is protected with a stainless steel hatch with plain milled finish, surrounded by a tempered-glass light diffuser (the heat tolerance of the glass shall be -40 to 300 °C). The hatch shall be hinged and held in position with screws.

#### Fire Suppression System

- The kitchen canopy fire extinguishing system shall protect the kitchen and prevent the fire from spreading through the building using a completely automatic fire control system of the wet chemical type. The fire detection system shall be capable of detecting fire in the canopy or cooking equipment and shall automatically discharge extinguishing liquid agent on cooking appliance areas to eliminate the possibility of reignition or re-flash, into the plenum chamber and on the exhaust duct collars. The system shall include a spring-loaded release mechanism, agent tank nozzles with blow-off caps and stainless steel appliance drops, a fusible link detector, wall-mounted emergency pull stations, a wall-mounted Automan and cabinet. The system's installation shall be performed by an authorised representative of the system manufacturer and conform to UL 300 requirements and local codes.

Type: UVF Manufacturer: Halton

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/locations](http://www.halton.com/locations)

## Product code

SAP product code UVF\_3

WE = Closed end(s)    2 =    2 walls  
                               R =    Right side wall  
                               L =    Left side wall  
                               N =    No wall

## L = Length

If WE = N        L = 1100, 1150,.....3000  
 If WE = R or L    L = 1150, 1200,.....3050  
 If WE = 2        L = 1200, 1250,.....3100

## B = Width

If LF = T5 or T8    B = 1200,1250,.....1700  
 If LF = N            B = 1200,1250,.....1700

## H = Height

555-555  
 555-400

## LT = Light fitting &amp; light colour

A = T5 830  
 B = T5 840  
 E = T8 830  
 F = T8 840  
 P = T8 930  
 H = T8 940

NB = Number of blind filters = 0, 1, 2, 3, 4, 5 or 6

## EC = Number of exhaust connections

1 =    1 spigot  
 2 =    2 spigots  
 3 =    3 spigots  
 N =    no spigot

ED = Exhaust damper    Y = Yes  
                               N = No

## SC = Number of supply connections

1 =    1 spigot  
 2 =    2 spigots  
 3 =    3 spigots  
 4 =    4 spigots  
 N =    no spigot

SD = Supply damper    Y =    Yes  
                               N =    No

## CJ = Capture Jet™ technology variants

1 = CJ fan + connection plenum + grille  
 2 = CJ fan + connection plenum + spigot Ø160  
 3 = CJ fan only (no connection plenum)  
 4 = Spigot Ø160 + connection plenum (No CJ fan)  
 5 = Nothing (no CJ fan, no connection plenum...)

## UC = UV cassette type

4S = 1US4, small cassette, 4 lamps (1500 m³/h)  
 4L = 1UL4, long cassette, 4 lamps (2000 m³/h)  
 6S = 1US6, small cassette, 6 lamps (2250 m³/h)  
 6L = 1UL6, long cassette, 6 lamps (3000 m³/h)  
 8S = 1US8, small cassette, 8 lamps (3000 m³/h)  
 8L = 1UL8, long cassette, 8 lamps (4000 m³/h)

## CD = Canopy drain

D = Drain tap  
 C = Collection tray

## HS = Hanging system

S = Standard  
 U = U profile

## MA=Material

AS = Full stainless steel  
 AT = Full stainless steel 1,2 mm  
 CS = Standard  
 CT = Standard 1,2 mm

## Sub product

KB (cover board)  
 KI (Infill panel)

## Code example

UVF/N-1100-1200-555, LT=A, NB=0, EC=N, ED=N,  
 SC=N, SD=N, CJ=3, UV=6S, CD=D, HS=S, MA=CS,  
 ZT=N