

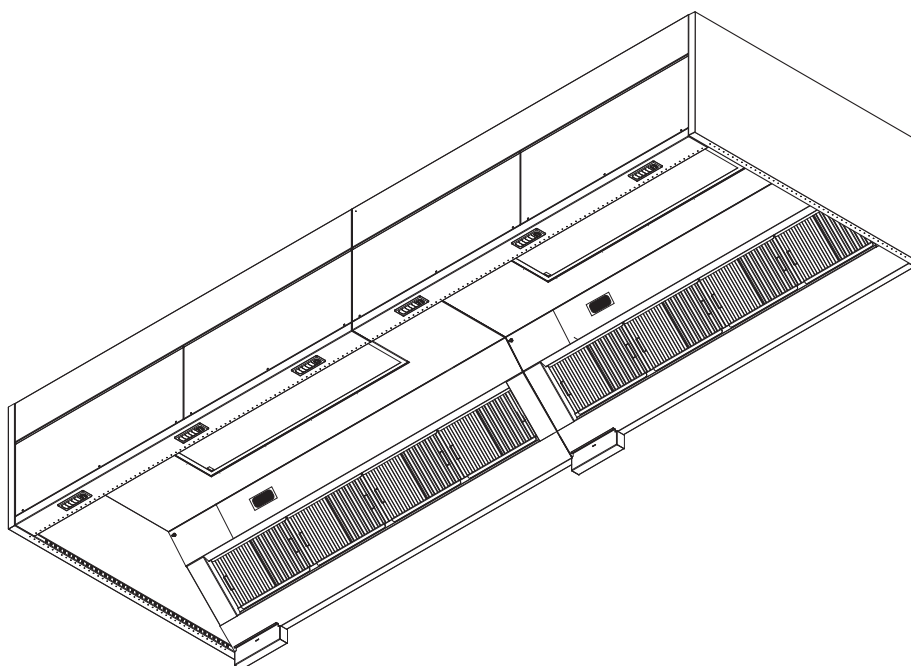
OPERATION, CLEANING & MAINTENANCE

READ ALL INSTRUCTIONS BEFORE USE

Halton Capture Jet 3 – Proprietary Kitchen Ventilation Exhaust Hoods with UV Treatment

This manual is suitable for the following models:

| | |
|---------------|--|
| UVF | Halton Capture Jet™ Canopy with UV treatment and provision for Supply Air. |
| UVF-M | Halton Capture Jet™ Canopy with UV treatment and provision for Supply Air. |
| UVF-H | Halton Capture Jet™ Heavy duty Canopy with UV treatment and provision for Supply Air. |
| UVF-HI | Halton Capture Jet™ Heavy duty Island Canopy with UV treatment and provision for Supply Air. |
| UVI | Halton Capture Jet™ Canopy with UV treatment. |
| UVI-M | Halton Capture Jet™ Island Canopy with UV treatment |



1.0 Introduction

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1.1 Attention

Carefully read this instruction booklet, as it contains important advice for safe installation, operation and maintenance. This manual is to be passed onto the owner/facility at the project completion.

Disclaimer

The manufacturer and distributor cannot be held responsible or liable for any injuries or damages of any kind occurred to persons, units or others, due to **abuse and misuse** of this unit in regards to installation, removal, operation, servicing or maintenance, or lack of conformity with the instructions indicated in this documentation.

All units made by the manufacturer are assembled, where possible, and ready to install. Any installation, removal, servicing, maintenance and access or removal of any parts, panels or safety barriers that is not permitted, does not comply in accordance to this documentation, or not performed by a **trained and authorised specialist** will result in the **immediate loss of the warranty**.

The manufacturer cannot be held responsible or liable for any **unauthorized modifications** or repairs. All modifications or repairs must be approved by the manufacturer in writing before initiating. All modifications or repairs performed to this unit **must** be performed at all times by a **trained and authorised specialist**.

1.2 General Information


When using any electrical unit, safety precautions must always be observed.

Our units have been designed for high performance.

Read these instructions carefully and retain for future reference.

- All units **MUST** be installed according to the procedures stated in the installation section of this manual
- In the case of new personnel, training is to be provided before operating the equipment
- **DO NOT** use this unit for any other purpose than its intended use
- Keep fingers out of “pinch point” areas
- Only use this unit with voltage specified on the rating label
- Threaded fasteners can loosen in service. Regular inspection and tightening should be carried out as required
- If any fault is detected, refer to the troubleshooting guide

1.3 UV - Responsibilities

| | |
|---|--|
|  | <p style="text-align: center;">WARNING</p> <p style="text-align: center;">The UV-C radiation emitted from the UV cassettes affects the hydrocarbon components of human flesh and eyes.</p> |
|---|--|

Halton UV exhaust products have built-in engineering controls to protect operators from accidental exposure to radiation. These include:

- A pressure switch to only operate UV lamps when the exhaust fan is running;
- A filter safety switch to turn UV lamps off when a filter is removed;
- An access safety switch to turn UV lamps off when any UV doors or access panels are removed;
- UV power interlock to only supply power to the UV system when the exhaust fan is turned on (this is the responsibility of the installer)

Halton's UV-C lamps have an operating lifetime of 13,000 hours and the tubes are safely fitted in IP rated cassettes that can be easily removed for periodic maintenance away from the food preparation area. A simple user interface communicates the status of the UV including power supply, maintenance and communication alarms.

It is the responsibility of any employer to bring the risks and associated safety measures to the attention of their employees. This includes developing a safety plan in the event UV exposure does occur. Any safety plan should include first aid treatment and seeking further medical attention. Regular training should also be conducted on the safe operation of the UV system.


When installing, operating or servicing Halton UV products:

- Always contact Stoddart's service team to discuss any problems with the UV system
- Do not attempt to disable or bypass the UV engineering controls;
- Do not attempt to operate the UV-C lights whilst they are exposed;
- If UV lights do operate while exposed;
- Do not look at operating UV-C lights
- Cover skin and eyes to avoid prolonged exposure to UV light
- Isolate the power, fit the filters and access panels and call Stoddart for technical support
- Dispose of used UV tubes responsibly;

Should any complications arise that cannot be solved using this manual, contact Stoddart for further advice.

Each UV system is designed and considered separately, based on the information provided to Stoddart. Stoddart cannot be held responsible if the design of the HVAC installation has been modified so that the efficiency of the UV system or concentration at the discharge point is impaired. Residual ozone generated by the Halton UV system may be present in the extract air prior to discharge to the atmosphere. AS 1668.2-2012, Table C1 and the NEPC provide guidelines on the maximum exposure limit of ozone.

1.4 UV Warnings

| | |
|---|---|
|  | <p style="text-align: center;">WARNING</p> <p style="text-align: center;">The UV-C radiation emitted from the UV cassettes affects the hydrocarbon components of human flesh and eyes.</p> |
|---|---|

The UV-C lamps used for Halton's Capture Ray™ technology contain a very small quantity of mercury. Classification in accordance with directives 67/548/EEC, 2001/59/EC and 2006/102/EC:



T+



N

T+: Very toxic

N: Substances or preparations that are dangerous for the environment

1.5 Handling of the UV Lamps

The UV lamps are manufactured using quartz glass (fragile).

Care **MUST** be taken when carrying out routine maintenance and/or UV lamp replacement.

Cleaning and maintenance of the UV lamps and Filters should only be performed by trained personnel, in accordance with the operating instructions.

1.6 Disposal of the UV Lamps

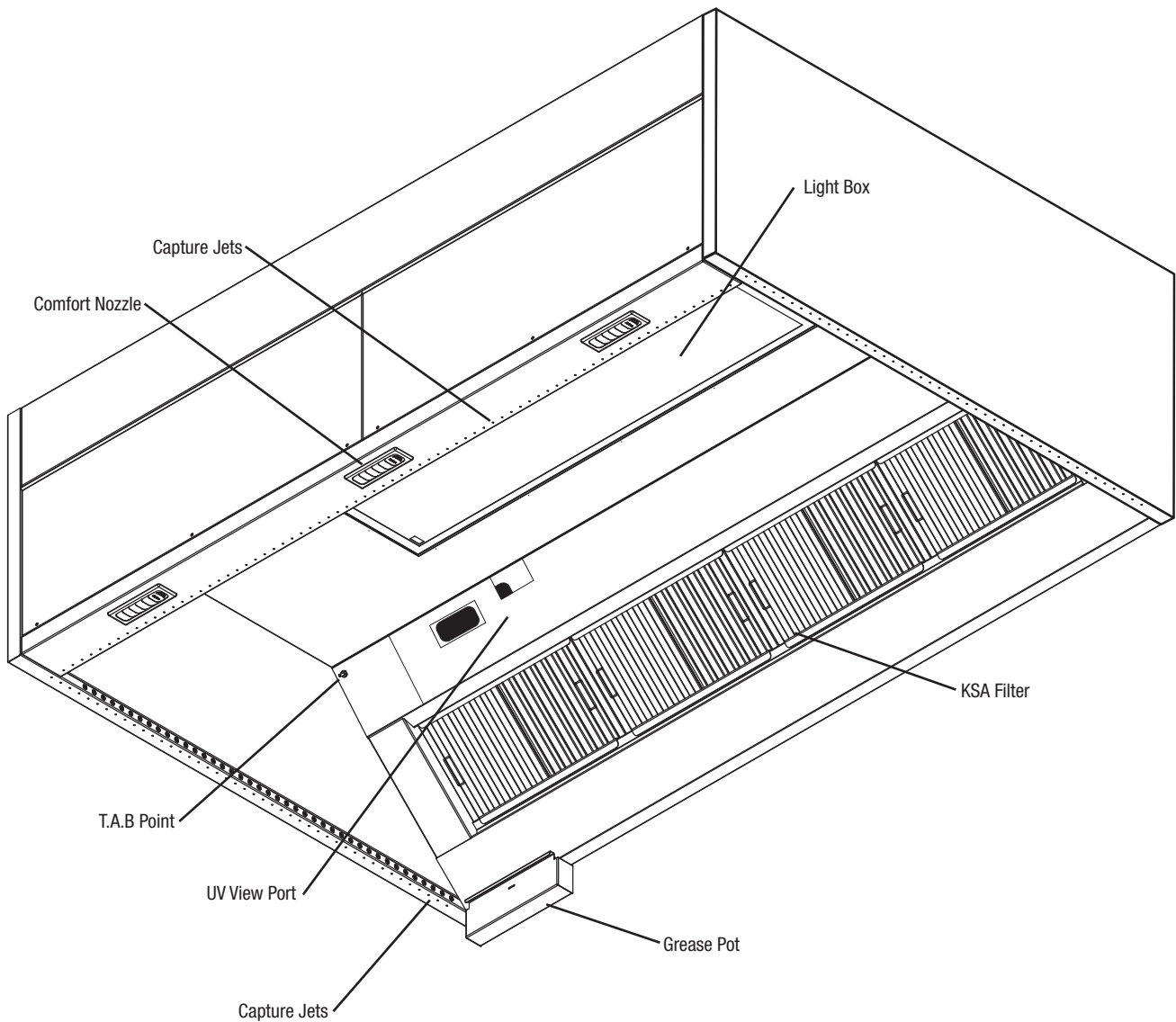
UV lamps for disposal (defective or lamps that have exceeded their lifetime) **MUST** be handled carefully, **DO NOT** break the quartz tubes. They UV lamps **MUST** be disposed of in accordance with local regulations.

1.7 In Case Of Broken UV Lamp

Immediately wash your hands, arms and any other body parts which have been in contact with the tube splinters. Slip on protective clothing (at least protection gloves if, contrary maintenance instructions, they were not used during the tube replacement). Carefully collect the tube pieces while trying to limit air drafts which can whip up the dust. Place them in hermetic packaging and dispose as hazardous waste. Any broken tube must be disposed of the same way as intact tubes (see above). The quantity of mercury used in the UV-C lamps is very small. However, if you feel unwell, seek medical advice immediately.

1.8 Overview

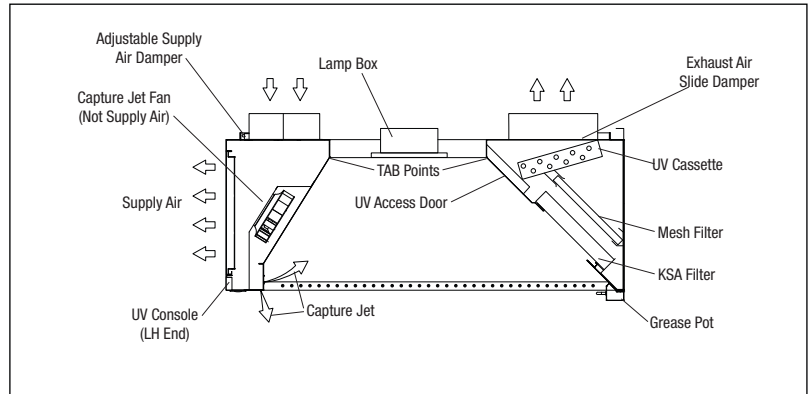
Example only. Exhaust hood configuration may vary due to customer specifications



1.9 Section Views

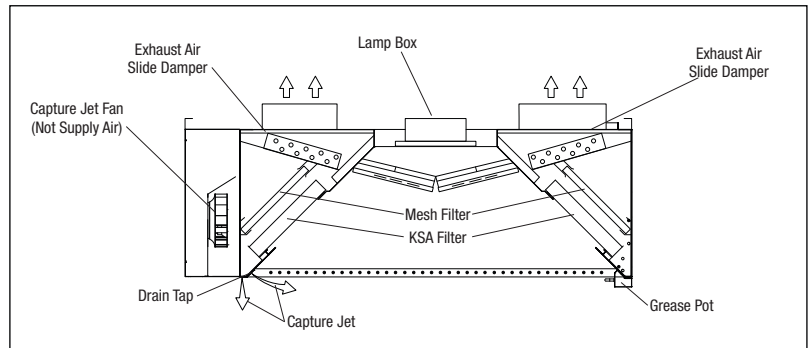
UVI: No provision for make-up air supply through hood.

UVF: Provision for make-up air supply through front perforated face of the hood.



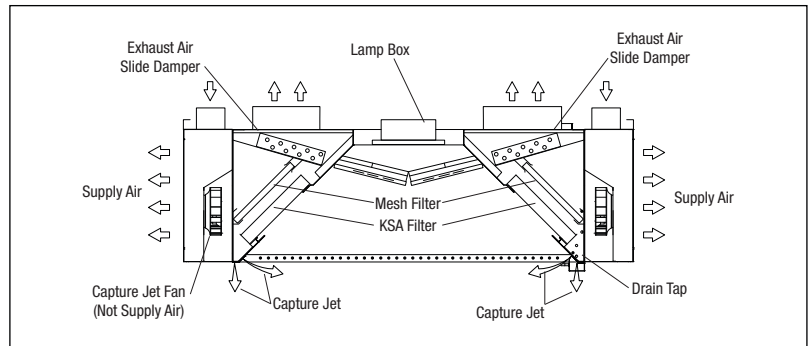
UVI-H: Wall position No provision for make-up air supply through hood.

UVF-H: Wall Position with provision for make-up air supply through front perforated face of the hood.



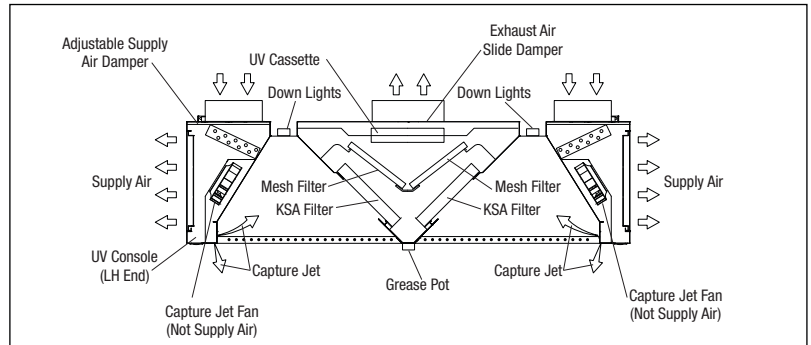
UVI-HI: Island Position No provision for make-up air supply through hood.

UVF-HI: Island Position with provision for make-up air supply through front & rear perforated faces of the hood.



UVI-M: Island Position No provision for make-up air supply through hood.

UVF-M: Island Position with provision for make-up air supply through front & rear perforated faces of the hood.

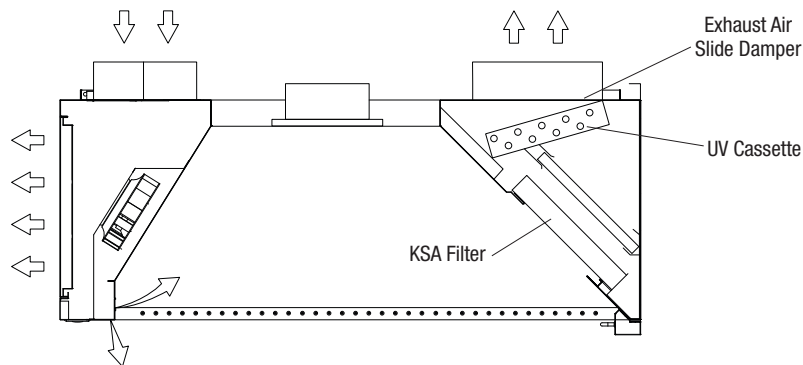


1.10 Capture Jet

- Halton Capture Jet Hoods have a row of horizontal and vertical jet holes along the front and open sides of the canopy. The capture jets produce controlled air curtains that capture and spiral the air toward the filters, improving capture. The air is drawn into the Capture Jet by special fans and speed controllers in the hood

1.11 Exhaust Plenum

- KSA cyclonic particulate separation filters are the 1st level of exhaust air treatment
- UV Mesh screens equalize the airflow through the UV chamber for optimum UV exposure
- UV Cassette with UV lamp tubes generate Ozone in the exhaust air to react with vapours
- Exhaust Air Slide Damper is adjusted during commissioning only to balance air between multiple hood sections
- T.A.B. points allow easy periodic checking of exhaust suction pressure



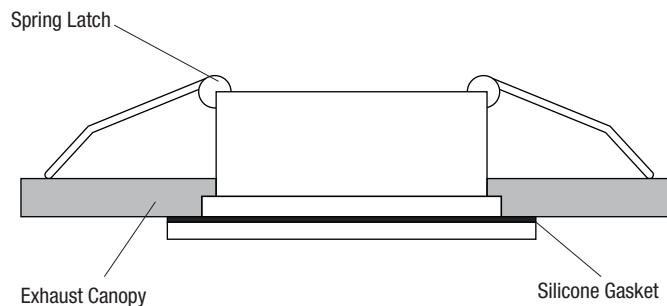
1.12 Supply Plenum (on F models)

- Perforated front face panels allows laminar flow of make-up air into the kitchen
- Supply air damper is adjusted during commissioning only to balance air between multiple hood sections.
- Comfort Nozzles allow some of the supply air to be directed down onto the chef to provide them with a more comfortable work environment
- Make up air supplied at low level velocity through the face of the canopy improve capture and containment by a further 10%

1.13 Lights

- The light box is mounted in the flat top section of the exhaust hood. A hinged glass door provides access to the lights

Optional: Down lights (LED or halogen) are fitted into stainless steel spring loaded fittings



2.1 Hood Operation

Kitchen exhaust hoods are part of a complete kitchen exhaust system that includes exhaust fans, controllers (switches, VSD and or BMS), exhaust ducts and possibly secondary filtration systems. The make-up air supply system (mechanical or natural ventilation) is also an integral part of the exhaust system.




To operate the hood specifically:

- Turn on the room lights. The lights in the hood are normally switched on together with the room lighting
- Check all filters are positioned correctly in the hood. Filter position may affect airflow through the hood
- Turn on the Kitchen exhaust fan so that it draws the required airflow through the exhaust hood. (The exhaust fan may have a manual switch or be BMS or timer controlled)
- If the exhaust fan is controlled by a 2 speed switch, operate the fan in low only during preparation. Operate in high speed for all cooking activity (label the switch "Preparation" and "Cooking")
- Check the UV lights switch on automatically when the exhaust fan is on and there is adequate airflow through the hood. The LEDs on the UV console or UV Touch screen indicate power and operation of the system

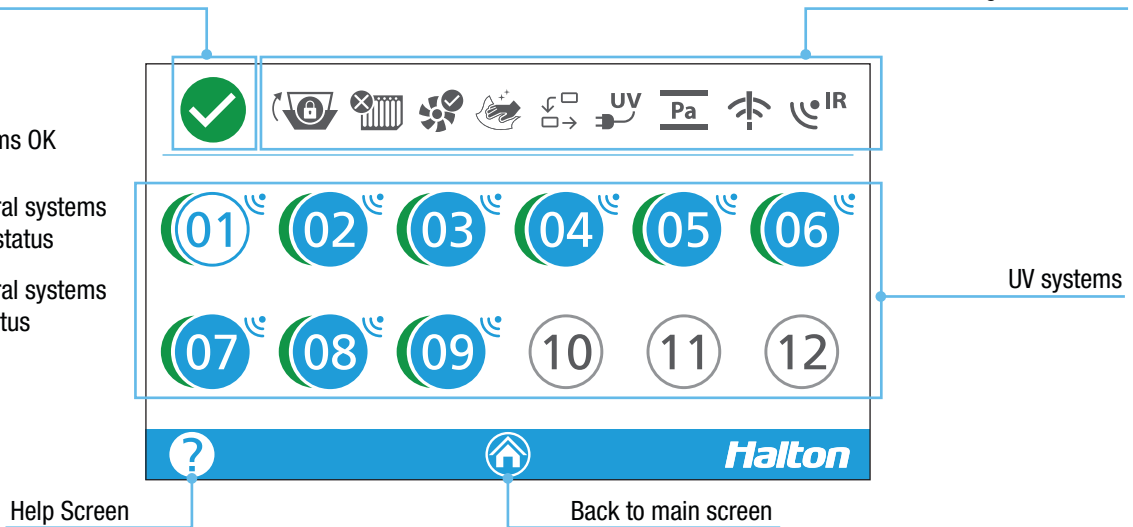
2.2 UV Console

2.2.1 Main Screen

General Status

-  All UV systems OK
-  One or several systems on Warning status
-  One or several systems on Alarm status

Warnings and Alarms



System OK

Warning

Alarm



UV systems*

UV on Demand Option

01 UV lamps ON

01 UV lamps OFF

01 Non Working/Set system

*UV system: Hood / Ceiling exhaust plenum(s)

Warnings and Alarms



Door Alarm



Filter Alarm



Fan Alarm



Tube Cleaning Warning



UV Lamps Replacement Alarm



Ballast Alarm



Low Pressure Warning



High Pressure Warning



Communication Alarm

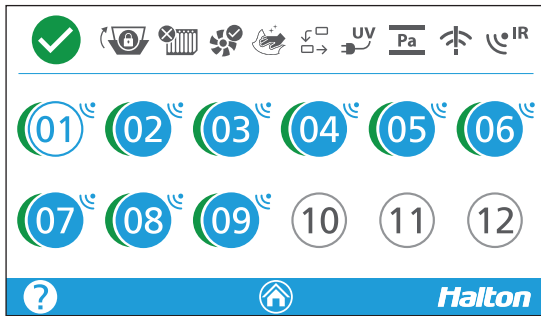


InfraRed Alarm (UV on Demand only)

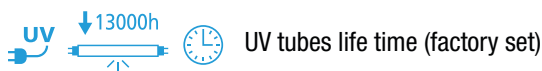
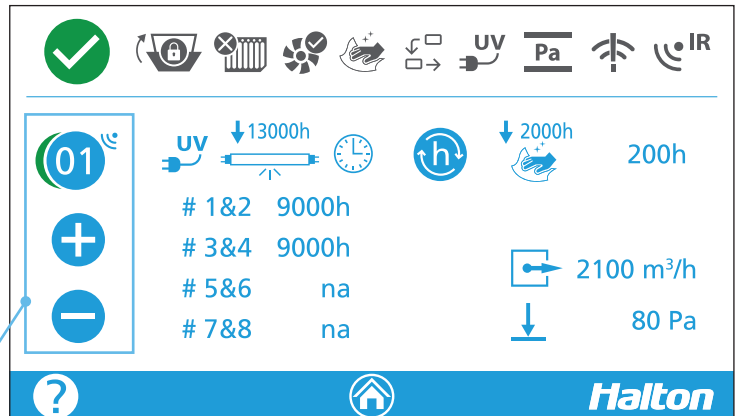


Auxiliary controller Communication Alarm (if present)

2.2.2 Detailed Information When UV Systems Are Fully Operational



Navigation into the UV systems



UV tubes life time (factory set)



2100 m³/h Actual airflow



Counter reset



80 Pa Actual pressure



2000h

Cleaning time (factory set) and remaining hours before next cleaning

4 Tubes UV Frame
2 Ballasts

1&2 1300h
3&4 1300h
5&6 na
7&8 na

6 Tubes UV Frame
3 Ballasts

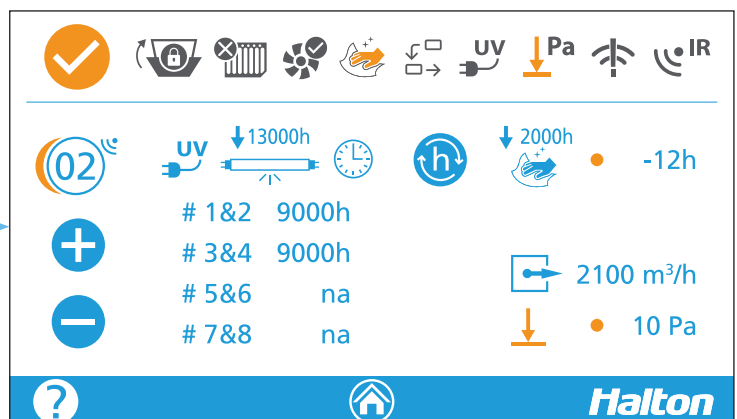
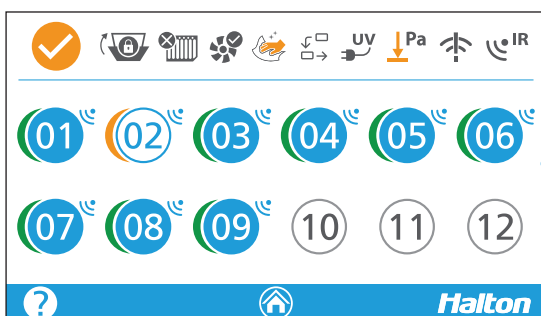
1&2 1300h
3&4 1300h
5&6 1300h
7&8 na

8 Tubes UV Frame
4 Ballasts

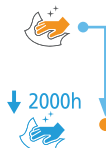
1&2 1300h
3&4 1300h
5&6 1300h
7&8 1300h

Remaining hours before tubes changing operation.
2 tubes per ballast

2.2.3 Detailed Information When There Are Warnings

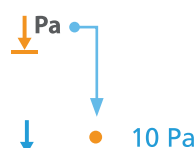


UV tubes cleaning required



Number of operation hours since last lamps cleaning is 0 or under.
Lamps still working

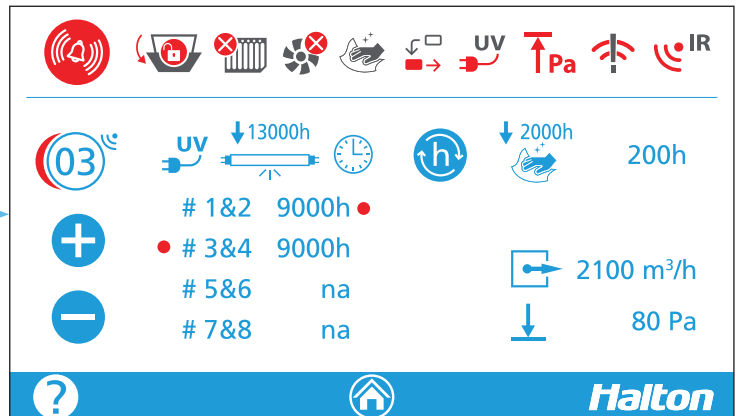
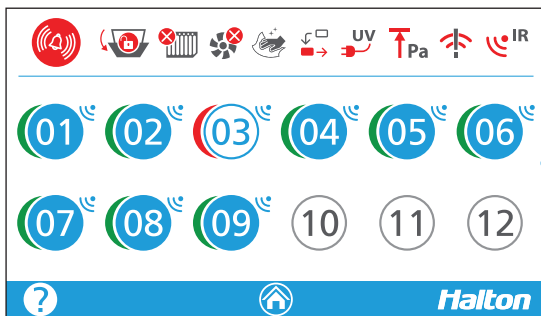
Low Pressure



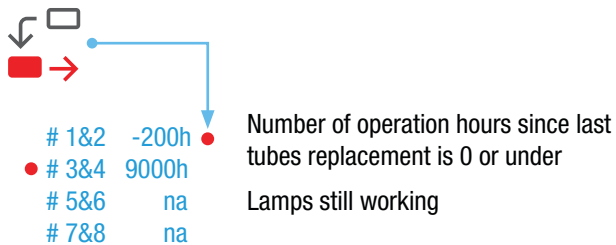
Exhaust pressure loss is under the minimum set in factory.
Lamps stop working

Note: Explanations and solutions for warnings available in Trouble shooting chapter.

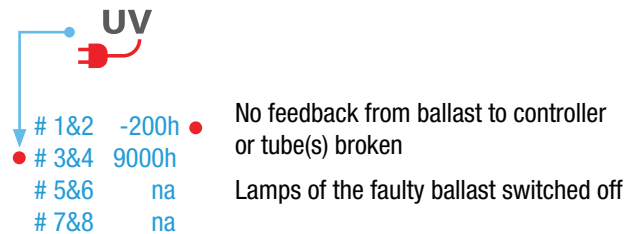
2.2.4 Detailed Information When There Are Alarms



UV Tubes replacement required



Faulty ballast



Uv Access Door Opened
Lamps are switched off

Fan Error
Lamps are switched off

InfraRed Sensor Default
Lamps still working
UV on demand only

Missing Filters
Lamps are switched off

Communication Error
Lamps are switched off

High Pressure
Lamps still working

Auxiliary Controller Communication Error
Lamps are switched off

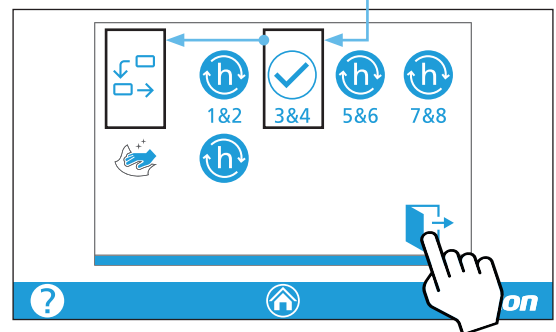
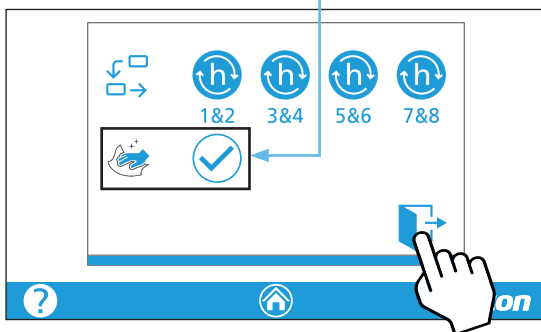
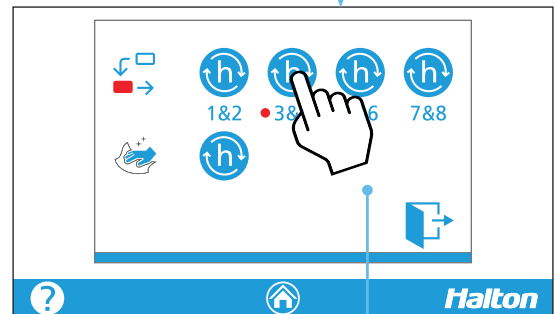
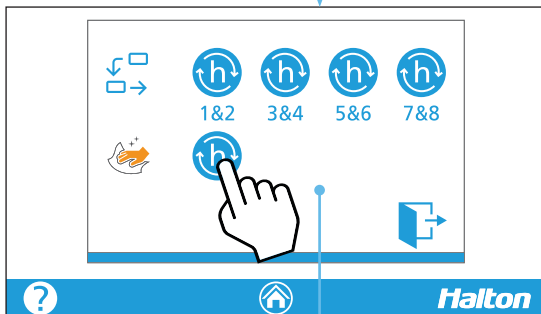
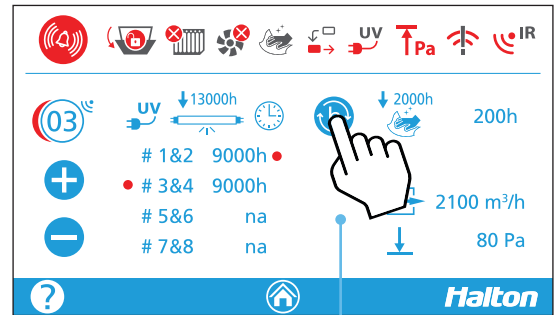
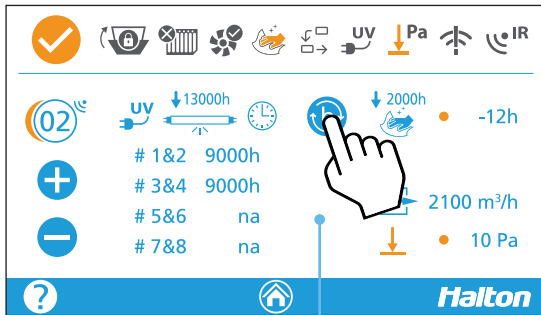
Note: for explanations and solutions for alarms refer to trouble shooting page 34

2.2.5 Resetting of the UV Lamps Counters

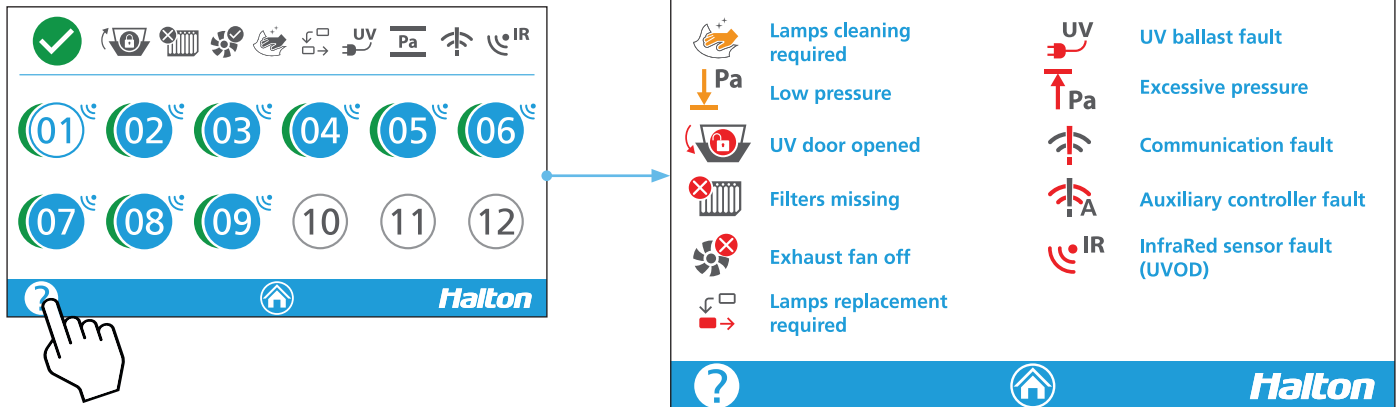


IMPORTANT

Each ballast drives 2 UV tubes. Halton cannot be held responsible for any efficiency or safety problem if the counters are reset in sole aim to suppress the alarms i.e. without having carried out the appropriate maintenance operations.



2.2.6 Access to the Help Section

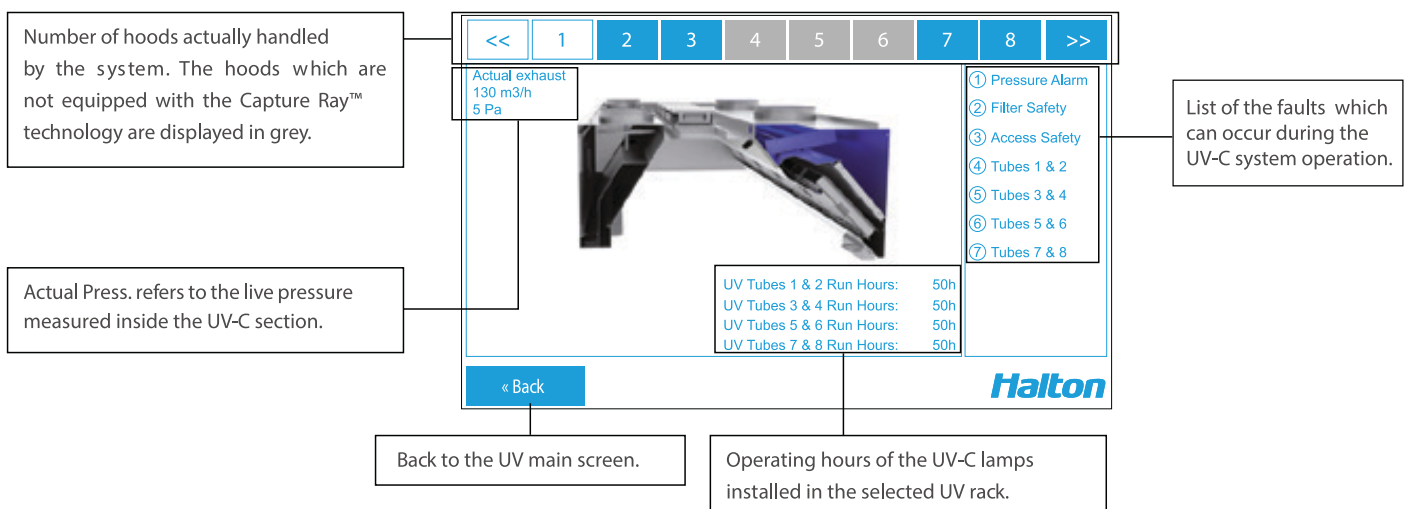


2.3 UV Touch Screen

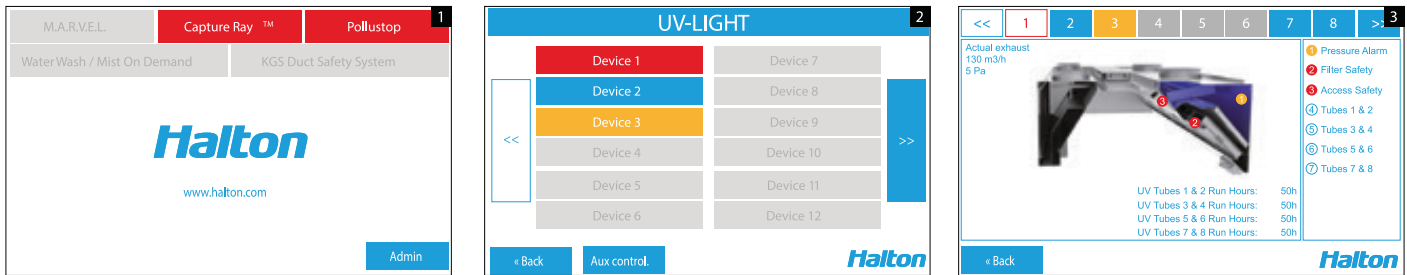
Some businesses use a wall mounted touch screen to manage the UV operation of multiple hoods in a kitchen. The touch screen might also manage other elements of the ventilation system such as secondary filtration systems, exhaust fans and M.A.R.V.E.L. demand-based controllers. Touch screen operating instructions are provided separately with a quick overview provided on the following pages



2.3.1 "UV-C" Main Screen Description



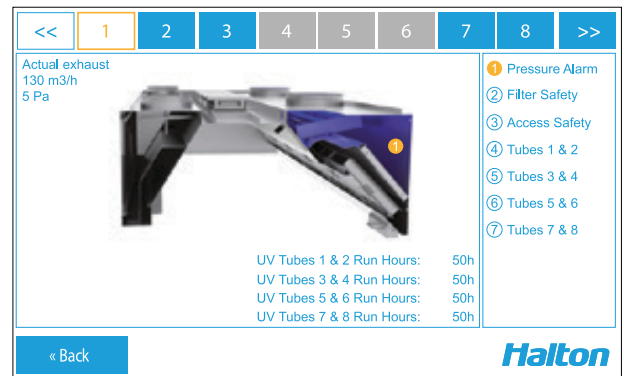
2.3.2 Signalling The Potential Faults Or Statuses



2.3.4 Pressure Alarm

The pressure, that is currently measured inside the UV-C section, is lower than the minimum allowed. All the lamps of the UV-C section are then automatically turned off for safety reasons. The “Pressure Alarm” dot turns to orange (not critical alarm).

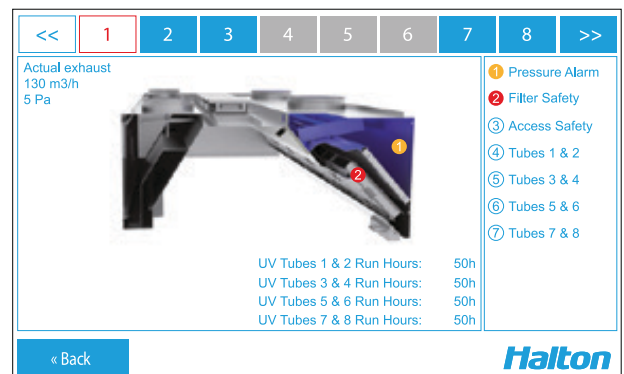
Note that all the UV racks may systematically trigger the same alarm. Note also that this alarm can correspond to a normal situation. The allowed pressure can be indeed set to switch off automatically the lamps under a predefined value of exhaust airflow to extend their lifetime.



2.3.5 Filter Safety Alarm

One or several filter(s) are missing at exhaust plenum level. All lamps of the UV-C section are then automatically turned off for safety reasons. The “Filter Safety” dot turns to red. Depending on the number of missing filters and the corresponding pressure decrease, the “Pressure Alarm” dot may turn to orange at the same time.

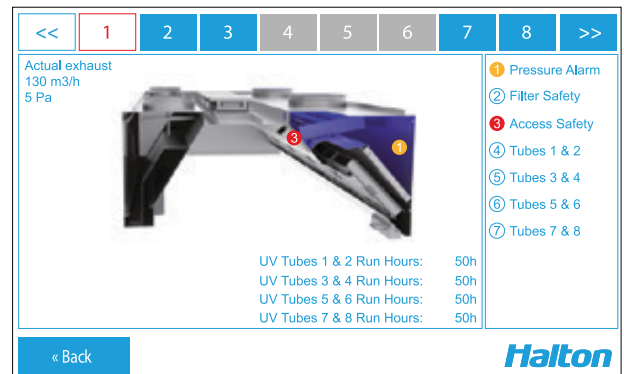
Note: If all filters are missing, the pressure decrease generated may trigger the Pressure alarm of other hood sections.



2.3.6 Access Safety Alarm

The access door to the UV rack is open. All lamps of the UV-C section are then automatically turned off for safety reasons. The “Access Safety” and the “Pressure Alarm” dots turn red

Note: The pressure decrease generated may trigger the Pressure alarm of other hood sections.

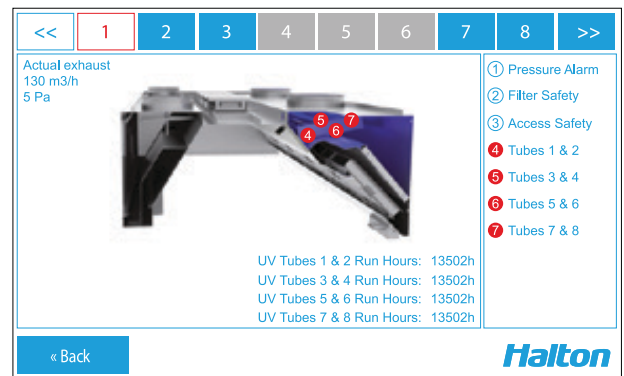


2.3.7 Tubes 1&2, 3&4, 5&6, 7&8 Alarm

This alarm can be triggered by 2 events:

- If the total running hours exceeds the defined lifetime of the UV lamps (normally 13000 hours);
- If there is no feedback from the ballast when the lamps are turned on (possible reasons: cable malfunction, lamps or ballast failure).

Note: If one or several UV lamps have to be replaced, the run hours counter must be reset. Please refer to the corresponding chapter.

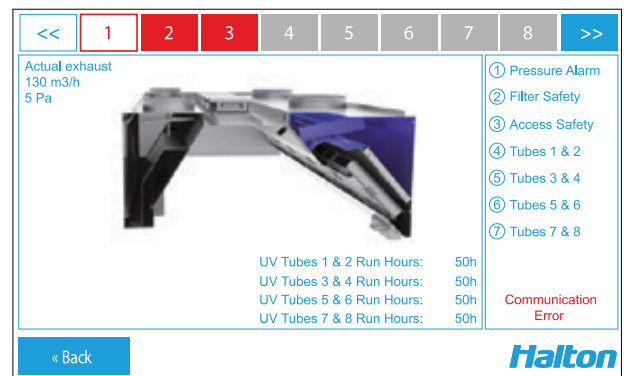


2.3.8 Communication Alarm

This alarm is triggered when there is a problem on the communication network of the UV system (between the controllers that make up the system).

The most frequent reason to get this alarm is a damaged communication cable or a defective controller.

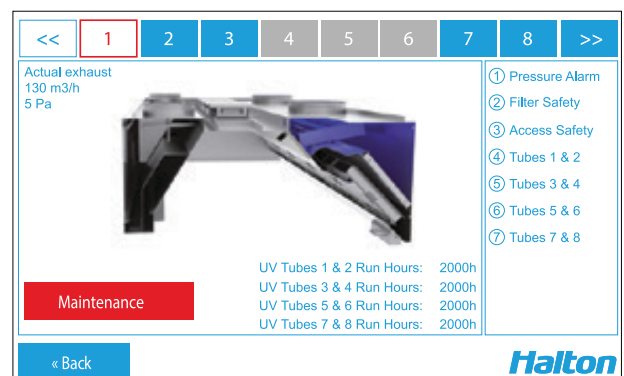
Note: When a communication cable is damaged all hood sections located downward in the communication network will also trigger the alarm.



2.3.9 Maintenance Alarm

This alarm is triggered when the lamps need to be cleaned depending on the number of operating hours defined in the "UV-Light Options" menu (administrator mode).

Note: Once maintenance is completed, click on the red button to make alarm disappear.

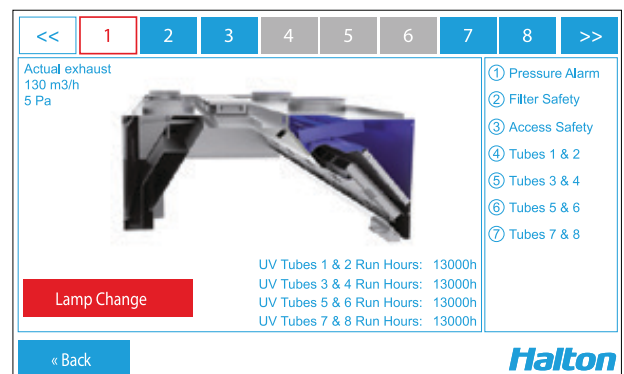


2.3.10 Lamp Change Alarm

This alarm is triggered when the lamps have to be replaced after having been used longer than the lifetime defined in the "UV-Light Options" menu (administrator mode).

Note: Once maintenance is completed, click on the red button to make alarm disappear.

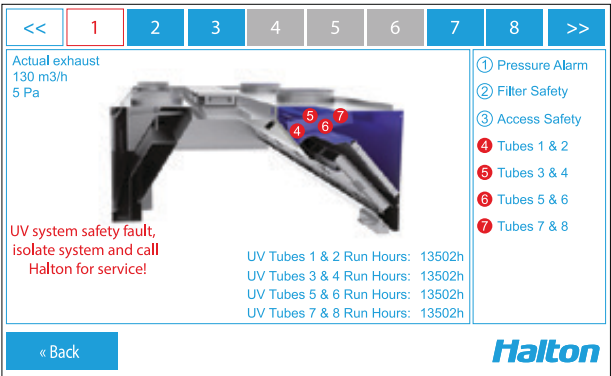
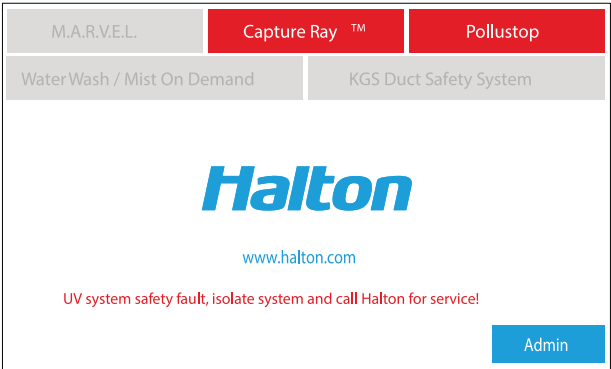
Note: The lifetime of the UV lamps is 13000h.



2.3.11 Auxiliary Controller Alarm

For interconnections with other systems (whether they are from Halton or not) or communication with the BMS (Building Management System), the UV system can be equipped with an “Auxiliary Controller”. This controller relays exactly the same alarms as described before. If one or several of these alarms occur the “Auxiliary Controller” triggers an additional and general warning message on the main screen and hood sections screens as shown.

Note: When the UV system is combined with M.A.R.V.E.L. technology, the warning message may be also displayed in case of fault on one of the two systems.







3.1 Cleaning

3.1.1 General Information

- Threaded fasteners can loosen in service. Regular inspection and adjustment should be carried out as required
- Cleaning is recommended for health and safety purposes and to prolong the life of the unit
- Do not use abrasive pads or cleaners on the stainless steel or any other metal parts of the unit
- Do not use industrial chemical cleaners, caustic based cleaners or bleaches and bleaching agents, many will damage the metals and plastics used on this unit
- When drying, metal surfaces should be wiped with a soft cloth in the same direction as grained polish
- Do not remove any screws for general cleaning. All internal sections of the unit are to be cleaned by a qualified technician
- This unit is not waterproof, do not hose, do not pour water directly onto the unit, do not immerse in water

3.1.2 Surface Finish / Corrosion Protection

1. Stainless steel exhibits good resistance to corrosion however, if not properly maintained stainless steel can rust and/or corrode
2. All metal surfaces should be checked while cleaning for damage, scuffs or scrapes as these can lead to rust and further damage to the product
3. Any sign of mild rust and/or corrosion should be thoroughly cleaned with warm soapy water and dried as soon as possible
4. Mild rust, discolouration and/or corrosion can be treated with a commercial cleaning agent that contains citric/oxalic/nitric/phosphoric acid. Do not use cleaning agents with chlorides or other harsh chemicals as this can cause corrosion. After treatment, wash with warm (not hot) soapy water and dry thoroughly
5. Some commercial stainless steel cleaners can leave residue or film on the metal. Make sure any residue is washed off with a clean damp cloth
6. Wipe the surfaces dry (in the same direction as grained polish) after cleaning and do not let water pool on the unit
7. For non-food contact surfaces, a light oil can be wiped on the surfaces with a cloth to enhance the stainless steel surface. Wipe in the direction of the grain

| | | | |
|---|--|---|---|
|  | <p>IMPORTANT</p> <p>Threaded fasteners can loosen in service. Regular inspection and adjustment should be carried out as required</p> |  | <p>WARNING</p> <p>This unit is NOT waterproof, do NOT hose. DO NOT pour water directly onto the unit. DO NOT immerse in water</p> |
|  | <p>IMPORTANT</p> <p>Some commercial stainless steel cleaners leave residue or film on the metal that may entrap fine particles of food, deeming the surface not FOOD SAFE.</p> |  | <p>WARNING</p> <p>Wait until the unit has cooled to a safe temperature before undertaking any cleaning or maintenance. Contact with hot surfaces can cause burns and serious injury.</p> |

3.2 Recommended Cleaning And Maintenance Schedule

For good kitchen hygiene, the exhaust hood should be visually inspected by management at least once per week. The below 'Cleaning and Maintenance Schedule' can also be found attached on the inside of the exhaust hood. These provide a cleaning guide for Extreme, Heavy and Light duty operation. Regular tasks for the operator include cleaning the hood's surfaces, emptying the grease pots and washing the filters. Additionally, a service technician is required to periodically perform routine maintenance tasks.

This schedule is only a guide. The frequency of cleaning will depend on the type and duration of cooking as well as the product and cooking oils used.

Legend:

- X – extreme usage
- H – heavy usage
- L – light usage

| Item | 6-12 Hours | Daily | Weekly | 2 Weeks | 1 Month | 3 Months | 6 Months | 12 Months |
|--|--|-------|--------|---------|---------|----------|----------|-----------|
| Check Indicator Lights Match Operation | X | H | L | | | | | |
| 3.3 Clean Exposed Hood Surfaces | X | H | L | | | | | |
| 3.4 Grease Pots - Inspect and Empty | X | H | L | | | | | |
| 3.5 KSA Cyclonic Filters – Inspect and Wash | | X | H | L | | | | |
| 3.6 UV Mesh Filter - Inspect and Wash | | X | H | L | | | | |
| 3.7 UV Tubes - Inspect and Wash | | X | H | L | | | | |
| Replace UV tubes | 13,000 hours (approx. 2-3 years usage) | | | | | | | |
| 3.8 Exhaust Plenum - Inspect and Clean | | | | | X | H | L | |
| 3.9 Supply Plenum – Inspect and Clean | | | | | X | H | L | |
| 3.10 Ductwork Surfaces - Inspect and Clean | | | | | | X | H | L |
| ** Inspect And Service Exhaust And Supply Fans | | | | | | X | H | L |
| Check Exhaust Hood Airflow Balance | | | | | | X | H | L |
| Clean And Service Capture Jet Fans | | | | | | | | X, H, L |
| Test Emergency Stop Button | | | | | | | | X, H, L |

** Refer to Fan Supplier's manual.

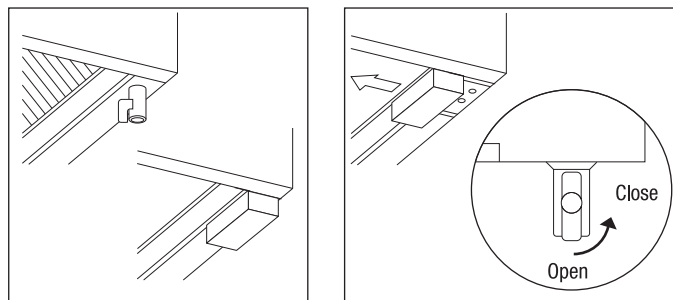
3.3 Exposed Hood Surface

Check all metal surfaces to ensure that there is no accumulation of grease or dirt and that there is no surface damage that could harbour dirt and bacteria. Clean exposed interior and exterior surfaces of hood and light fixture with mild soapy water or a neutral product. Carefully rinse away all surplus cleaning product.

| Cleaning Task | Cleaning Agent | Comments |
|--|--|--|
| Routine cleaning | Use mild detergent and warm water | Use a sponge or clean cloth, rinse with clean water, wipe dry if necessary |
| Oil or Grease | Use cleanser or organic solvents (e.g. acetone, alcohol or methylated spirits) | Apply cleanser to a damp cloth or sponge and rub cleanser on the metal |
| Stubborn stains, soil and burnt deposits | Mild cleaning solutions (e.g. specialty stainless steel cleaners) | Use rag or fibre brush (soft nylon or natural bristle) or scotch-brite™ scouring pads. Do not use steel wool. Rub in the direction of the grain and polish lines. Rinse well with clean water and wipe dry |

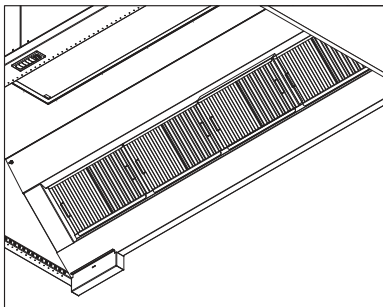
3.4 Grease Pots – Inspect and Empty

1. Regularly check grease collection pots as they collect the oil separated from the exhaust air
 2. To remove the pot from the hood, lift and slide the pot forward out of its holder (carefully if it is full and hot)
 3. Empty the oil into a waste oil container for recycling
 4. Wash the pot with hot soapy water before re-fitting it to the hood
 5. Replace the pot immediately as oil will continue to drip from the drain
- Note: for hoods that have a drain tap instead of a grease pot, hold a bucket under the drain and turn the tap to release collected oil

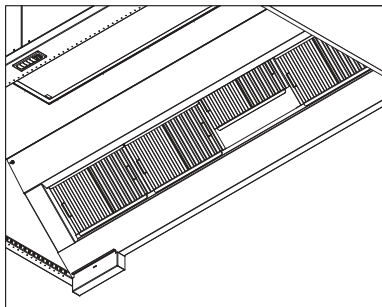


3.5 KSA Cyclonic Filters – Inspect and Wash

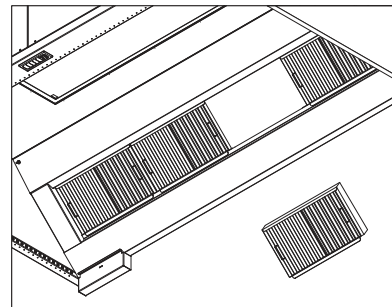
1. Switch off the exhaust fan
2. Take note of filter positions (to ensure any blind panels are positioned in same location)
3. Remove each KSA filter from the hood
4. Wash particulate off the filter in the pot sink with detergent, using spray-rinse and a brush or cloth
5. Place filters in a dishwasher basket, and pass through the dishwasher
6. Dry the filters & re-fit into the hood
7. Make sure the filters are properly located with both top and bottom hanging rails in place. (If there is a Filter to fan interlock, the fan will not restart when a filter is removed or not positioned properly)



Filter Arrangement

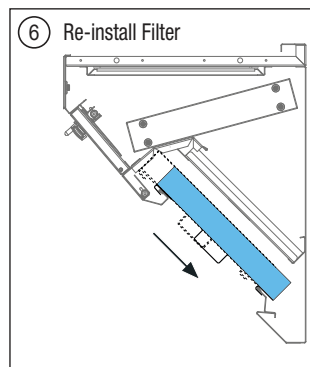
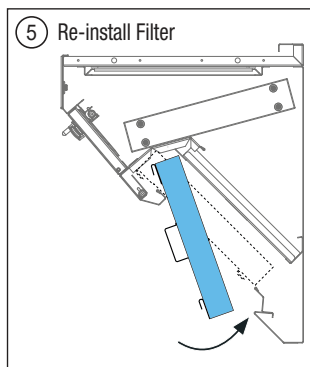
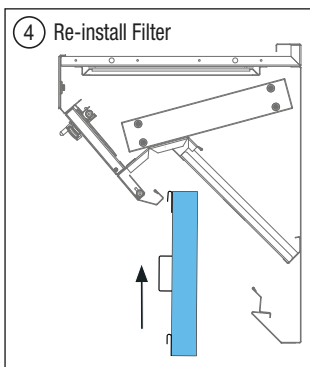
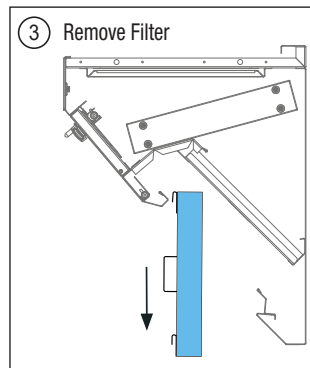
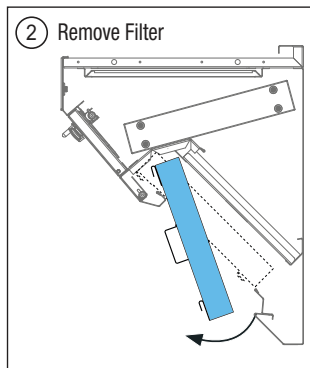
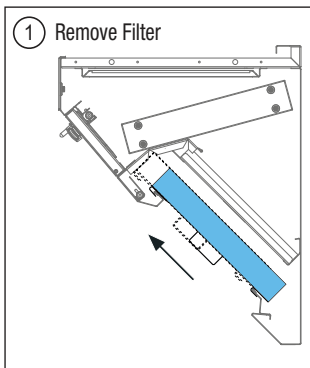


Filter Removal



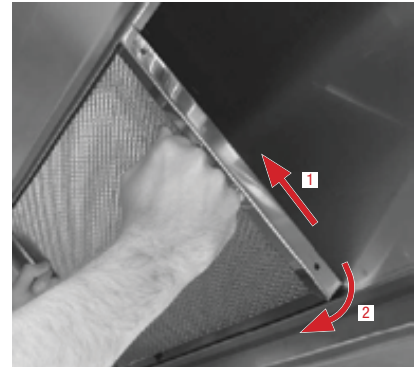
Filter Arrangement
Post Removal

Note: KSA Filters must be correctly positioned over the top and bottom rails




3.6 Mesh Filters - Inspect and Wash

1. Inspect the UV mesh (equaliser) filters & wash if dirty. (this is typically done weekly)
2. To remove UV filters, lift and pull them out bottom first.
3. Wash particulate off the filter in the pot sink with detergent, using spray-rinse and a brush
4. Put the UV filter in a dishwasher basket (5 per basket) and pass through the dishwasher
5. Dry the filters & re-fit them into the hood
6. If only the front face is slightly greasy, the filter can be rotated so greasy side faces UV light



3.7 UV Tubes - Inspect and Clean

| | |
|--|--|
|  | <p style="text-align: center;">CAUTION</p> <p>The UV-C lamps are made of quartz glass and are fragile. Care must be taken when cleaning the lamps, and all appropriate safety equipment utilised. Broken glass can cause injury and contaminate the food preparation area. Remove the UV rack from the hood for washing and servicing the tubes</p> |
|--|--|

1. Inspect the UV tubes either when the mesh filters are being inspected and washed or by access through the UV access door (this is typically done weekly)
2. If white dust forms on the surface of the UV tubes, it should be gently wiped off using a soft damp cloth to maintain effective operation (can be done without removing the UV rack)
3. If the tubes look or feel greasy, remove the UV rack from the hood (see instructions on page 26) and place it on a safe table (away from food preparation area). Wipe the tubes using a mild detergent and then wash off any residue

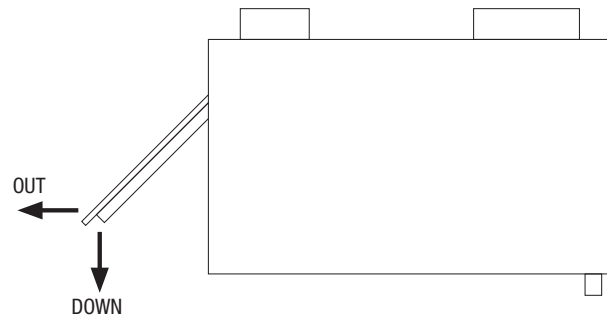
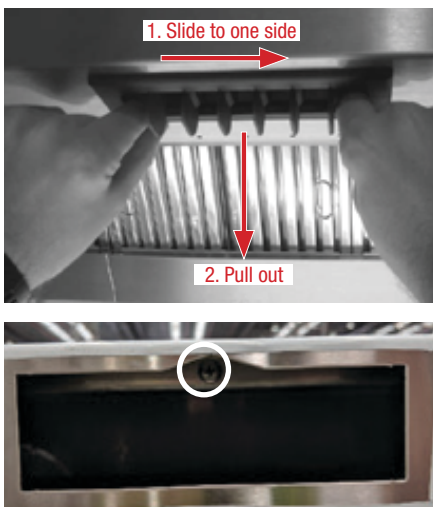
3.8 Exhaust Plenum - Inspect and Clean

The exhaust ductwork has to be periodically inspected and cleaned by the Service Contractor, the exhaust plenum should be also be thoroughly cleaned at the same time.

When the filters are removed, inspect the inside of the exhaust plenum. Condensed oil vapour should flow to the base and drain to the grease pots. Particulate and insects, etc. may accumulate inside the hood and cause ponding. Wipe the inside of the exhaust plenum using old rags.

3.9 Supply Plenum – Inspect and Clean

UV hoods with supply air passing through a perforated front panel should be inspected periodically and wiped clean as required. The front panel can be removed by removing the comfort nozzles, undoing the screws and lifting the panel out.



3.10 Ductwork Surfaces - Inspect and Clean (by Service Contractor)

The recommended inspection periods for extract ductwork, as published in *HVAC TR/19 by Airah – “Guide to good practice. Internal Cleanliness of ventilation systems”, are as follows:

- Heavy use (12-16 hours/day) – inspect every 3 months
- Moderate use (6-12 hours/day) – inspect every 6 months
- Light use (<6 hours/day) – inspect every 12 months

Ductwork cleaning is usually done by specialist cleaning contractors. TR/19 suggests that the duct is cleaned based on the grease depth in the duct, according to the following:

- Duct considered clean – grease depth $\leq 0.05\text{mm}$
- Duct considered acceptable – grease $< 2\text{mm}$
- Duct should be scheduled for cleaning – grease depth $> 2\text{mm}$
- Duct should be cleaned immediately – grease depth $> 3\text{mm}$

Failure to implement a cleaning maintenance procedure will cause an accumulation of grease and dirt in the ventilation system which will promote the growth of harmful bacteria, increase the risk of fire, generate odours, reduce airflow through the kitchen and impair the overall system performance and efficiency. Cleaning frequency may be a condition of insurance policies – check your policy. For the efficient operation of a kitchen ventilation system, implement cleaning & maintenance procedures. For detailed requirements refer to the HVAC publication TR/19. Chemical safety procedures should be noted prior to use. If a cleaner containing chlorides, bleaches or hypochlorite's is used it must be, afterwards, promptly and thoroughly cleaned off.

* HVAC TR/19 by Airah: https://www.airah.org.au/Content_Files/Resources/Technical-Bulletin-Kitchen-Exhaust.pdf

4.1 Maintenance

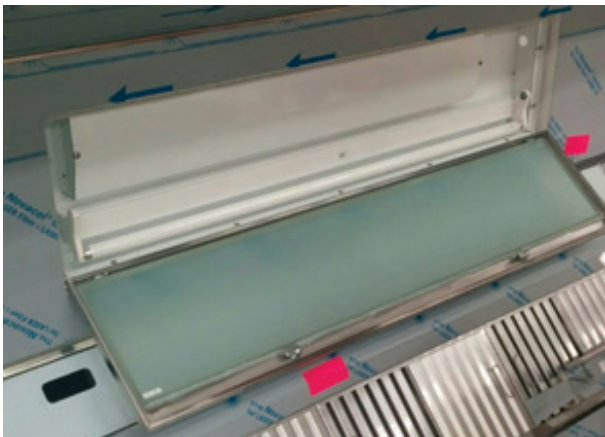
- The auto wash process requires regular inspection. Detergent and water usage may require adjustment based on site demands
- The process of handling and washing filters can result in them being bent. Check filters for damage to ensure they can be easily refitted.
- Fluorescent or LED lights in the exhaust hood have a limited service life & require periodic replacement by an authorised technician
- The Capture Jet fan requires annual service & cleaning by an authorised technician
- Airflow checks should be done annually and after service work by measuring the TAB pressure to confirm the exhaust airflow is within specification and ensure ongoing performance

4.2 Fluorescent and LED tubes



| | |
|---|---|
|  | IMPORTANT |
| | <p>Before accessing the lights, Ensure all power to the hood is switched off</p> |

Fluorescent lights are housed within the light fixture to provide sufficient light to the work area underneath the hood. The lights may be fluorescent tubes, LED tubes, halogen down lights or LED down lights. Before replacing any lights ensure power to the hood is switched off.

1. Unlatch the light diffuser panel and swing it downwards
2. Rotate the tube to release it from the tombstone ends and remove it
3. Replace the tube with a tube of the same size and wattage



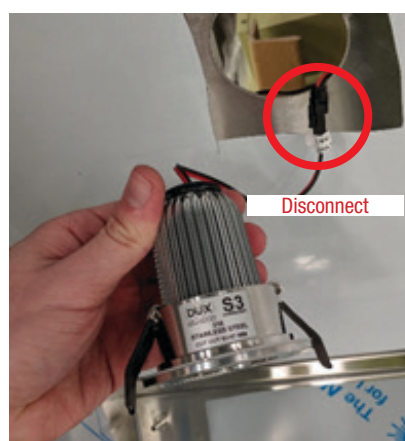
4.3 Down Lights:

| | |
|---|---|
|  | IMPORTANT |
| | Before accessing the lights, Ensure all power to the hood is switched off |
|  | WARNING |
| | A qualified electrician or service technician is required for removing/ replacing the Down Lights and/or Driver. |

1. Pull the down light down and out of the hood, this can be difficult. There are two spring clamps holding the lamp in. You may need to pry the light off the surface of the hood and use a screwdriver (or similar) to hold the clamps back. If it is possible, reach on top of the hood and hold the clamps back



2. Disconnect the light and replace it with a new one



3. If replacing the light doesn't fix the problem, the driver needs to be replaced by a qualified electrician, service technician or similarly qualified persons. The driver is attached with Velcro next to the light opening with enough cable to pull it through the hole



4. To replace the driver, pull it through the hole, undo the connections and replace it with a new one



5. Re-fit all lights and drivers as they were before. Ensure the driver is connected to the hood with Velcro again (reuse the Velcro from the old driver if need be)

4.4 Removal of the UV Cassettes from the Exhaust Hood:

1. Unlatch the UV access doors and open
2. Unplug the UV power cables at each end of the UV cassette frame (a quarter turn Bayonet style fitting)



3. Lift and slide the UV cassette out of the hood and place the UV Cassette on a safe work surface away from the food preparation for cleaning or service work. (hold the handle – approximate Cassette weight is 5kg)



4. To refit the UV cassette, insert the cassette into the hood, carefully re-attach the UV power cables and lock them with a quarter turn.
5. Close and latch the UV access doors

4.5 Replacing UV Tubes

If the UV tubes have become significantly stained or have exceeded their maximum operating hours they will need to be replaced by a qualified technician. Do not attempt to service a UV system yourself. Contact the Stoddart service department.

4.6 Replace a UV Ballast

UV ballasts need occasional service by a qualified technician. Do not attempt to service a UV system yourself. Contact the Stoddart service department.

4.7 Service the Capture Jet Fan

Every 6 months (typically) the Capture Jet fan will need to be serviced by a qualified technician. Contact the Stoddart service department.

4.5 Testing and Balancing Pressure and Airflow - Exhaust Air Flow

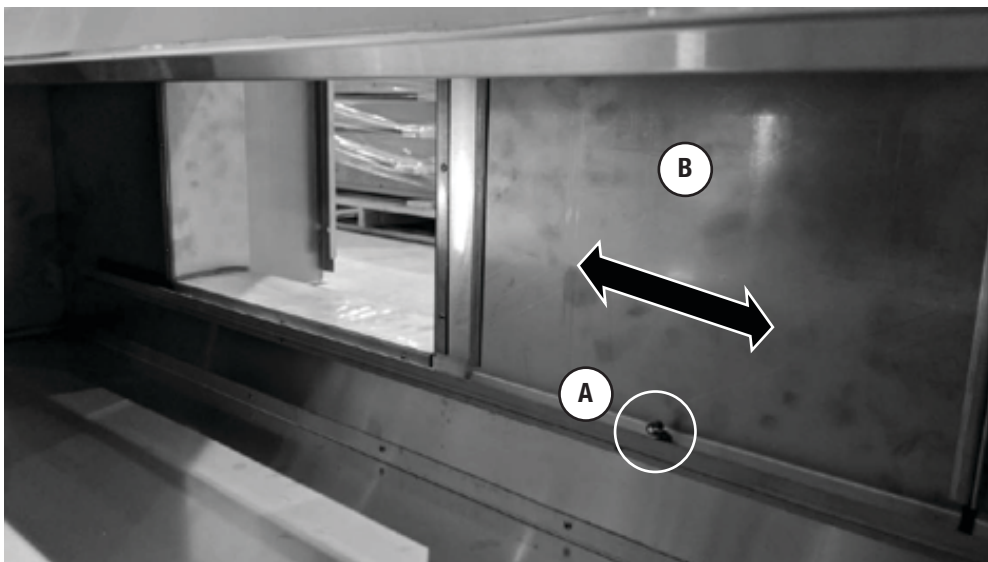
Every 6 months (typically) the Capture Jet fan will need to be serviced by a qualified technician. Contact Stoddart at 1300 307 289 for assistance.

Before measuring airflows check the exhaust and supply fan are on and functioning normally. Airflows are balanced in each hood section by adjusting the sliding dampers. It is important for the hood to have a balanced airflow, to ensure exhaust and supply function efficiently.

1. Using a manometer measure the pressure at the T.A.B. (Testing and Balancing) point. Do this for each exhaust plenum.



2. Compare results to the rating plate. Values must be within $\pm 10\%$ of specified value. If the value is correct, skip to the next section. If the value is incorrect, continue with the following steps.
3. Remove the filters to open or close the sliding dampers to increase/decrease pressure as required. Loosen the screw (A), then slide the damper (B) as required.



4. When the damper is in the final position re-fit the filters
5. Re-measure the pressure at the T.A.B point, if required continue adjusting the dampers and taking measurements until the specified values are reached

4.6 Testing and Balancing Pressure and Airflow - Supply Air Flow

Every 6 months (typically) the Capture Jet fan will need to be serviced by a qualified technician. Contact Stoddart at 1300 307 289 for assistance.

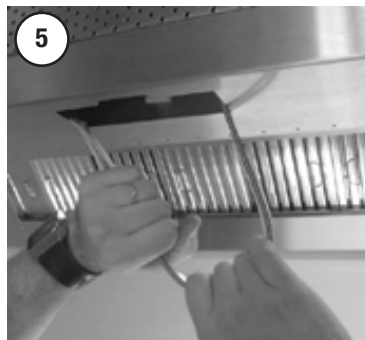
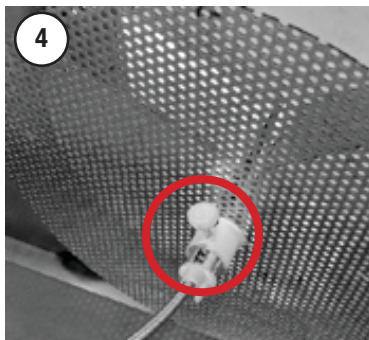
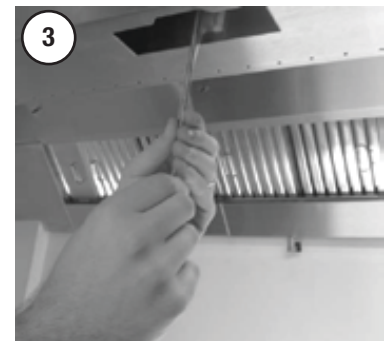
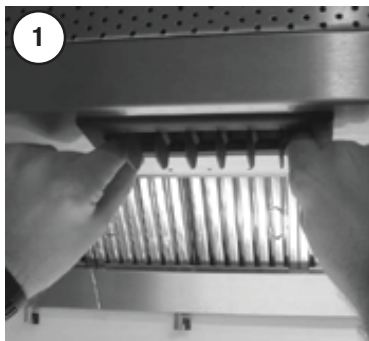
There are two components to the supply air, the T.A.B. pressure point and front face air speed. Note that not every model has a perforated front panel for supply air and only KWF models require a supply duct to be connected. Other models have an optional supply duct connection. Before measuring airflows check the exhaust and supply fan on and functioning normally. Airflows must be balanced for each damper in each hood section. It is important for the hood to have a balanced airflow, to ensure exhaust and supply function efficiently.

Using a manometer measure the pressure at the T.A.B. (Testing and Balancing) point. For hood models with a perforated front panel, use a vane manometer to measure the face air velocity at 50mm from the front panel. The air speed must be less than 0.6m/s. Do this for each supply plenum.

Compare results to the rating plate. Values must be within $\pm 10\%$ of specified value and the air velocity must be less than 0.6m/s. If the values are incorrect, adjust the airflows as per below.



1. To adjust to supply dampers (each supply collar has its own adjustable damper), first remove the comfort nozzles
2. Locate the spring inside the supply plenum
3. Twist the spring to increase (anticlockwise) or decrease (clockwise) the pressure as required
4. The bolt on the axle may need to be loosened before the damper can be adjusted
5. Feed the spring back inside the supply plenum
6. Re-fit the comfort nozzles when done














4.7 Troubleshooting

4.7.1 UV Hood Troubleshooting

- If any faults/issues occur with the unit, follow the below troubleshooting procedures
- If the troubleshooting procedures do not correct the problem, contact the Stoddart Service Department

| Problem / Alarm Indication | Possible Cause(s) | Corrective Action(s) |
|---|---|---|
| UV - First alarm indicator on Bluetooth console is illuminated | <ul style="list-style-type: none"> - The total running hours has exceeded the lifetime of the UV lamps - A lamp or ballast has broken or failed - Fault with communication cable - UV controller is faulty - Console is faulty | <ul style="list-style-type: none"> - Have a technician replace the UV tubes - Check for faults with the communication cable and replace as required - 3. Check UV tubes for any failures - If problem persists, contact Stoddart |
| UV - Second alarm indicator on Bluetooth console is illuminated | <ul style="list-style-type: none"> - The pressure currently being detected is lower than the minimum allowed pressure - The access hatch is open or not correctly closed - A filter has been removed or is not inserted correctly - Reed switches are faulty - UV controller is faulty - Console is faulty - Pressure switch needs calibrating | <ul style="list-style-type: none"> - Check the fan is running - Check the ductwork is properly sealed - Check that the access hatch is properly closed - Check that all filters are in place - Check the KSA and mesh filters for any build-up and clean as required - If problem persists, contact Stoddart |
| UV - Third alarm indicator on Bluetooth console is illuminated | <ul style="list-style-type: none"> - Communication cables unplugged - Fault with communication cable - UV controller is faulty - Console is faulty | <ul style="list-style-type: none"> - Check all connections between the console and UV controllers - Check for faults with the communication cable and replace as required - If problem persists, contact Stoddart |
| Cooking fumes are not being removed from the Kitchen | <ul style="list-style-type: none"> - Exhaust fan not operating correctly - Capture Jet fan not operating correctly - Exhaust fan is slowed or under sized - Supply air is not balanced - Excessive kitchen drafts - Equipment moved from original position - Equipment has changed - Secondary treatment system requires service | <ul style="list-style-type: none"> - Check exhaust fan is powered on and running correctly - Check supply air capture jet fan is running - Check the required T.A.B. pressures, must be within 10% of value shown on rating plate - Check the exhaust fan is the correct size for required duty - Check supply fan and adjust speed to balance kitchen - Close doors and windows or turn off fans causing draft - Check equipment list and revise exhaust system design as required - Service filters |
| Excessive oil and grease at discharge | <ul style="list-style-type: none"> - Filters are overloaded or not correctly fitted - Hood and/or ductwork requires cleaning | <ul style="list-style-type: none"> - Check they are correctly installed - Check and clean the inside of the hood exhaust plenum(s) and ductwork - If problem persists, contact Stoddart. |
| Measured exhaust pressures not per rating plate (+/-10%) | <ul style="list-style-type: none"> - Exhaust/supply dampers not set correctly - Poor seal around supply/exhaust collars - Exhaust fan is under or over sized - Supply fan is under or over sized - Optional VFD is not adjusted correctly | <ul style="list-style-type: none"> - Check the required T.A.B. pressures and adjust the exhaust/supply dampers - Check the supply and exhaust collars for a sufficient seal - Replace exhaust fan with the correct size - Replace supply fan with the correct size - Adjust VFD settings |
| Lights not working | <ul style="list-style-type: none"> - Power not on - Tubes, starter or ballast faulty - Damaged, or incorrect wiring | <ul style="list-style-type: none"> - Supply power to the lighting circuit - Replace damaged component - Fix faulty wiring |
| Some lights don't turn on | <ul style="list-style-type: none"> - Connections not made between hoods - Faulty lights | <ul style="list-style-type: none"> - Check all lighting connections have been made between each hood section - Replace the lights - If problem persist, contact Stoddart. |
| Excessive ozone odour at the discharge | <ul style="list-style-type: none"> - UV lamps don't have any grease to consume - System is on when there is no cooking | <ul style="list-style-type: none"> - Check fan speed is not too high - Turn UV off when not cooking - If problem persists, contact Stoddart |
| Some lights or UV tubes don't turn on | <ul style="list-style-type: none"> - Connections not made between hoods - Faulty UV ballast - Faulty UV tubes - Faulty lights | <ul style="list-style-type: none"> - Check all lighting, UV data connections have been made between each hood section - Have an authorised technician service the UV ballast and tubes - Replace the lights - If problem persist, contact Stoddart |

4.7.2 UV Console Alarms

| Alarm | Level | Description | Possible Cause(s) | Corrective Action(s) |
|--|----------|--|--|--|
|  Communication Alarm | Critical | PLC loose the connection to the controller (MU1) | <ul style="list-style-type: none"> - No power supply on controller (MU1) - Problem on communication wiring (RS485) - Wrong configuration of the controllers quantity / numbers | <ul style="list-style-type: none"> - Check the power supply - Check communication wires plugged and not damaged - Check the overall system configuration settings (Halton/ Partner) |
|  Low pressure warning | Advisory | Airflow under the minimum set to activate the UV lights (usually 30Pa) | <ul style="list-style-type: none"> - Exhaust fan low or stopped (All sections trigger the same warning) - Linked to UV_Filter removed alarm or UV_Door open alarm - Minimum airflow set is too high | <ul style="list-style-type: none"> - Check Exhaust fan is working / contact Stoddart service department for investigation - Check filters/door alarms explanations - Check the configuration settings (Halton/Partner) |
|  High pressure Alarm | Critical | Airflow above the maximum set to activate the UV lights | <ul style="list-style-type: none"> - MFA filter(s) clogged - Fan works too high - Maximum airflow set is too low | <ul style="list-style-type: none"> - Check the filters and clean if dirty - Check Exhaust fan/speed variator setting - Check the configuration settings (Halton/Partner) |
|  Filter removed Alarm | Critical | One or several filters not detected by the controller (MU1) UV lights are shutting down | <ul style="list-style-type: none"> - One or several filters missing - One or several filters badly positioned - Detection line damaged or not well plugged | <ul style="list-style-type: none"> - Check all filters are fitted in the exhaust plenum - Check all filters are correctly fit in position - After checking previous points, contact Stoddart service department for investigation |
|  Door open Alarm | Critical | UV frame access door not detected by the controller (MU1) UV lights are shutting down | <ul style="list-style-type: none"> - The door is still open or badly closed - Detection line damaged or not well plugged | <ul style="list-style-type: none"> - Check the door is correctly closed and locked - After checking previous point, contact Stoddart service department for investigation |
|  Clean Lamps Alarm | Advisory | UV tubes need to be cleaned | <ul style="list-style-type: none"> - Time counter for tubes cleaning is equal or higher than time counter | <ul style="list-style-type: none"> - Clean the tube and reset the counter |
|  Replace lamps Alarm | Critical | UV tubes/frame need to be replaced | <ul style="list-style-type: none"> - UV tubes/frame lifetime counter is equal or higher than time counter | <ul style="list-style-type: none"> - Replace the tubes/frame and reset counter |
|  Ballast Alarm | Critical | No feedback from the designated ballast: <ul style="list-style-type: none"> - Ballast 1 = tubes 1&2 - Ballast 2 = tubes 3&4 - Ballast 3 = tubes 5&6 - Ballast 4 = tubes 7&8 | <ul style="list-style-type: none"> - Ballast is down - One or all tubes supplied by ballast down or damaged - Connection between ballasts and UV frame not plugged or damaged - Connection between controller (MU1) and ballast not plugged or damaged | <ul style="list-style-type: none"> - Contact Stoddart service department for investigation and/or replacement |
|  InfraRed Alarm | Critical | Controller dont get any feedback from InfraRed sensor(s) | <ul style="list-style-type: none"> - Wiring between controller and InfraRed sensor - Wrong configuration of the InfraRed sensor - InfraRed sensor out of order | <ul style="list-style-type: none"> - Check the wiring not damaged and correctly plugged - Check the configuration settings (Halton/Partner) - After checking previous points, contact (Halton/Partner) for replacement |
|  Fan Alarm | Critical | Controller dont get any feedback from exhaust fan | <ul style="list-style-type: none"> - Wiring between controller and exhaust fan - Wrong configuration - Exhaust Fan down or out of order | <ul style="list-style-type: none"> - Check the wiring not damaged and correctly plugged - Check the configuration settings (Halton/Partner) - After checking previous points, contact (Halton/Partner) for replacement |
|  Auxiliary controller communication Alarm | Critical | Controller dont get any feedback from Auxiliary controller (MU5) | <ul style="list-style-type: none"> - Wiring between controller and Auxiliary controller - Wrong configuration of the Auxiliary controller - Auxiliary controller out of order | <ul style="list-style-type: none"> - Check the wiring not damaged and correctly plugged - Check the configuration settings (Halton/Partner) - After checking previous points, contact (Halton/Partner) for replacement |

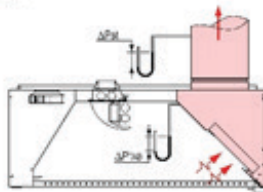
4.8 Pressure Drop And Sound Data

The sound levels in the kitchen under an exhaust canopy are influenced by many external factors including the room and surfaces, the duct, the exhaust fans and supply fans.

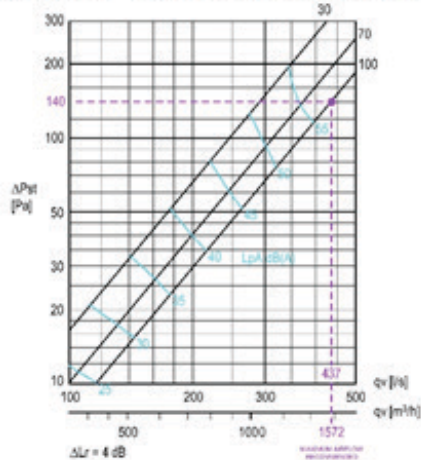
The graphs show the noise level of the exhaust air passing through the exhaust hood (typically 50 – 65dBA) is low in comparison to ambient noise levels in commercial kitchen (typically 70 – 75dBA) environments. Closing the slide dampers increases the exit velocity and increases the air noise level.

ΔP_{st} = Exhaust section static pressure loss
 ΔP_{TAB} = T.A.B.™ pressure for airflow rate measurement
 30,70,100 = Damper opening in %

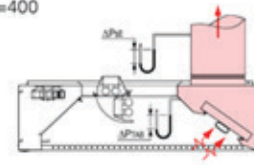
Exhaust plenum
 H=555



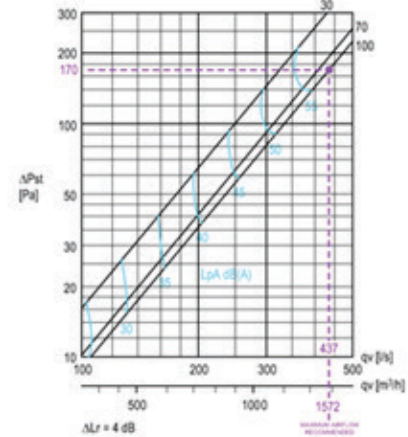
Section 1000 Static pressure loss and sound data



Exhaust plenum
 H=400

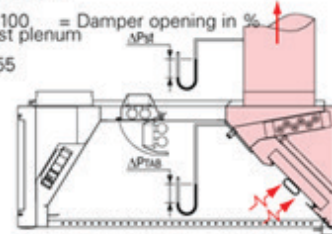


Section 1000 Static pressure loss and sound data

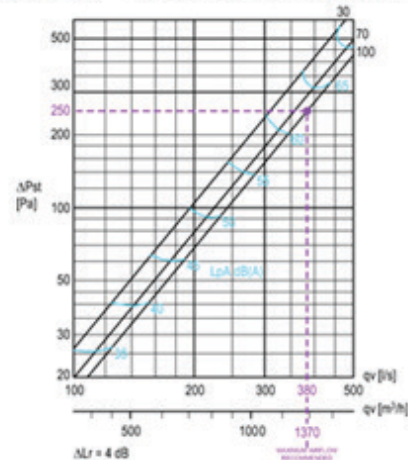


ΔP_{st} = Exhaust section static pressure loss
 ΔP_{TAB} = T.A.B.™ pressure for airflow rate measurement
 30,70,100 = Damper opening in %

Exhaust plenum
 H = 555



Section 1000 Static pressure loss and sound data



The Exhaust Pressure drop measured across the hood increases with the airflow. The pressure measured in the duct for a given airflow increases as the slide damper is closed. The dampers should not be closed more than 50%.

For any given airflow, the pressure drop measured at the TAB point can be determined by a constant relationship;

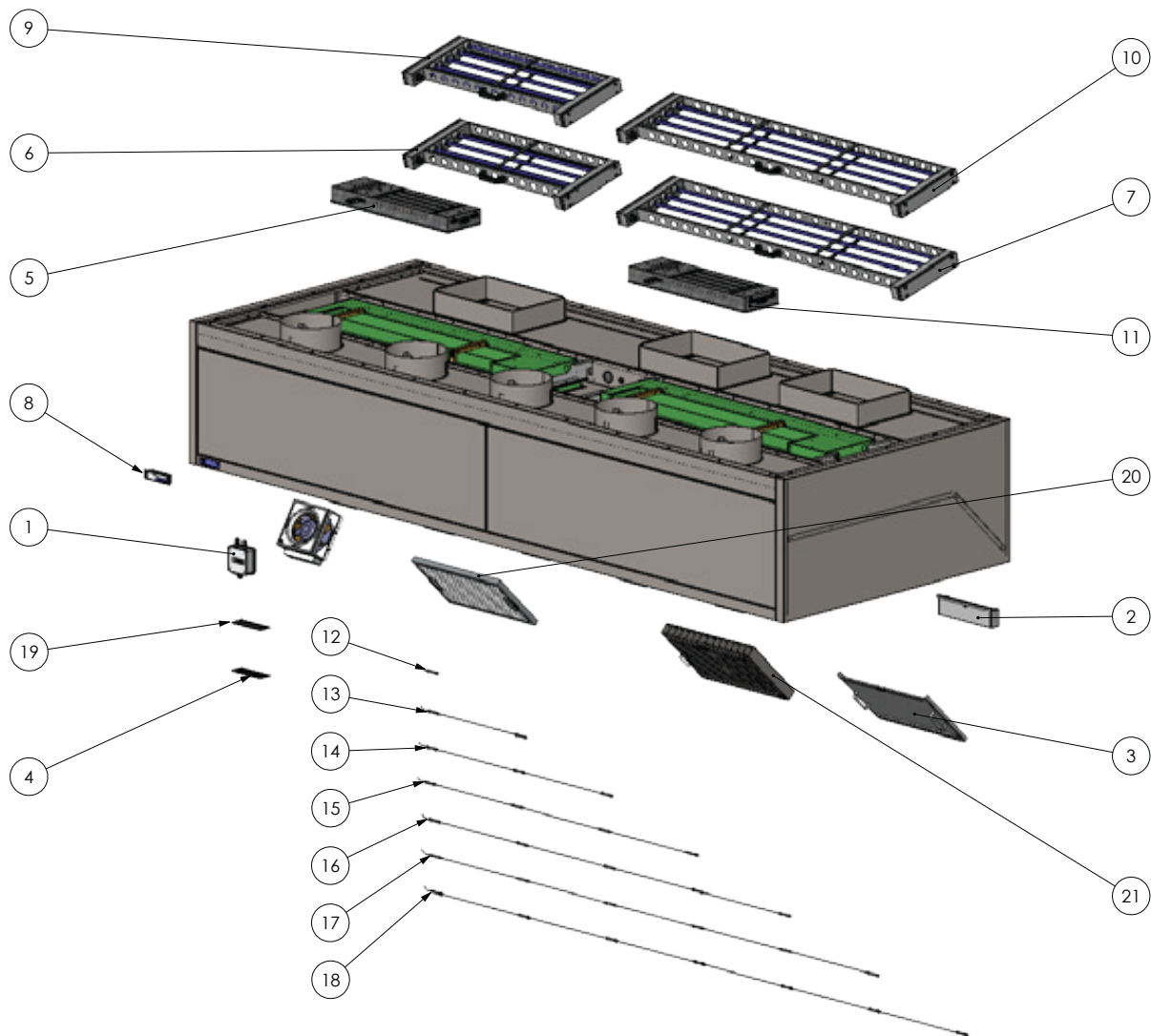
$$Q = K \cdot \sqrt{TAB}.$$

4.9 Spare Parts

4.9.1 SPEH-HAL-UVI-UVF

| Item No. | Part Number | Spare Parts Description |
|----------|------------------|------------------------------|
| 1 | SPEH-HAL-0066 A4 | Capture Jet Fan & Controller |
| 2 | SPEH-HAL-0072 A1 | Grease Pot |
| 3 | SPEH-HAL-0083 A4 | Blind Filter |
| 4 | CMGE-1107 | Air Nozzle |
| 5 | CMGE-1110 C1 | UV Ballast Tray (3 Ballast) |
| 6 | CMGE-1111 | 6 Tube UV Lamp Rack |
| 7 | CMGE-1112 | 6 Tube UV Lamp Rack |
| 8 | CMGE-1136 | UV Operator Console |
| 9 | CMGE-1359 | 8 Tube UV Lamp Rack |
| 10 | CMGE-1360 | 8 Tube UV Lamp Rack |
| 11 | CMGE-1361 C1 | UV Ballast Tray (4 Ballast) |

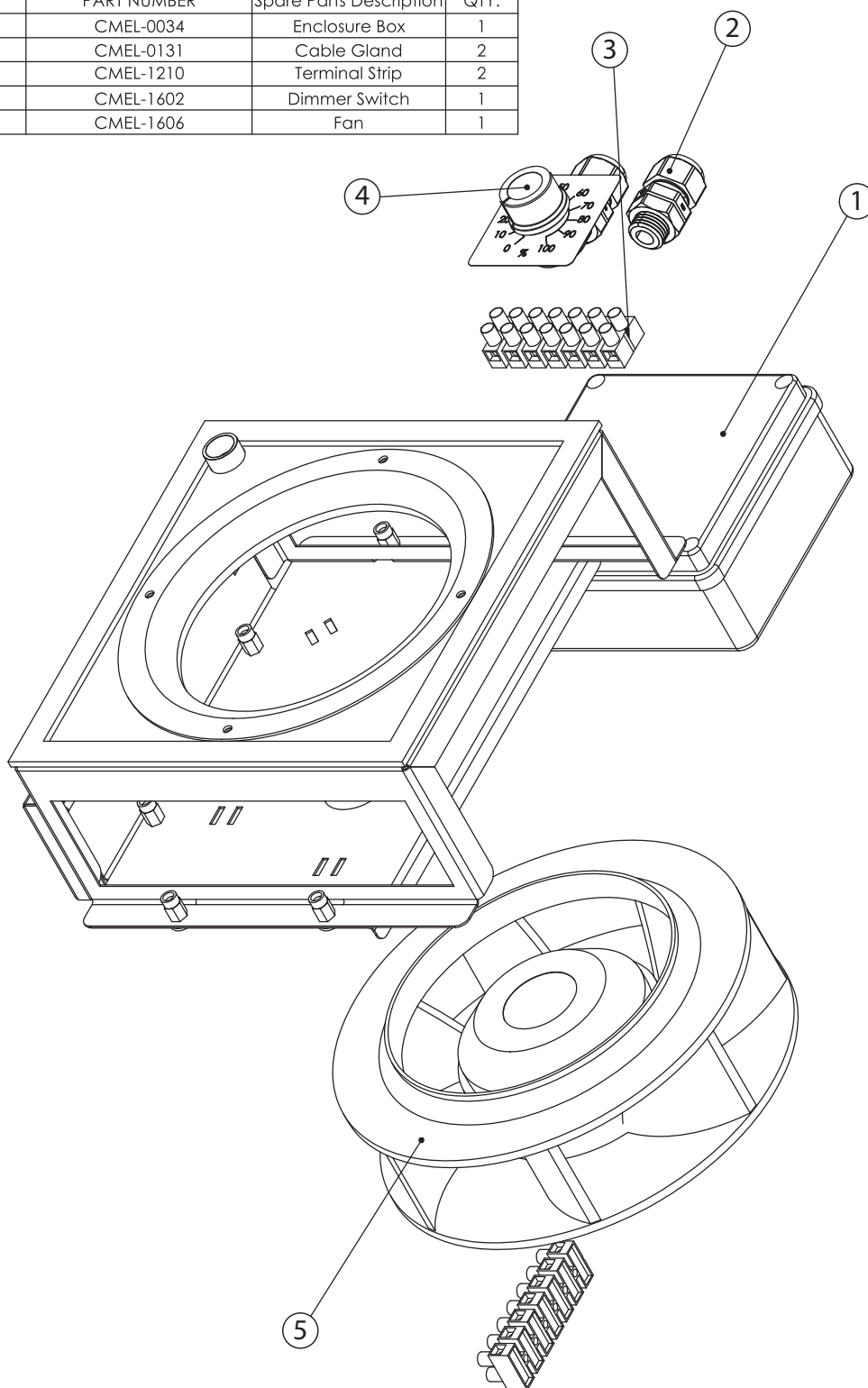
| Item No. | Part Number | Spare Parts Description |
|----------|-------------|-------------------------|
| 12 | CMEL-1213 | Reed Switch |
| 13 | CMEL-1214 | 2 Reed Switches |
| 14 | CMEL-1215 | 3 Reed Switches |
| 15 | CMEL-1216 | 4 Reed Switches |
| 16 | CMEL-1217 | 5 Reed Switches |
| 17 | CMEL-1218 | 6 Reed Switches |
| 18 | CMEL-1219 | 7 Reed Switches |
| 19 | CMHAL-0010 | Air Nozzle Closed |
| 20 | CMFIL-0007 | Mesh Filter |
| 21 | CMHAL-0019 | KSA Filter |



Due to continuous product research and development,
the information contained herein is subject to change without notice.

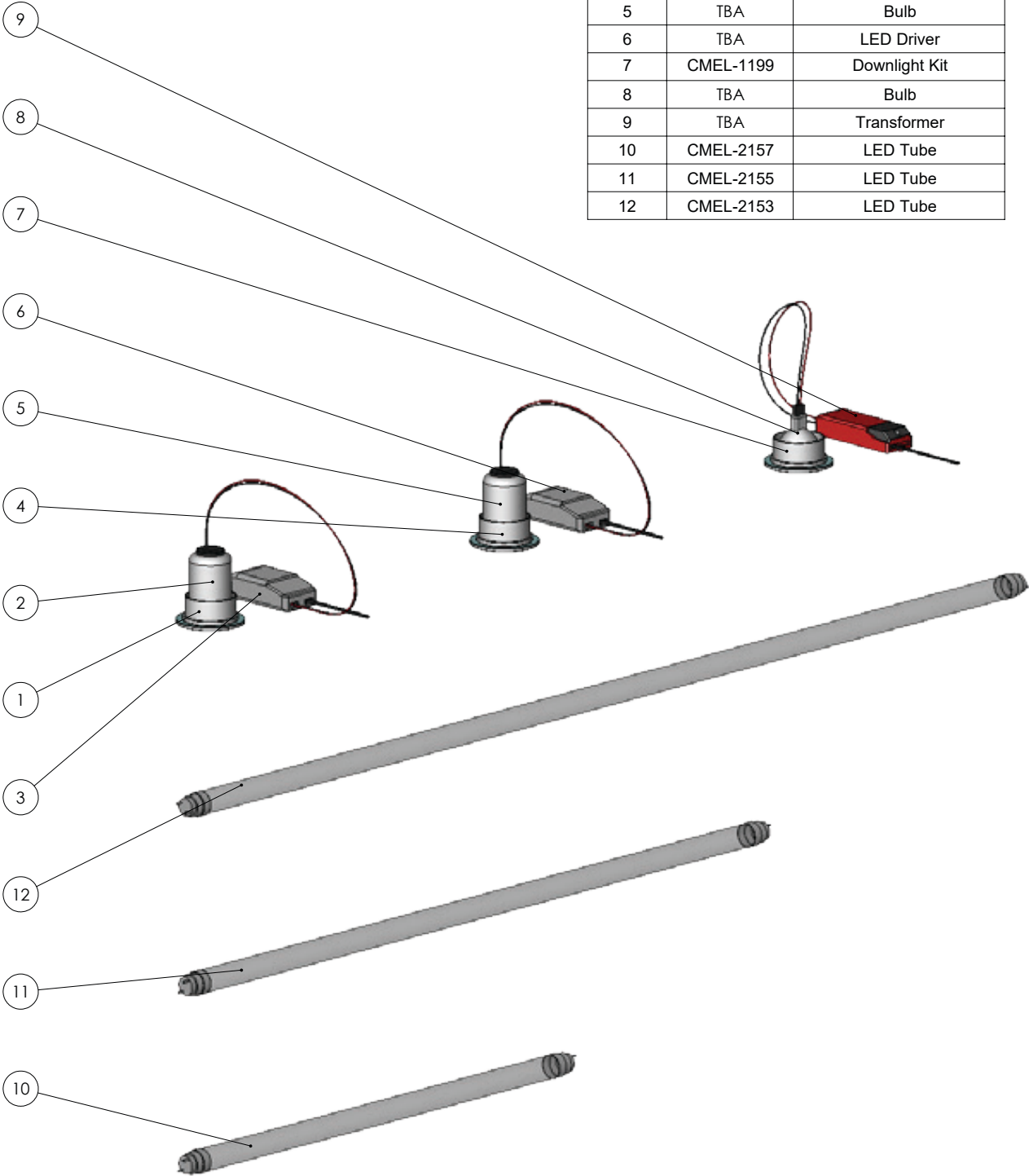
4.9.2 SPEH-HAL-0066

| ITEM NO. | PART NUMBER | Spare Parts Description | QTY. |
|----------|-------------|-------------------------|------|
| 1 | CMEL-0034 | Enclosure Box | 1 |
| 2 | CMEL-0131 | Cable Gland | 2 |
| 3 | CMEL-1210 | Terminal Strip | 2 |
| 4 | CMEL-1602 | Dimmer Switch | 1 |
| 5 | CMEL-1606 | Fan | 1 |



4.9.3 Hood Light Options

| Item No. | Part Number | Spare Parts Description |
|----------|-------------|-------------------------|
| 1 | CMEL-1660 | Downlight Kit |
| 2 | TBA | Bulb |
| 3 | TBA | LED Driver |
| 4 | CMEL-1813 | Downlight Kit |
| 5 | TBA | Bulb |
| 6 | TBA | LED Driver |
| 7 | CMEL-1199 | Downlight Kit |
| 8 | TBA | Bulb |
| 9 | TBA | Transformer |
| 10 | CMEL-2157 | LED Tube |
| 11 | CMEL-2155 | LED Tube |
| 12 | CMEL-2153 | LED Tube |



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Email: spares@stoddart.com.au



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Service / Spare Parts

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Email: service@stoddart.co.nz

Email: spares@stoddart.co.nz



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