

# Halton – Completes the circle!



# Halton Completes The Circle!

Emissions  
Capture

Fire  
Suppression

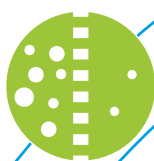
Mechanical  
Filtration

Automatic  
Cleaning



# How does Halton complete the

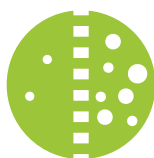
By upgrading its PolluStop units to always keep pace with the stringent requirements demanded by the current trends in cooking activity.



The Third generation of Halton's PolluStop exhaust units integrates Halton's PowerClean™ ESP (Electrostatic Precipitator) as an additional cornerstone. Incorporates the highest levels of emission control. Grease, odours, moisture, smoke and the inevitable headaches linked to fire safety, hygiene and neighbourhood complaints become history... which is not the case when initial capital investment is the prime consideration.

- Eliminate neighbourhood and safety concerns.
- Establish your restaurant wherever you choose.
- Eliminate the need for vertical duct risers, reduce the installation costs and increase the leasable surface.
- Benefit from reduced maintenance costs compared to traditional exhaust units.

By launching the range of Aerolys supply-air units, specifically designed for professional kitchens and urban pollution control.

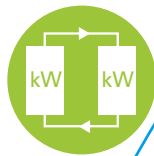
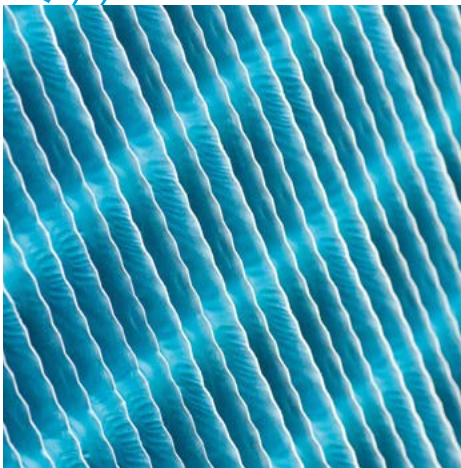


Halton's range of Aerolys supply-air units is designed to comply with the highest hygiene requirements inside professional kitchens. It is not simply a question of pumping in air. Whatever its level, hygiene can rapidly be compromised if a correct balance between supply and exhaust is not maintained at all times and in each area of the kitchen. Aerolys units provide a high level of air quality inside the kitchen and works "hand-in-hand" with PolluStop units and Halton's airflow optimisation system M.A.R.V.E.L.

- Fresh air free of urban pollution and bacteria.
- Good thermal comfort.
- Constant balance between exhaust & supply.
- Guarantee of hygienic treatment of the supply air.

circle?

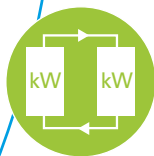
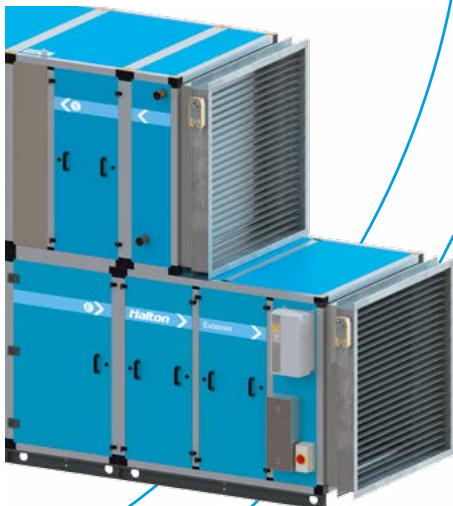
By completing, at the same time, the circle of heat recovery and preheating fresh air supplied into professional kitchens.



Speaking of a dominant trend with regard to heat recovery is an understatement. This provision is already compulsory in professional kitchens in some countries. Both PolluStop and Aerolys units can be equipped with an air-to-water heat recovery coil. This treatment process ensures that the system operates with clean air. It enables keeping the recovery effectiveness at a constant level over time, and greatly limiting heat-exchanger maintenance and cleaning costs. Heat Recovery can be combined with M.A.R.V.E.L. airflow optimisation system for unrivaled energy savings.

- Maximum recovery efficiency remaining constant over time.
- Huge energy savings.
- Maintenance costs reduced to the lowest possible level.
- Cost effective solution once pollution control is in place.

And continuing making savings by launching a range of combined exhaust & supply units with combined air-to-air and air-to-water heat recovery.



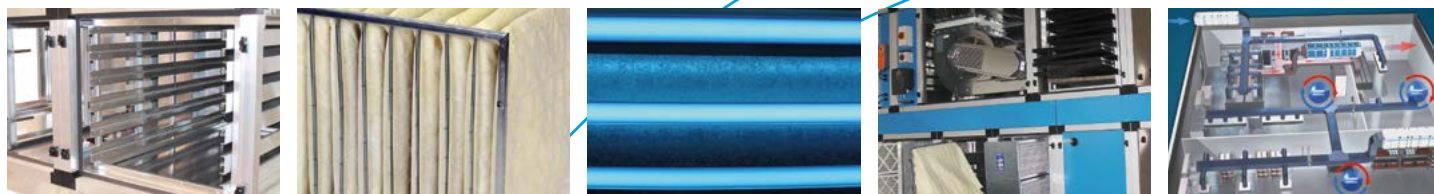
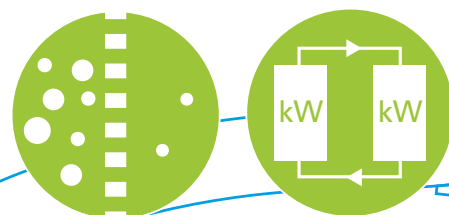
Extenso units are a combination of PolluStop and Aerolys units, resulting in a unique list of benefits. This combination makes it possible to incorporate highly efficient heat exchangers preventing any cross contamination, still fully compatible with Halton airflow optimisation system M.A.R.V.E.L. The savings can't be higher in the field of professional kitchens.

- Complete and consistent solution.
- Highest possible level of savings in combination with M.A.R.V.E.L.
- As for all other Halton technologies, unique and intuitive user interface: Halton's Touch Screen.

# Halton expertise and innovations

## POLLUTION CONTROL & HEAT RECOVERY ON SUPPLY

Conditioning air for professional kitchens is not only a question of temperature and quality of the air. It is also a question of correct balance between supply and exhaust as well as energy efficiency. Halton Foodservice-specific supply-air units address the highest levels of safety, comfort and energy efficiency.



### AIR DIFFUSION



Badly designed supply-air diffusion can easily distort the cooking plume and disrupt the working conditions. Halton has a unique range of Foodservice-specific diffusers and the expertise to ensure the highest level of air distribution.

### EMISSIONS CAPTURE



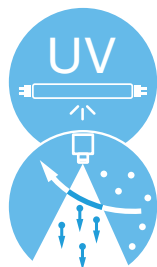
Complete capture of the cooking effluent with the lowest possible energy consumption is the contribution from Halton's Capture Jet™ hoods and ventilated ceilings as well as for specific solutions such as theatre cooking.

### MECHANICAL GREASE FILTRATION



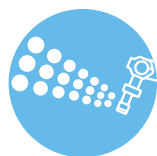
Halton's highly efficient mechanical filters reduce the build-up of grease deposits inside the ductwork. They improve fire safety and hygiene levels and reduce ductwork cleaning costs.

### SPECIFIC LOCAL GREASE & ODOUR FILTRATION PROCESSES



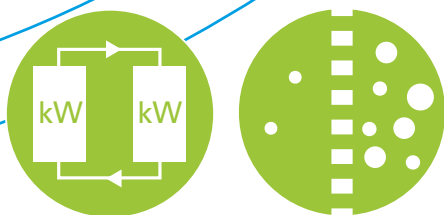
Bring your safety to the highest level and prevent neighbourhood complaints with specific grease and odour treatment processes installed within Halton's exhaust devices... including solid fuel specific solutions.

### AUTOMATIC CLEANING



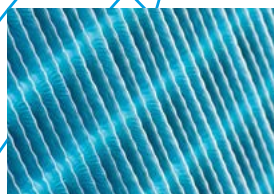
Focus on your core business of preparing and delivering food whilst Halton washes down the filters and exhaust plenums automatically for you and reduces your maintenance costs.

# at every step!



## POLLUTION CONTROL & HEAT RECOVERY ON EXHAUST

Returning the air to atmosphere in at least as good a condition as when it was taken in represents a real challenge. To reach that goal, Halton's range of exhaust units is based on the most efficient emission control technologies and enables the establishment of professional kitchens anywhere. They also ensure the highest efficiency for heat recovery.



Enjoy the highest energy savings among all airflow optimisation systems available in the market thanks to M.A.R.V.E.L. Always keep an eye on your restaurant with Halton's remote control and monitoring tools.

## AIRFLOW & ENERGY MANAGEMENT



Due to the successful Halton Control Platform, whatever the number of technologies you have in your kitchen, you will always have your kitchen at your finger tips. Haltons Touch Screen provides a simple and intuitive interface.

## ADVANCED & INTUITIVE CONTROLS



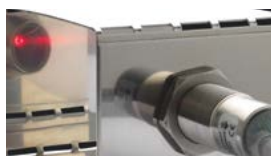
Fire hazard is a major concern in today's professional kitchens. Halton pre-engineers and factory pre-installs Ansul fire suppression systems for an aesthetically-pleasing system with HACCP certification.

## FIRE SUPPRESSION



With the prevention of grease build-up and fire extinguishing systems, it only remains for duct monitoring to complete this safety circle. Halton's duct monitoring systems provide an alarm to indicate that cleaning is required.

## DUCT MONITORING



Whether it comes to moving the show among the guests or installing a small kitchen devoid of a ventilation system, Halton's highly efficient recycling units unleash countless business opportunities.

## RECYCLING UNITS





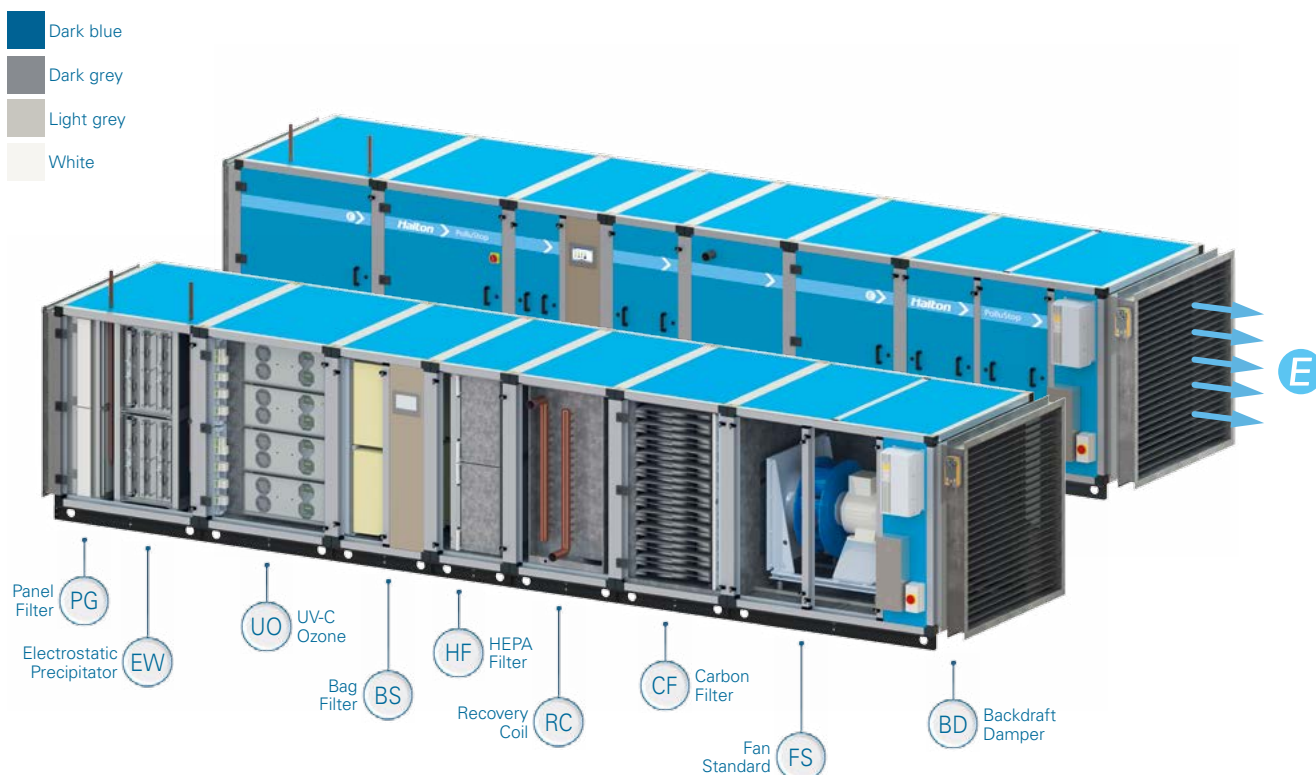
## Halton's Exhaust and Supply Air Handling Units



## POLLUSTOP PST

### EXHAUST UNIT WITH POLLUTION CONTROL AND HEAT RECOVERY

Modular construction, highly efficient and enables low-level discharge



#### APPLICATIONS

The PolluStop range was designed to work with Capture Ray™ technology whether integrated into canopies, ceilings or in the PolluStop unit itself. UV-C lamps neutralise grease particles which are not contained by the primary filtering system. By increasing the lamps to a carefully selected number, cooking odours are minimised to such a level that it is no longer necessary to discharge the extracted air at roof-top level. NFX active carbon filters are designed to process surplus ozone produced by the UV-C lamps when the cooking appliances are not running at maximum load.

After UV treatment, the optional recovery coil in the PolluStop unit can be used safely, efficiently and with minimal maintenance. It can be used to pre-condition the fresh air or the domestic hot water.

- Specially developed for kitchens in dense urban areas.
- Wide range of units, from 3,240 to 38,880 m<sup>3</sup>/h (0.9 to 10.8 m<sup>3</sup>/s).
- Respects the neighbourhood due to minimal cooking

odours.

- Saves energy due to the integrated heat recovery coil, sustainable over time.
- Acoustic insulation built into the unit's double-skin panels.
- All in one control system for monitoring the filter pressure losses, controlling the speed of the fan and monitoring the UV-C lamps.
- As an option, the three systems can be controlled with one interface: the Halton Touch Screen.
- External installation possible. There are a number of additional service possibilities, such as variable frequency drive and other monitoring systems.

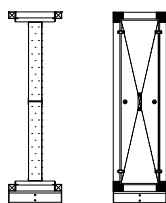
## SPECIFICATIONS AND DIMENSIONS

PST size	01	02	03	04	05	06	07	08	09	10
Airflow [m³/h]	3,240	6,480	9,720	12,960	16,200	19,440	24,300	29,160	34,020	38,880
Airflow [m³/s]	0.9	1.8	2.7	3.6	4.5	5.4	6.75	8.1	9.45	10.8
Height [mm]	750	750	1350	1350	1350	1350	1950	1950	1950	1950
Width [mm]	730	1330	1030	1330	1630	1930	1630	1930	2230	2530

\* Sizes 11 to 14 on request, for exhaust airflow rates up to 68,880 m³/h (18 m³/s)



**Panel Filter (G4)**  
Standalone

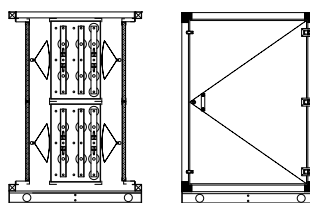


400

- Purpose: Remove medium particles.
- Grade: Pleated filter G4 (EU4).
- Efficiency > 95% for 5 microns particles and above.
- Media: Cotton and synthetic fibre.
- Built according to EN 1886:2007.
- 100% incinerable.



**Electrostatic Precipitator**

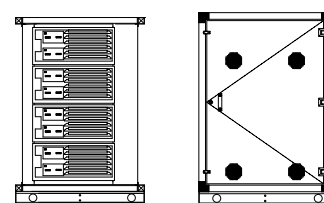


1000

- Ultra high efficiency model.
- Purpose: Ideal for removing excess moisture and particulate from exhaust airstream.
- With integral hot water/detergent wash system for in situ cleaning.
- Requires permanent drain connection.
- Includes downstream mesh filter.
- Built according to EN 1886:2007.



**UV-C Treatment**  
Ozone

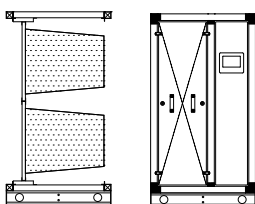


1000

- UV-C (ultraviolet light) based Halton Capture Ray™ technology.
- Includes ozone producing lamps within quartz sleeves.
- Purpose: Removal of airborne grease and reduction of cooking odours.
- Ideally located in the hood but can be incorporated in the PolluStop unit.
- Number of lamps depending on the cooking operation (equipment and menu).
- Built according to EN 1886:2007.



**Bag Filter**  
Short Pockets

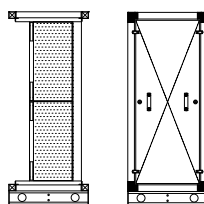


800

- Purpose: Remove medium-sized particles.
- Grade: F9 (EU9), 8 short pockets.
- Efficiency >95% for 0.4 microns particles and above.
- Media: Fibreglass.
- Lifetime increased by at least 80% when used with Halton's Electrostatic Precipitator (EW).
- Built according to EN 1886:2007.



**HEPA Filter**

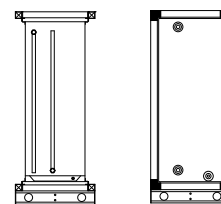


600

- Purpose: Remove ultra fine particles.
- Grade: HEPA (High Efficiency Particulate Arrester) filter H10 (EU10).
- Efficiency > 95% DOP for 0.3 microns particles and above.
- Media: Water-repellent glass paper pleats separated by corrugated aluminium.
- Not suitable for high moisture content air.
- Lifetime increased by at least 80% when used with Halton's Electrostatic Precipitator (EW).
- Built according to EN 1886:2007.



**Recovery Coil**



600

- Approximately efficient to 45-50% heat transfer.
- Ideally suited to either air-to-air or air-to-water transfer, or both.
- No risk of cross contamination.
- Can transfer coolth under certain summer conditions.
- Copper pipework with aluminium fins.
- Number of rows determined by the specific duty.
- Includes moisture eliminators (essential for PolluStop).
- Pressurisation set available if required (included with Extensio).
- Built according to EN 1886:2007.

Module	Pressure Loss $\Delta P$ [Pa]			Lifetime depending on cooking activity [Weeks]		
	Clean	Dirty	Overload	Light (1)	Medium (2)	Heavy (3)
PG Panel Filter (G4)	55	125	150	8..10	4.8	3
EW Electrostatic Precipitator	125..250			-	-	-
UO UV-C Treatment (Ozone)	50			13,000 hours		
BS Bag Filter (long pockets)	190	250	450	16..20 / 29..36 (EW)	8..10 / 14..18 (EW)	6 / 11 (EW)
HF HEPA Filter	155	400	550	25..35 / 45..63 (EW)	12..20 / 22..36 (EW)	8..10 / 14..18 (EW)
CF Carbon Filter	65	140	160	104	78	52
RC Recovery Coil	150..250			-	-	-

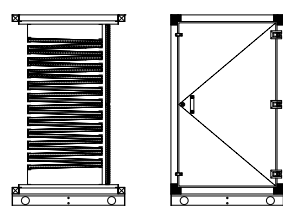
(EW) Lifetime extension gained when preceded by Halton's Electrostatic Precipitator

(1) Light duty: All electric cooking & steam cooking.

(2) Medium duty: Mix of gas/electric cooking appliances, frying.

(3) Heavy duty: All gas cooking appliances, anything to do with solid fuel, charbroiling and grilling. Any type of oriental cooking. High output cooking appliances for production kitchens.

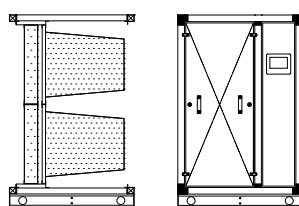
## CF Carbon Filter



850

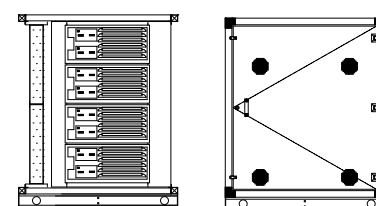
- Purpose: Remove surplus ozone generated by UV-C lamps.
- Grade: NFX Activated Carbon granules.
- Media: Coconut shell activated carbon (eco-friendly).
- Includes 25 mm G4 Post-Carbon Panel Filter as standard.
- Built according to EN 1886:2007.
- Incorporates a "colourcell" to indicate filter life.

## PG + BS



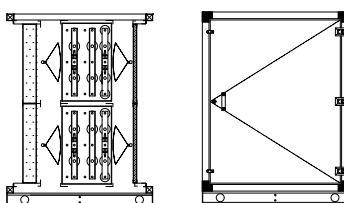
940

## PG + UO



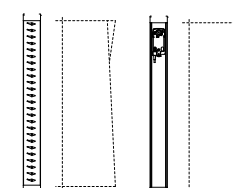
1200

## PG + EW



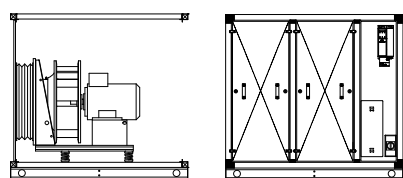
1100

## BD Backdraft Damper



130

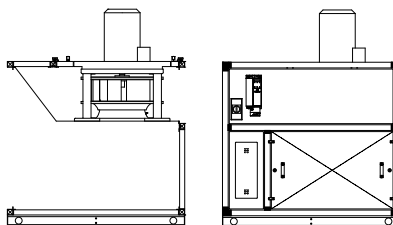
## FS Fan Standard



1560

- High manufacturing standards for the longest lifecycle.
- High efficiency direct drive fans.
- First class dynamic balancing (lowest vibrations)
- Temperature rating up to 40°C.
- Variable frequency drive.
- Up to 2000 Pa total pressure.

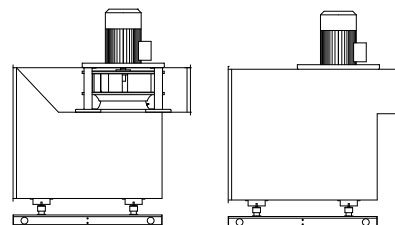
## FO Fan Motor out of the Air Stream



PST 1/7: 1560  
PST 8/10: 2060

- High manufacturing standards for the longest lifecycle.
- High efficiency direct drive fans.
- First class dynamic balancing (lowest vibrations)
- Temperature rating up to 120°C.
- Variable frequency drive.
- Up to 2000 Pa total pressure.

## FF Fan Fire Rated



PST 1/7: 1560  
PST 8/10: 2060

- High manufacturing standards for the longest lifecycle.
- High efficiency direct drive fans.
- First class dynamic balancing (lowest vibrations)
- Temperature rating up to 400°C.
- Serves for both duty and fire mode.
- Variable frequency drive.
- Up to 2000 Pa total pressure.

## OPTIONAL FILTER BY-PASS

For countries whose regulations demand that the fan must remain in operation during a fire (to allow staff and guests to safely evacuate) by removing the smoke generated by the fire, the filters have to be by-passed. A fire generates a huge quantity of particles which clog up filters in a very short period of time. The exhaust airflow decreases dramatically which compromises the evacuation time.

As an option, the PolluStop units can be equipped with a by-pass. It is based on the use of 3 dampers:

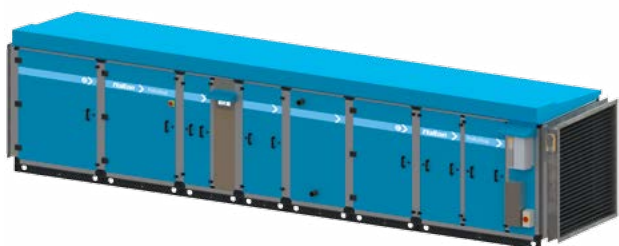
- (1) A normally open (NO) damper at the air inlet of the unit which is equipped with a fusible link and locking mechanism.
- (2) A normally closed (NC) damper at the by-pass inlet which is electronically operated.



- (3) A normally open (NO) damper at the air outlet of the unit which isolates the filters and is also electronically operated.

The connecting duct between the by-pass inlet and outlet is fire rated. Other specifications are available on request.

## OUTDOOR INSTALLATION



PolluStop, Aerolys and Extensio units can be installed externally. In such cases a special weatherproof roof will be supplied. The touch screen can still be installed on the unit if required as it is protected to IP65.

## FLAT DESIGN

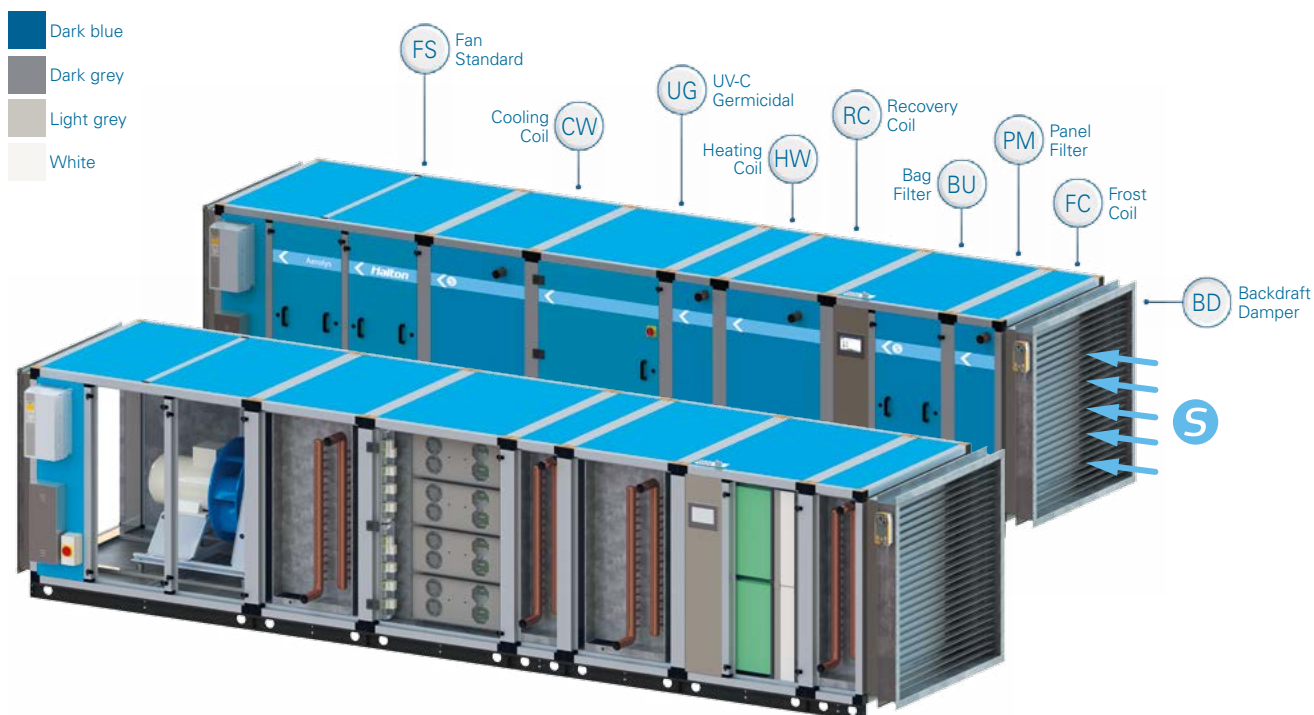


PolluStop and Aerolys units are available in a shallow version, designed to be installed in the limited space within ceiling voids. Due to access limitations, the flat design is only available in 4 sizes.

## SOUND ATTENUATION



Built-in attenuators are available for PolluStop, Aerolys and Extensio with the option of Melinex lining for polluted airstreams. Intended for the reduction of in-duct noise transmission. Standard construction is 100mm Airways & 200mm Splitters, with 900mm, 1200mm and 1500mm length options. For specific noise requirements, consider seeking professional acoustic advice.



## APPLICATIONS

The Aerolys range of supply air-handling units has been developed to work alongside, and complement, the successful range of PolluStop pollution control units. The primary function of the Aerolys unit is not just simply to introduce replacement air back into a commercial kitchen, but to ensure that the quality of that air is as good as it possibly can be.

As with the PolluStop range, Aerolys has been conceived on the basis of individual modules which are then selected based on whatever specific requirements are called-for by a given project.

- Specially developed for kitchens in dense urban areas.
- Wide range of units, from 3,240 to 38,880 m<sup>3</sup>/h (0.9 to 10.8 m<sup>3</sup>/s)
- If selected, can work in conjunction with the energy recovery coil incorporated in a PolluStop unit, offering either air-to-air or air-to-water heat transfer, or a combination of both.
- Has options for low temperature hot water, indirect gas or electric heating facilities.
- Has options for chilled water or direct expansion (dx) cooling facilities.

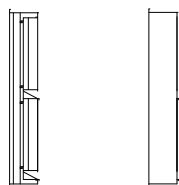
- Attenuators for reducing in-duct noise levels can be provided.
- Features Halton's unique "Urban Pack" which is a combination of ultra high-efficiency Panel filters, impregnated long-pocket Bag filters and germicidal non-ozone-producing UV lamps. This combination works to ensure the cleanest and most bacteria-free replacement air for the kitchen, its food and its staff.
- Fully integrated into the Halton Control Platform
- External insulated panelling available in 4 colour options (dark blue, light grey, dark grey or white).
- Acoustic insulation built into the unit's double-skin panels.
- All in one control system for monitoring the filter pressure losses, controlling the speed of the fan and monitoring the UV-C lamps.
- As an option, the three systems can be controlled with one interface: the Halton Touch Screen.
- External installation possible. There are a number of additional service possibilities, such as variable frequency drive and other monitoring systems.

## SPECIFICATIONS AND DIMENSIONS

ARL size*	01	02	03	04	05	06	07	08	09	10
Airflow [m³/h]	3,240	6,480	9,720	12,960	16,200	19,440	24,300	29,160	34,020	38,880
Airflow [m³/s]	0.9	1.8	2.7	3.6	4.5	5.4	6.75	8.1	9.45	10.8
Height [mm]	750	750	1350	1350	1350	1350	1950	1950	1950	1950
Width [mm]	730	1330	1030	1330	1630	1930	1630	1930	2230	2530

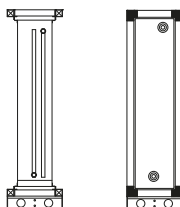
\* Sizes 11 to 14 on request, for exhaust airflow rates up to 68,880 m³/h (18 m³/s)

### SL Sand Louvre



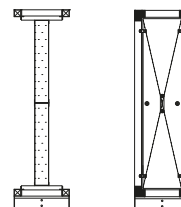
205

### FC Frost Coil



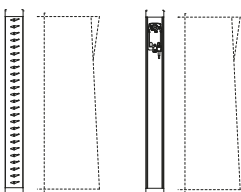
400

### PM Panel Filter M5



400

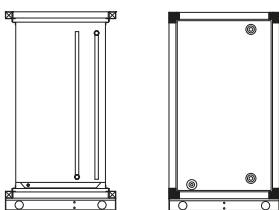
### BD Backdraft Damper



130

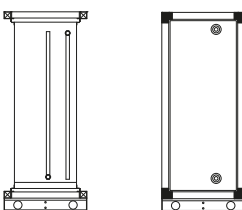
- Purpose: Protect the unit from the ingress of outside air cold enough to damage the items of plant.
- Typically, would raise the temperature of the incoming air to 5°C.
- Copper pipework with aluminium fins.
- Number of rows determined by the specific duty.
- 3-way diverting valve set available if required.
- Generally assumed that a LPHW (Low Pressure Hot Water) supply is available on site.
- Built according to EN 1886:2007.
- Purpose: Remove medium/fine particles.
- Grade: Ultra high efficiency pleated filter M5 (EU5).
- Efficiency > 97% for 5 microns particles and above.
- Media: Synthetic glass fibre paper.
- Built according to EN 1886:2007.
- A component of the Halton Urban Pack where the quality of the incoming air must be to an extremely high standard.
- 100% incinerable.

### CW Chilled Water Coil



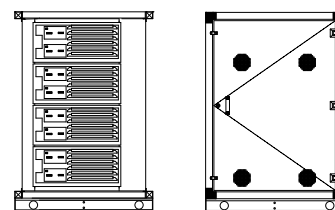
◀ 800 ▶

### HW Heating Coil Low Pressure Hot Water



◀ 600 ▶

### UG UV-C Treatment Germicidal



◀ 1000 ▶

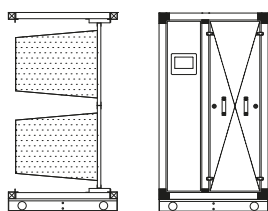
- Copper pipework with aluminium fins.
- Number of rows determined by the specific duty.
- As standard includes moisture eliminators.
- Complete with drain pan and connection.
- Generally assumed that a chilled water supply is available on site.
- 3-way modulating valve available if required.
- Built according to EN 1886:2007.
- Can be used as Frost and/or Duty coil.
- Copper pipework with aluminium fins.
- Number of rows determined by the specific duty.
- 3-way modulating/diverting valve set available if required.
- Generally assumed that a LPHW (Low Pressure Hot Water) supply is available on site.
- Built according to EN 1886:2007.
- Purpose: For use in Aerolys units where removal/reduction of bacteria is required (part of Halton's "Urban pack" offering).
- Includes non-ozone producing UV lamps inside quartz sleeves.
- A component of the Halton Urban Pack where the quality of the incoming air must be to an extremely high standard (hospitals, care homes, public buildings, etc).
- Built according to EN 1886:2007.



Also Gas and Electric options

Module	Pressure Loss $\Delta P$ [Pa]			Lifetime depending on the application [weeks]		
	Clean	Dirty	Overload	Rural	Semi-rural	Urban
FC Frost Coil		20 to 50		-	-	-
PM Panel Filter (M5)	60	150	250	8..10	4..8	3
CW Chilled Water Coil		150 to 200		-	-	-
HW Heating Coil (LPHW)		20 to 50		-	-	-
UG UV-C Treatment (Germicidal)		50			13,000 hours	
BU Bag Filter (Urban, Long Pockets)	85	250	450	35..45	25..35	15..25
BL Bag Filter (Long Pockets)	130	250	450	35..45	25..35	15..25
RC Recovery Coil		150..250		-	-	-

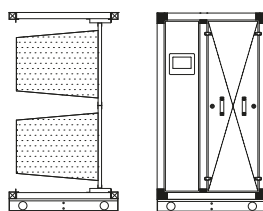
### BU Bag Filter Urban, Long Pockets



◀ 790 ▶

- Purpose: Remove fine particles and reduce toxic gases.
- Grade: F7 (EU7), 10 long pockets.
- Media: Glass fibre and broad spectrum carbon. Carbon impregnation to reduce toxic gases.
- Efficiency >88% for 0.4 microns particles and above.
- A component of the Halton Urban Pack where the quality of the incoming air must be to an extremely high standard (hospitals, care homes, public buildings, etc).
- Built according to EN 1886:2007.

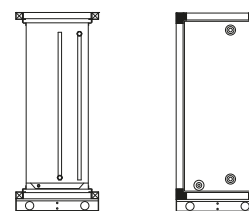
### BL Bag Filter Long Pockets



◀ 800 ▶

- Purpose: Remove medium/fine particulate.
- Grade: F9 (EU9), 12 long pockets.
- Efficiency >96% for 0.4 microns particles and above.
- Media: Fibreglass
- Built according to EN 1886:2007.

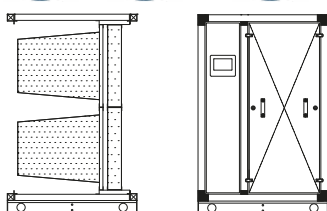
### RC Recovery Coil



◀ 600 ▶

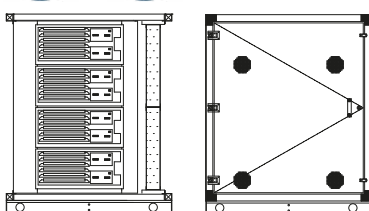
- Approximately efficient to 45-50% heat transfer.
- Ideally suited to either air-to-air or air-to-water transfer, or both.
- No risk of cross contamination.
- Can transfer coolth under certain summer conditions.
- Copper pipework with aluminium fins.
- Number of rows determined by the specific duty.
- Includes moisture eliminators.
- Pressurisation set available if required.
- Built according to EN 1886:2007.

### PM + BU or BL



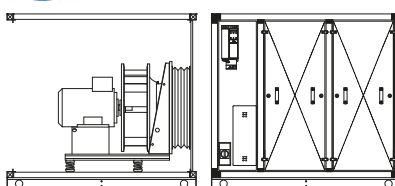
◀ 940 ▶

### PM + UG



◀ 1200 ▶

### FS Fan Standard



◀ 1560 ▶

- High manufacturing standards for the longest lifecycle.
- High efficiency direct drive fans.
- First class dynamic balancing (lowest vibrations)
- Temperature rating up to 40°C.
- Variable frequency drive.
- Up to 2000 Pa total pressure.

## OUTDOOR INSTALLATION



PolluStop, Aerolys and Extenso units can be installed externally. In such cases a special weatherproof roof will be supplied. The touch screen can still be installed on the unit if required as it is protected to IP65.

## FLAT DESIGN



PolluStop and Aerolys units are available in a shallow version, designed to be installed in the limited space within ceiling voids. Due to access limitations, the flat design is only available in 4 sizes.

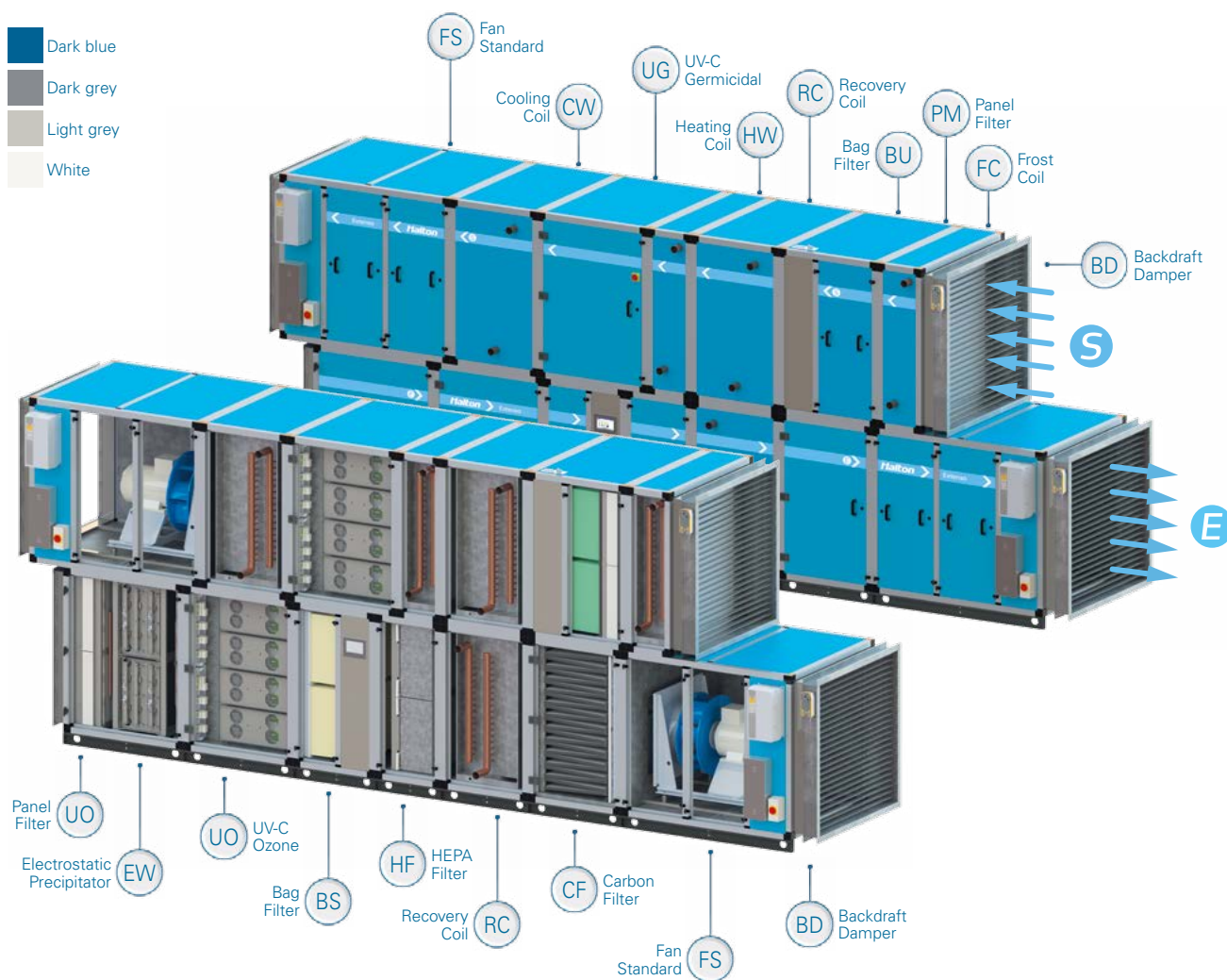
## SOUND ATTENUATION



Built-in attenuators are available for PolluStop, Aerolys and Extenso with the option of Melinex lining for polluted airstreams. Intended for the reduction of in-duct noise transmission. Standard construction is 100mm Airways & 200mm Splitters, with 900mm, 1200mm and 1500mm length options. For specific noise requirements, consider seeking professional acoustic advice.

## COMBINED SUPPLY AND EXHAUST UNIT

Modular construction, highly efficient and offers smaller footprint



### APPLICATIONS

#### Extenso, 2 world-class products in a single package!

The Extenso range of “combined” air-handling units is offered as a solution for those projects requiring PolluStop pollution control and Aerolys supply air-handling to be provided as a single, compact integrated unit.

Extenso provides all the features and options that are available from the individual PolluStop and Aerolys ranges, but with the added benefit that the single “footprint” of Extenso is half that of the separate units. This can be of particular benefit on those projects where Plant Room, or rooftop, space is at a premium.

- Specially developed for kitchens in dense urban areas.
- Wide range of units, from 3,240 to 38,880 m³/h.
- Can be configured as either “stacked” (one on top of the other), or “alongside” (side-by-side)
- If selected, can incorporate matched energy recovery coils offering either air-to-air or air-to-water heat transfer, or a combination of both
- Fully integrated into the Halton Control Platform
- External insulated panelling available in 4 colour options (dark blue, light grey, dark grey or white).
- Respects the neighbourhood due to minimal cooking odours.
- Saves energy due to the integrated heat recovery coil, sustainable over time.
- Acoustic insulation built into the unit's double-skin panels.
- All in one control system for monitoring the filter pressure losses, controlling the speed of the fan and monitoring the UV-C lamps.
- The three systems are be controlled with one interface: the Halton Touch Screen.
- External installation possible. There are a number of additional service possibilities, such as variable frequency drive and other monitoring systems.

# Every step contributes to a High Performance Kitchen



A professional kitchen is a very demanding environment in which ventilation is always a challenge. Each technology, system or product developed by Halton is exclusively designed to combine one or more of the following objectives:

- Energy efficiency;
- Indoor Environment Quality (IEQ);
- Food or Fire Safety;
- Air purification.

Our innovations constantly supply the widest and most efficient technical range in the field of kitchen ventilation. This range generates a powerful synergy, which is necessary to obtain a High Performance Kitchen. A kitchen where efficiency competes only with well-being.





## High Performance Kitchen

### Energy performance

At 800 kWh/m<sup>2</sup> (1), the catering business is the most energy-consuming activity out of all commercial and residential buildings in the United States, far ahead of the hospital sector (at 600 kWh/m<sup>2</sup>). All things being equal, this observation may also be considered valid in Europe and in many other countries. It makes energy performance the most important aspect of the "High Performance Kitchen" concept.

### Indoor Environment quality

Lack of staff is one of the major challenges faced by commercial catering. The low appeal of the chef's profession is largely due to unpleasant thermal comfort. This is related to air temperature and speed, the heat radiated by cooking appliances and humidity. The Indoor Environment Quality (IEQ) is a wider notion that also encompasses lighting quality, sound pressure levels and visual comfort. All of these factors can be improved with a correctly designed and properly dimensioned air ventilation and conditioning system.

### Safety

Many restaurants today do not re-open after a major safety incident. Operators or owners not only have to deal with the interruption of business, but also face up to their responsibilities to the building's other tenants, customers, third parties, or cope with bad press. Safety is de facto a major concern in professional kitchens.

### Air purification

It is highly likely that future legislation may well stipulate that "fresh" air used for any process must be discharged back into the atmosphere at the same quality as that at which it was taken. This will represent a real challenge for catering establishments in dense urban areas.

\* The High Performance Kitchen by Halton / IEQ Indoor Environment Quality)

<sup>(1)</sup> Energy Efficiency in Buildings, Transforming the Market (WBCSD World Business Council for Sustainable Development)



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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.