

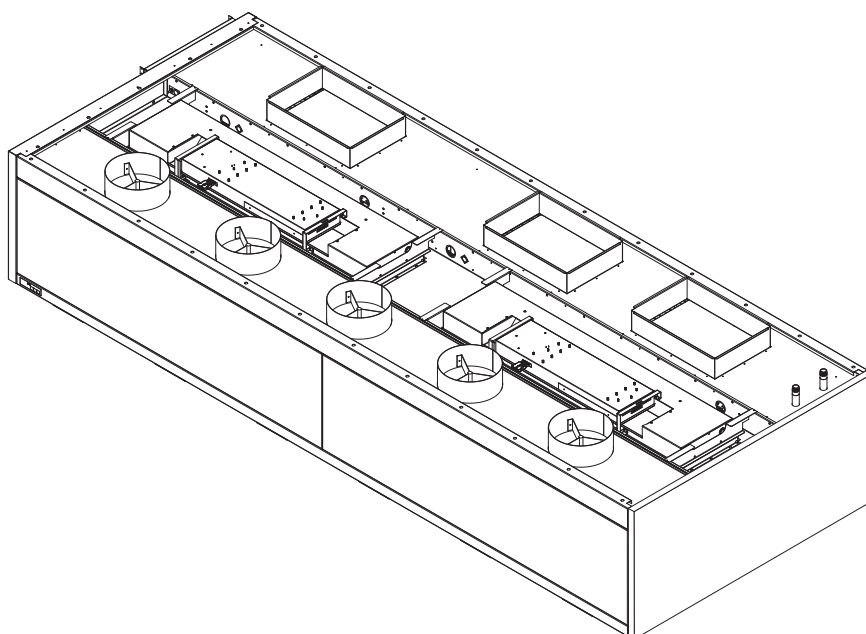
OPERATION, CLEANING & MAINTENANCE

READ ALL INSTRUCTIONS BEFORE USE

Halton Cold Mist & Wash, Filter Hood Proprietary Kitchen Ventilation Exhaust Hoods

This manual is suitable for the following models:

UWI	Halton Capture Jet™ Canopy with Hot Wash and UV treatment.
UWI - CM	Halton Capture Jet™ Canopy with Cold Mist, Hot Wash and UV treatment.
UWF	Halton Capture Jet™ Canopy with Hot Wash, UV treatment and provision for Supply Air.
UWF - CM	Halton Capture Jet™ Canopy with Cold Mist & Hot Wash, UV treatment and provision for Supply Air.
UWI - H	Halton Capture Jet™ Heavy duty Canopy with Hot Wash and UV treatment.
UWI - H.CM	Halton Capture Jet™ Heavy duty Canopy with Cold Mist, Hot Wash and UV treatment.
UWF - H	Halton Capture Jet™ Heavy duty Canopy with Hot Wash, UV treatment and provision for Supply Air.
UWF - H.CM	Halton Capture Jet™ Heavy duty Canopy with Cold Mist, Hot Wash, UV treatment and provision for Supply Air.



1.0 Introduction

1.1 Attention	4
1.2 General Information	4
1.3 UV - Responsibilities	5
1.4 UV Warnings	6
1.5 Handling of the UV Lamps	6
1.6 Disposal of the UV Lamps	6
1.7 In Case Of Broken UV Lamp	6
1.8 Hood Overview	7
1.9 Water Control Cabinet Overview	8
1.10 Section Views	9
1.11 Capture Jet	10
1.12 Exhaust Plenum	10
1.13 Supply Plenum (on F models)	10
1.14 Lights	10

2.0 Operation

2.1 Hood Operation.	11
2.2 Detergent Requirements	11
2.3 Modes of Operation.	12
2.4 Alarm States	13
2.5 UV Console	14
2.5.1 Main Screen	
2.5.2 Detailed Information When UV Systems Are Fully Operational	
2.5.3 Detailed Information When There Are Warnings	
2.5.4 Detailed Information When There Are Alarms	
2.5.5 Resetting of the UV Lamps Counters	
2.5.6 Access to the Help Section	
2.6 UV Touch Screen	19
2.6.1 "UV-C" Main Screen Description	
2.6.2 Signalling The Potential Faults Or Statuses	
2.6.3 Pressure Alarm	
2.6.4 Filter Safety Alarm	
2.6.5 Access Safety Alarm	
2.6.6 Tubes 1&2, 3&4, 5&6, 7&8 Alarm	
2.6.7 Communication Alarm	
2.6.8 Maintenance Alarm	
2.6.9 Lamp Change Alarm	
2.6.10 Auxiliary Controller Alarm	
2.7 General Notes On The System	23
2.8 Safe Operating Procedure	23

3.0 Cleaning and Inspection

3.1 Cleaning	24
3.1.1 General Information	
3.1.2 Surface Finish / Corrosion Protection	
3.2 Recommended Cleaning And Maintenance Schedule	25
3.3 Exposed Hood Surface	25
3.4 Remove Misting Panels - weekly	26
3.5 Inspect Spray Nozzles	27
3.6 KSA Cyclonic Filters – Inspect and Wash	28
3.7 Mesh Filters - Inspect and Wash	29
3.8 UV Tubes - Inspect and Clean.	29
3.9 Exhaust Plenum - Inspect and Clean	30
3.10 Supply Plenum – Inspect and Clean.	30
3.11 Ductwork Surfaces - Inspect and Clean (by Service Contractor)	30
3.12 Check Detergent Level - weekly	31
3.12 Check and Clean Strainers - quarterly.	32

4.0 Maintenance and Service

4.1 Maintenance	33
4.2 Fluorescent and LED tubes	33
4.3 Down Lights:	34
4.4 Removal of the UV Cassettes from the Exhaust Hood:.	36
4.5 Replacing UV Tubes.	36
4.6 Replace a UV Ballast	36
4.7 Service the Capture Jet Fan	36
4.8 Adjusting Water Usage	37
4.9 Adjusting Detergent Usage	38
4.10 Changing PLC Values	39
4.11 Auto/Timer Mode Schedule Notes	43
4.12 Testing Water Quality	44
4.12.1 Total Dissolved Solids (TDS) Test	
4.13 Testing and Balancing Pressure and Airflow - Exhaust Air Flow	45
4.14 Testing and Balancing Pressure and Airflow - Supply Air Flow	46
4.15 Troubleshooting	47
4.15.1 UV Hood	
4.15.2 UV Console Alarms	
4.16 Pressure Drop And Sound Data	50
4.17 Spare Parts	51
4.17.1 SPEH-HAL-KWI-KWF	
4.17.2 SPEH-HAL-0066	

1.1 Attention

Carefully read this instruction booklet, as it contains important advice for safe installation, operation and maintenance. Keep this booklet on hand until commissioning has been completed. This manual is to be passed onto the owner 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. Therefore, the unit must be used exclusively for the purpose for which it has been designed.

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
- The hood should not be used to structurally support other equipment (ducting, filters etc). These should be suspended independently and not impart any added mechanical load on the hood

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

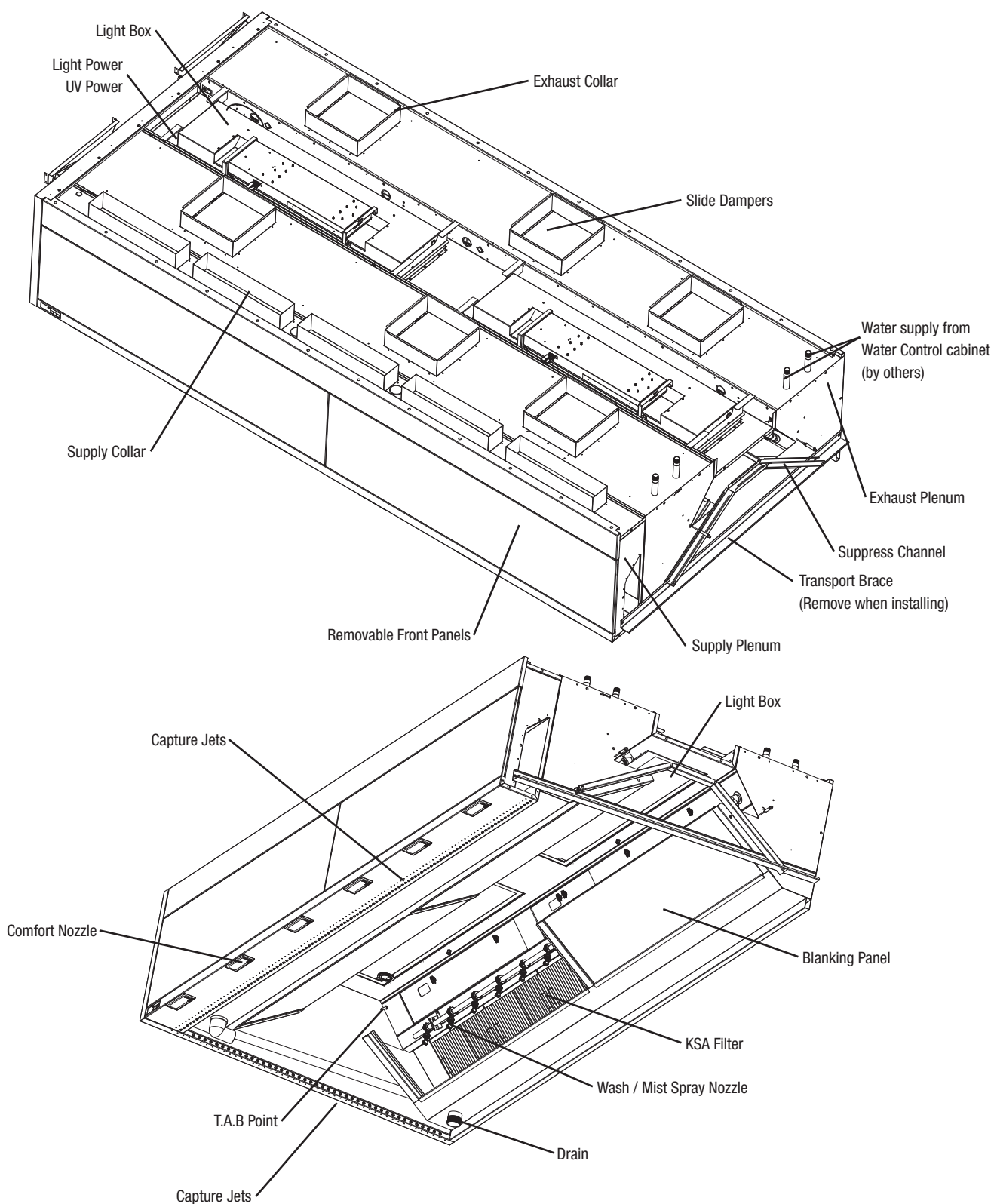
UV lamps for disposal (defective or lamps that have exceeded their lifetime) **MUST** be handled carefully, **DO NOT** break the quartz tubes. They UV lamps **MUST** be disposed of in accordance with local regulations.

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.

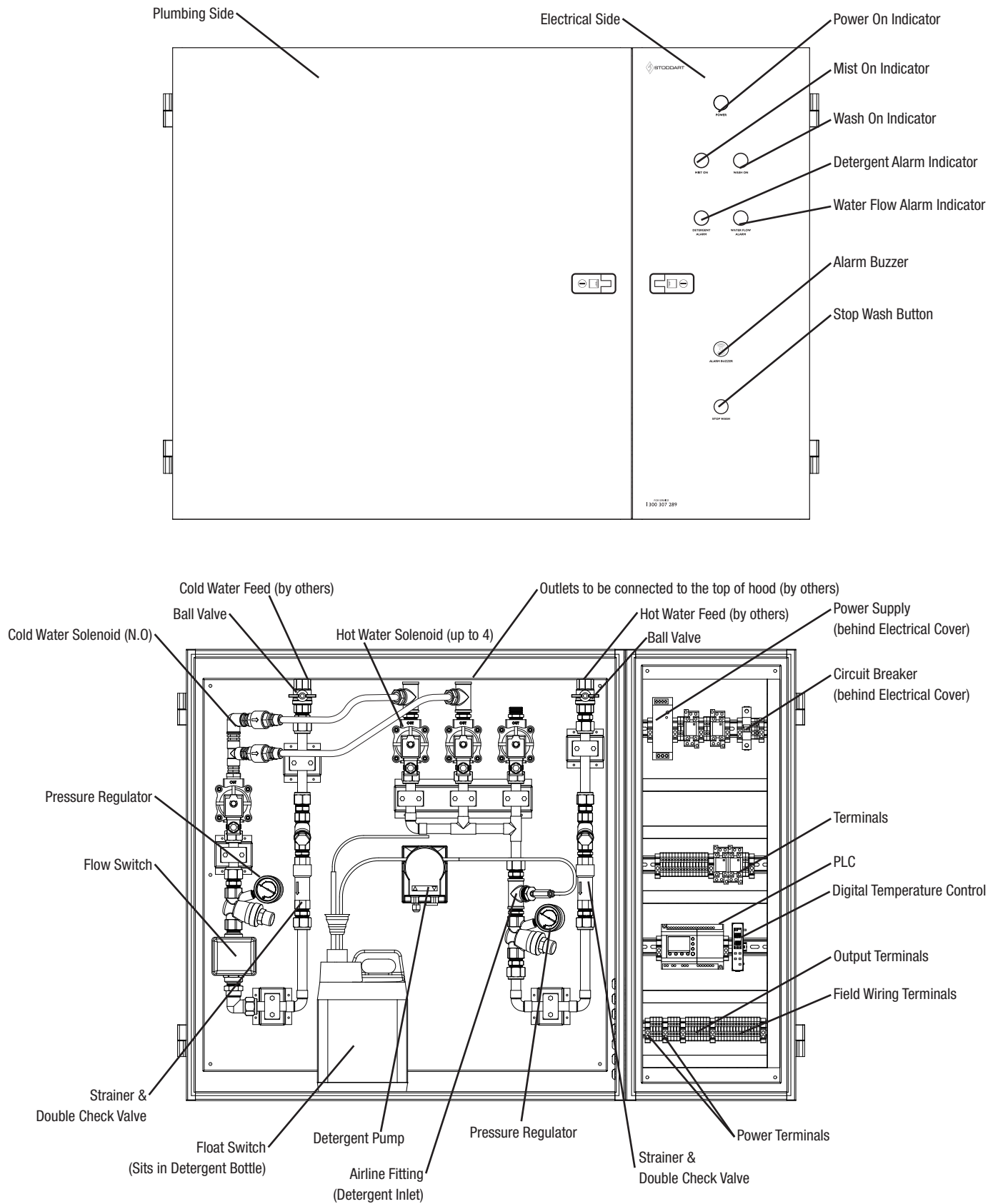
1.8 Hood Overview

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



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

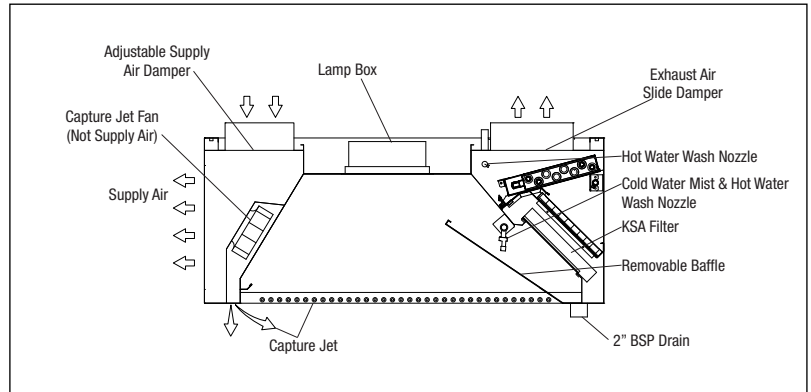
1.9 Water Control Cabinet Overview



1.10 Section Views

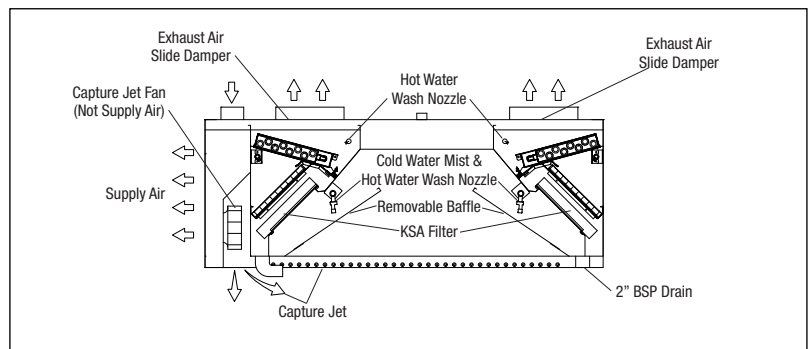
UWI: No provision for make-up air supply through hood.

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



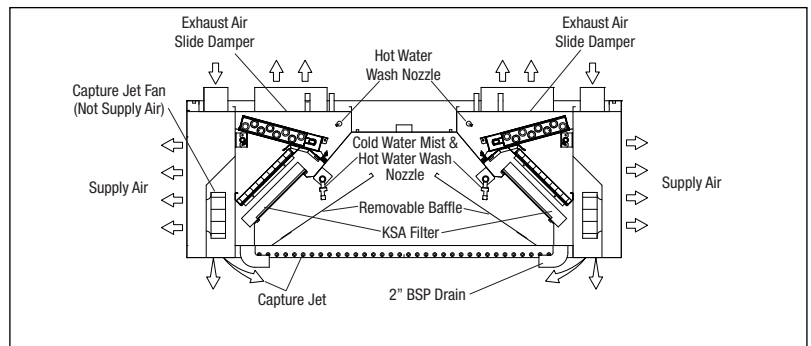
UWI-H: Wall position No provision for make-up air supply through hood.

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



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

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

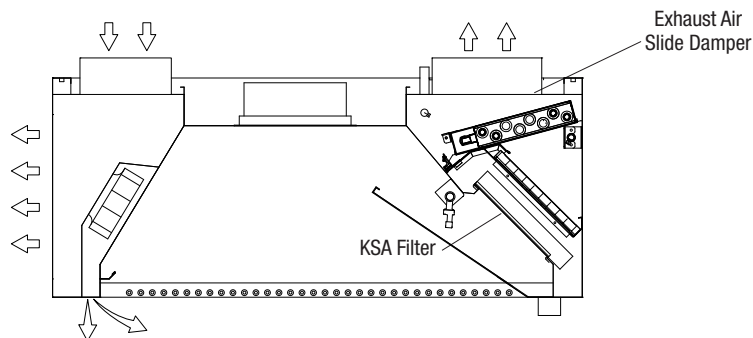


1.11 Capture Jet

- 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

1.12 Exhaust Plenum

- KSA cyclonic particulate separation filters are the primary exhaust air treatment
- Cold water mist nozzles arrest sparks and cool the air
- Hot water spray nozzles (with detergent) clean the hood of any build-up at the end of each day
- 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 the exhaust fan's suction pressure



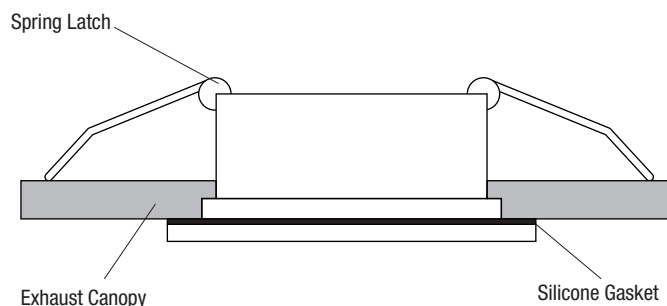
1.13 Supply Plenum (on F models)

- 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
- Capture Jet fan draws a small quantity of supply air & forces it through special Capture Jets to assist in capturing the cooking emissions
- Comfort Nozzles allow some of the supply air to be directed down onto the chef to provide them with a more comfortable work environment

1.14 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



2.0 Operation

2.1 Hood Operation

The Cold Mist and Wash Hood is a proprietary product of Halton (manufactured under license in Australia by Stoddart) designed for removing heat embers from exhaust systems over high energy cooking equipment such as gas and solid fuel char grills, woks and pizza ovens. The UWI /UWF hoods provide a solution to mitigate the risk of fires in the exhaust system from live fuel embers. It uses a cool water mist curtain to cool the hot air to below the flash point of the oil (and creosote), to wet & extinguish embers and to clean the oil and carbonaceous particulate out of the exhaust air. Additionally, it automatically washes the plenum with hot soapy water to remove combustible deposits.

The Cold Mist & Wash hood is a valuable part of a fire risk management solution that includes fire suppression, alarms and building operational controls.

The capture and containment efficiency of Capture Jet 3 hoods has been designed to the proven & tested standard ASTM F1704 (Ref; AS1668.2 -2012 Clause 3.6). The design exhaust air flow rates listed on the rating plate are calculated for the convective heat generated by the appliances under each canopy.

When the hood is washing it uses 60 litres of water per minute for every 2.5 metres of exhaust plenum (default 2 minutes of wash time per section per wash cycle). When the hood is misting it uses 2 litres of water per minute for every meter of exhaust plenum. Be aware that the length and model of the hood varies between jobs. Your hood may have two exhaust or supply plenums. These requirements will also vary slightly with your specific water pressure.

All plumbing must be connected in accordance to AS/NZS 3500.

All electrical connections must be made in accordance to AS 3000.

Areas with poor water quality (such as SA or WA) may need an additional water filtration system. This should have been determined prior to installation, for reference see 4.8 page 33.

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.

Hoods are only part of a fire safety system. Other technologies (such as ANSUL) should be used in conjunction with hoods to ensure fire safety.

To operate the hood:

- Turn on the room lights. The lights in the hood are normally switched on together with the room lighting
- Turn the water control cabinet on (should be connected to a continuous source of power)
- Turn on the water supplies connected to the water control cabinet (both hot and cold)
- Turn on the kitchen exhaust fan so that it draws the required airflow through the exhaust hood. In the standard mode of operation the system must receive an input on terminals B11 & B12 to indicate that the fan is on so it enters mist mode (see Modes of Operation 2.3)
- Turn off the exhaust fan at the end of the day. In the standard mode of operation this will signal the system to start the wash cycle

If the system is left idle or shut down for extended periods, the solenoids and pump should be inspected before recommissioning.

It is critical that water supply is maintained to the water control cabinet. It is also critical that all components in the cabinet are kept in working order and the nozzles in the hood are operating as designed. A full maintenance schedule can be found in – 'Recommended Cleaning and Maintenance Schedule' (3.2 page 21). The mist sprays must also form a continuous curtain of water across the length of the hood's intake slot (3.5 page 22).

2.2 Detergent Requirements

The detergent used in the hood should follow the recommendations of your detergent/chemical supplier. The requirements for the detergent are that it is not chlorinated, bleach water or otherwise corrosive and that it is low foaming. It must also be compatible with the copper, brass and stainless steel used in UWI hoods. While Stoddart does not guarantee correct operation with the following products, the detergent used in the UWI system should be equivalent to Diverwash VC24 or Dominant Typhoon.

2.3 Modes of Operation

Note: the required mode of operation should have been set/selected during installation and commissioning.

The system can operate in two modes: BMS/fan switch mode and auto/timer mode. The default and recommended mode is BMS/fan switch mode. Auto/timer mode is provided to be used only where it is not possible to use BMS/fan switch mode. When in auto/timer mode the mist and wash cycle occur on a programmable schedule. This mode is not recommended but is provided for situations where the BMS/fan switch mode can't be used. When in BMS/fan switch mode an input must be connected to terminals B11 and B12 to signal when the exhaust fan is on. The input to these terminals can provide a closed circuit whenever the exhaust fan is running and provide an open circuit whenever the exhaust fan is off. The mist/wash cycles will switch with the fan.

When operating in auto/timer mode, the wash start time and mist time frame must be programmed in the PLC. It is the responsibility of the kitchen operators to ensure the mist is always on whenever the exhaust fan is on and that the fan is off when the wash cycle runs.

A jumper wire between terminal I1 and +24VDC is used to select the mode of operation. When the jumper is present, the system is in BMS/switch mode and when it isn't, the system is in auto/timer mode. Check that the presence of the jumper matches the operating conditions required by the kitchen staff.

- Jumper wire present = BMS/fan switch mode
- No jumper wire = auto/timer mode

The PLC clock needs to be set. On the main screen (pictured below) of the PLC, press "OK" once to enter edit mode and "OK" again to select the time.

	W	A	T	E	R		M	I	S	T	
	H	O	O	D		V	2	.	1		
B	M	S	/	S	W		M	o	d	e	
			1	2	:	4	1				

Use the arrows to navigate around the edit screen (shown below) and the "+" and "-" buttons to change the values. When you're finished, press "OK" to save your changes or "ESC" to cancel.

C	I	o	c	k	S	e	t				
d	d	/	m	m	/	y	y	y	y		
1	5	/	1	1	/	2	0	1	8		
	1	3	:	0	5		T	h	u		

2.4 Alarm States

A temperature controller is included, as an option, to keep the mist running in BMS/fan switch mode if the exhaust fan is turned off and the air is still hot. The mist will only turn off when the air temperature is below an acceptable level.

The water control cabinet has three alarm states:

- No water alarm
- Low detergent alarm
- Fire alarm

These alarms and the alarm buzzer need to be visible/heard from the kitchen/KWI hood. In situations where this isn't possible, remote indicator lights should be installed. Contact the installer if this is the case.




The no water and low detergent alarms occur internally, within the cabinet, where as the fire alarm is optional and is triggered from an external input (refer to the wiring diagram in section Error! Reference source not found. – 'Error! Reference source not found.' on page Error! Bookmark not defined.). Each alarm will sound the buzzer and switch the optional general error output (again, refer to the wiring diagram for more details). Additionally, there are indicators on the front of the water control cabinet for the no water and low detergent alarms.

Name	PLC Screen	Description																																																
Fire Alarm	<table><tr><td></td><td>W</td><td>A</td><td>T</td><td>E</td><td>R</td><td></td><td>M</td><td>I</td><td>S</td><td>T</td><td></td></tr><tr><td></td><td>H</td><td>O</td><td>O</td><td>D</td><td></td><td>V</td><td>2</td><td>.</td><td>1</td><td></td><td></td></tr><tr><td>B</td><td>M</td><td>S</td><td>/</td><td>S</td><td>W</td><td></td><td>M</td><td>o</td><td>d</td><td>e</td><td></td></tr><tr><td></td><td>F</td><td>I</td><td>R</td><td>E</td><td></td><td>A</td><td>L</td><td>A</td><td>R</td><td>M</td><td></td></tr></table>		W	A	T	E	R		M	I	S	T			H	O	O	D		V	2	.	1			B	M	S	/	S	W		M	o	d	e			F	I	R	E		A	L	A	R	M		Displayed when the system receives a fire alarm input on terminals B13/B14. Follow your fire procedure
	W	A	T	E	R		M	I	S	T																																								
	H	O	O	D		V	2	.	1																																									
B	M	S	/	S	W		M	o	d	e																																								
	F	I	R	E		A	L	A	R	M																																								
Low Detergent	<table><tr><td></td><td>W</td><td>A</td><td>T</td><td>E</td><td>R</td><td></td><td>M</td><td>I</td><td>S</td><td>T</td><td></td></tr><tr><td></td><td>H</td><td>O</td><td>O</td><td>D</td><td></td><td>V</td><td>2</td><td>.</td><td>1</td><td></td><td></td></tr><tr><td>B</td><td>M</td><td>S</td><td>/</td><td>S</td><td>W</td><td></td><td>M</td><td>o</td><td>d</td><td>e</td><td></td></tr><tr><td>L</td><td>O</td><td></td><td>D</td><td>E</td><td>T</td><td>E</td><td>R</td><td>G</td><td>E</td><td>N</td><td>T</td></tr></table>		W	A	T	E	R		M	I	S	T			H	O	O	D		V	2	.	1			B	M	S	/	S	W		M	o	d	e		L	O		D	E	T	E	R	G	E	N	T	Displayed when the float switch is triggered. Check the detergent bottle ('Check Detergent Level', page 19)
	W	A	T	E	R		M	I	S	T																																								
	H	O	O	D		V	2	.	1																																									
B	M	S	/	S	W		M	o	d	e																																								
L	O		D	E	T	E	R	G	E	N	T																																							
No Water	<table><tr><td></td><td>W</td><td>A</td><td>T</td><td>E</td><td>R</td><td></td><td>M</td><td>I</td><td>S</td><td>T</td><td></td></tr><tr><td></td><td>H</td><td>O</td><td>O</td><td>D</td><td></td><td>V</td><td>2</td><td>.</td><td>1</td><td></td><td></td></tr><tr><td>B</td><td>M</td><td>S</td><td>/</td><td>S</td><td>W</td><td></td><td>M</td><td>o</td><td>d</td><td>e</td><td></td></tr><tr><td></td><td></td><td>N</td><td>O</td><td></td><td>W</td><td>A</td><td>T</td><td>E</td><td>R</td><td></td><td></td></tr></table>		W	A	T	E	R		M	I	S	T			H	O	O	D		V	2	.	1			B	M	S	/	S	W		M	o	d	e				N	O		W	A	T	E	R			Displayed when the mist is on and the flow switch is recording a low water flow. Check the water supply.
	W	A	T	E	R		M	I	S	T																																								
	H	O	O	D		V	2	.	1																																									
B	M	S	/	S	W		M	o	d	e																																								
		N	O		W	A	T	E	R																																									

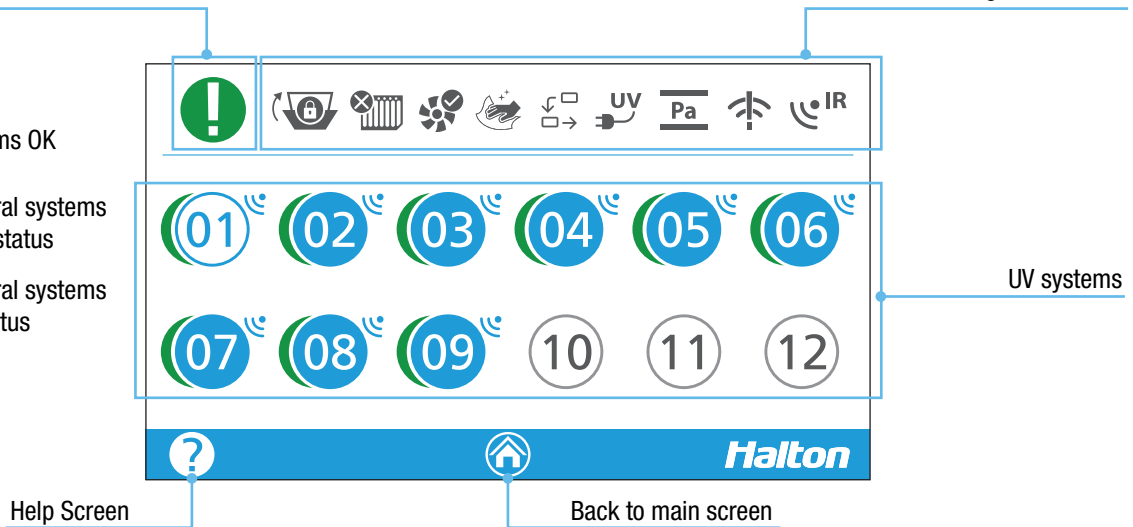
2.5 UV Console

2.5.1 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

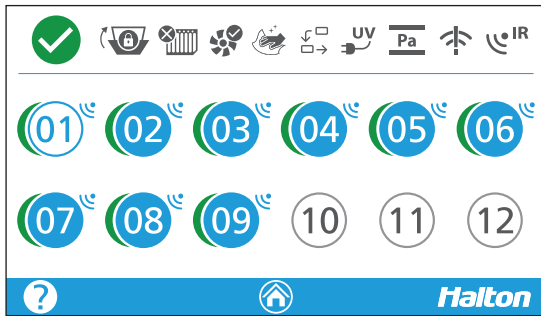
-  UV lamps ON
-  UV lamps OFF
-  Non Working/Set system

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

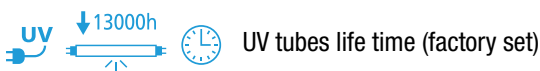
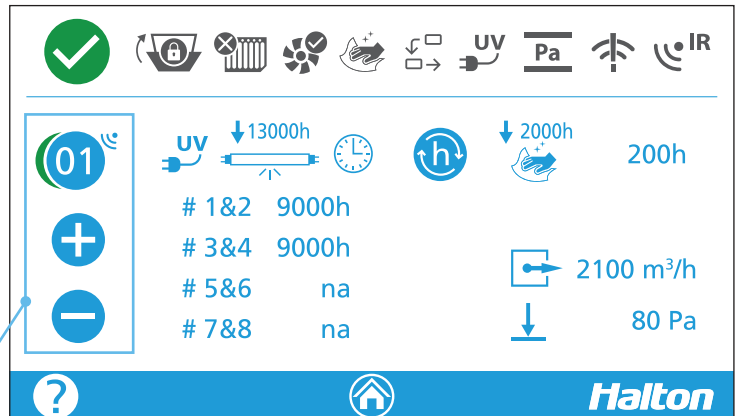
Warnings and Alarms

- | | | | | | |
|---|---|----------------------------|---|---|---|
|  |  | Door Alarm |  |  | Low Pressure Warning |
|  |  | Filter Alarm |  |  | High Pressure Warning |
|  |  | Fan Alarm |  |  | Communication Alarm |
|  |  | Tube Cleaning Warning |  |  | InfraRed Alarm (UV on Demand only) |
|  |  | UV Lamps Replacement Alarm |  |  | Auxiliary controller Communication Alarm (if present) |
|  |  | Ballast Alarm | | | |

2.5.2 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

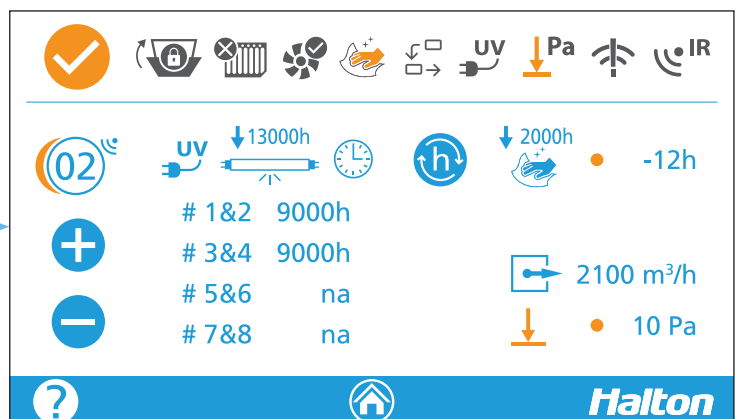
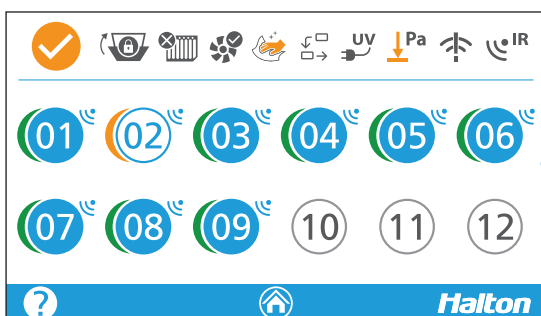
1&2 1300h
3&4 1300h
5&6 1300h
7&8 na

8 Tubes UV Frame
4 Ballasts

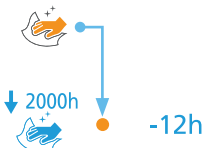
1&2 1300h
3&4 1300h
5&6 1300h
7&8 1300h

Remaining hours before tubes changing operation.
2 tubes per ballast

2.5.3 Detailed Information When There Are Warnings

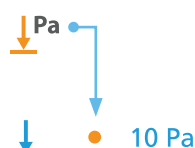


UV tubes cleaning required



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

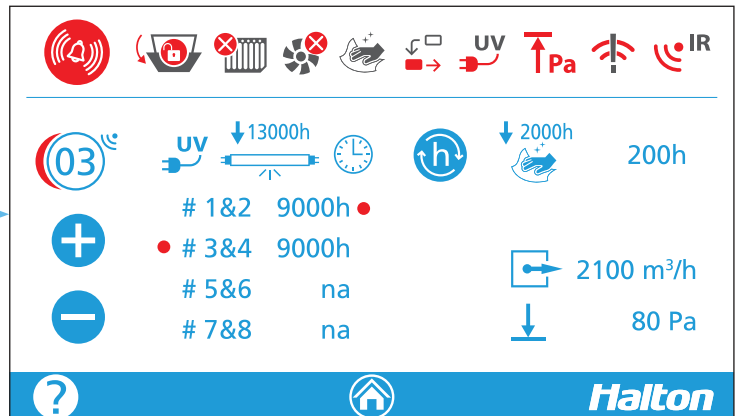
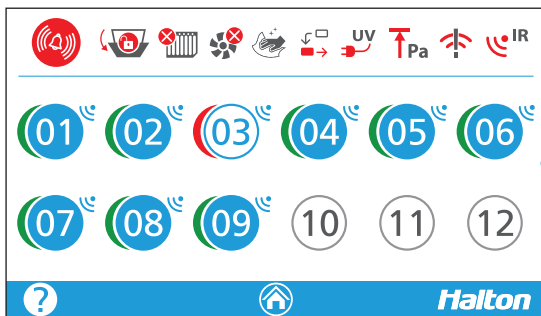
Low Pressure



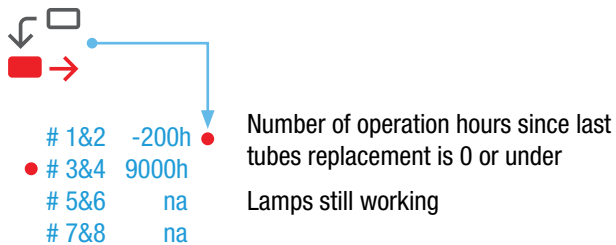
Exhaust pressure loss is under the minimum set in factory.
Lamps stop working

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

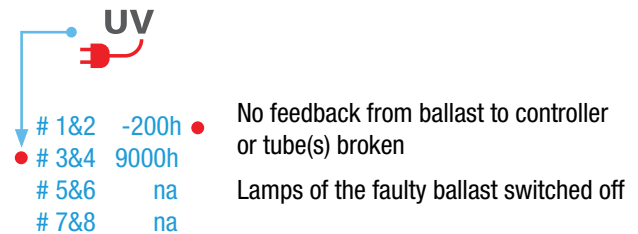
2.5.4 Detailed Information When There Are Alarms



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

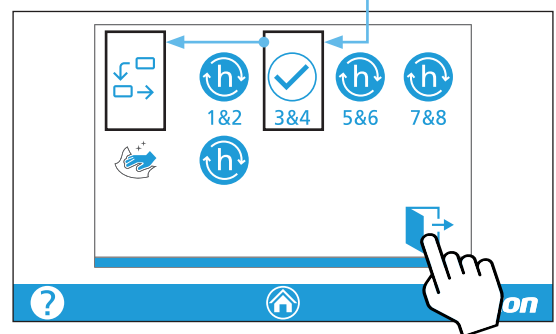
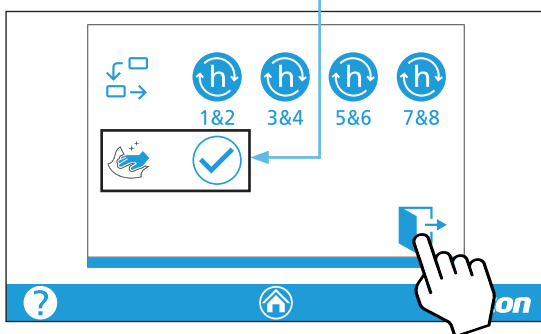
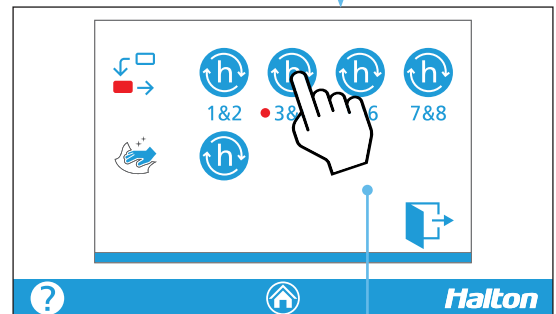
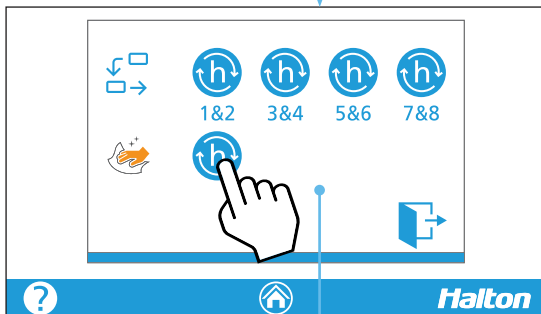
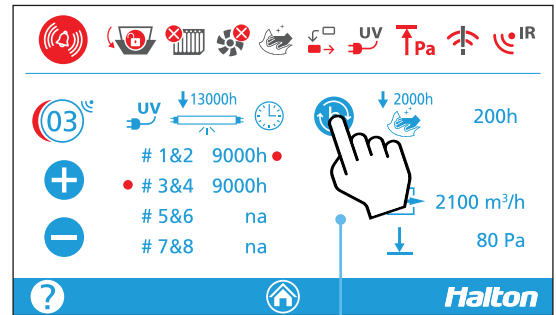
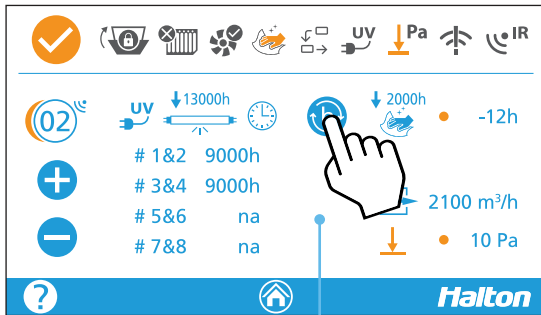
Note: for explanations and solutions for alarms refer to trouble shooting page 34

2.5.5 Resetting of the UV Lamps Counters

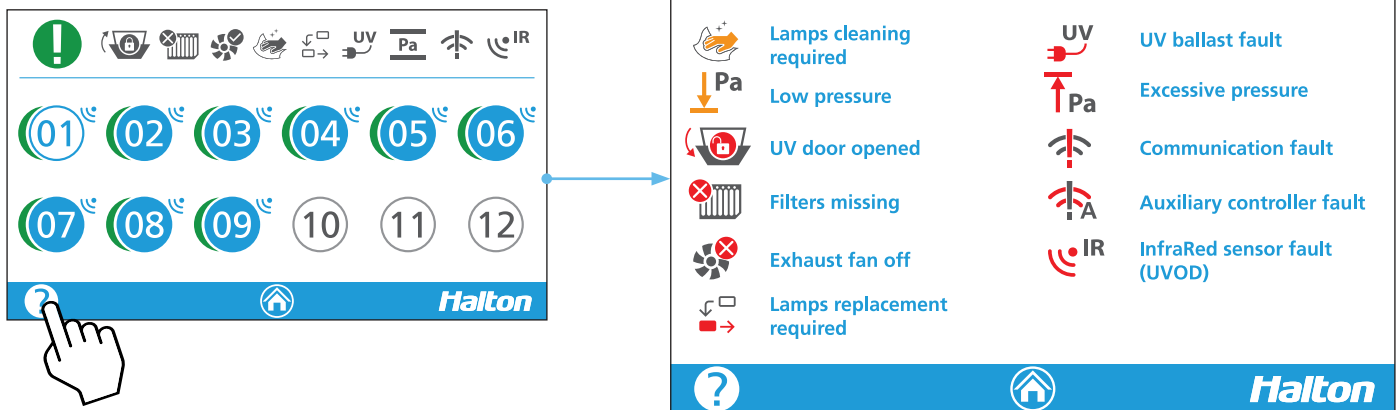


IMPORTANT

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.



2.5.6 Access to the Help Section

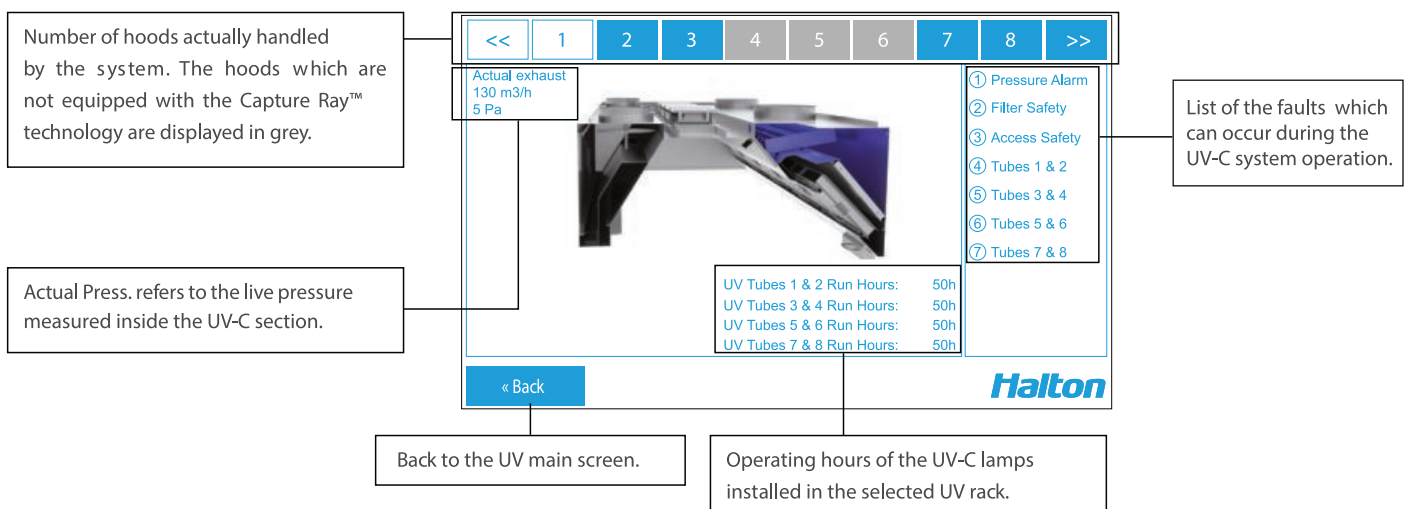
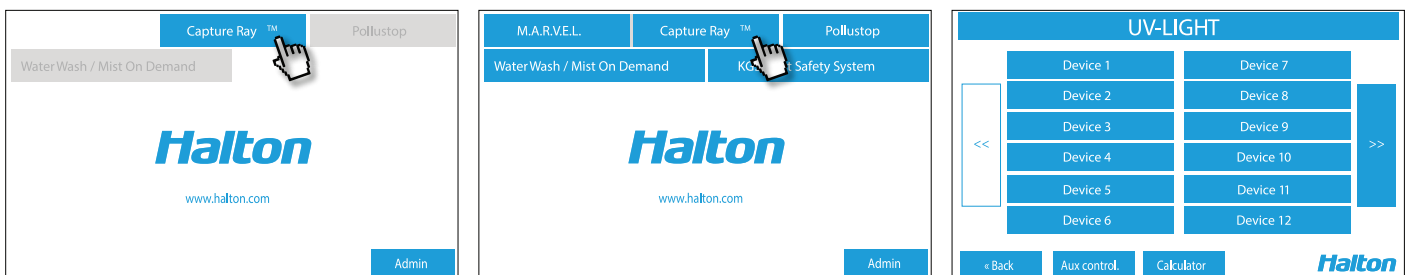


2.6 UV Touch Screen

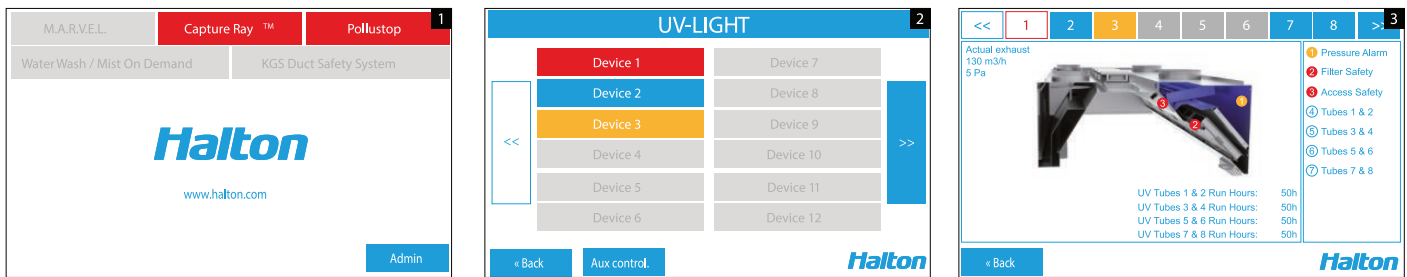
Some businesses use a wall mounted touch screen to manage the UV operation of multiple hoods in a kitchen. The touch screen might also manage other elements of the ventilation system such as secondary filtration systems, exhaust fans and M.A.R.V.E.L. demand-based controllers. Touch screen operating instructions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



2.6.1 "UV-C" Main Screen Description



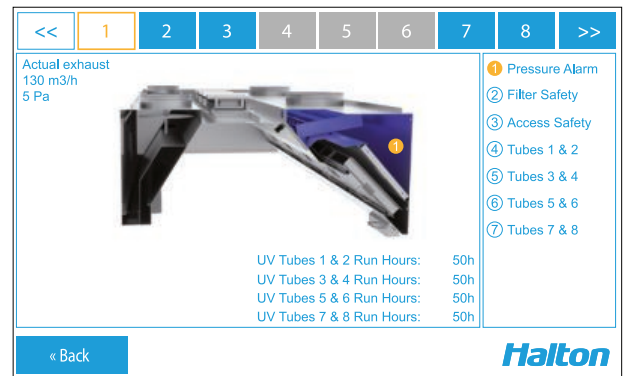
2.6.2 Signalling The Potential Faults Or Statuses



2.6.3 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).

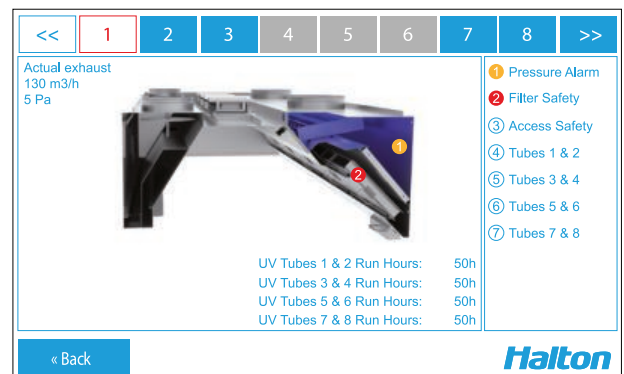
Note that all the UV racks may systematically trigger the same alarm. Note also that this alarm can correspond to a normal situation. The allowed pressure can be indeed set to switch off automatically the lamps under a predefined value of exhaust airflow to extend their lifetime.



2.6.4 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.

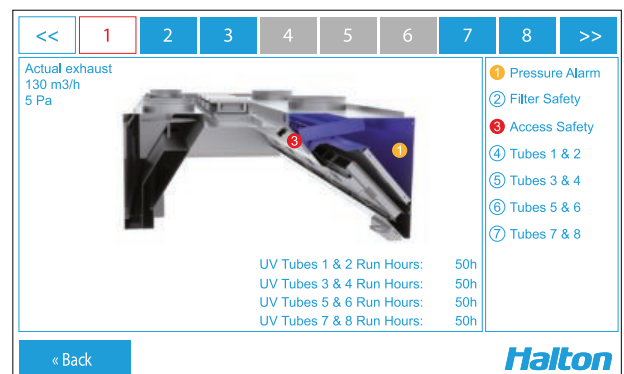
Note: If all filters are missing, the pressure decrease generated may trigger the Pressure alarm of other hood sections.



2.6.5 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.

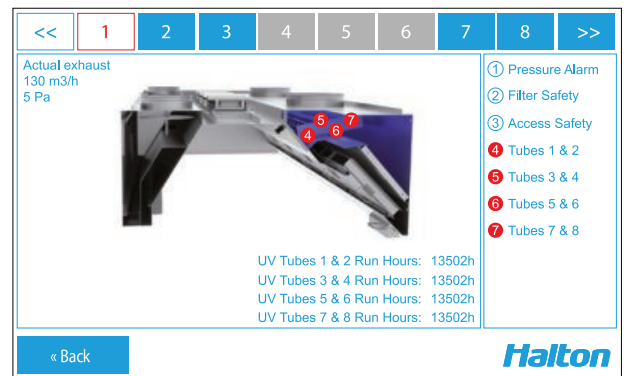


2.6.6 Tubes 1&2, 3&4, 5&6, 7&8 Alarm

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.

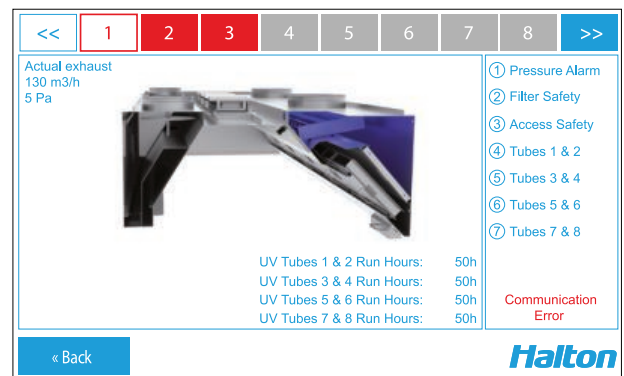


2.6.7 Communication Alarm

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.

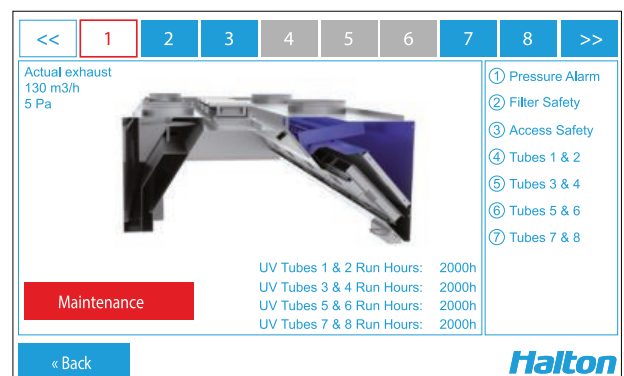
Note: When a communication cable is damaged all hood sections located downward in the communication network will also trigger the alarm.



2.6.8 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.

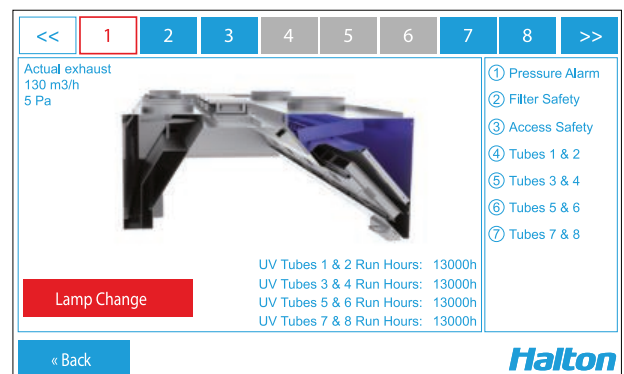


2.6.9 Lamp Change Alarm

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.

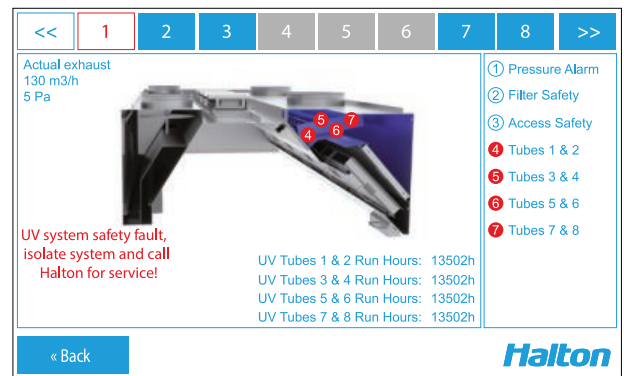
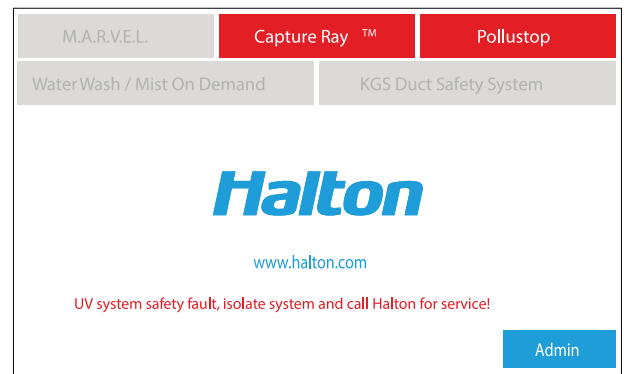
Note: The lifetime of the UV lamps is 13000h.

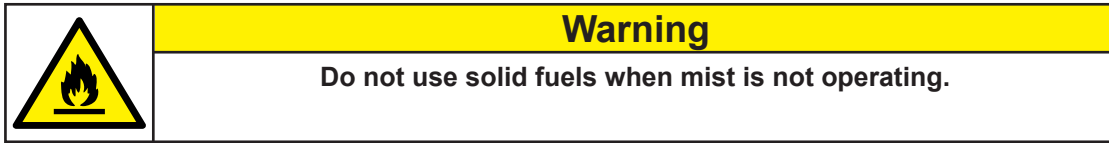


2.6.10 Auxiliary Controller Alarm

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.





2.7 General Notes On The System

The business operator must implement a preventative maintenance program to ensure ongoing performance. The maintenance program must include regular inspection of the spray nozzles (weekly) and periodic inspection of the exhaust ducts (3 monthly). A more detailed maintenance plan is included in – ‘Recommended Cleaning and Maintenance Schedule’ 3.2.

The control systems must ensure the mist system operates whenever there is ember risk. i.e. The mist must operate whenever the exhaust fan is operating or there is heat in the hood:

- A switched input is required to the water control cabinet to prove when the fan is operating. The switched input can come from the fan controller, BMS or a pressure switch in the duct
- If the fan is switched off before the fire has totally cooled, a thermocouple (set to max. 40°C) should be added into the top of the hood or on the cooking appliance to provide an overriding switched input to keep the mist running until heat has reduced
- If the power supply to the water control cabinet fails (i.e. PLC can't determine either of the two above conditions), N/O mist solenoid valve turns on the mist

The Wash cycle initiates after a pre-set delay after the fan switches input off. The wash cycle is prevented from operating when the fan is on. A low detergent level alarm on the cabinet assists the maintenance of detergent supply, its usage and replenishment should be checked regularly.





If connecting to a common ventilation system, proper maintenance procedures should be followed for the system. Duct monitoring systems can be considered but do not form part of this scope.

If you encounter any problems with the operation of the hood, call the Stoddart service department.

2.8 Safe Operating Procedure

It is of high importance that the business operator provides a safe operating procedure to all employees involved with the function of solid fuel cooking equipment. When using such equipment, procedures must involve contingency plans for all situations. (for example: if the exhaust fan fails while cooking is in progress, if the mains water supply is cut, if the cooking fire gets out of control, etc.). The procedures will involve actions such as closing the door of the oven or placing a cover over the Parilla grill to suffocate the solid fuel fire and prevent embers or from reaching the exhaust system. If a fire blanket is used, water should be applied over the fire blanket to cool the fire & avoid the spread of fire.

3.1 Cleaning

	<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>

3.1.1 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

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 Remove Misting Panels		X	H	L				
3.5 Inspect Spray Nozzles		X	H	L				
3.6 KSA Cyclonic Filters – Inspect and Wash		X	H	L				
3.7 UV Mesh Filter - Inspect and Wash		X	H	L				
3.8 UV Tubes - Inspect and Wash		X	H	L				
Replace UV tubes	13,000 hours (approx. 2-3 years usage)							
3.9 Exhaust Plenum - Inspect and Clean					X	H	L	
3.10 Supply Plenum – Inspect and Clean					X	H	L	
3.11 Ductwork Surfaces - Inspect and Clean						X	H	L
3.12 Check Detergent Level		X	H	L				
3.13 Check and Clean Strainers					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
Inspect Solenoids								X, H, L
Inspect Flow Switch								X, H, L
Inspect Float Switch								X, H, L
Test Emergency Stop Button								X, H, L

** Refer to Fan Supplier's manual.

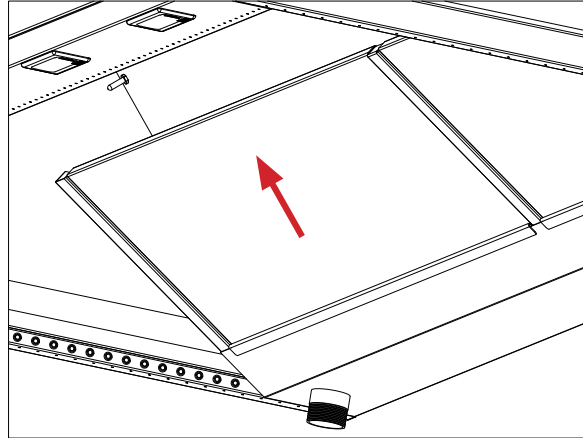
3.3 Exposed Hood Surface

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 Remove Misting Panels - weekly

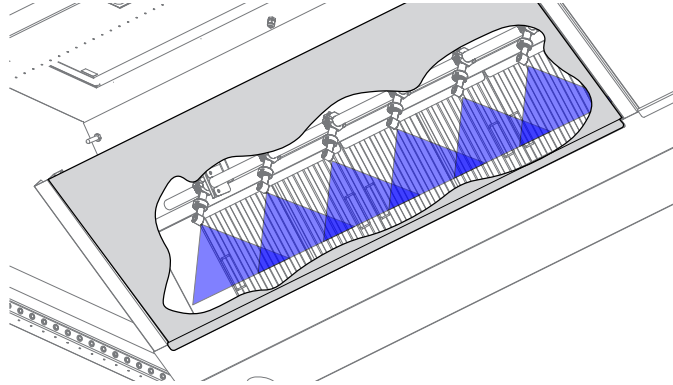
Remove the misting panels, If the back of the misting panels have significant build-up they may require manual cleaning. Clean them with the same requirements outlined in section 3.3 – 'Clean Exposed Hood Surfaces - daily'. If you find you're doing this regularly this is a good sign the mist or wash cycles are dirty/need replacing. Refer to section 3.5 – 'Check and Clean Spray Nozzles'.



3.5 Inspect Spray Nozzles

Do not remove the Mist Capture Panels while the mist or wash is running.

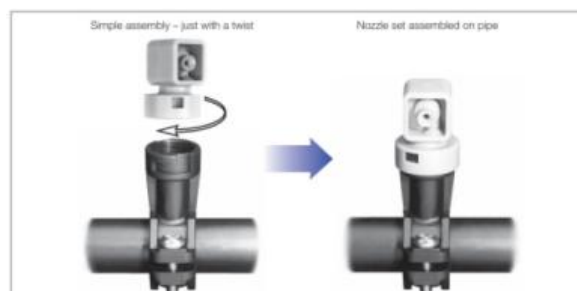
1. While the mist is active, hold a camera above the mist capture panel and video the nozzle spray pattern. All nozzles should have a conical spray of water directed to the filters



2. If any of the nozzles are not producing a constant mist screen (i.e. they are dribbling or only producing a small mist screen) the nozzles will need to be cleaned. Isolate the water supply and remove the mist capture panels to access the nozzles and filters

	WARNING
	Turn the isolation valves off in the water control cabinet before servicing the spray nozzles

3. Remove the nozzle with a quarter turn (do not lose O ring)



4. Clean the nozzle with hot soapy water. If nozzle is blocked, clear it with a length of nylon fishing line or similar (do not use wire as this could damage the nozzle)
5. If the nozzles need to be replaced, contact the Stoddart Spare Parts department

Hot wash spray nozzles cannot be checked while the wash cycle is happening. Hot wash nozzles should only be removed by a technician.

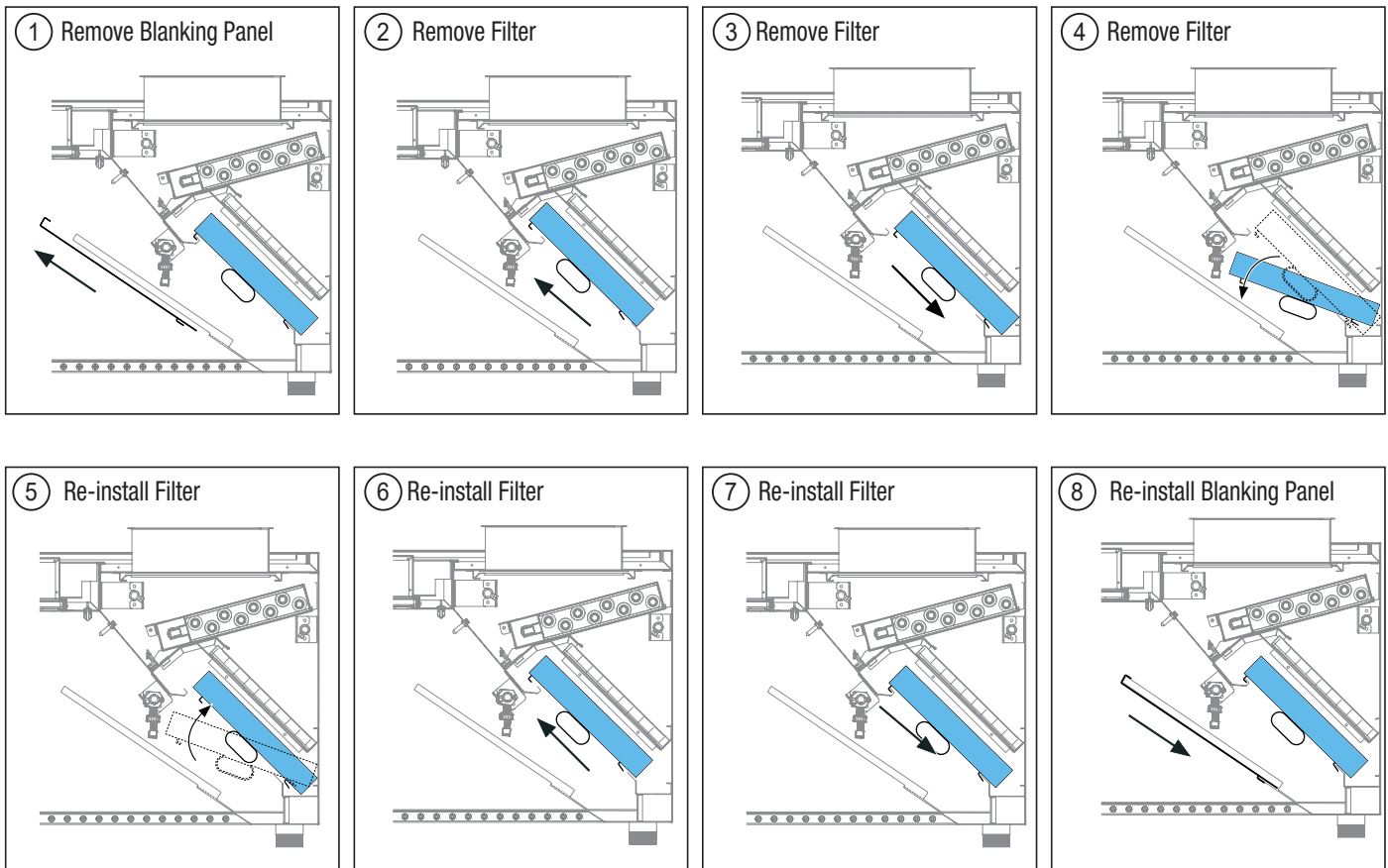
The state of the exhaust plenum should indicate if the spray nozzles are spraying effectively. If a specific part of the exhaust plenum has build-up the nozzles around that part of the exhaust plenum may be blocked. Check each nozzle to see that the spray hole is not blocked. If nozzle is blocked, clear it with a length of nylon fishing line or similar (do not use wire as this could damage the nozzle). If the blockage cannot be removed, Refer to the water quality testing on Page 31 and contact the Stoddart Service Department.

If the entire exhaust plenum is dirty, there may be a problem with the wash cycle, contact the Stoddart Service Department.



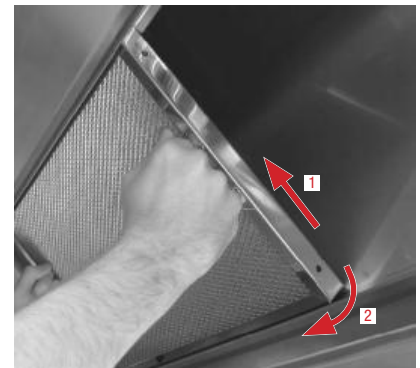
3.6 KSA Cyclonic Filters – Inspect and Wash

1. Switch off the exhaust fan
2. Remove the blanking panels
3. Take note of filter positions (to ensure any blind panels are positioned in same location)
4. Remove each KSA filter from the hood
5. Wash particulate off the filter in the pot sink with detergent, using spray-rinse and a brush or cloth
6. Place filters in a dishwasher basket, and pass through the dishwasher
7. Dry the filters & re-fit into the hood
8. 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)



3.7 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



3.8 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

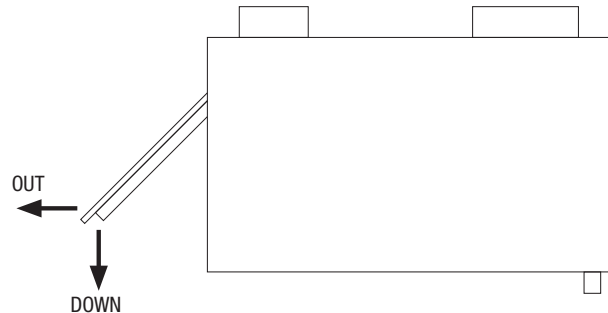
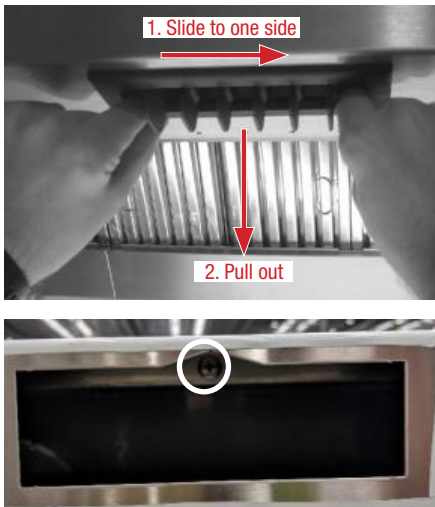
3.9 Exhaust Plenum - Inspect and Clean

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.

3.10 Supply Plenum – Inspect and Clean

UWI 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.



3.11 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:

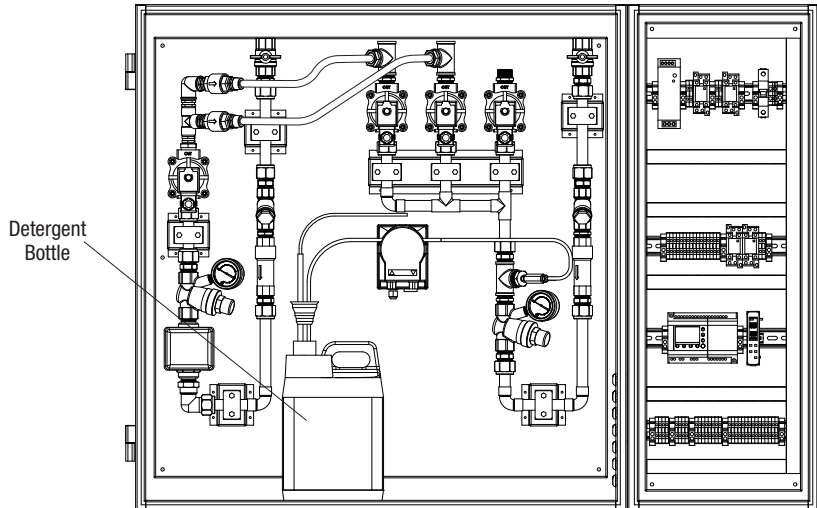
- Duct considered clean – grease depth $\leq 0.05\text{mm}$
- Duct considered acceptable – grease $< 2\text{mm}$
- Duct should be scheduled for cleaning – grease depth $> 2\text{mm}$
- Duct should be cleaned immediately – grease depth $> 3\text{mm}$

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

3.12 Check Detergent Level - weekly

The detergent level should be periodically checked to ensure it is not empty. This is especially important whenever there is a low detergent alarm. It should also be checked to ensure the wash cycle is happening. If you find the detergent level is never dropping, contact Stoddart for assistance. The detergent bottle should sit in the bottom of the left side of the water control cabinet.



When checking the detergent level, also check the float switch is mounted correctly. The float switch should be mounted so the bung is firmly in the top of the detergent bottle. Additionally, the bottom of the float switch should be as close to the bottom of the detergent bottle as practical (but not touching it). The second condition is more important than the first.

Firmly in the
top of the bottle



Float sits near the
base of the bottle



Also check that the detergent alarm is working when the float switch is removed from the bottle.

When the detergent bottle is empty, replace it with another bottle of suitable detergent (see section 2.1 – 'Detergent Requirements' on page 9 for the detergent specifications).

3.12 Check and Clean Strainers - quarterly

	<p>WARNING</p>
	<p>A qualified technician is required for removing/replacing spray nozzles</p>

Before checking any strainers make sure the isolation valves at the top of the cabinet are off.

There are two strainers in the water control cabinet. One on the cold water side and one on the hot water side. Loosen the cap on the strainers to access the mesh inside.



Clean the mesh of any build-up.



Refit the mesh, tighten the cap and turn the isolation valves back on when you're finished. If the strainer is damaged, contact Stoddart for assistance.

4.0 Maintenance and Service

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



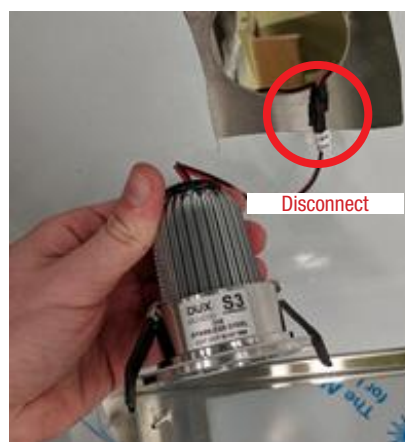
4.3 Down Lights:

	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.

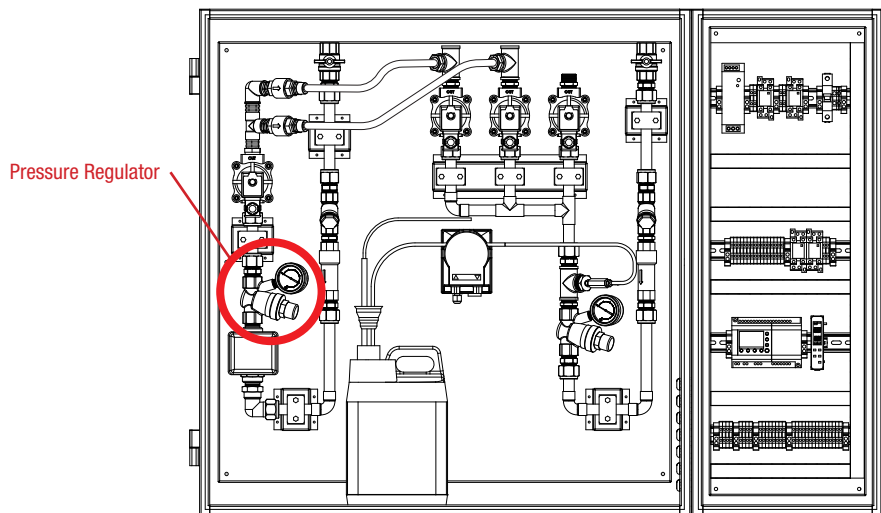
4.8 Adjusting Water Usage

There are two parts of the system that could be causing the hood to use too much water: the wash and the mist cycles. Both of these can be adjusted individually by a qualified technician only.

The most likely cause of excess water consumption is the wash cycle running for too long. The system has programmable wash and rinse times (down to a minimum of 1 minute). To adjust these times, refer to “Changing PLC Values” 4.10. Alternatively, if the hot water system recovering in time is a problem, the delay between the washes can also be adjusted. After changing the values, you must ensure the hood is still being adequately cleaned each day. The values should never be set in a way that prevents the hood being properly cleaned.

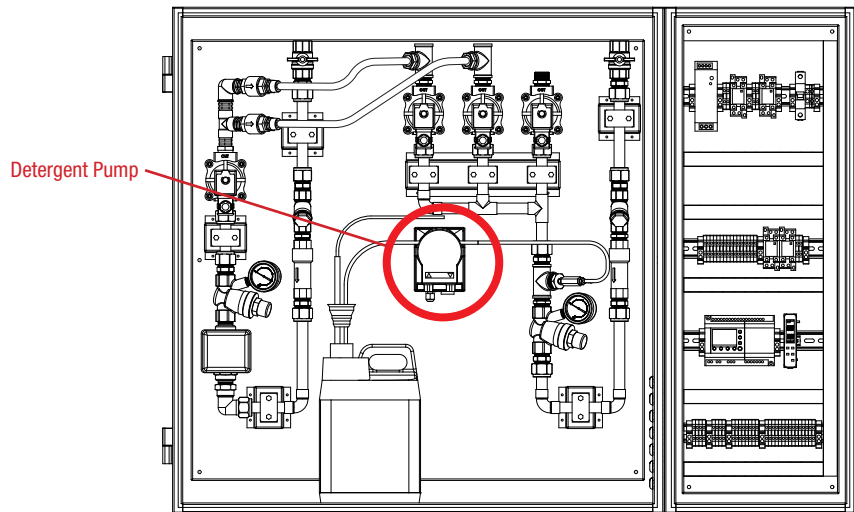
The pressure on the cold water line can be adjusted by a qualified technician to reduce the amount of water used during normal operation. However, the pressure should never be reduced below 3 bar (300 kPa) and the mist nozzles need to be checked to ensure they are clean and there is a constant and consistent mist screen.

The regulator to adjust the pressure is housed in the plumbing side of the water control cabinet. Use the dial on the regulator to change the pressure but ensure all the above conditions are met.



4.9 Adjusting Detergent Usage

The detergent pump is housed in the plumbing side of the water control cabinet.



The pump has a small potentiometer to adjust its speed. Access the speed dial by removing the 2 screws securing the front panel.



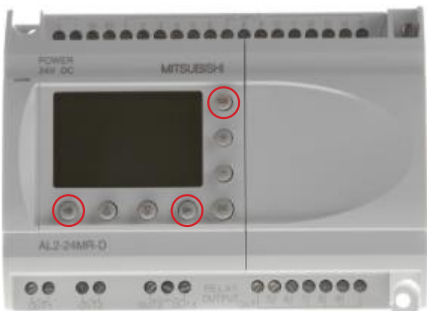

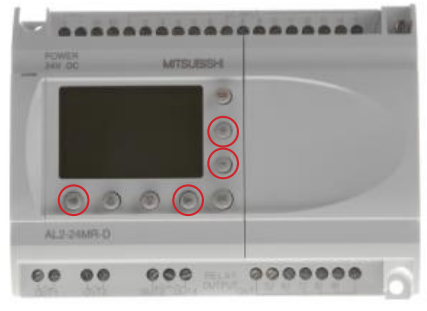
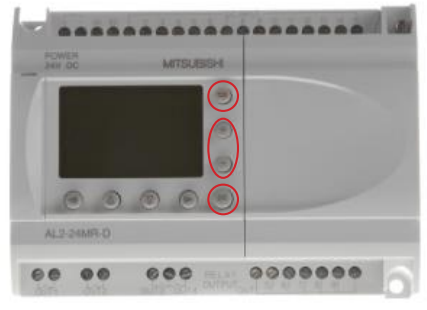
Adjust the dial as required, clockwise for more detergent, anti-clockwise for less. The correct detergent level should be determined by the detergent/chemical supplier.



The amount of detergent dispensed can also be changed by changing the length of the wash cycle (this will increase the volume used but not the concentration). This is a setting in the PLC, see section page 27

4.10 Changing PLC Values

The operation of the Cold Mist and Wash hood can be configured by a qualified technician using the PLC. Refer to the table below for instructions on changing the settings and descriptions of each screen.

Name	PLC Screen	Description
Settings Sequence		To enter settings, press and hold left, right and (ESC). Use the same sequence to exit settings
Sub menu Navigation		Use the up and down buttons to navigate through the different settings sub menus
Settings Navigation		Press the (+) to enter a sub menu and the (-) button to leave it. Navigate through the values in a sub menu using the left and right buttons
Changing Settings		After navigating to a settings value, press (OK) to select it. Change the value using (+) and (-), then use (OK) to save the change or (ESC) to cancel

Sub-Menu Description												
Name	PLC Screen											Description
Zone Settings	1											Contains information about the number of wash zones in the KWI system
					Z	O	N	E				
			S	E	T	T	I	N	G	S		
Wash Sequence Parameters	2											Contains information about the delay/run times for the wash cycle
					W	A	S	H				
			S	E	Q	U	E	N	C	E		
		P	A	R	A	M	E	T	E	R	S	
Auto-Mode Settings	3											Contains the scheduled wash times for auto/timer mode. Note: these settings only apply when using the non-standard auto/timer mode
			A	u	t	o	-	M	o	d	e	
			S	e	t	t	i	n	g	s		
Delay Settings	4											Contains the delays for alarms
			A	U	T	O	-	M	O	D	E	
			S	E	T	T	I	N	G	S		
Special Parameters	5											Contains additional parameters that should only need to be set once
			S	P	E	C	I	A	L			
		P	A	R	A	M	E	T	E	R	S	

Settings Screen Description These values can be changed – default (suggested) values shown in screen shots																																																											
Name	PLC Screen										Description																																																
Number of Zones (sub menu 1)	<table><tr><td>N</td><td>U</td><td>M</td><td>B</td><td>E</td><td>R</td><td></td><td>O</td><td>F</td><td></td><td></td></tr><tr><td>Z</td><td>O</td><td>N</td><td>E</td><td>S</td><td></td><td>(</td><td>1</td><td>-</td><td>4</td><td>)</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										N	U	M	B	E	R		O	F			Z	O	N	E	S		(1	-	4)																							The number of wash zones (hoods) present in the system. This must be between 1 and 4 inclusive and equal the number of wash solenoids in the system				
	N	U	M	B	E	R		O	F																																																		
	Z	O	N	E	S		(1	-	4)																																																
Delay Between Washes (sub menu 2)	<table><tr><td>D</td><td>E</td><td>L</td><td>A</td><td>Y</td><td></td><td>B</td><td>E</td><td>T</td><td>.</td><td></td></tr><tr><td>W</td><td>A</td><td>S</td><td>H</td><td>E</td><td>S</td><td>(</td><td>M</td><td>I</td><td>N</td><td>S</td><td>)</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										D	E	L	A	Y		B	E	T	.		W	A	S	H	E	S	(M	I	N	S)																1							The time (in minutes) between washing each wash zone. This gives the hot water system time to recover and will depend on the water system. Change this for testing			
	D	E	L	A	Y		B	E	T	.																																																	
	W	A	S	H	E	S	(M	I	N	S)																																															
				1																																																							
Wash Runtime (sub menu 2)	<table><tr><td>W</td><td>A</td><td>S</td><td>H</td><td></td><td>R</td><td>U</td><td>N</td><td>T</td><td>I</td><td>M</td><td>E</td></tr><tr><td>(</td><td>M</td><td>I</td><td>N</td><td>S</td><td>)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										W	A	S	H		R	U	N	T	I	M	E	(M	I	N	S)																							2								The time (in minutes) each wash zone washes for. Change this for testing.
	W	A	S	H		R	U	N	T	I	M	E																																															
	(M	I	N	S)																																																					
				2																																																							
Soak Time (sub menu 2)	<table><tr><td>S</td><td>O</td><td>A</td><td>K</td><td></td><td>T</td><td>I</td><td>M</td><td>E</td><td></td><td></td><td></td></tr><tr><td>(</td><td>M</td><td>I</td><td>N</td><td>S</td><td>)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										S	O	A	K		T	I	M	E				(M	I	N	S)																							1								The time (in minutes) the hot water and detergent soaks for. This occurs between the wash and rinse. Change this for testing.
	S	O	A	K		T	I	M	E																																																		
	(M	I	N	S)																																																					
				1																																																							
Rinse Time (sub menu 2)	<table><tr><td>R</td><td>I</td><td>N</td><td>S</td><td>E</td><td></td><td>T</td><td>I</td><td>M</td><td>E</td><td></td><td></td></tr><tr><td>(</td><td>M</td><td>I</td><td>N</td><td>S</td><td>)</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										R	I	N	S	E		T	I	M	E			(M	I	N	S)																							2								The time (in minutes) mist is sprayed to wash away the detergent mixture. Change this for testing.
	R	I	N	S	E		T	I	M	E																																																	
	(M	I	N	S)																																																					
				2																																																							
Auto Wash Daily Start (sub menu 3)	<table><tr><td>A</td><td>U</td><td>T</td><td>O</td><td></td><td>W</td><td>A</td><td>S</td><td>H</td><td></td><td></td><td></td></tr><tr><td>D</td><td>A</td><td>I</td><td>L</td><td>Y</td><td></td><td>S</td><td>T</td><td>A</td><td>R</td><td>T</td><td></td></tr><tr><td>T</td><td>I</td><td>M</td><td>E</td><td></td><td>(</td><td>H</td><td>H</td><td>:</td><td>M</td><td>M</td><td>)</td></tr><tr><td>0</td><td>1</td><td>:</td><td>1</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										A	U	T	O		W	A	S	H				D	A	I	L	Y		S	T	A	R	T		T	I	M	E		(H	H	:	M	M)	0	1	:	1	0								The time (hours and minutes) the wash will run each day. When using auto/timer mode it is the user's responsibility to ensure the fan won't be running at this time. An optional fan relay output is provided for this purpose
	A	U	T	O		W	A	S	H																																																		
	D	A	I	L	Y		S	T	A	R	T																																																
	T	I	M	E		(H	H	:	M	M)																																															
0	1	:	1	0																																																							
Auto Fan Daily Schedule (sub menu 3)	<table><tr><td>A</td><td>U</td><td>T</td><td>O</td><td></td><td>F</td><td>A</td><td>N</td><td></td><td></td><td></td><td></td></tr><tr><td>D</td><td>A</td><td>I</td><td>L</td><td>Y</td><td></td><td>S</td><td>C</td><td>H</td><td>E</td><td>D</td><td>.</td></tr><tr><td>H</td><td>H</td><td>:</td><td>M</td><td>M</td><td>-</td><td>H</td><td>H</td><td>:</td><td>M</td><td>M</td><td></td></tr><tr><td>0</td><td>8</td><td>:</td><td>0</td><td>0</td><td>-</td><td>1</td><td>7</td><td>:</td><td>3</td><td>0</td><td></td></tr></table>										A	U	T	O		F	A	N					D	A	I	L	Y		S	C	H	E	D	.	H	H	:	M	M	-	H	H	:	M	M		0	8	:	0	0	-	1	7	:	3	0		The time frame (specified in hours and minutes) the mist will run for. When using auto/timer mode it is the user's responsibility to ensure the mist is always running when the exhaust fan is An optional fan relay output is provided for this purpose
	A	U	T	O		F	A	N																																																			
	D	A	I	L	Y		S	C	H	E	D	.																																															
	H	H	:	M	M	-	H	H	:	M	M																																																
0	8	:	0	0	-	1	7	:	3	0																																																	

Settings Screen Description These values can be changed – default (suggested) values shown in screen shots																																																											
Name	PLC Screen										Description																																																
Wash Start-Up Delay (sub menu 4)	<table border="1"> <tr><td>W</td><td>A</td><td>S</td><td>H</td><td></td><td>S</td><td>T</td><td>A</td><td>R</td><td>T</td><td>U</td><td>P</td></tr> <tr><td>D</td><td>E</td><td>L</td><td>A</td><td>Y</td><td></td><td>(</td><td>S</td><td>)</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>1</td><td>8</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										W	A	S	H		S	T	A	R	T	U	P	D	E	L	A	Y		(S)																			1	8	0							The delay time (in seconds) before the wash starts after receiving a wash request signal on terminals B11 & B12
W	A	S	H		S	T	A	R	T	U	P																																																
D	E	L	A	Y		(S)																																																			
			1	8	0																																																						
Damper off Delay (sub menu 4)	<table border="1"> <tr><td>D</td><td>A</td><td>M</td><td>P</td><td>E</td><td>R</td><td></td><td>O</td><td>F</td><td>F</td><td></td><td></td></tr> <tr><td>D</td><td>E</td><td>L</td><td>A</td><td>Y</td><td></td><td>(</td><td>S</td><td>)</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>2</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										D	A	M	P	E	R		O	F	F			D	E	L	A	Y		(S)																			2	0								The delay time (in seconds) before the optional damper output changes states
D	A	M	P	E	R		O	F	F																																																		
D	E	L	A	Y		(S)																																																			
			2	0																																																							
Fan on Delay (sub menu 4)	<table border="1"> <tr><td>F</td><td>A</td><td>N</td><td></td><td>O</td><td>N</td><td></td><td>D</td><td>E</td><td>L</td><td>A</td><td>Y</td></tr> <tr><td>(</td><td>S</td><td>)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>6</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										F	A	N		O	N		D	E	L	A	Y	(S)																									6	0								The delay time (in seconds) before the optional fan output changes states
F	A	N		O	N		D	E	L	A	Y																																																
(S)																																																									
			6	0																																																							
Use Cooking Sensor (sub menu 5)	<table border="1"> <tr><td>U</td><td>S</td><td>E</td><td></td><td>C</td><td>O</td><td>O</td><td>K</td><td>I</td><td>N</td><td>G</td><td></td></tr> <tr><td>S</td><td>E</td><td>N</td><td>S</td><td>O</td><td>R</td><td></td><td>(</td><td>O</td><td>-</td><td>N</td><td>O</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td><td>-</td><td>Y</td><td>E</td><td>S</td><td>)</td></tr> <tr><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										U	S	E		C	O	O	K	I	N	G		S	E	N	S	O	R		(O	-	N	O							1	-	Y	E	S)				1									This feature controls the mist activation action of the hood. If set to 1, terminal I8 accepts a constant 24VDC input to keep the mist running. The mist turns off once the signal is removed. If set to 0, terminal I8 accepts a pulse of 24VDC. In this case, the mist output latches until another pulse is sent to I8 to turn off the mist. The pulse feature is designed for a push button whereas the constant input is designed for ON/OFF switches
U	S	E		C	O	O	K	I	N	G																																																	
S	E	N	S	O	R		(O	-	N	O																																																
						1	-	Y	E	S)																																																
			1																																																								
Mist Enabled During Fire (sub menu 5)	<table border="1"> <tr><td>M</td><td>I</td><td>S</td><td>T</td><td></td><td>E</td><td>N</td><td>A</td><td>B</td><td>L</td><td>E</td><td>D</td></tr> <tr><td>D</td><td>U</td><td>R</td><td>I</td><td>N</td><td>G</td><td></td><td>F</td><td>I</td><td>R</td><td>E</td><td></td></tr> <tr><td>(</td><td>0</td><td>-</td><td>0</td><td>F</td><td>F</td><td></td><td>1</td><td>-</td><td>0</td><td>N</td><td>)</td></tr> <tr><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										M	I	S	T		E	N	A	B	L	E	D	D	U	R	I	N	G		F	I	R	E		(0	-	0	F	F		1	-	0	N)					1								When set to 1 the mist will turn on after a fire alarm. When set to 0 it will turn off. Note: it is recommended that this is set to 1. Follow the instructions of the fire engineers or fire department
M	I	S	T		E	N	A	B	L	E	D																																																
D	U	R	I	N	G		F	I	R	E																																																	
(0	-	0	F	F		1	-	0	N)																																																
				1																																																							

4.11 Auto/Timer Mode Schedule Notes

Note: when using auto/timer mode, it is the responsibility of the kitchen staff to ensure the mist is always running when the exhaust fan is on and that the wash cycle only occurs when the fan is off. These requirements must be met. It is highly recommended that auto/timer mode is only used when absolutely necessary.

Note: you will need to push the “OK” button once to enter edit mode and then again to select the time you wish to edit. Save your changes by pressing “OK” or cancel by pressing “ESC”.

When adjusting the times, the second row allows you to adjust the week of the month the timer will run on. Adjust the values with the “+” and “-” buttons. For example, in the image bellow, the timer had been disabled for the 2nd and 3rd weeks.

These weeks have been disabled

B	0	0	3	:	T	S		#	0	1		
	1	-	-	4	5		1	S	T			
	S	M	T	W	T	F	S	A	T			
	0	1	:	1	0		0	N				

The second row is used select the days of the week that the timer affects. Again, adjust with the “+” and “-” buttons. In the example bellow, the timer has been disabled for Tuesday and Wednesday.

These days have been disabled

B	0	0	3	:	T	S		#	0	1		
	1	2	3	4	5		1	S	T			
	S	M	-	-	T	F	S	A	T			
	0	1	:	1	0		0	N				

For the daily start time, leave the last value as “On”, change the time as required

Change value

B	0	0	3	:	T	S		#	0	1		
	1	2	3	4	5		1	S	T			
	S	M	T	W	T	F	S	A	T			
	0	1	:	1	0		0	N				

Do not edit

For the fan start time, ensure the last value for the earliest time (#01) is set to on and for the latest time (#02) it is set to off.

B	1	6	2	:	T	S		#	0	1		
	1	2	3	4	5		1	S	T			
	S	M	T	W	T	F	S	A	T			
	0	8	:	0	0		0	N				

B	0	0	3	:	T	S		#	0	2		
	1	2	3	4	5		1	S	T			
	S	M	T	W	T	F	S	A	T			
	1	7	:	3	0		0	F	F			

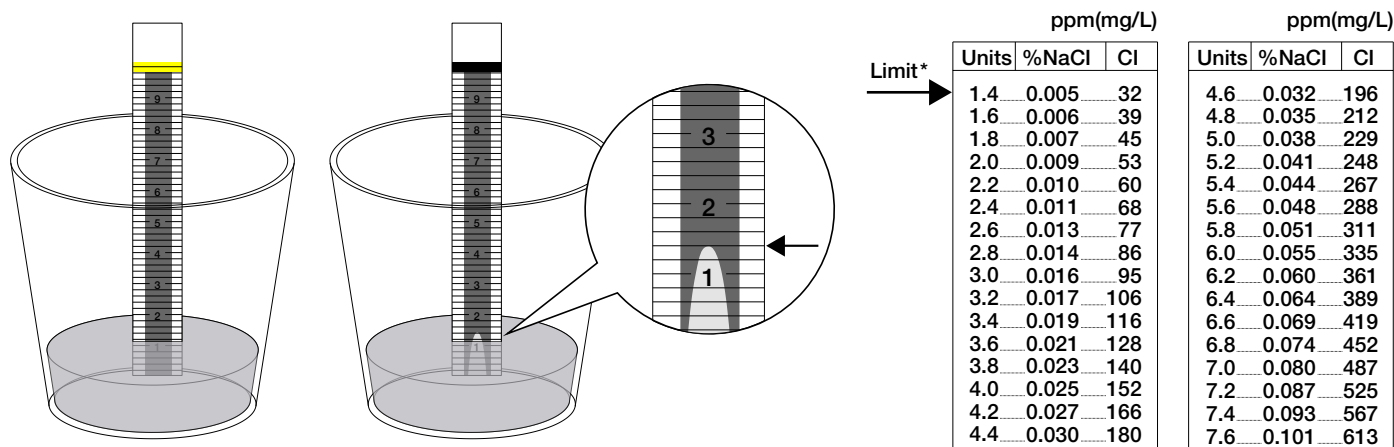
4.12 Testing Water Quality

Areas with poor water quality (such as SA or WA) may also need an additional water filter. Follow the checks below to determine if a filter is needed and install the appropriate filter, if required.

There are two tests that need to be completed before determining if a filter is required: a chloride test and a total dissolved solids (TDS) test. For the chloride test:

1. Remove Titrator from bottle and replace bottle cap immediately
2. Insert lower end of the Titrator into water to be tested (approx 20mm of water). DO NOT allow water to touch yellow completion band at top of Titrator
3. Allow water to completely saturate the wick of Titrator. Reaction is complete when yellow band turns dark
4. Note where the white chloride peak falls on the scale. This represents the unit value
5. Refer to the table to convert the Titrator units into salt concentration

Readings higher than 3.0 (95PPM) risk crevice corrosion in the stainless steel body of the hood. Readings higher than 4.6 (196PPM) risk pitting corrosion.



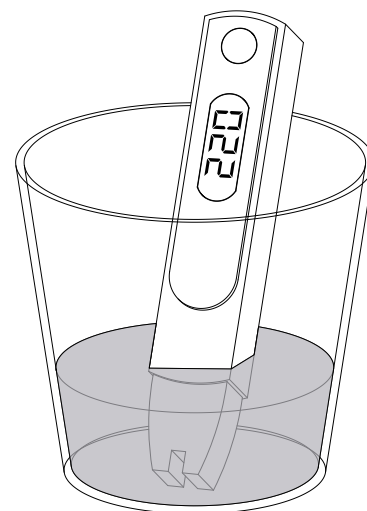
4.12.1 Total Dissolved Solids (TDS) Test

For the TDS test:

1. Remove the cover from the TDS meter, turn on by pressing the On/Off button. The display should read 000.
2. Insert lower end of the TDS meter into water to be tested (approx 20mm of water). DO NOT completely submerge.
3. Wait 5-10 seconds.
4. The number displayed on meter is the TDS (Total Dissolved Solids) of the water expressed in PPM (parts per million) e.g. TDS = 220PPM.
5. When finished, turn the TDS meter off.

A high TDS reading can lead to lime scale build-up inside the exhaust canopy and can also cause the spray/wash nozzles to clog quicker than usual.

If you find your water supply has a high chloride or TDS reading, investigate using an additional filtration method on the incoming water supplies.



4.13 Testing and Balancing Pressure and Airflow - Exhaust Air Flow

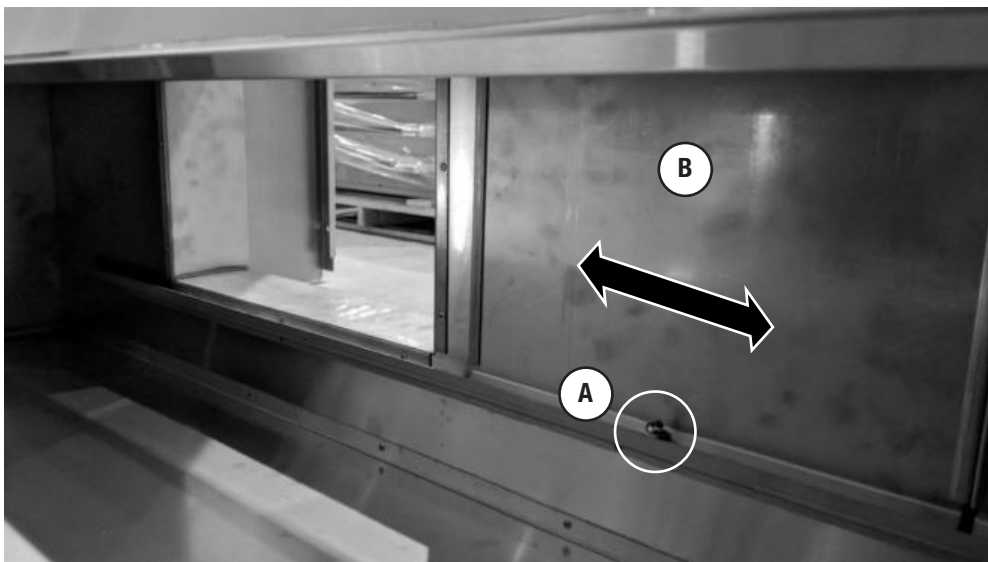
Every 6 months (typically) the Capture Jet fan will need to be serviced by a qualified technician. Contact Stoddart at 1300 307 289 for assistance.

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

4.14 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.

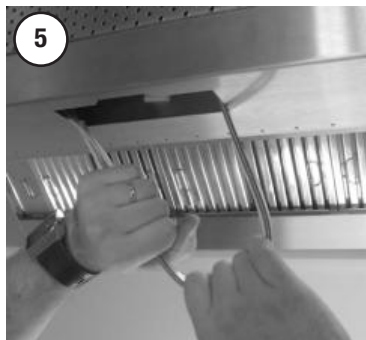
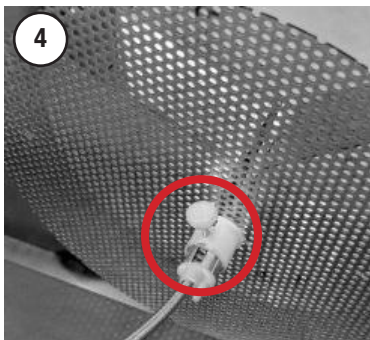
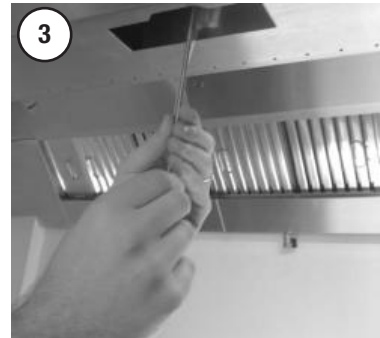
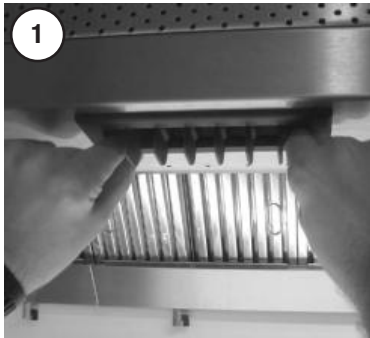
There are two components to the supply air, the T.A.B. pressure point and front face air speed. Note that not every model has a perforated front panel for supply air and only KWF models require a supply duct to be connected. Other models have an optional supply duct connection. Before measuring airflows 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



4.15 Troubleshooting











4.15.1 UV Hood

- 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)
Detergent low indicator on, buzzer beeping, PLC screen reads "LO DETERGENT"	<ul style="list-style-type: none"> - Detergent low - Float switch is not mounted properly - Float switch is faulty 	<ul style="list-style-type: none"> - Open the main panel door and refill the detergent. - Properly mount the float switch - Refer to the relevant section in the Operation & User Maintenance manual for - If problem persists, contact Stoddart
Fire alarm on, buzzer beeping, PLC screen reads "FIRE ALARM"	<ul style="list-style-type: none"> - Fire at site - Fire alarm triggered 	<ul style="list-style-type: none"> - Check the site for fire. - If there is no fire at the site and the problem persists, contact Stoddart
Water flow alarm indicator on, buzzer beeping, PLC screen reads "NO WATER"	<ul style="list-style-type: none"> - No water is supplied to the unit - Water pressure is too low - Flow switch is faulty 	<ul style="list-style-type: none"> - Check that the unit is being supplied with a continuous, steady flow of water. - If problem persists, contact Stoddart
System is in the incorrect mode	<ul style="list-style-type: none"> - Jumper wire on terminal I1 present/not present - Damaged or incorrect wiring - Faulty PLC 	<ul style="list-style-type: none"> - Add/remove jumper wire to terminal I1 - Fix faulty wiring - Refer to the relevant section in the Operation & User Maintenance manual for more information - If problem persists, contact Stoddart
System does not run in auto/timer mode.	<ul style="list-style-type: none"> - PLC programmed to BMS/switch mode - Washing schedule not set - Emergency stop button in action 	<ul style="list-style-type: none"> - Remove the jumper wire on terminal I1 - Set the date and time for the system in the PLC - Set the washing time at washing schedule - Enable the washing schedule - Release the emergency stop button - Refer to the relevant section in the Operation & User Maintenance manual for more information - If problem persists, contact Stoddart
System does not run in BMS/switch mode	<ul style="list-style-type: none"> - Emergency stop button in action - PLC programmed to auto/timer mode - No BMS/switch input 	<ul style="list-style-type: none"> - Reset the emergency stop button. - Add a jumper wire to terminal I1 - Add a switch input on terminals B11 & B12 - Refer to the relevant section in the Operation & User Maintenance manual for more information - If problem persists, contact Stoddart
Control system does not power up	<ul style="list-style-type: none"> - No incoming supply (230VAC) - MCB or RCD is tripped / not ON 	<ul style="list-style-type: none"> - Supply 230VAC for the system incoming supply - Open the electrical compartment door and locate the MCB and RCD at the top. Reset / ON the MCB and RCD - If problem persists, contact Stoddart
Hood lights/Capture Jet fan won't turn on	<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 - If problem persists, contact Stoddart
Significant build-up in the hood	<ul style="list-style-type: none"> - Water not being supplied to the hood - Mist not spraying correctly - Wash cycle not happening 	<ul style="list-style-type: none"> - Check that the hood is receiving a continuous, steady flow of water - Check that the spray nozzles are clean and not eroded - Check that the wash cycle is being properly triggered - If problem persists, contact Stoddart
Detergent level not dropping	<ul style="list-style-type: none"> - Wash cycle not happening - Faulty detergent pump 	<ul style="list-style-type: none"> - Check that the wash cycle is being properly triggered - Check the detergent pump is pumping detergent during the wash cycle - If problem persists, contact Stoddart
Mist remains on after fan turns off	<ul style="list-style-type: none"> - Temperature in capture zone is still > 40°C 	<ul style="list-style-type: none"> - Check fire/heat source has been extinguished, allow to cool below 40°C for system to shut mist off and start wash

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

4.15.2 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

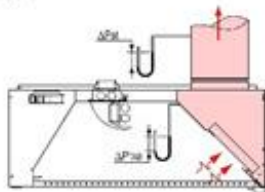
4.16 Pressure Drop And Sound Data

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.

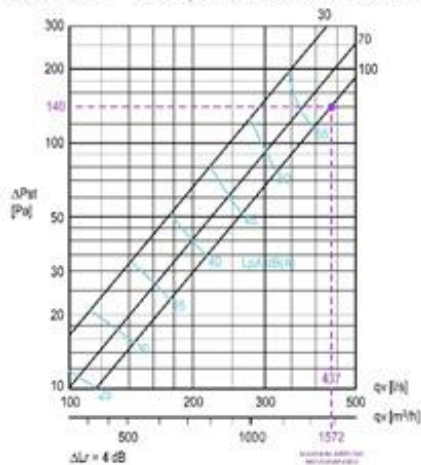
The graphs show the noise level of the exhaust air passing through the exhaust hood (typically 50 – 65dBA) is low in comparison to ambient noise levels in commercial kitchen (typically 70 – 75dBA) environments. Closing the slide dampers increases the exit velocity and increases the air noise level.

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

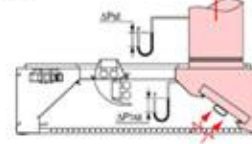
Exhaust plenum
 H=555



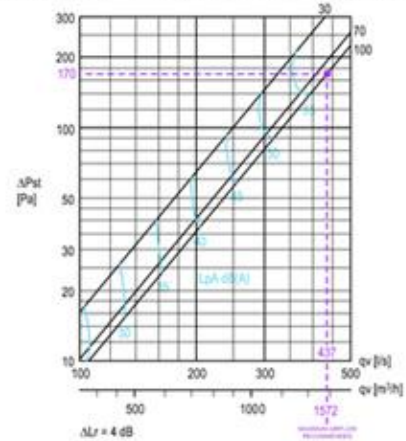
Section 1000 Static pressure loss and sound data



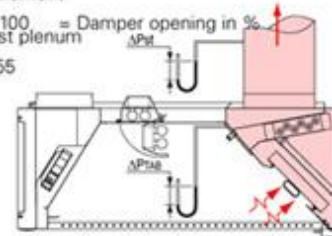
Exhaust plenum
 H=400



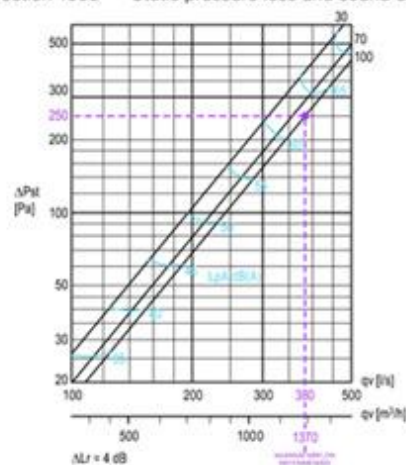
Section 1000 Static pressure loss and sound data



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;

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

4.17 Spare Parts

4.17.1 SPEH-HAL-KWI-KWF

Item No.	Part Number	Spare Parts Description
1	SPEH-HAL-0086 A4	Capture Jet Fan & Controller
2	SPEH-HAL-0083 A4	Blind Filter
3	CMHAL-0010	Air Nozzle Closed
4	CMHAL-0019	KSA Filter
5	CMGE-1107	Adjustable Air Nozzle
6	SPEH-HAL-KWI-KWF-Inner Baffle	Made to Order, Serial No. Required
7	CMHAL-0079	Nozzle, Blue, Full Cone
8	CMPL-0897	Nozzle, Brass, Full Cone 1/8 BSP

DETAIL A
SCALE 1 : 2

DETAIL B
SCALE 1 : 2

*****NOTE*****
Some parts have parts breakdowns on subsequent pages

NAME	SIGNATURE	DATE	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN MILLIMETERS
DRAWN: D Bowden		20/11/2018	
APPROVED:			
Weight:			
Surface Area:			

STODDART
www.stoddart.com.au

REV/VER	REVISED BY	DATE	REVISION DESCRIPTION	STATUS
A	D Bowden	23/11/2018	Spare Parts Layout	As Built

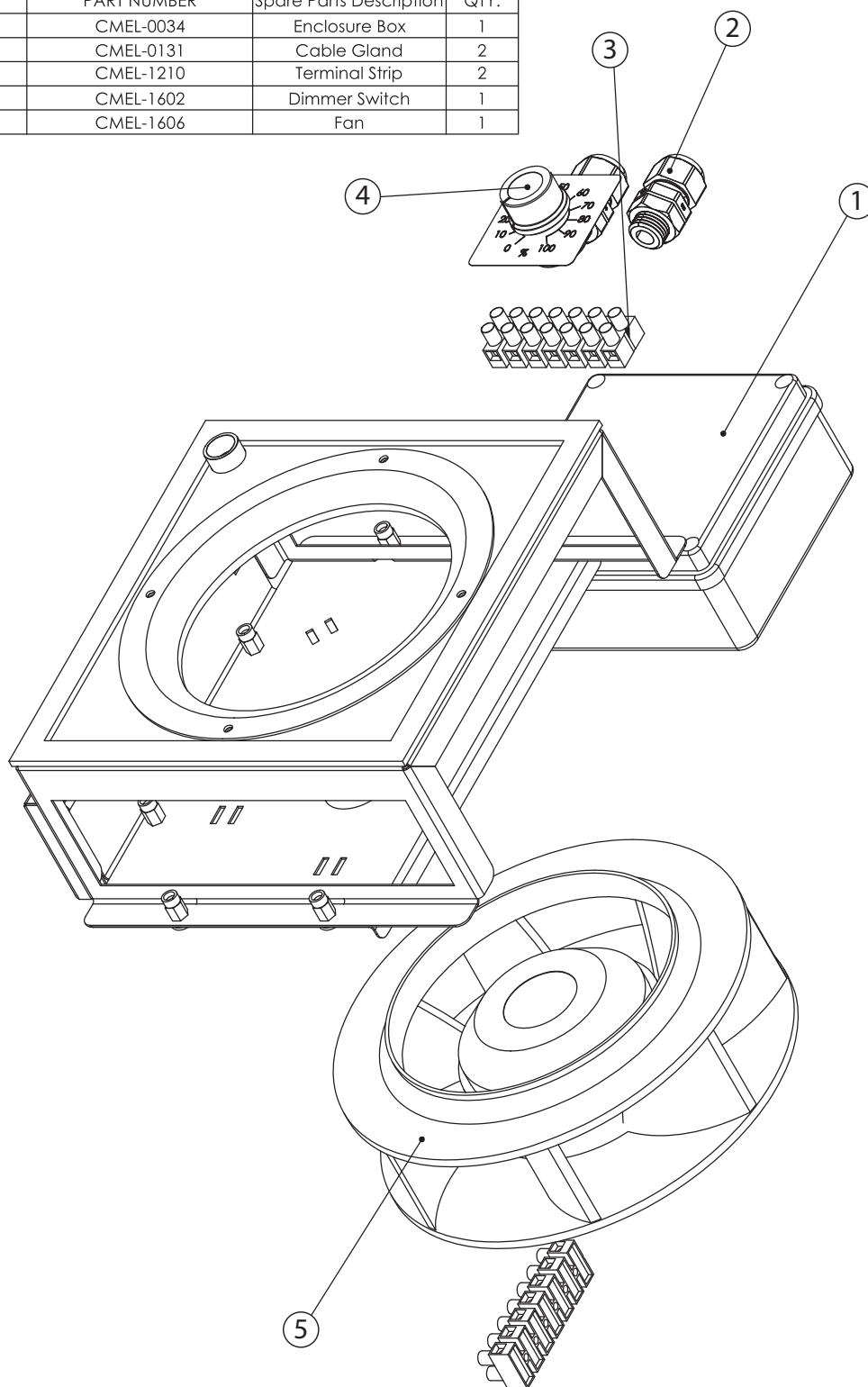
PART NO.	DESCRIPTION	QTY
SPEH-HAL-KWI-KWF d01 A1	Spare Parts	

DWG No: SPEH-HAL-KWI-KWF d01 A1
Dwg Issue: 1

DO NOT SCALE DRAWING: This drawing remains the property of Iron Standard Pty Ltd ABN 14 009 690 231 & cannot be reproduced without prior permission A3. Sheet 1 of 1
File Location: G:\14_ Exhaust_Canopies\Engineering\02_ Halton\01_Solidworks\04_Water Wash\02_Spare Parts Model\

4.17.2 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



Page Intentionally Left Blank

Australia

Australian Business Number: 16009690251

Service / Spare Parts

<https://customerservice.stoddart.com.au>

Sales

Tel: 1300 79 1954

Email: sales@stoddart.com.au

Web: www.stoddart.com.au



Customer
Service Portal

New Zealand

New Zealand Business Number: 6837694

Service / Spare Parts

<https://customerservice.stoddart.com.au>

Sales

Tel: 0800 79 1954

Email: sales@stoddart.co.nz

Web: www.stoddart.co.nz



Customer
Service Portal