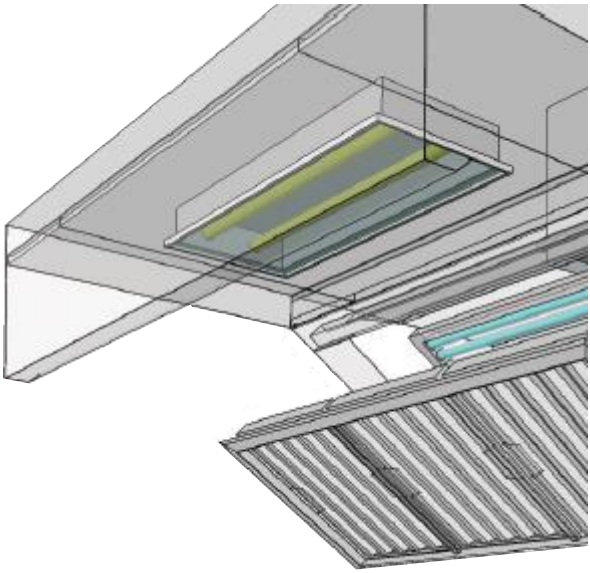
EFTECH

ENVIRONMENTAL FOODSERVICE TECHNOLOGIES

Advanced Energy and Kitchen Byproduct Solutions



EFTECH
EXTRACT CANOPIES

USERS GUIDE

CE

Important Information

Read these instructions carefully before using the product, paying particular attention to all sections that carry warning symbols, caution symbols and notices. Ensure that these are understood at all times

WARNING!

This symbol is used whenever there is risk of personal injury

CAUTION!

This symbol is used whenever there is risk of damaging your EFTECH canopy

Note:

This symbol is used to provide additional information, hints and tips.

Health & Safety Warnings

- Ultraviolet C radiation is harmful to the skin and the eyes, and can cause skin
- UV-C lamps generate ozone. Ozone is classified as oxidizing agent and is irritant for the eyes and airways.

WARNING

During normal operation, the reflected ultra violet light will be visible around the filters at the UV-C lamps. They are installed behind the grease filters and will not be directly visible.

If at the time the filters have been compromised the lamps are exposed and directly visible to the eye, turn off the system immediately.

Never look at direct UV-C light as it will cause conjunctivitis, which is a short term condition. This can cause a sensation of sand in the eyes known as "welder's eye"

In the event of eye exposure to UV-C light, seek medical advice immediately. Symptoms common to "welder's eye" and conjunctivitis should be reported.

OZONE: If the smell of ozone is noticed in the kitchen (ammonia type smell), turn off the system, ventilate the kitchen and leave the kitchen. Re-enter after five minutes.

ENVIRONMENTAL FOODSERVICE TECHNOLOGIES
Advanced Energy and Kitchen Byproduct Solutions

EFTECH Canopies User Guide Contents

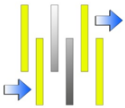
About Product / Document

Welcome to your EFTECH User Guide for your new canopy. The purpose of this document is to provide basic operation and maintenance information for your new EFTECH Canopy. The intended audience of this document is the end user of the system, the building owner, kitchen manager, kitchen staff, or maintenance technician. This document will instruct the reader on basic operation, maintenance, and troubleshooting.

Icons & Abbreviations

Icons


Extract


Carbon Filtration


Jet Stream Technology


Clean Stream Technology

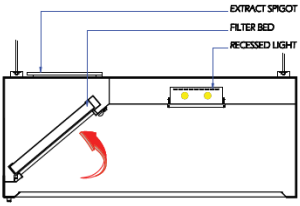

Auto Sense Technology

Abbreviations

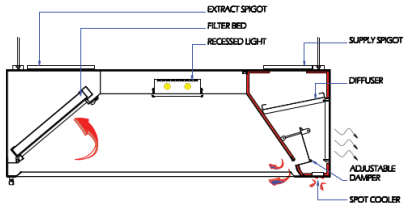
A: Autosense
AISI: American Iron and Steel Institute
APU: Air Purge Unit
AT: Aux Touchpad
CS: Clean Stream
EC: European Commission
EU: European Union
FC: Filter Canopy
FD: Filter Dropdown
FX: FlowX
HC: Hood Controller
I/O: Input/Output
I: Island
JS: Jet Steam
LED: Light-Emitting Diode
O: Oxygen
SC: System Controller
TP: Touchpad
UV: Ultraviolet
VFD: Variable Frequency Drive
VOCs: Volatile Organic Compounds
W: Wall

Canopy Models

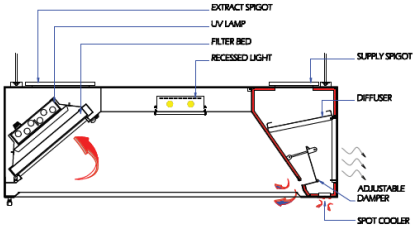
Wall Canopies



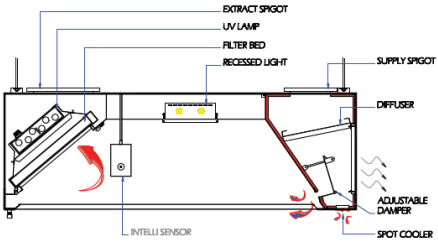
W-FX FlowX



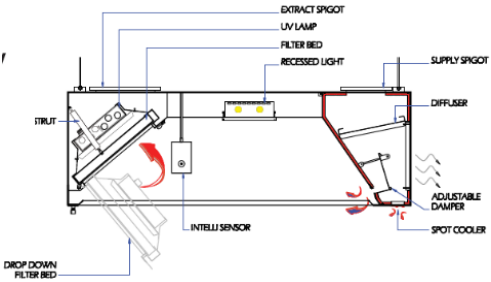
W-JS Jet Stream Technology



W-JS-CS Jet Stream with Clean Stream Technology

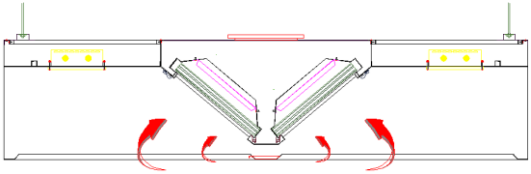


W-CS-JS-A Clean Stream and Jet Stream Technology with Autosense Smart Canopy

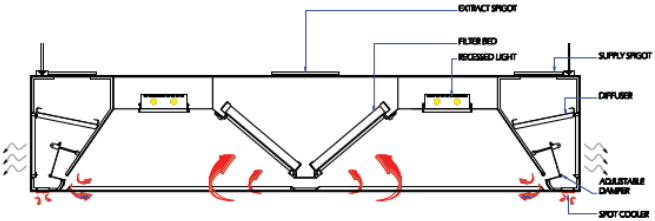


W-CS-JS-A-FD Clean Stream, Jet Stream Technology and Autosense Smart Canopy with drop-down filter bed technology

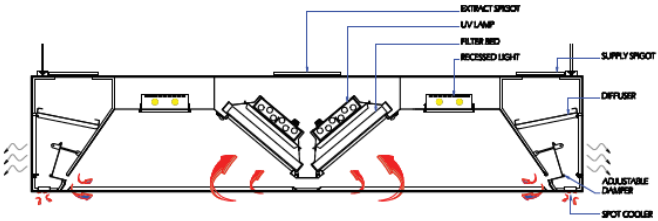
Island Canopies



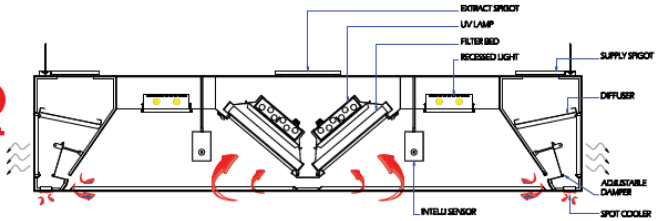
I-FX FlowX Island Canopy



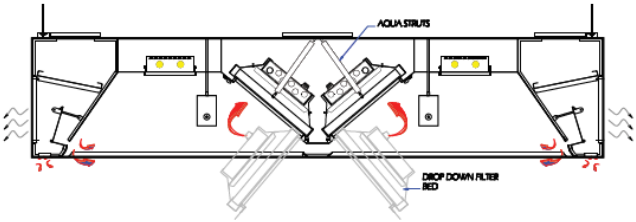
I-JS Island Canopy with Jet Stream Technology



I-CS-JS Jet Stream with Clean Stream Technology

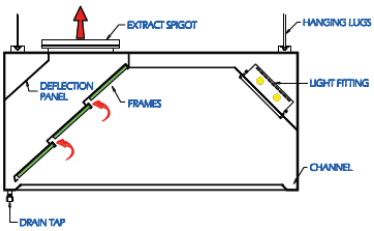


I-CS-JS-A Clean Stream and Jet Stream Technology with Autosense Smart Canopy

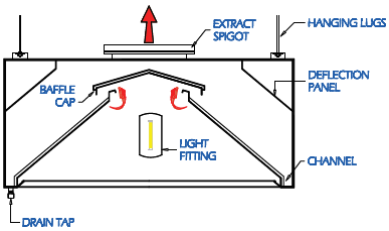


I-CS-JS-A-FD Clean Stream, Jet Stream Technology and Autosense Smart Canopy with drop-down filter bed technology

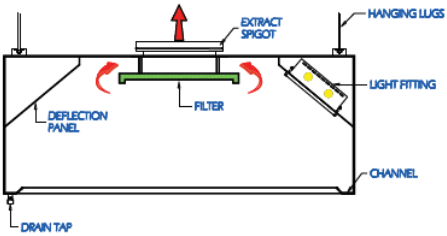
Condense Canopies



W-C Condense Canopy 1

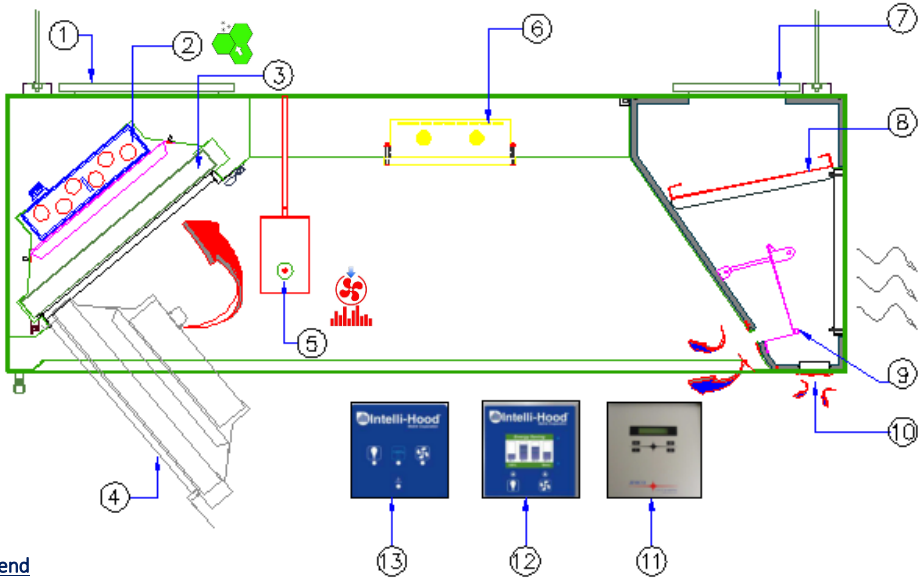


I-C Condense Canopy 2



I-C Condense Canopy 3

Clean Stream and Jet Stream Technology with Autosense Smart Canopy Detailed Drawing



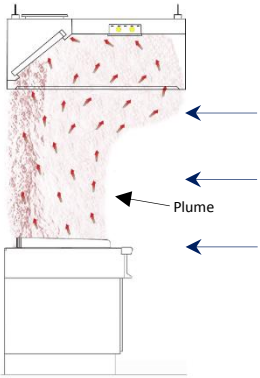
Legend

1. Extract (Air Out)
2. UV-C Lamp
3. Filter Bed
4. Drop Down Filter Bed
5. Intelli Sensor
6. Recessed LED Light
7. Supply (Air In)
8. Diffuser (Diffuses the air)
9. Adjustable Damper (Adjust Air Flow)
10. Spot Cooler (Fresh air supply to cool user)
11. Clean Stream Control Panel
12. Autosense Touchpad Controller
13. Autosense Aux Touchpad Controller

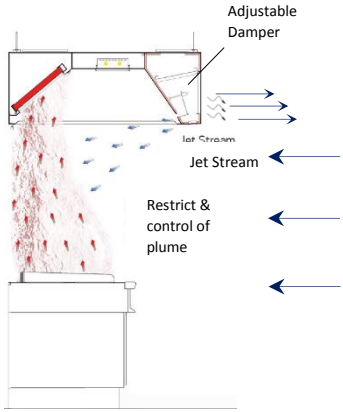
EFTECH Canopies Overview & Operating Instructions

NOTE
Extract & Supply fans are supplied by others

FlowX Canopies



Jet Stream Technology



- As the plume rises into the canopy, the plume exits the kitchen via the extract (No. 1 in detailed drawing)
- The FlowX canopy comes with a LED light, this light is connected to the main kitchen light circuit

- The Jet Stream technology restricts and controls the plume under the canopy.
- The adjustable damper (No. 9 in detailed drawing) adjusts the jet stream flow

Clean Stream Technology

Oxygen O_2 + UV-C Light = O_3 Extra Oxygen atom attaches to organic or chemical pollutants

- The Clean Stream technology uses UV-C light to effectively reduction of odours and Volatile Organic Compounds (VOCs). The UV-C light reacts with the common oxygen molecule O_2 in the air that we

breath converting it into ozone O_3. Ozone O_3 readily sheds an oxygen atom to become O_2 once again but in the process oxidising the unwanted substances.

- With the Clean Stream technology, the UV-C Ultra Violet Lamps are located behind the filters in the cooking canopy, the lamps should not be visible. The **reflected** UV-C (Blue) light is visible during normal operation. Please see trouble Shooting if UV is not illuminating.

Clean Stream Control Panel

Start-up

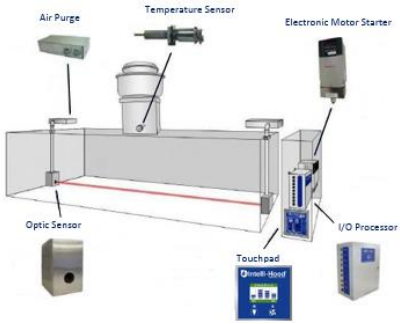
1. Turn **on** the extract ventilation system (fans) for canopy
2. Ensure control panel LED is illuminating Green, show above
3. System Display should indicate no faults and "Run" mode in operation
4. Check that REFLECTED UV-C (Blue) light is visible behind filters
5. Start cooking

System Fault Reset

In the event of system failure:

- ☑ Check that all filters are securely and correctly in place
- ☑ Check that fan for canopy is on and running
- ☑ Check that there are no trips/fuses blown and the display is functioning
- ☑ Check system display for any faults
- ☑ Record fault and contact your service contractor

Autosense Smart Canopy



Autosense Smart Canopy System Diagram

Optic Sensor monitor the presence of smoke and vapours inside the hood. With the presence of smoke and/or vapours, a signal is sent to the I/O processor to ramp fans to full speed to remove it.

Temperature Sensor monitors the exhaust air temperature in the exhaust duct. A temperature signal is transmitted to the I/O processor that uses the signal to vary the speed in proportion to actual heat load.

I/O Processor receives inputs from the temperature sensor and optic sensor. With the inputs received from the sensors, the processor controls the output of the electronic motor starters. The processor also displays current operations of each hood and is able to be programmed by the Touchpad.

Air Purge unit is a miniature blower that are equipped on both the optical transmitter and receiver to prevent grease from collecting on the optical sensor lenses when the kitchen hood exhaust system is operating.

Electric Motor Starter is a variable frequency drive equipped on each exhaust and Make-up fan motor. The electric motor starter receives the signal from the I/O processor then adjusts the motor speed to meet each hood's needs.

Touchpad allows users to turn on the system and displays current system fan levels. The keypad also gives the user programming capabilities for the system

Autosense Smart Canopy Touchpad

The **Fans Button** is typically used to change the state of the system between STANDBY MODE (exhaust fans off) and ENERGY SAVING MODE (exhaust fans running).

The **Lights Button** is typically used to turn the lights of the hood on/off. This function is optional and may not be used in all installations of Intelli-Hood. Consult the design documents of your particular installation to determine if this button is used.

The **Display Screen** shows the operational state of the Intelli-Hood system. Symbols and Messages that appear on the screen are explained elsewhere in this manual.

Two **Soft Buttons** below the Display Screen are used for the function displayed on the screen. In Normal Operation Modes, the Right Button is used to access programming and help Menus, and the left button is used too active the “100% Fan Speed Mode”. In Programming Modes, the functions of the buttons change.

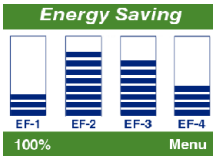
Two **Arrow Buttons** are used to move among programming parameters and change programming values.

The **Display Screen** shows the status of the Intelli-Hood System. Screenshots of the display in various situations

Autosense Smart Canopy Touchpad Display Screen Modes

Standby Mode

- Intelli-Hood logo display screen
- Fans are off
- Right Soft key can be used to enter Menus

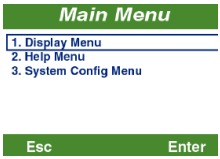


Energy Saving Mode

- Energy Saving in top bar denotes Energy Saving Mode. At least one fan associated to this touchpad is in Energy Saving Mode, but not necessarily all fans
- Display will scroll through the hoods and fans that are active and display their operating speeds
- Left Soft Key can be used to send the system to 100% Mode (manual mode)
- Right Soft Key can be used to enter menus

100% Mode (Manual Mode)

- "Bypass Mode" in top bar denotes 100% Mode.
- Display will scroll through the Hoods and Fans and display their operating speeds
- Left Soft Key can be used to send the system to "Normal" Energy Saving Mode
- Right Soft Key can be used to enter Menus



Menus Home Screen

- The screenshot shown is the Main Menu Screen, the first screen of the menus.
- Arrows and Enter key (right soft key) can be used to make choices.
- ESC button (left soft key) will exit the menu and return to the operating screen
- Refer to the Menus section of this document and the Intelli-Hood Technical Manual for more information regarding menus.

Autosense Smart Canopy Touchpad Display Typical Operation

Typical Operation

The **FANS button** is typically used to change the system mode from Standby to Energy Saving and vice versa. If multiple Touchpads are installed, then it is possible to program relationships to dictate which fan is controlled by each Touchpad.

Touchpad Display Menu

The **Display Menu** will allow the Kitchen Staff Person or Maintenance Technician to view basic system status items such as Faults, VFD Speeds, and Hood Sensor status in a list format. The Display Menu is accessible to any user.

System Configuration Menu

The **System Configuration Menu** is a mean by which one can change the setup of the Intelli-Hood system for the particular kitchen installation. The number of hoods, fans, and many parameters can be configured through the System Configuration Menu. The Intelli-Hood Technical Menu contains detailed information about the System Configuration Menu.

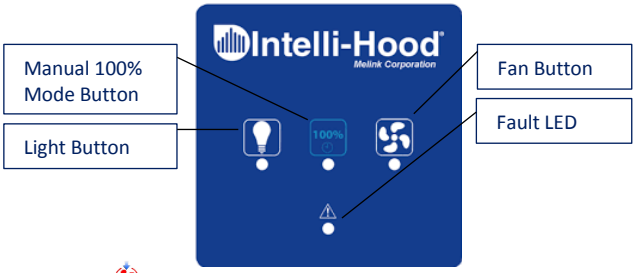
When one selects System Configuration Menu from the Main Menu, the screen will prompt the user to input a pass code to proceed. This pass code is intended to prevent the accidental access of the System Configuration Menu. One should not attempt to modify the System

Configuration Menu

The **Configuration Menu** parameters without a thorough knowledge of Intelli-Hood programming. Please contact EFTECH for more assistance.

Help Menu

The **Help Menu** contains instructions for contacting Technical Support and other information.



Autosense Smart Canopy Aux Touchpad

- The **Fans Button** is used to change the state of the system from STANDBY MODE (exhaust fans off) to ENERGY SAVING MODE (exhaust fans running). When the system is in ENERGY SAVING MODE, the Green indicator light under the fans button will illuminate.
- The **Lights Button** will control an output signal to turn the lights of the hoods on/off. The indicator light under the button will show the state of the lights output.
- The **100% Mode Button** may be used to change the system from ENERGY SAVING MODE to 100% MODE. The 100% Button will have no function if the system is in STANDBY MODE. The indicator light under the 100% Button shows that exhaust fans are in 100% MODE.
- The **Fault Light** is an alarm indicator light. The Fault Light indicates a fault of some type. There are several fault types as listed in the Troubleshooting Section.

NOTE

- Aux Touchpad cannot show status or speeds of the fans. The Aux Touchpad can indicate a fault, but it cannot indicate the fault type. The configuration parameters cannot be adjusted with a Aux Touchpad
- It is important to understand that the way in which the fans can turn on and off is by changing from STANDBY to ENERGY SAVING MODE

EFTECH Canopy Maintenance

FlowX & Jet Stream Canopy Maintenance

Filter Cleaning

It is recommended for the Hood filters to be cleaned daily or on regular cleaning schedule to keep them free of grease and able to provide maximum filtering capabilities.

If hood filters are neglected, they can't do their job – which is to provide a flame barrier in the event of a cooking fire below and to catch grease laden vapours before they reach the duct system.

When hood filters are clogged from infrequent cleaning, it causes many problems including extreme fire hazards, higher utility costs, and strain on the exhaust system that hampers the ability to pull heat and smoke from the kitchen.

How to Clean Hood Filters

Hand Wash

The best way to clean hood filters is good old-fashioned hand washing. Use hot soapy water and dry them immediately after cleaning. Power washing is also acceptable.

Dishwasher

You can also run filters through a high temp dishwasher with soap and water.

CAUTION

Do **not** use bleach, as it will quickly corrode the hood filters. In fact, stay away from any kind of chemical unless it's non-corrosive and designed for filter cleaning.

Clean Stream Technology Maintenance

The lamps' optimum efficiency is only attained when the lamps are clean and free of deposits. The UV-C lamps generally have a life span of 9,999 hours, after which they must be replaced. There is an hour meter on the control panel. Lamps should be replaced at least every two years.

Recommended Weekly Maintenance

☑ Clean the lamps, see cleaning of lamps below

☑ Check the control panel for alerts / faults

☑ Cleaning of the controller If it is dirty, wipe with a damp cloth with ordinary household detergent

Recommended 6 Month Maintenance checked as part of the maintenance agreement

✓ The air purification system

✓ The safety equipment

Cleaning the UV-C Lamps

1. Turn **off** the extract ventilation system for the canopy (fans)
2. Check that the **Red** LED is illuminating on the UV control panel, this ensures the UV-C lamps are off
3. Remove the grease filters from the hood
4. Wipe the UV-C lamps with a damp cloth
5. Apply an alkaline cleaner to the lamps as required. (Follow the detergent instructions)
6. Use water to rinse the detergent off the lamps. (Soft water is preferable for preventing lime deposits on the lamps.)
7. Dry the lamps with a dry cloth.
8. If the lamps are calcified (best viewed on dry lamps) de-calcify them with deacidification agent
9. Place the grease filters back in their slots again
10. Turn **on** the extract ventilation system for the canopy (fans)
11. Ensure the **Green** LED is illuminating on the UV control panel so that the system returns to normal operation

Cleaning the UV-C Control Panel

- Cleaning of the controller If it is dirty, wipe with a damp cloth with ordinary household detergent

Autosense Smart Canopy Maintenance

Cleaning the Optic Sensors

1. The Intelli-Hood Optic Sensors must be cleaned periodically. The time between cleanings will vary depending on the application and quantity of grease in the airstream of a ventilation hood. Optic sensors in applications with high amounts of grease may need to be cleaned 2 or 3 times per month.
2. Some applications may have optic sensors that can go several months between cleanings.
3. If the sensors get too much contamination on the lenses, an optic fault will occur. The fans will run at full speed until the sensors are cleaned and reset.
4. In order to clean the optic sensors, follow the steps below. Cleaning of the optic sensors may be performed with the fans on or off.
5. Press the pushbutton latches on the sides of the optic box and remove the cover.
6. Wipe the lens of the optic circuit board with a soft, moist cloth
7. Replace the cover of the optic box ensuring that the cable connecting the optic box cover to the optic bracket is not in front of the lens.
8. If the fans were on during cleaning, turn them off.
9. Turn on the fans.

Cleaning the Hoods

- Cover the optic sensors with plastic wrap and thick tape **before** using high pressure water, steam or other cleaning chemicals in the hood.
- Do **not** get any of the circuit boards in any other devices of Intelli-Hood wet

Cleaning the Temperature Sensors

- Temperature sensors rarely need to be cleaned. If extremely large amounts of grease and other contamination build on the sensor; the probes should be brushed or wiped clean

Cleaning of Touchpad and Aux Touchpad Devices

CAUTION

- Do **not** use a sharp kitchen utensil or other object to press buttons on the Touchpad or Aux Touchpad
- Press the buttons with human fingers **only**

- Clean the keypad surfaces with a moist cloth.
- Only use light-duty cleaning chemicals

Trouble Shooting

Issue Description	*Solution Description*
Canopy LED light not on	Kitchen lights not switched on
Green LED on UV control panel not illuminating	Grease Filters not replaced correctly / extract fans not running
Fan button on Touchpad not turning fans on / off	Fan Button on Touchpad is disabled
Fault light on Aux Touchpad is illuminate	See Touchpad for fault message

NOTE

- Clean Stream safety switch
- This will ensure that the lamps switch off if the filters are not installed or if they are removed, so that people are not exposed to UV-C light.
- The springs' function is solely to prevent the filters being pushed away from the sockets when removing a filter

Clean Stream Safety Switch

Location of Safety Switch

The socket and the springs are designed for installation in a blank plate. If there is no blank plate in the hood, it may be necessary to replace the filter with a blank plate. (see photo)

Mounting of Safety Switch

The switch is mounted in the centre of the blank plate with a spring on each side; see attached drawing. It is very important to mount the filter switch correctly. You should pay particular attention to ensuring that the filters and blind plates meet FULLY, so that contact is unaffected. Light must not escape from between the filters and blind plate of the lamps

Canopy Specification

- Extraction Canopy manufactured entirely in AISI stainless steel with satin finish
- Extraction canopy exhaust flow rates are designed based on H.V.C.A.D.W.172 guidelines “Thermal Convection Method”
- Extract canopy components are:
- Stainless steel baffle filters tested to ASTM standard F2519-05. Grease removal efficiency 95%, 8-10 microns and above.
- Fully welded U – channel to perimeter with drain off valve External grease collection drawers to accommodate intercepted grease and oils from filter bed.
- IP65 rated heat resistant light fittings. LUX rating 500lux at working height
- Full length insulated supply air plenum to front

- The supply plenum will supply air to kitchen by way of perforated supply air diffusers with secondary supply air internally directed to filter bank to aid induction. Adjustable spot cooling to underside of supply plenum included also. Both internal and external supplies are damper controlled
- Fully accessible twin bank filter bed with U.V. treatment system with pressure controls and Safety Switches to ensure U V is only operational when Exhaust Fan is running and Baffle Filters are in place.
- Exhaust air & supply air spigots for connection by contractor
- Auto Sense Air Control innovation to actively monitor cooking conditions and deliver Air Flow as required
- Canopy supplied complete with Optic Sensor within the Canopy and monitoring temperature sensor in each of the exhaust duct spigots. System Processor provided to allow for automatic speed control of the Exhaust & Supply Fans
- Wiring of Sensors to the Control Panel located in the Kitchen Area
- Wiring of Control Cabling from the Control Panel to the Invertors and BMS System

Disposal and Recycling of Canopies

- Follow national and local legislation for disposal
- The canopies are manufactured from stainless steel and should be recycled
- ALL electrical items are under the WEEE regulations for disposal
- The owner and operator both have a duty of care to dispose of these correctly follow national and local legislation for disposal. Disposal should be done by a specialist licence waste contractor or by using the facilities provided by local council waste sites

ENVIRONMENTAL FOODSERVICE TECHNOLOGIES
Advanced Energy and Kitchen Byproduct Solutions

EU DECLARATION OF CONFORMITY

Manufacturer's Name: EFTECH

Manufacturer's Address: Unit 1a,
Sunbury Industrial Estate,
Ballymount,
Dublin 12

Canopy Models	**Model Reference**	
Kitchen Extract Canopies	***Wall Canopies***	***Island Canopies***
FlowX Canopy	W-FX	I-FX
Jet Stream Canopy	W-JS	I-JS
Clean Stream Canopy	W-CS	I-CS
Clean Stream Canopy with Jet Stream Technology	W-CS-JS	I-CS-JS
Autosense Smart Canopy with Jet Stream Canopy	W-JS-A	I-JS-A
Autosense Smart Canopy with Clean Stream Canopy	W-CS-A	I-CS-A
Autosense Smart Canopy with Clean Stream and Jet Stream Technology	W-CS-JS-A	I-CS-JS-A
Autosense Smart Canopy with Clean Stream, Jet Stream and drop-down filter bed technology	W-CS-JS-A-FD	I-CS-JS-A-FD
Condensate Canopies		
Condensate Canopy 1	W-C	
Condensate Canopy 2		I-C
Condensate Canopy 3		I-FC

EFTECH declares that the products stated above conforms to the following European CE Marking Directives:

Low Voltage Directive **2014/35/EU**

Electromagnetic compatibility Directive **2004/108/EC**

When installing per the EFTECH Manual and using general safe practices associated the installation and use of electrical products.

All components of the product stated above were designed within CE guidelines and using CE marked components were possible. This product is marked in accordance with The CE Marking Directive 93/68/EEC

Signature: Richard Mason
Richard Mason
Managing Director

Date: 5/9/16

EFTECH
ENVIRONMENTAL FOODSERVICE TECHNOLOGIES
Advanced Energy and Kitchen Byproduct Solutions

LED Recess Lights

CHEF-LINK

UV-C

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