

Operations & Service Manual



FSH-2,
FSH-2A-99,
FSH-2A-99W



Model: FSH-2A-99



Giles Enterprises, Inc.

An ISO 9001 Registered Company

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LIMITED WARRANTY

- Subject to the terms and conditions of this Limited Warranty as herein stated, all Giles Enterprises, Inc., Foodservice Equipment and parts purchased new from an authorized Giles Enterprises, Inc., representative are warranted as to defects in material or workmanship for a period of 12 months from the date of installation, provided, however, that with regard to labor costs in connection with this warranty, see below. All installations must be made by a qualified installing agency in accordance with all applicable codes and/or regulations in the jurisdiction in which installed. Limited warranty coverage is extended to the original owner only and is void if the unit is resold.
- During the Limited Warranty period, Giles Enterprises, Inc. will replace or recondition, at its factory, any part or parts of this unit which Giles Enterprises, Inc. inspectors judge defective, provided the unit has been subjected to normal usage, properly installed, operated and serviced. This Limited Warranty does not cover cosmetic damage, and damage due to acts of God, accident, misuse, alteration, negligence, abuse of the Giles Foodservice Equipment or the use of unorthodox repair methods. All parts replaced under this Limited Warranty carry only the unexpired term of this Limited Warranty. Limited Warranty service may be furnished only by an authorized Giles Enterprises, Inc., representative.
- If Limited Warranty service is requested, Giles Enterprises, Inc., will send factory-authorized service representatives to repair, recondition, replace or inspect units of its manufacture with such labor being rendered without cost to owner for ninety (90) days from the date of installation. Otherwise, service, including labor and transportation charges or other expenses, in connection with the removal or installation of any part or parts supplied under this Limited Warranty, are specified on the original sales contract between the purchaser and the authorized Giles Enterprises, Inc., representative.
- Giles Enterprises, Inc. reserves the right to change or improve its equipment and parts in any way without obligation to alter such equipment or parts previously manufactured.
- Giles Enterprises, Inc. makes no further warranties, express or implied including implied warranties of merchantability or fitness for a particular purpose, and has no other obligation or liability not specifically stated herein.
- Repair or replacement as provided under this Limited Warranty is the exclusive remedy. Giles Enterprises, Inc., shall not be liable for any incidental or consequential damages for breach of any express or implied warranty on this product, except to the extent prohibited by applicable law. Any implied warranty of merchantability or fitness for a particular purpose on this product is limited in duration to the duration of this Limited Warranty.
- Used Giles Enterprises, Inc., Foodservice Equipment or parts or Giles Enterprises, Inc., Foodservice Equipment or parts not purchased from an authorized Giles Enterprises, Inc., representative, carry no warranties, express or implied.

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& FSH-2A-99W

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Safety

Safety Overview

The instructions contained in this manual have been prepared to aid you in learning the proper procedures for installing and servicing your new unit.

Throughout this manual, safety precautions are identified through the use of the safety alert symbol and three signal words: **DANGER, WARNING**, and **CAUTION**. All safety alert information precedes the step(s) to which they apply. Suggested, recommended, or other noteworthy information is identified through the use of **NOTES**. Additionally, certain words are used to indicate a specific meaning or to add emphasis.

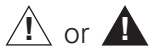
The following words are used as indicated throughout the manual:

Shall: understood to be mandatory.

Should: understood to be advisory.

May: understood to be permissive.

Will: indicates a future event/condition to occur.



Used in conjunction with signal words (**DANGER, WARNING**, or **CAUTION**) to alert you of potential personal injury hazards, immediately preceding precautionary measures that pertain to subsequent step(s). Obey all safety messages that follow this symbol to avoid possible injury or death. Failure to adhere to safety precautions identified by the safety alert symbol may also void the warranty.

DANGER

- Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

- Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

- Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. Also used to alert against unsafe practices.

CAUTION

- When used without the safety alert symbol, **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in equipment/property damage, and void the warranty.

NOTE:

- Identifies suggested, recommended, or other noteworthy information.

Specific Safety Precautions

For your safety, please observe the following precautions when operating or servicing your Giles equipment. Read the following important safety information to avoid personal injury and/or damage to the equipment.

DANGER

- Turn off the unit and unplug the power cord before cleaning or performing maintenance.
- **DO NOT** hose down the unit's interior or exterior with water.
- Failure to comply with these **DANGER** notices will result in death or serious injury, equipment/property damage, and void the warranty.

WARNING

- Consult a qualified electrician to ensure that:
 - all electrical specifications and codes are met.
 - circuit breakers and wiring are of sufficient rating and gauge.
- The unit must be properly grounded and all electrical specifications must be met during installation.
- Improper installation, adjustment, alteration, service or maintenance could result in death or serious injury, equipment/property damage, and void the warranty.
- **DO NOT** use or store gasoline or other flammable liquids or vapors in the vicinity of this or any other appliance!
- Failure to comply with **WARNING** notices could result in death or serious injury and equipment/property damage and void the warranty.

WARNING

- Internal ultraviolet radiation source
- Keep protective barrier in place.
- Replace all removable parts after servicing.
- An interlock is provided to reduce exposure to excessive ultraviolet radiation. **DO NOT** defeat the purpose of the interlock.

CAUTION

- **The unit must be adequately and properly grounded. Improper grounding may result in electrical shock. Always refer to your local electrical code to ensure proper grounding of this or any other electrical equipment. Always consult with an electrician or other qualified service person to ensure breakers and wiring are of sufficient rating and gauge for the equipment being operated.**
- Ensure the unit is positioned in a secure, safe location.
- Consult an electrician to ensure all electrical specifications have been met and the unit is properly grounded. The wiring diagrams contained in this manual should aid your electrician in the installation of your unit.

CAUTION

- The electronic components of the Control Panel are impact-sensitive. Exercise care around the Control Panel to maintain proper operation.
- During cleaning of the unit
 - **DO NOT** steam clean.
 - **DO NOT** use products containing chlorine.
 - **DO NOT** use abrasive products, steel wool or scouring pads.
- **DO NOT** modify, alter or add attachments to this equipment!
- Failure to comply with these **CAUTION** notices may result in equipment/property damage and void the warranty.

CAUTION

- The unit must remain in the upright (vertical) position.
- Exercise care when removing the wooden crate from around the unit.
- **DO NOT** operate the unit unless you fully understand the components and their intended function (see Section 3).

NOTE:

- If the crate is damaged upon receipt, immediately inspect the unit and notify the carrier of any damage to the unit.
- To aid the electrician, an electrical wiring diagram is contained in this manual. Refer to the wiring diagram during installation or servicing.
- Comply with all appropriate state and/or local health regulations regarding the cleaning and sanitation of equipment.

NOTE:

- **An HVAC specialist may be required for installations to confirm proper air exchange and the heat load capabilities of the on site AC system.**
- Exhaust ventilation is recommended for areas in which recirculating hoods are used. We recommend 50 CFM per lineal ft. of hood.
- This amount could vary based on local codes and the site specific installation requirements.

Notes:

1. Introduction

Congratulations on the purchase of your new Giles Free Standing Ventless Hood, Model FSH-2, FSH-2A, FSH-2A-99 or FSH-2A-99W manufactured by Giles Enterprises, Inc., Montgomery, Alabama (USA), hereafter referred to as "Giles". The Free Standing Ventless Hood is a product of extensive research and testing. Every unit is thoroughly inspected and tested prior to shipment. Proper care and maintenance will ensure years of trouble-free service.

The Giles Ventless Hood System is used in conjunction with various listed cooking appliances to accomplish removal of grease vapors and objectionable odors which may be generated during cooking. The hood system performs this function through the use of what is commonly referred to as an electronic air cleaner (EAC). Electronic air cleaners use an electrical charge to remove contaminants from the air as they pass through the EAC.

To help protect your investment in this equipment, we recommend taking a few moments to familiarize yourself with the installation, cleaning and maintenance procedures contained in this manual. Read these instructions before installation and use. Adherence to these recommended procedures minimizes the potential for costly "down-time" and equipment repairs. Please retain this manual for future reference.

1-01. Construction

All of the unit's exterior parts are constructed of stainless steel.

1-02. Standard Features

Three Stage Filtration -uses three different filters to remove particulate matter from the air.

Extinguishing System -built into the hood to extinguish an accidental fire from the Fryer installed underneath the hood.

1-03. Optional Feature

Ultimate Ventless:

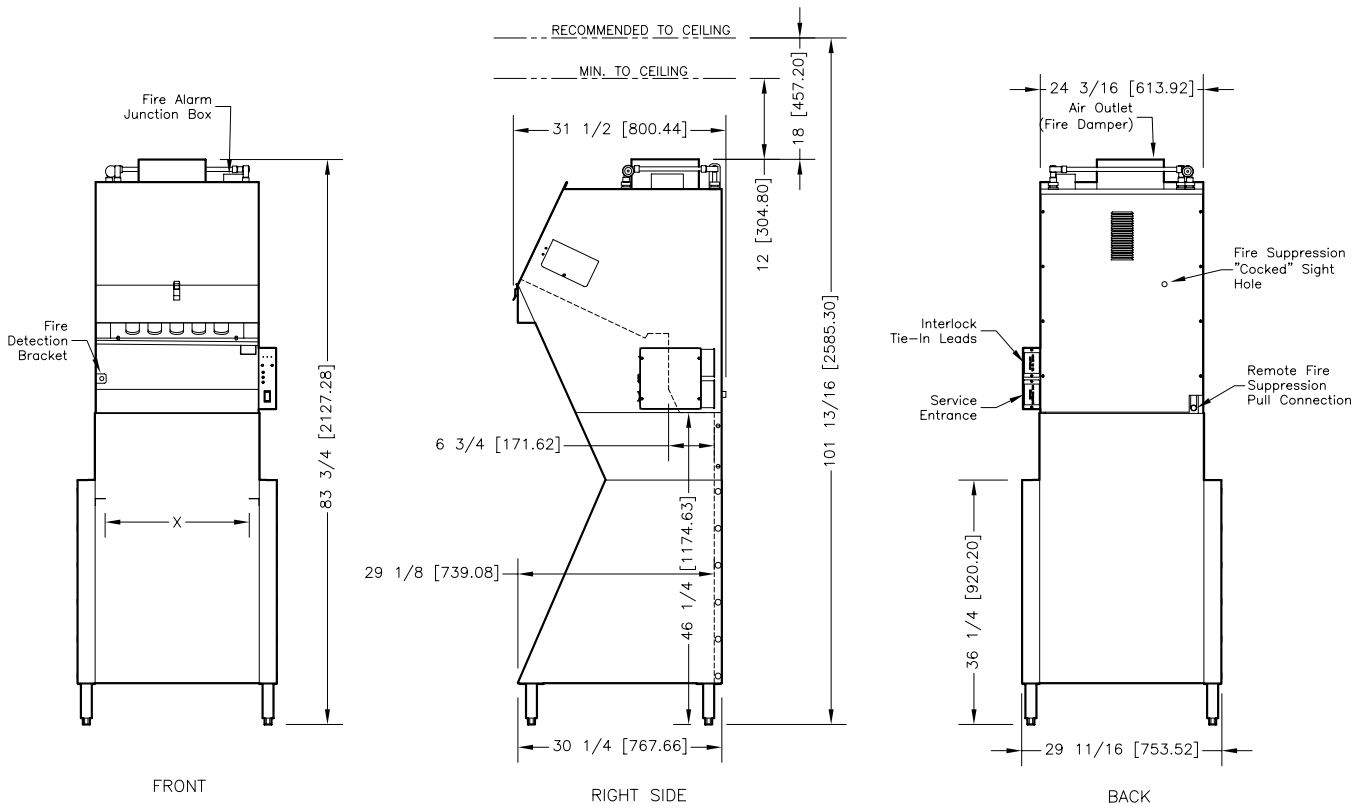
Ultra Violet light in conjunction with Giles patented air filtration system improves emission cleaning and odor control as well as keeping the unit free from grease build up.

Interlocking Start System (ILS)

-Interlocking Start System (ILS) -This system will cause the Hood and the Appliance below the Hood to shut down when the hood filters need to be cleaned or are not properly installed. ILS is required by some cities and/or states. Please check with your local code officials to see if this system is required.

1-03. Specifications

1-03.01. Overall Dimensions for FSH-2



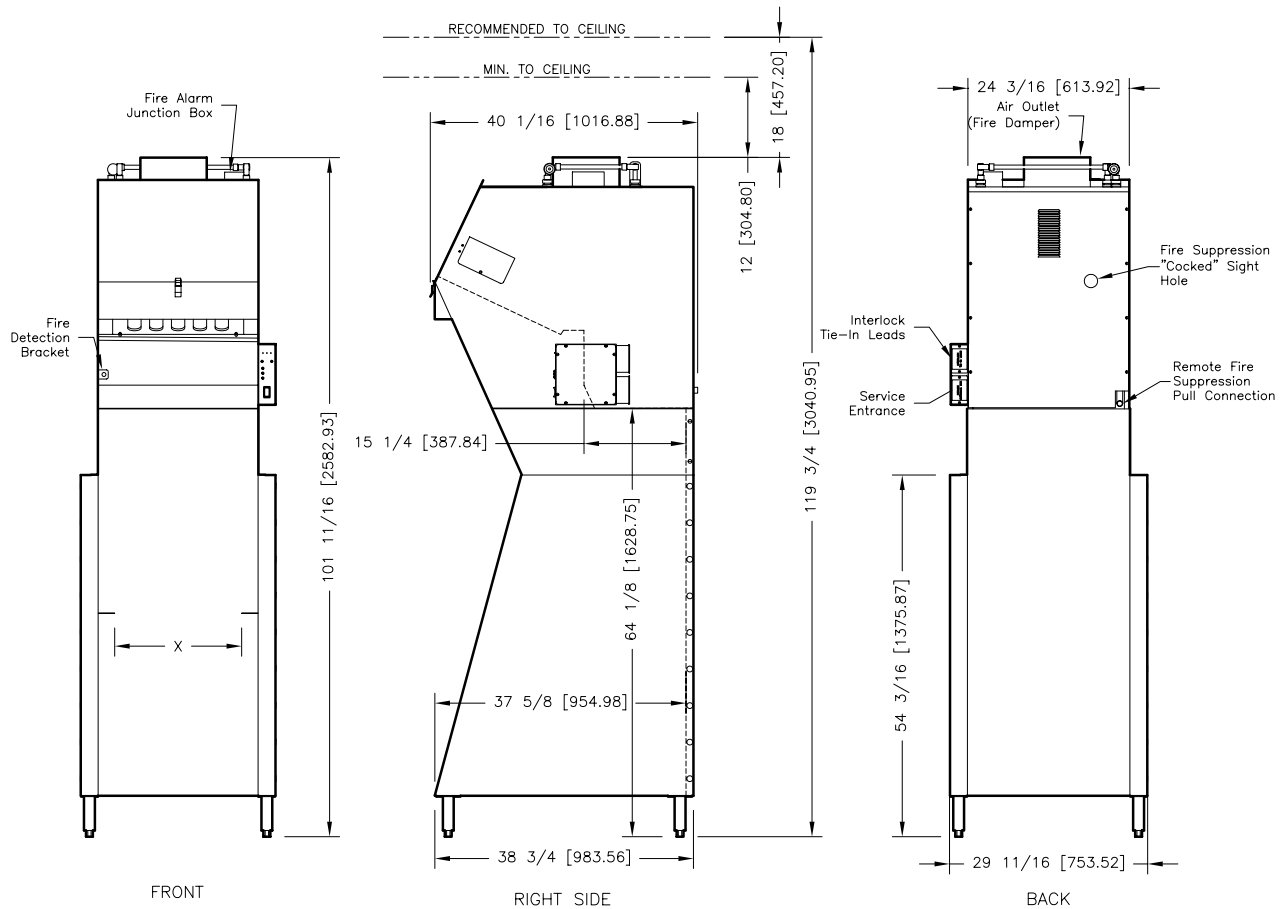
INCHES [MILLIMETERS]

DOCKING OPENING WIDTH "X"		
MODEL (LETTER DESIGNATION FOR OPENING)	INCHES	MILLIMETERS
FSH-2 (A)	24	609.6
FSH-2 (B)	20-1/8	511.2
FSH-2 (C)	18-5/8	473.1
FSH-2 (D)	16-1/8	409.6
FSH-2 (E)	15-5/8	396.9
FSH-2 (F)	15-1/8	384.2
FSH-2 (G)	14-1/8	358.8
FSH-2 (H)	10-1/8	257.2

Introduction

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

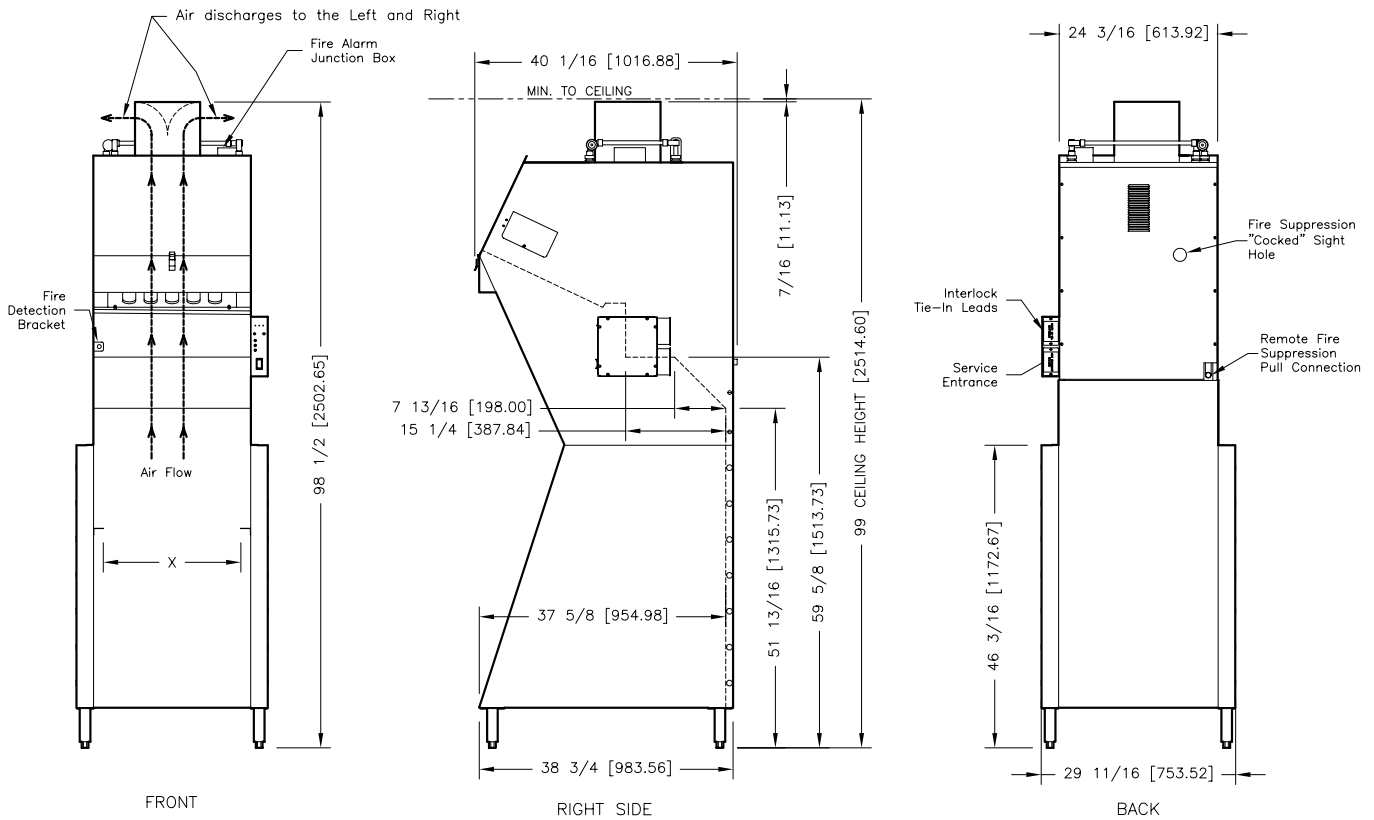
1-03.02. Overall Dimensions for FSH-2A



INCHES [MILLIMETERS]

DOCKING OPENING WIDTH "X"		
MODEL (LETTER DESIGNATION FOR OPENING)	INCHES	MILLIMETERS
FSH-2A (A)	24	609.6
FSH-2A (B)	20-1/8	511.2
FSH-2A (C)	18-5/8	473.1
FSH-2A (D)	16-1/8	409.6
FSH-2A (E)	15-5/8	396.9
FSH-2A (F)	15-1/8	384.2
FSH-2A (G)	14-1/8	358.8
FSH-2A (H)	10-1/8	257.2

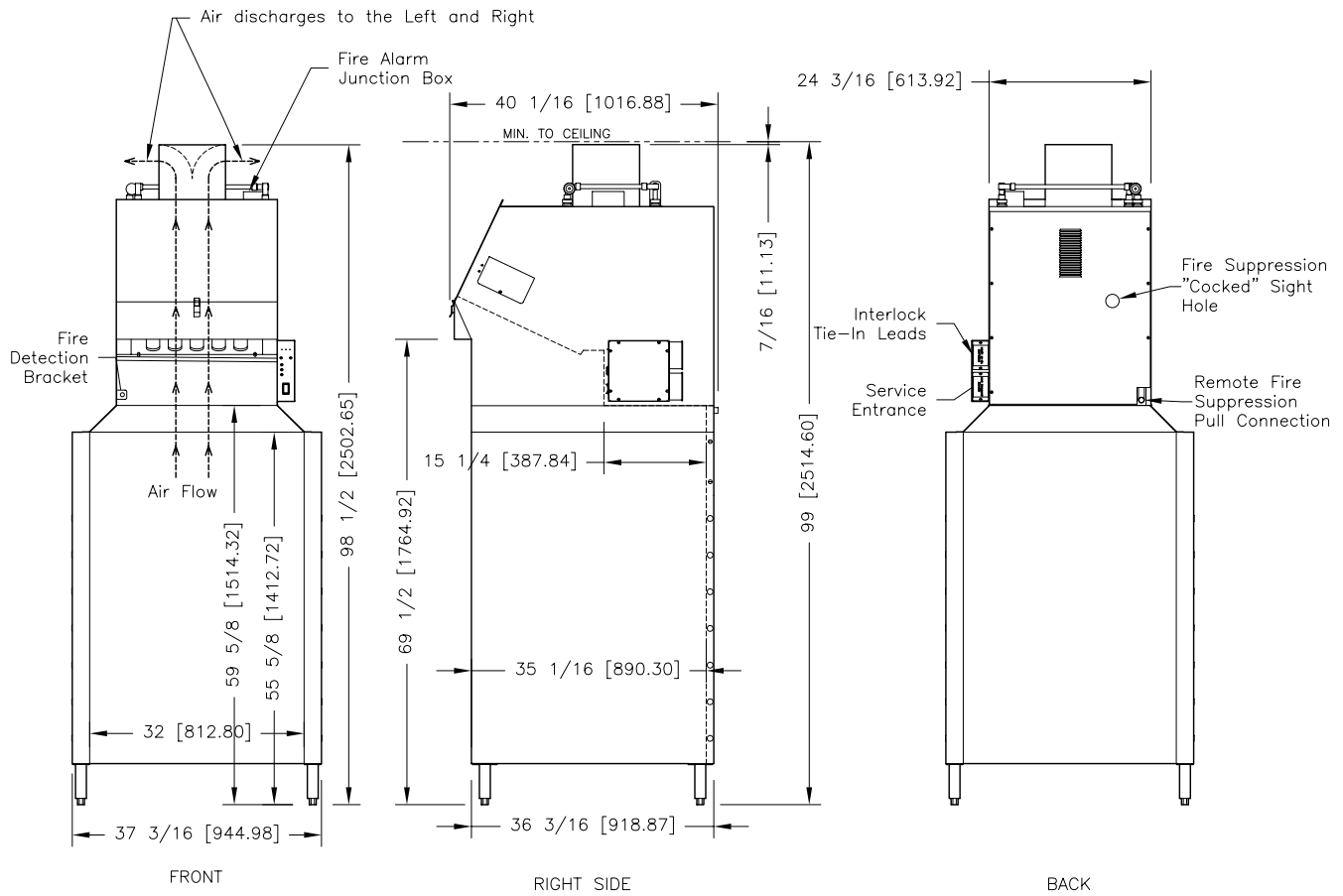
1-03.03. Overall Dimensions for FSH-2A-99



INCHES [MILLIMETERS]

DOCKING OPENING WIDTH "X"		
MODEL (LETTER DESIGNATION FOR OPENING)	INCHES	MILLIMETERS
FSH-2 (A)	24	609.6
FSH-2 (B)	20-1/8	511.2
FSH-2 (C)	18-5/8	473.1
FSH-2 (D)	16-1/8	409.6
FSH-2 (E)	15-5/8	396.9
FSH-2 (F)	15-1/8	384.2
FSH-2 (G)	14-1/8	358.8
FSH-2 (H)	10-1/8	257.2

1-03.04. Overall Dimensions for FSH-2A-99W



INCHES [MILLIMETERS]

1-03.04. Regulatory Listings

UL (US and Canada)
NSF
CE

1-03.06. Unit Weights

Model	Weights			
	Crated		Uncrated	
	lb	kg	lb	kg
FSH-2	462	146	327	148
FSH-2A	609	277	454	206
FSH-2A-99	535	243	380	173
FSH-2A-99W	635	289	480	218

2. Installation

This section provides a summary of the procedures necessary for proper installation of your unit. To help prevent personal injury or equipment damage, please ensure the following steps are taken.

2-01. Location

NOTE:

- The decibel level of the hood when operating is approximately 65 dB's.

 **CAUTION**

- **DO NOT MODIFY, ALTER OR ADD ATTACHMENTS TO THIS EQUIPMENT**

1. Before unpacking the unit and assembling the unit, using the dimensions and clearances shown in Section 2-04.03. and 2-04.06, determine the location of the unit.
2. Keep the unit and the surrounding area free and clear from combustible materials.
3. Please provide adequate room for servicing and proper operation of the unit. Also, provide adequate ventilation in the operating area where necessary.
4. Before operating, make sure the unit is in a secure position and will not move.

NOTE:

- **An HVAC specialist may be required for installations to confirm proper air exchange and the heat load capabilities of the on site AC system.**
- Exhaust ventilation is recommended for areas in which recirculating hoods are used. We recommend 50 CFM per lineal ft. of hood.
- This amount could vary based on local codes and the site specific installation requirements.

2-02. Unpacking

Your unit may arrive enclosed by a wooden crate. The Hood is secured to a wooden platform by means of high-tensile strength strapping.

NOTE:

- **If the crate is damaged, immediately inspect the unit and notify the carrier of any damage to the unit.**

⚠ CAUTION

- **Exercise care when lifting or moving the unit.**
- **Exercise care when removing the wooden crate from around the unit.**
- **Failure to comply with these CAUTION notices may result in minor or moderate injury, equipment/property damage, and void the warranty.**

1. Carefully cut and remove the plastic shipping wrap and the strapping mentioned above.
2. Use pliers to loosen wire hooks which secure the wooden crate around the unit. Remove the wooden crate.
3. Carefully remove the unit from the shipping platform. Your new FSH-2, FSH-2A, FSH-2A-99, or FSH-2A-99W is extremely heavy, see Section 1-03.04. for unit weights. Great care should be taken in lifting or moving the unit to prevent personal injury or equipment damage.

2-03. Electrical Requirements

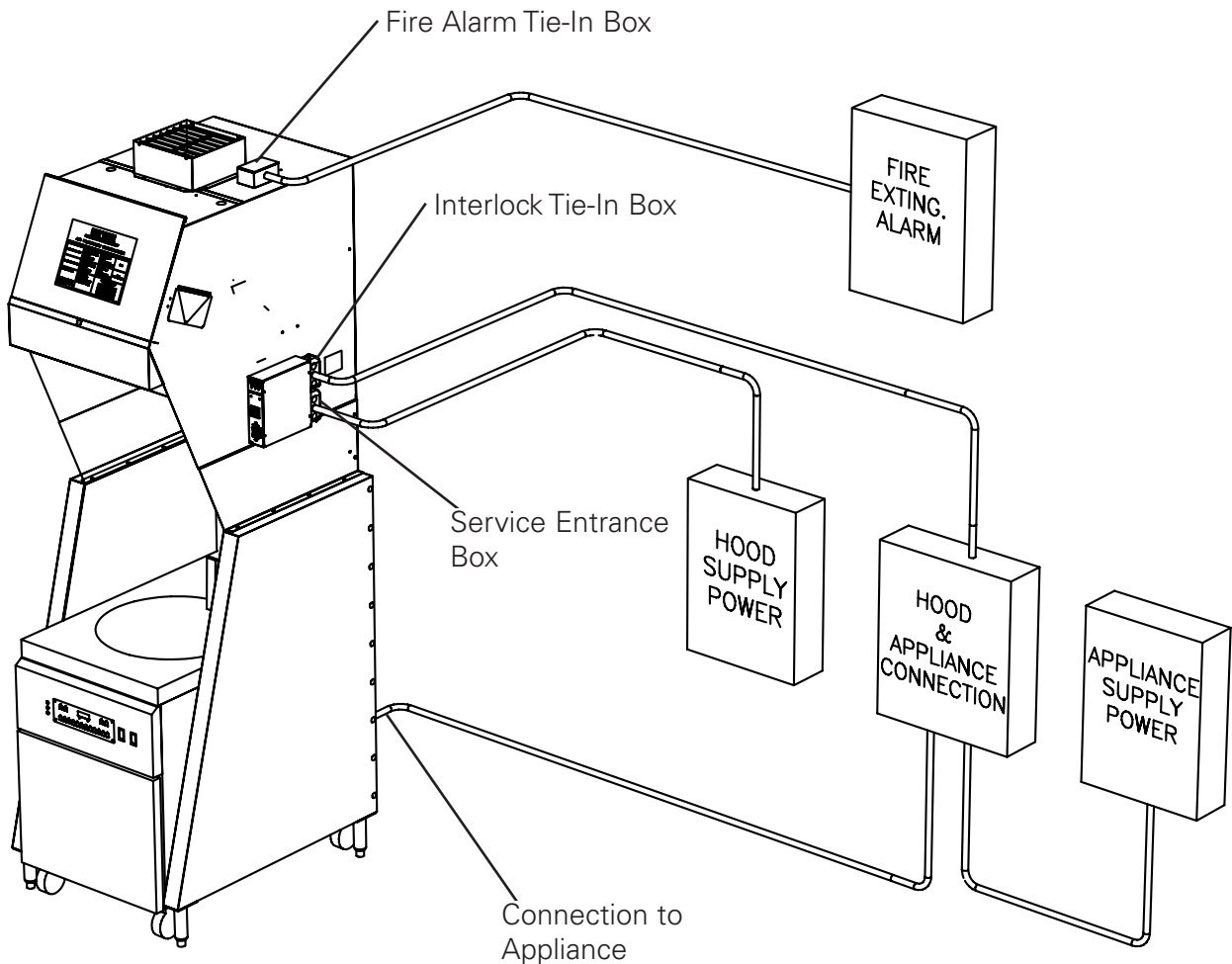
⚠ WARNING

- Consult a qualified electrician to ensure all electrical specifications have been met and that the unit is properly grounded.
- **The unit must be adequately and properly grounded. Improper grounding may result in electrical shock. Always refer to your local electrical code to ensure proper grounding of this or any other electrical equipment. Always consult with an electrician or other qualified service person to ensure breakers and wiring are of sufficient rating and gauge for the equipment being operated.**
- Improper installation, adjustment, alteration, service or maintenance could result in death or serious injury, equipment/property damage, and void the warranty.

Hood Electrical Requirements

Unit	Voltage	Hz	Phase	Amps	Breaker
FSH-2	208-240	60	1	3	10
FSH-2A	208-240	60	1	3	10
FSH-2A-99	208-240	60	1	3	10
FSH-2A-99W	208-240	60	1	3	10

2-03.01. Electrical Connections (Overview)



2-03.02. Hood Power Connection

Connect Hood Power:

1. Install appropriate Circuit Breakers in Hood Supply Power Box (Main Breaker Box). See Section 2-03. for required Circuit Breakers.
2. Remove Cover on Service Entrance Box and run appropriate size conduit and wire from the Service Entrance Box to the Hood Supply Power box (Main Breaker Box). Allow enough conduit and wire so the unit can be accessed for cleaning and servicing.
3. Make all appropriate connections.
4. Reinstall Service Entrance Box Cover.

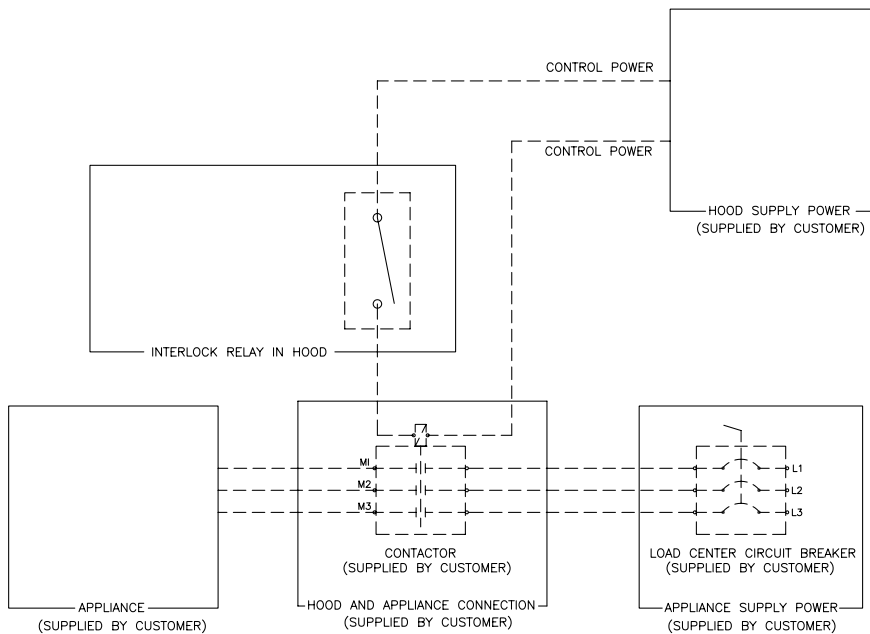
2-03.03. Hood and Appliance Interlock Connection

This connection will cause the Appliance installed below the Hood to shut down if any of the following occurs:

- Any Filter becomes excessively dirty, not allowing proper air flow through the Hood.
- Any Filter is missing or not installed correctly
- The Fire Extinguisher System is activated.

Interlock Hood to Appliance:

1. Remove Cover on Interlock Tie-In Box and run appropriate size conduit and wire from the Interlock Tie-In Box to a Hood and Appliance Connection Box (Supplied by Customer). Allow enough conduit and wire so the Hood can be accessed for cleaning and servicing.
2. Make appropriate connections. See Diagram below.
3. Reinstall Interlock Tie-In Box Cover.



NOTE:

- **If not using the ILS option, the Hood will continue to run and the Appliance will turn off when:**
 - Any Filter becomes excessively dirty, not allowing proper air flow through the Hood.
 - Any Filter is missing or not installed correctly.
 - The Fire Extinguisher System is activated.
- **If using the ILS option, the Hood and Appliance will turn off when:**
 - Any Filter becomes excessively dirty, not allowing proper air flow through the Hood.
 - Any Filter is missing or not installed correctly.
 - The Fire Extinguisher System is activated.

2-03.04. Fire Alarm Connection

This connection will send a signal the Facility Fire Alarm System that the Hood Fire Extinguisher System has been activated.

Fire Alarm Connection:

1. Remove Cover on Fire Alarm Tie-In Box and run appropriate size conduit and wire from the Box to the Facility Fire Alarm System. Allow enough conduit and wire so the Hood can be accessed for cleaning and servicing.
2. Make appropriate connections.
3. Reinstall Fire Alarm Tie-In Box Cover.

2-04. Fryer and Oven Limitations and clearances

This section describes various limitations to the fryers and the oven that can be placed underneath the hoods. Please note only Electric Fryers and Ovens that do not exceed the following limitations and following clearances are approved to be placed under these hoods. Gas Fryers, Gas Ovens, or any other type of appliances are not approved.

2-04.01. Fryer Limitations under FSH-2, FSH-2A, FSH-2A-99

WARNING

- **These Hoods are design for Electric Fryers Only!!! DO NOT USE ANY GAS APPLIANCES UNDER THE FSH-2, FSH-2A, FSH-2A-99!!!**

Hood	Max. kW Input	Max. Shortening Capacity (lbs)	Max Cooking Surface (per Fryer)
FSH-2	20 (Fryers only)	110	380 Sq. In.
FSH-2A	20 (Fryers only)	110	380 Sq. In.
FSH-2A-99	20 (Fryers only)	110	380 Sq. In.

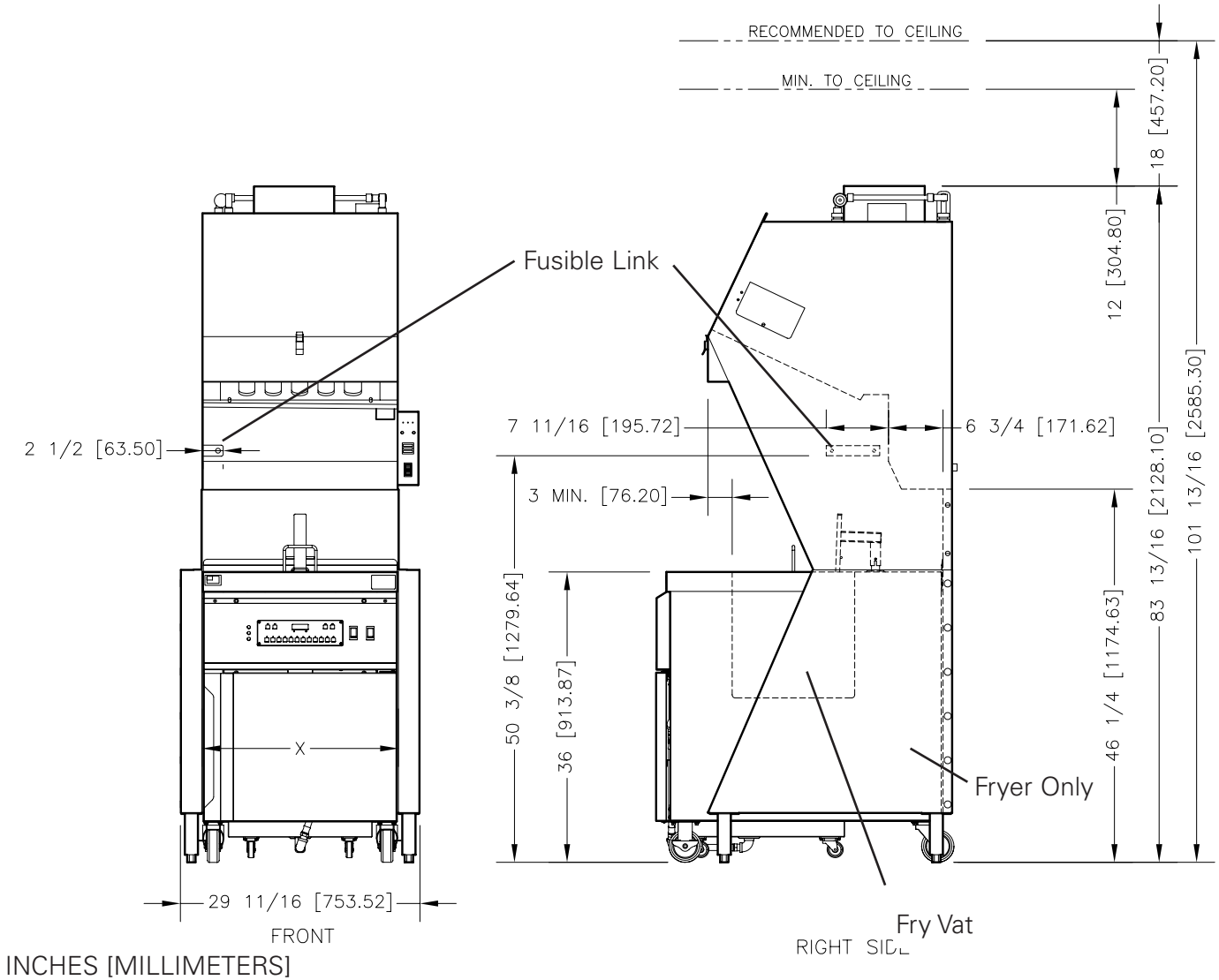
2-04.02. Oven Limitations under FSH-2A-99W

⚠ WARNING

- This Hood is design for Electric Ovens Only!!! DO NOT USE ANY GAS APPLIANCES UNDER THE FSH-2A-99W!!!

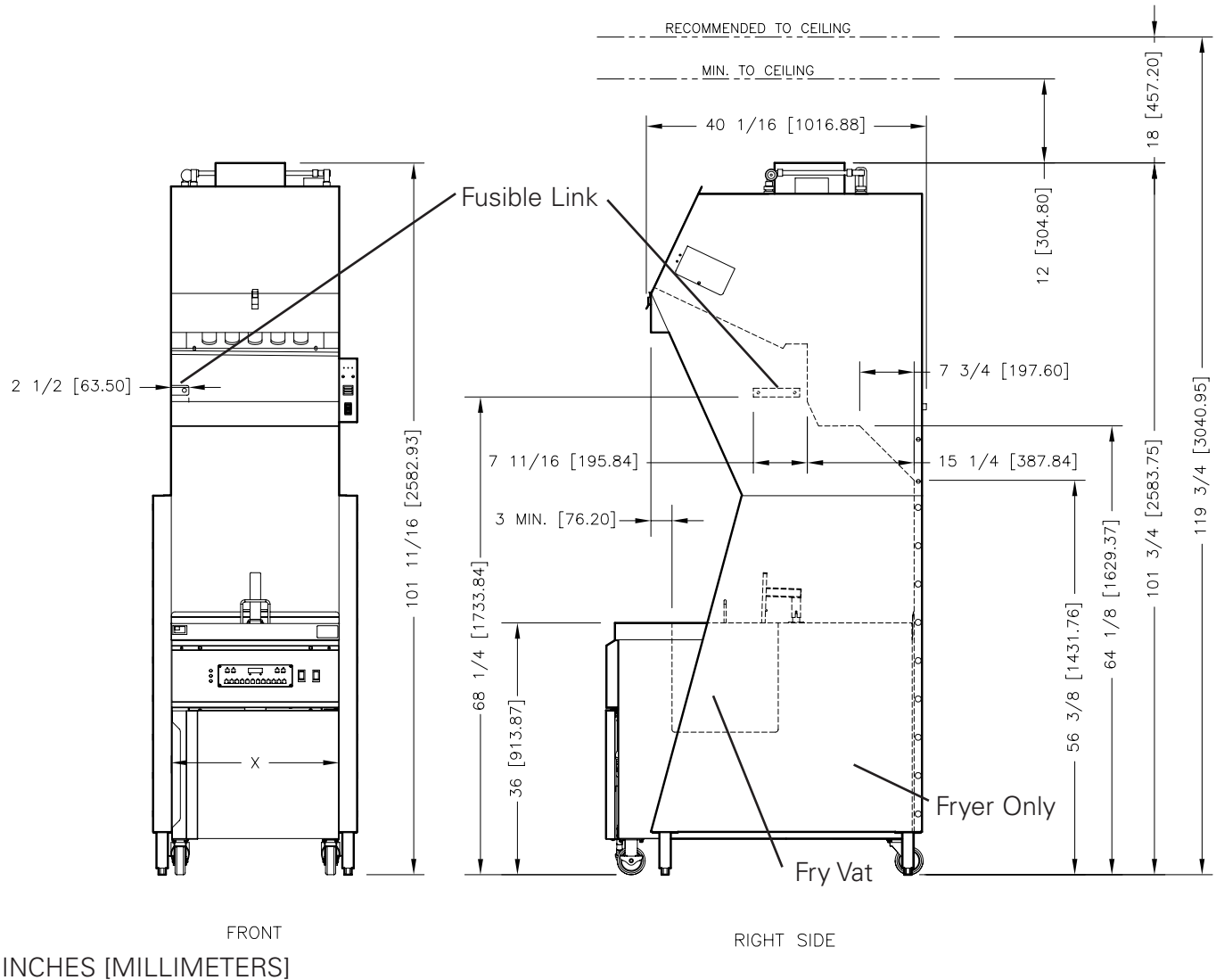
Hood	Max. kW Input	Max. Oven Temperature
FSH-2A-99W	8 (Ovens only)	450F

2-04.03. Fryer Clearances for FSH-2



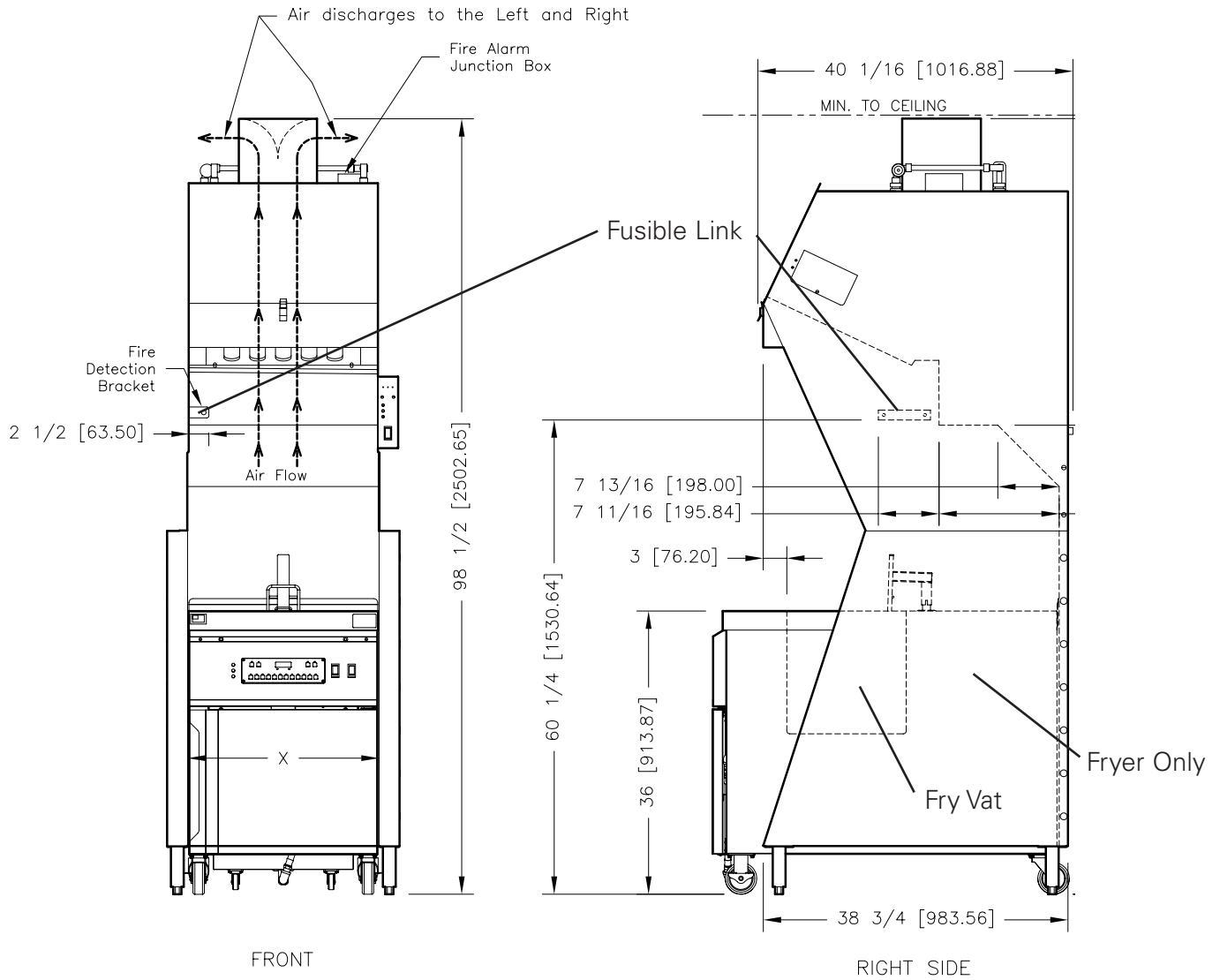
DOCKING OPENING WIDTH "X"		
MODEL (LETTER DESIGNATION FOR OPENING)	INCHES	MILLIMETERS
FSH-2 (A)	24	609.6
FSH-2 (B)	20-1/8	511.2
FSH-2 (C)	18-5/8	473.1
FSH-2 (D)	16-1/8	409.6
FSH-2 (E)	15-5/8	396.9
FSH-2 (F)	15-1/8	384.2
FSH-2 (G)	14-1/8	358.8
FSH-2 (H)	10-1/8	257.2

2-04.04. Fryer Clearances for FSH-2A



DOCKING OPENING WIDTH "X"		
MODEL (LETTER DESIGNATION FOR OPENING)	INCHES	MILLIMETERS
FSH-2A (A)	24	609.6
FSH-2A (B)	20-1/8	511.2
FSH-2A (C)	18-5/8	473.1
FSH-2A (D)	16-1/8	409.6
FSH-2A (E)	15-5/8	396.9
FSH-2A (F)	15-1/8	384.2
FSH-2A (G)	14-1/8	358.8
FSH-2A (H)	10-1/8	257.2

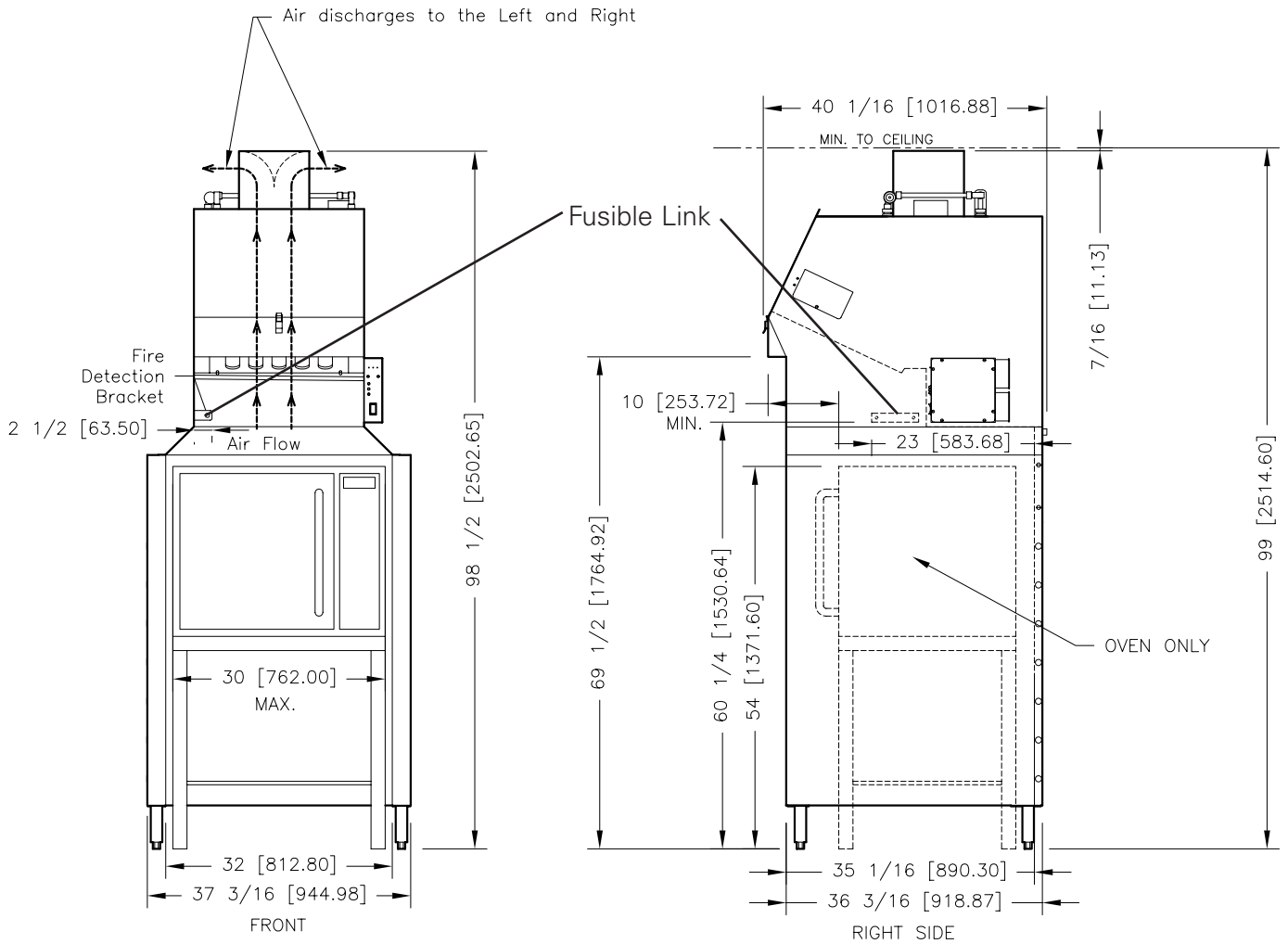
2-04.05. Fryer Clearances for FSH-2A-99



INCHES [MILLIMETERS]

DOCKING OPENING WIDTH "X"		
MODEL (LETTER DESIGNATION FOR OPENING)	INCHES	MILLIMETERS
FSH-2A-99 (A)	24	609.6
FSH-2A-99 (B)	20-1/8	511.2
FSH-2A-99 (C)	18-5/8	473.1
FSH-2A-99 (D)	16-1/8	409.6
FSH-2A-99 (E)	15-5/8	396.9
FSH-2A-99 (F)	15-1/8	384.2
FSH-2A-99 (G)	14-1/8	358.8
FSH-2A-99 (H)	10-1/8	257.2

2-04.06. Oven Clearances for FSH-2A-99W



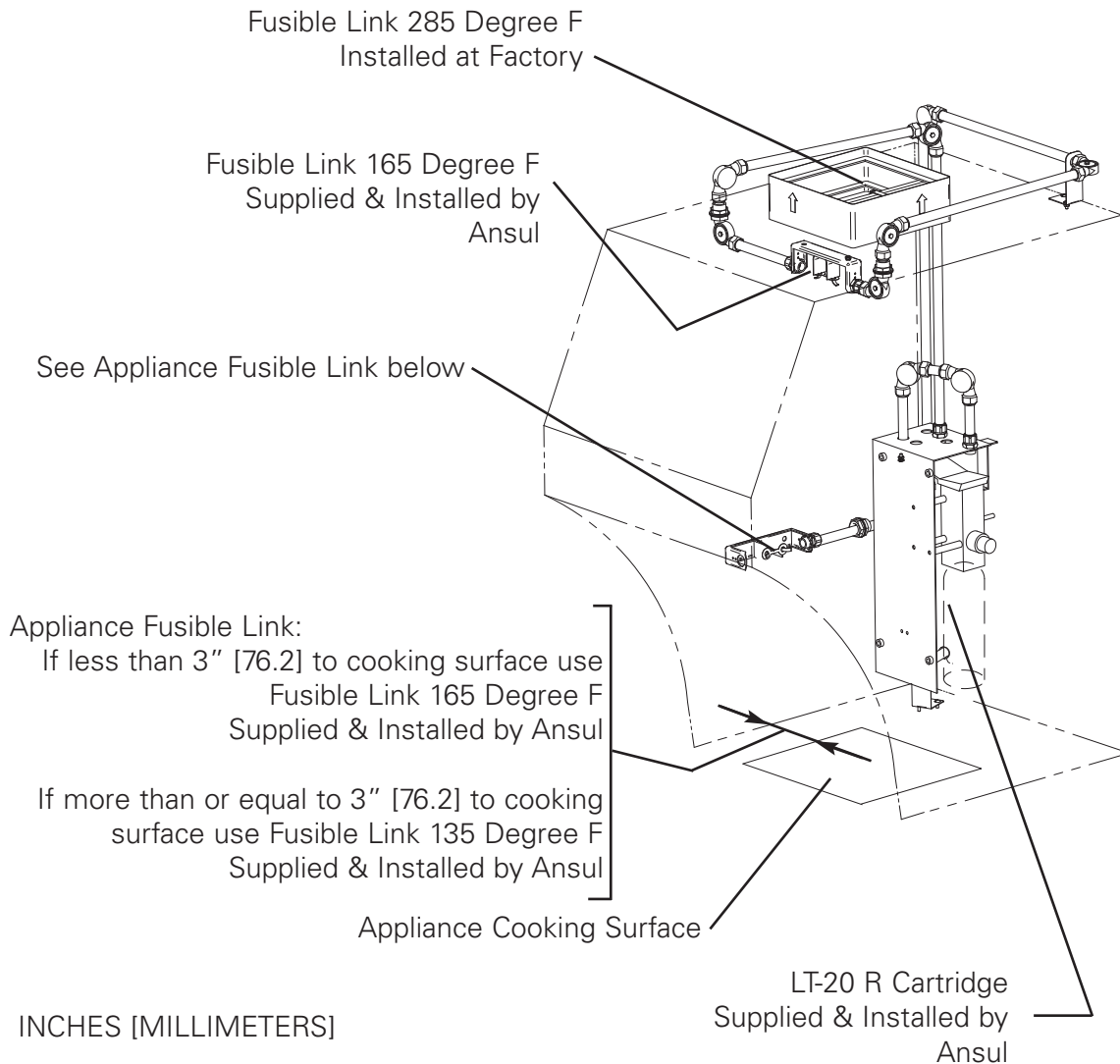
INCHES [MILLIMETERS]

2-05. Fire Suppression System

The fire suppression system used in your Giles Ventless Hood is an Ansul R-102 Restaurant Fire Suppression System (Standard UL 710B Listed). **Final installation, charging and testing of the system must be performed by an authorized Ansul distributor in accordance with the system's listing.**

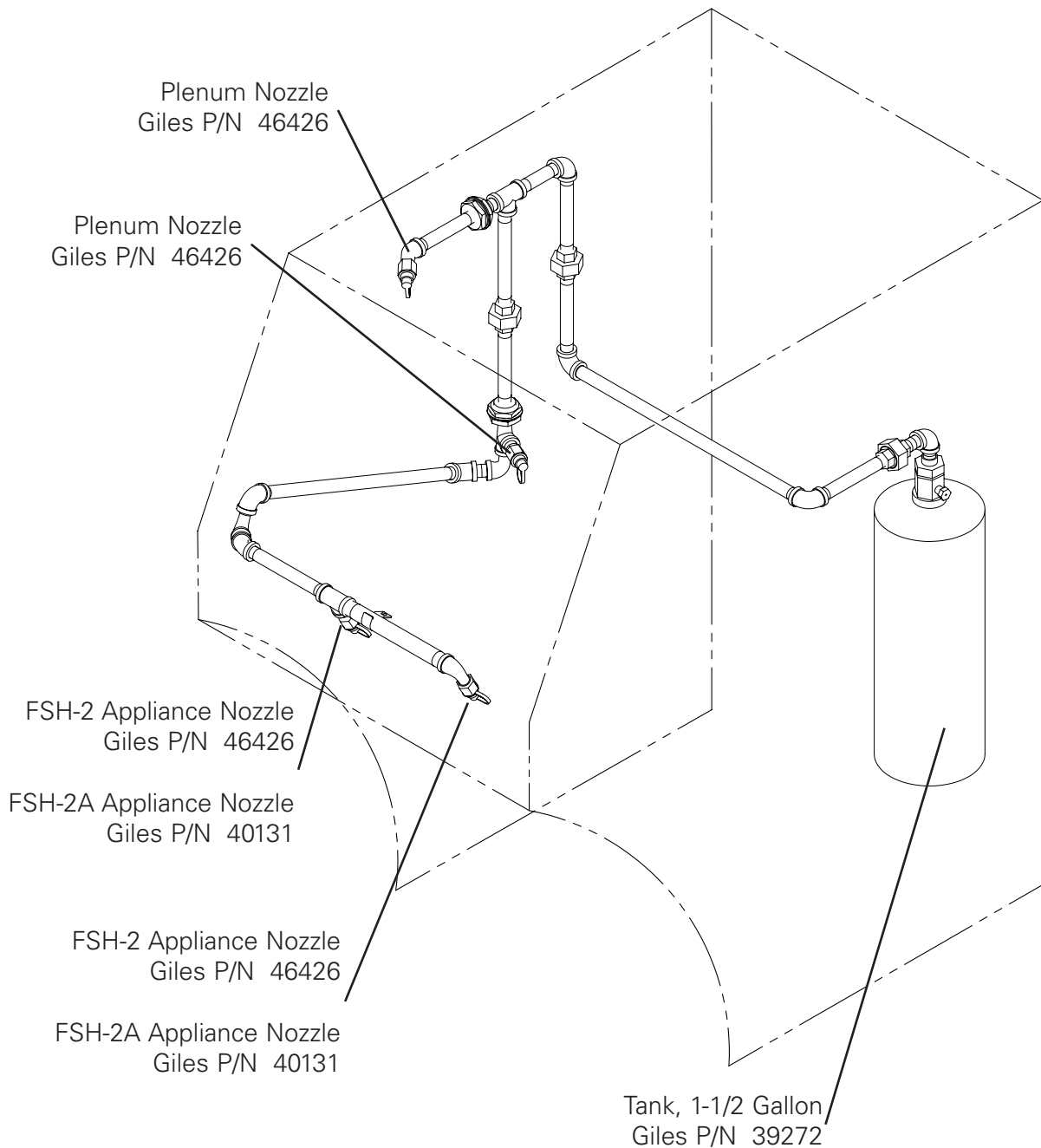
The fire suppression system is designed and UL-listed to provide fire protection for cooking appliances such as fryers. It protects your units, automatically, 24 hours per day. The system contains piping, nozzles (both appliance and plenum), and conduit for routing the fusible link cable through the hood.

2-05.01. Fusible Links and Gas Cartridge Location



2-05.02. Fire Extinguishing Nozzles and Tank Location

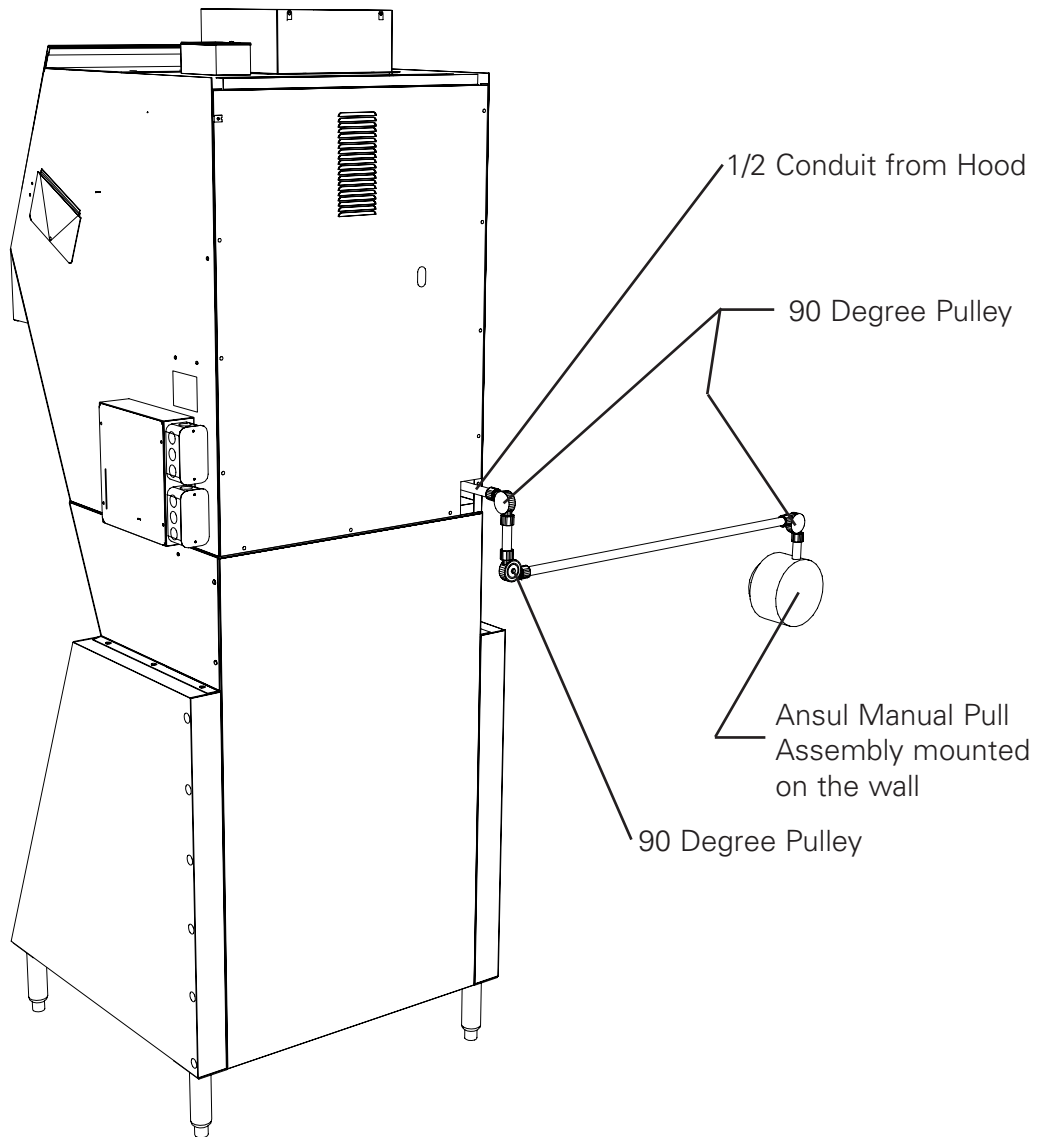
All nozzles have been factory installed in the proper operating position. **DO NOT MOVE OR ADJUST.**



2-05.03. Manual Pull Diagram

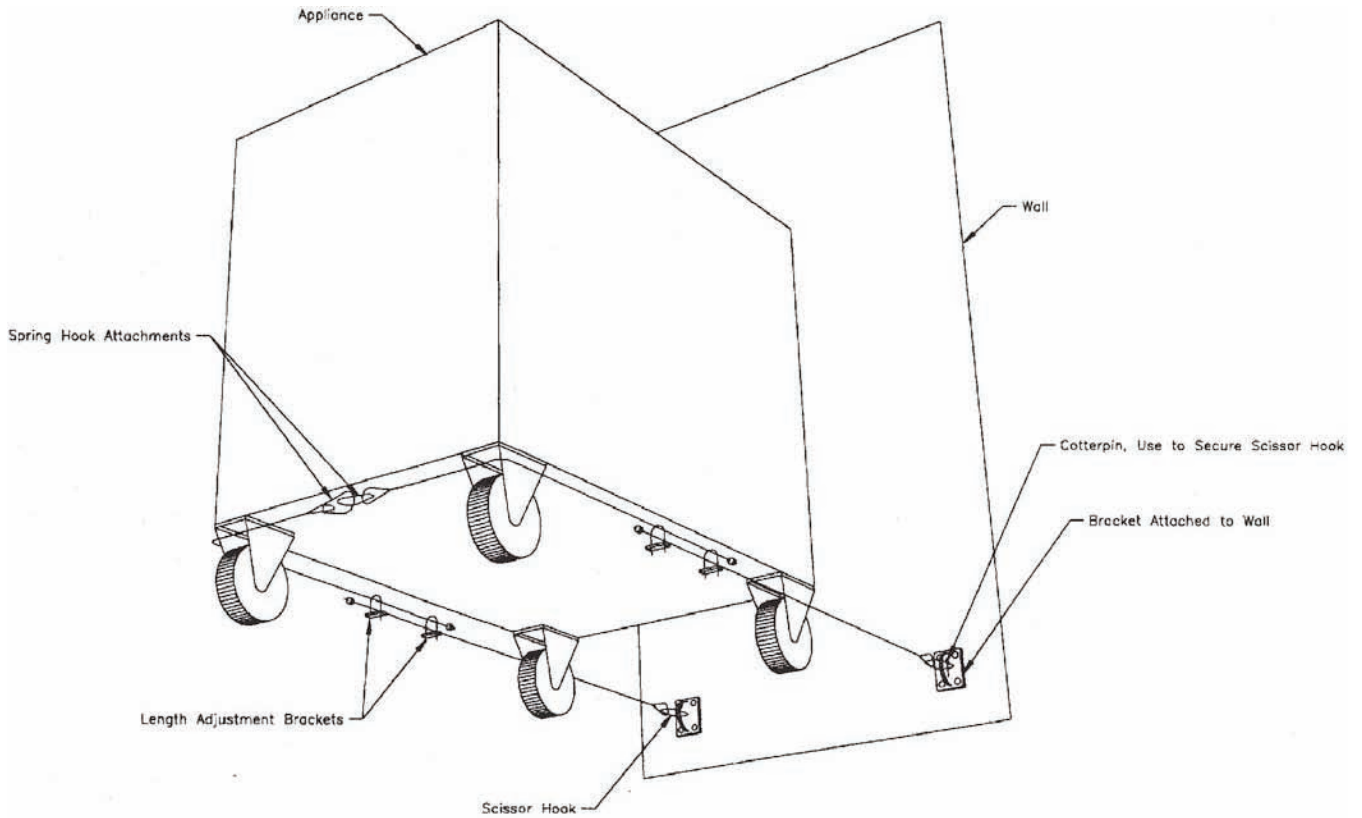
This Hood requires use of the Ansul R-102 Standard for a Manual Pull System. The Manual Pull System must be mounted on a near-by wall and connected to the Hood. This Manual Pull System is used to activate the Fire Extinguisher System from a remote location. The Manual Pull System is supplied and installed by Ansul.

The following illustration is a typical Manual Pull installation. Using this basic configuration the Hood may be moved from the wall for Cleaning and Servicing without removing the Manual Pull from the wall.



2-06. Restraining Device

Any Fryer placed under this Hood must be secured so that the Fryer can not move from below the Hood. The following is an example of a restraining device that may be used. The appropriate restraining device will vary depending on the Fryer, the restraining device is not supplied with the hood.



Note: Be sure to maintain minimum and maximum clearances (see Section 2-04.02 or 2-04.03 after the Restraining Device is installed.

3. Overview

The following section provides a brief overview of the components, functions, and accessories of the Free Standing Hood, Model FSH-2, FSH-2A, FSH-2A-99 and FSH-2A-99W. Please review this section carefully before proceeding any further.



3-01. Filter Area



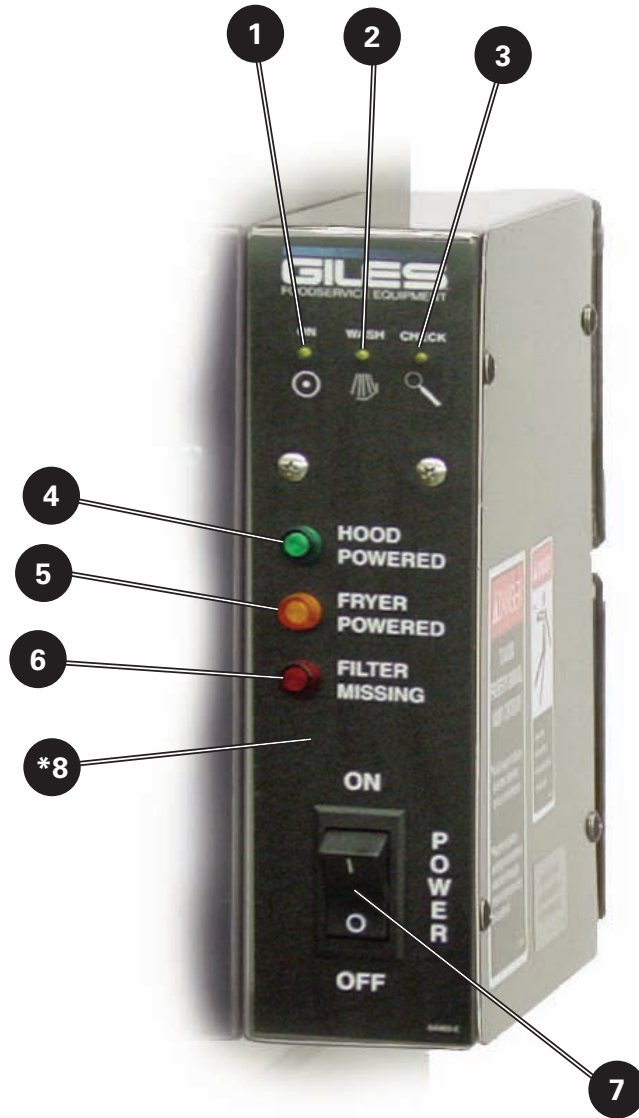
* -Not Shown

3-01. Filter Area

Item	Description	Function
*1	Hood Filter Cover	Used to access the Electronic Air Cleaner (EAC) and Charcoal Filters. This cover must be in place and latched for the unit to operate. <i>Ultra Violet Panel has sight windows.</i>
2	Ultra Violet Lamp (optional)	Improves emission cleaning and odor control as well as keeping the unit free from grease build-up, improving fire safety and leading to less maintenance. This lamp should be cleaned monthly and replaced annually. DO NOT touch Lamp with bare hands
3	Charcoal Filter	This Filter helps to remove odors generated during cooking. This Filter should be replaced monthly. NEVER attempt to clean a Charcoal Filter. Keep a spare filter on hand (Giles 30248) for quick change-out when needed! DO NOT remove the Charcoal Filter while the Hood or the Fryer is operating to prevent contact with electrical parts and avoid electrical shock.
4	EAC Filter	The EAC Filter is an electrical device which removes grease vapor and smoke generated by the fryer during cooking. Power must be turned OFF to the Hood and Fryer before removing the EAC for cleaning. The EAC should be cleaned daily. DO NOT remove the EAC Filter while the Hood or the Fryer is operating to prevent contact with electrical parts and avoid electrical shock.
5	Baffle Filter	The Baffle Filter is the first stage of the grease extraction and air-cleaning system found on these units. It is easily removed for daily cleaning. DO NOT remove the Baffle Filter while the Hood or the Fryer is operating to prevent contact with electrical parts and avoid electrical shock.
6	Grease Drip Cup	Used to hold excess grease from the hood. This cup should be cleaned daily or as needed.
7	Grease Drip Cup Safety Pin	Used to hold the Grease Drip Cup in place and to prevent the cup from accidentally dropping
8	Exhaust Stack	Located on top of the unit. Allow the recommended clearance of 18" or a minimum clearance of 12" between the top of the Exhaust Stack and the ceiling.
9	Appliance Fusible Link	Used to detect a fire in the Fryer Vat. Be careful not to hit or bump this link. Doing so may inadvertently cause the Fire Extinguisher System to activate.

* -Not Shown




3-02. Control Panel



3-02. Control Panel



Item	Description	Function
1	ON Indicator Light (EAC Status)	Used to indicate the Electronic Air Cleaner (EAC) Filter is on or powered.
2	WASH Indicator Light (EAC Status)	Used to indicate the EAC has become excessively dirty. Do not rely upon this light as a signal for routine cleaning of the EAC. Failure to clean the EAC daily will significantly decrease the life of the charcoal filter. Clean the EAC daily for best performance.
3	CHECK Indicator Light (EAC Status)	Used to indicate the EAC Filter is no longer cleaning the air. The EAC Filter must be cleaned or repaired.
4	Hood Powered Indicator Light	Used to indicate the Hood is powered and running.
5	Fryer Powered Indicator Light	Used to indicate power is available to the Fryer under the hood.
6	Filter Missing Indicator Light	Used to indicate the Baffle Filter or Charcoal Filter is missing or not correctly in place.
7	Power Switch	Used to turn power on to the Hood and will allow the Fryer under the Hood to be turned on.
*8	Push and Hold to Start Button	<p>(Used with ILS (Interlocking Start) units only). Used after the Power Switch is in the "ON" position, push and hold down "PUSH AND HOLD TO START" Button for 5 seconds allowing the unit to start. This allows the Hood and the Fryer underneath to both shut down if the Hood Filters become excessively dirty.</p> <p>This option is required by some cities. Please contact your local code officials to see if this is required in your city.</p>

* - Not Shown

3-03. Accessories (Included)		
Part	Description/Part Number	Function
	Baffle Filter P/N 42300	Used for removing smoke and contaminants from the air
	EAC Filter P/N 20520	Used for removing smoke and contaminants from the air
	Charcoal Filter P/N 30248	Used for removing odors from the air

Overview

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

3-03. Accessories (Included)		
Part	Description/Part Number	Function
	EAC Soak Tank P/N 39327	Used for cleaning EAC filter.
Part	Description/Part Number	Function
	UV Lamp P/N 90226	Used for emission control.



Notes:

Operation

4. Operation

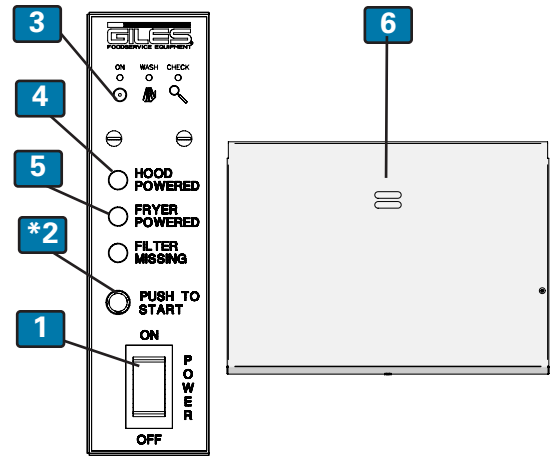
This section describes the operation of and the filter maintenance for the Hood.

4-01. Hood Operation

This section describes how to start the Ventless Hood. Make sure all the Filters and UV Light are in place and correctly installed before operating the unit.

1. Press the Power Switch to the ON **1** position, (if ILS, then press and hold the "Push and Hold to Start" **2** switch, for 5 seconds), the following will occur:

- 3** - illuminates indicating the EAC filter is cleaning the air.
- 4** - illuminates indicating the Hood is on and powered.
- 5** - illuminates indicating power is available to the Fryer underneath the Hood.
- 6** - sight window illuminates indicating UV is operating



* -ILS only

2. The Fryer underneath the Hood may now be turned on and used.

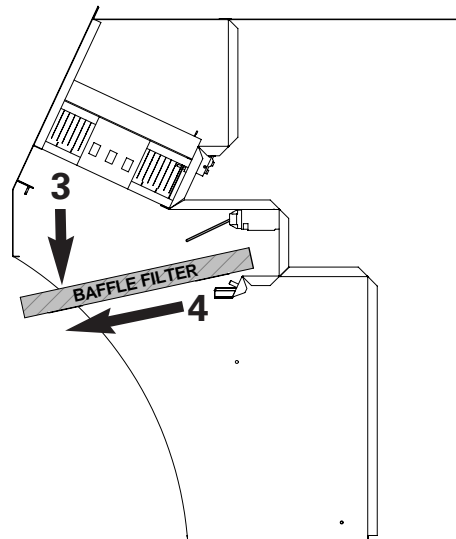
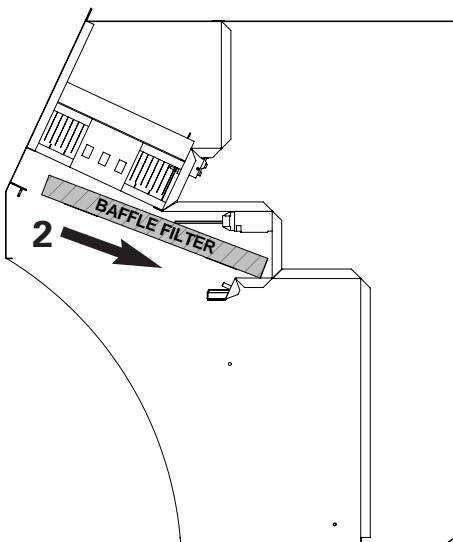
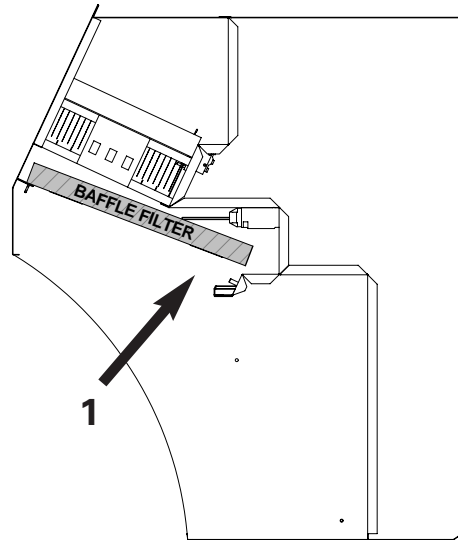
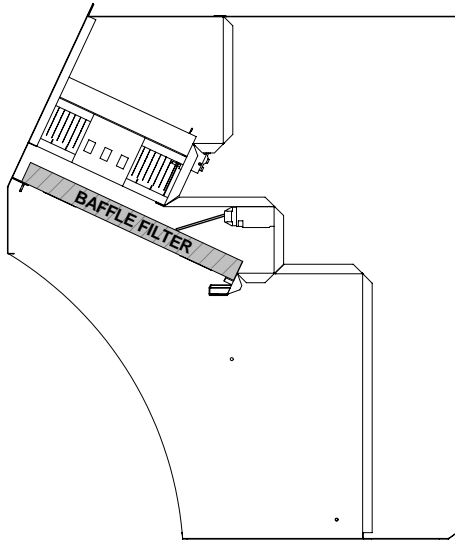
4-02. Hood Filters and Filter Maintenance

This section describes each Filter and it's maintenance required.

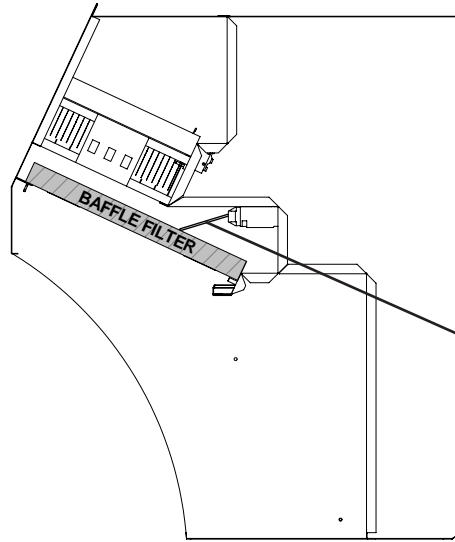
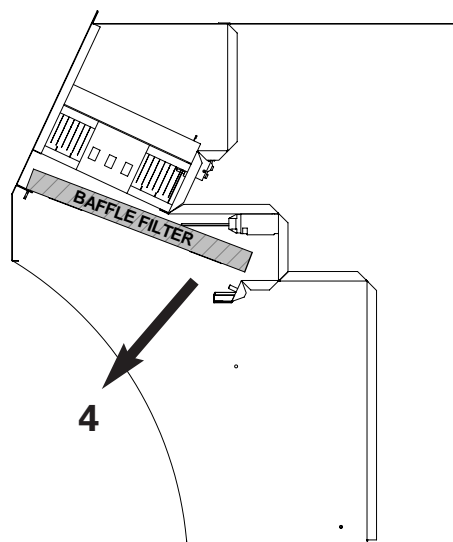
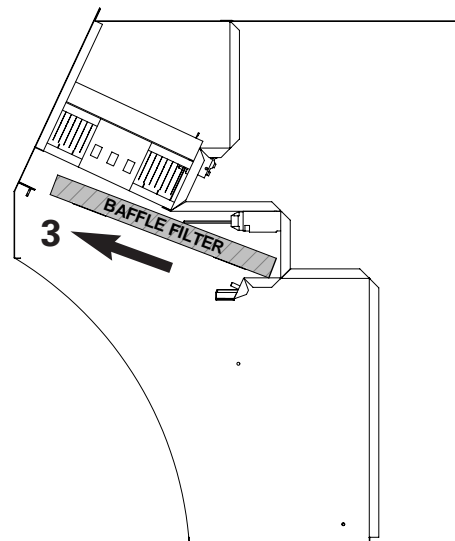
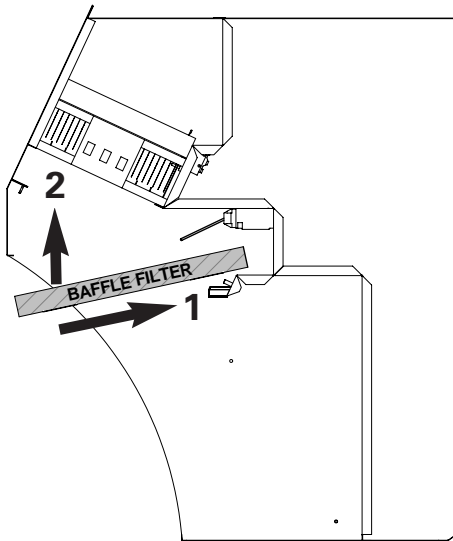
4-02.01. Hood Filter Table

Filter	When to clean or replace	How to remove	How to clean	How to install
Baffle Filter	Clean daily	Section 4-02.06	Section 4-02.07	Section 4-02.08
EAC Filter	Clean daily	Section 4-02.08	Section 4-02.11	Section 4-02.09
Charcoal Filter	Replace every 30 days, P/N 30248	Section 4-02.12.	Never clean, only replace Section 4-02.15	Section 4-02.13.
Ultra Violet Light	Clean every 30 days Replace annually	Section 4-02.14	Section 4-02.16	Section 4-02.15

4-02.02. Baffle Filter Removal



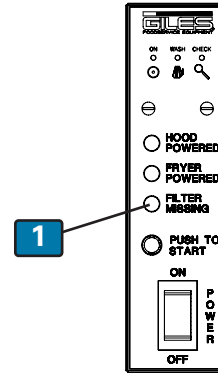
4-02.03. Baffle Filter Installation



Switch arm
must be
actuated by
the Baffle
Filter as
shown

4-02.04. Baffle Filter Missing

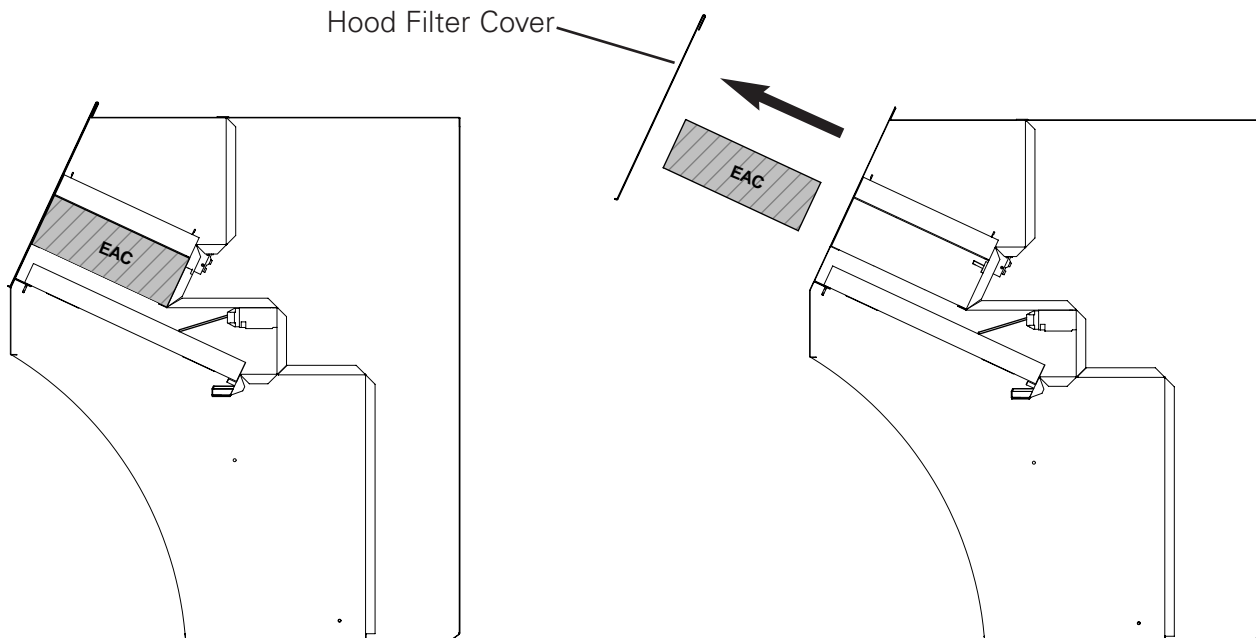
If the Baffle Filter is missing or not in place correctly the Filter Missing Light **1** will come on. See Section 7-02.03 Baffle Filter Installation.



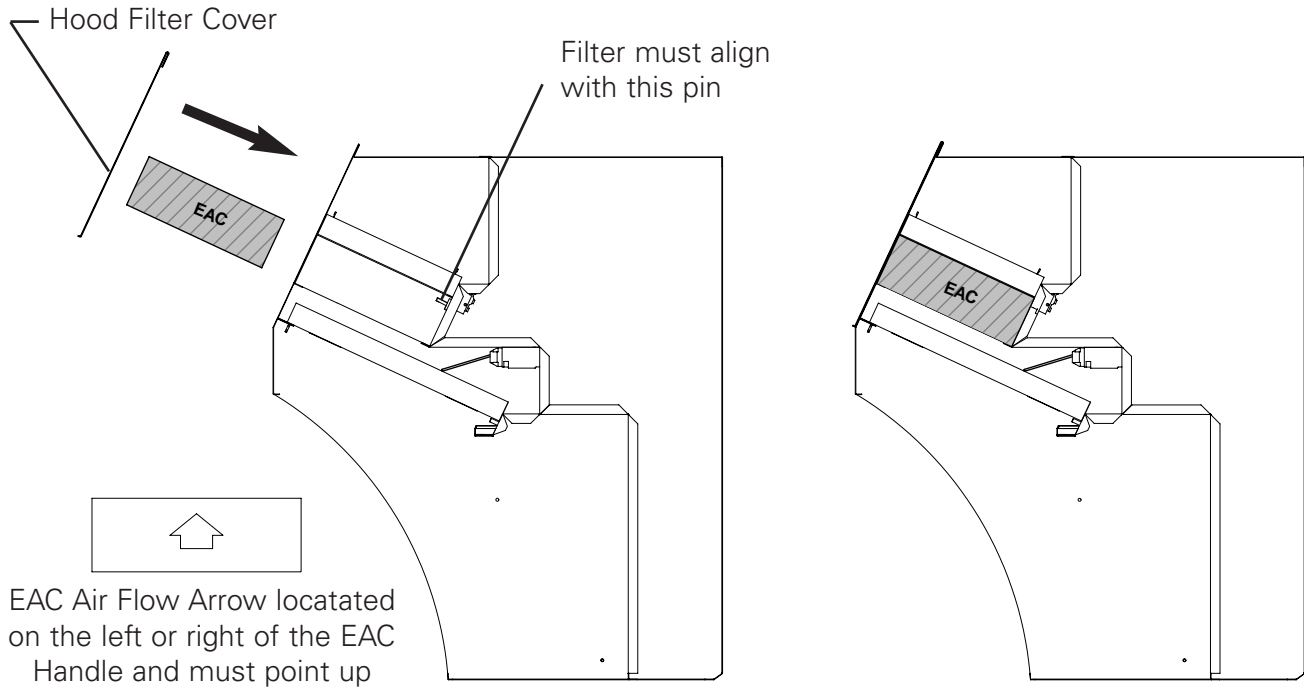
4-02.05. Baffle Filter Cleaning Procedure

The Baffle Filter should be cleaned daily. Place the Baffle Filter in a sink and clean with a mild degreaser. Dry thoroughly, then reinstall in the unit.

4-02.06. EAC Filter Removal



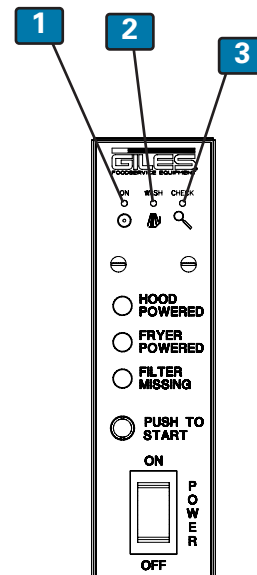
4-02.07. EAC Filter Installation



4-02.08. EAC Filter Status

The three indicator lights on the Control Panel display the status of the EAC Filter.

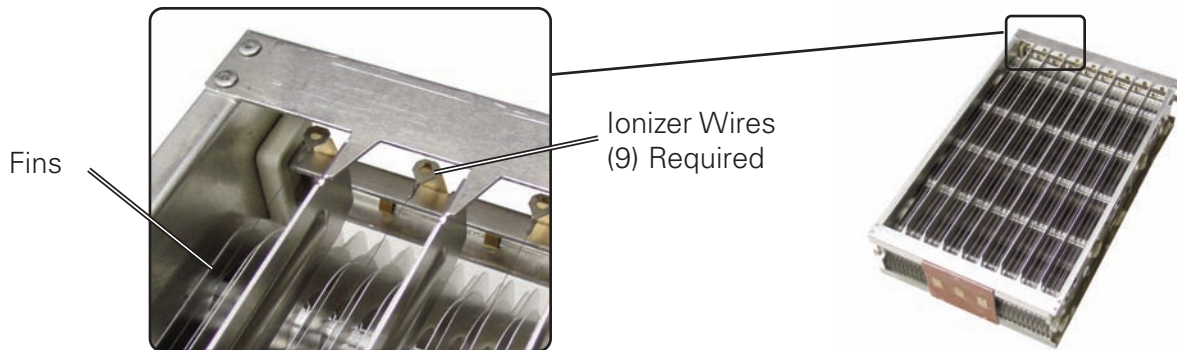
- 1** ON The EAC Filter is in place and powered.
- 2** WASH The EAC Filter is becoming excessively dirty and must be cleaned. If this light is on for more than 2 minutes an intermittent alarm will sound, and power to the Fryer underneath the Hood will be turned off.
- 3** CHECK The EAC Filter is not operating, either the filter is not properly connected to the power source or it is damaged. If this light is on for more than 2 minutes an intermittent alarm will sound, and power to the Fryer underneath the Hood will be turned off.



4-02.09. EAC Filter Cleaning

⚠ CAUTION

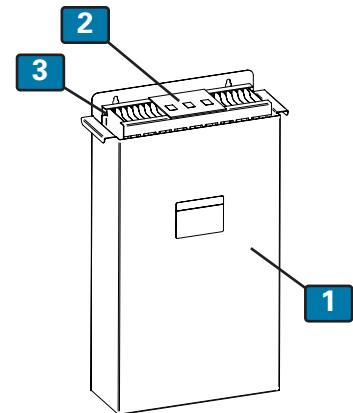
- Do not bend the fins or break the ionizer wires on the EAC as this will prevent the EAC from working properly and potentially void the warranty.



1. Mix 1/2 Gallon of a mild non-caustic biodegradable degreaser, such as Simple Green or Clean Magic, with 6.5 gallons of water in the included Soak Tank **1**.

NOTE:

- The mixed solution in the Soak Tank should last up to 30 days without being changed.



2. Holding the contact plate **2** on the EAC **3** slowly lower the filter into the Soak Tank.
3. After allowing the EAC to soak for 20 to 30 minutes, using the contact plate **2**, lift the EAC up and down approximately 1" to 2" to help remove the grease residue.
4. Slowly remove the EAC from the tank and rinse clean in a sink using hot water.
5. Allow the EAC to air dry, thoroughly.

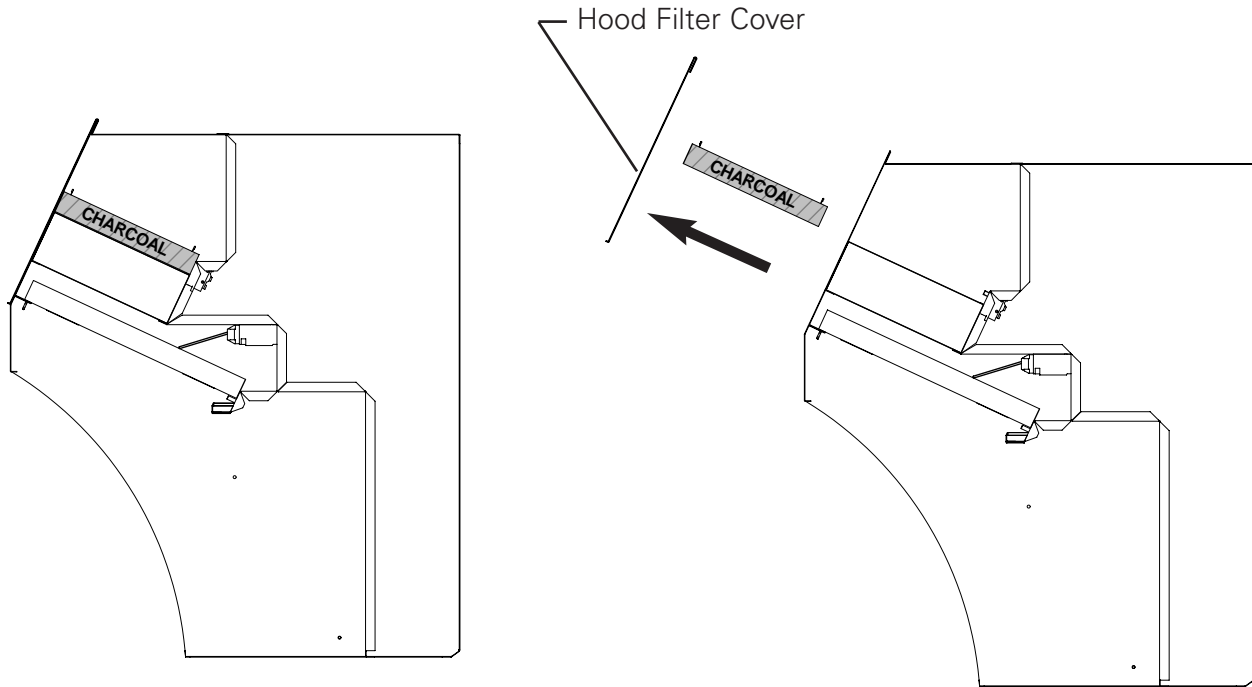
CAUTION

- Do not dry the EAC either by running the hood to air dry or by running the appliance to heat dry. This could potentially damage the EAC causing improper operation and voiding the warranty.

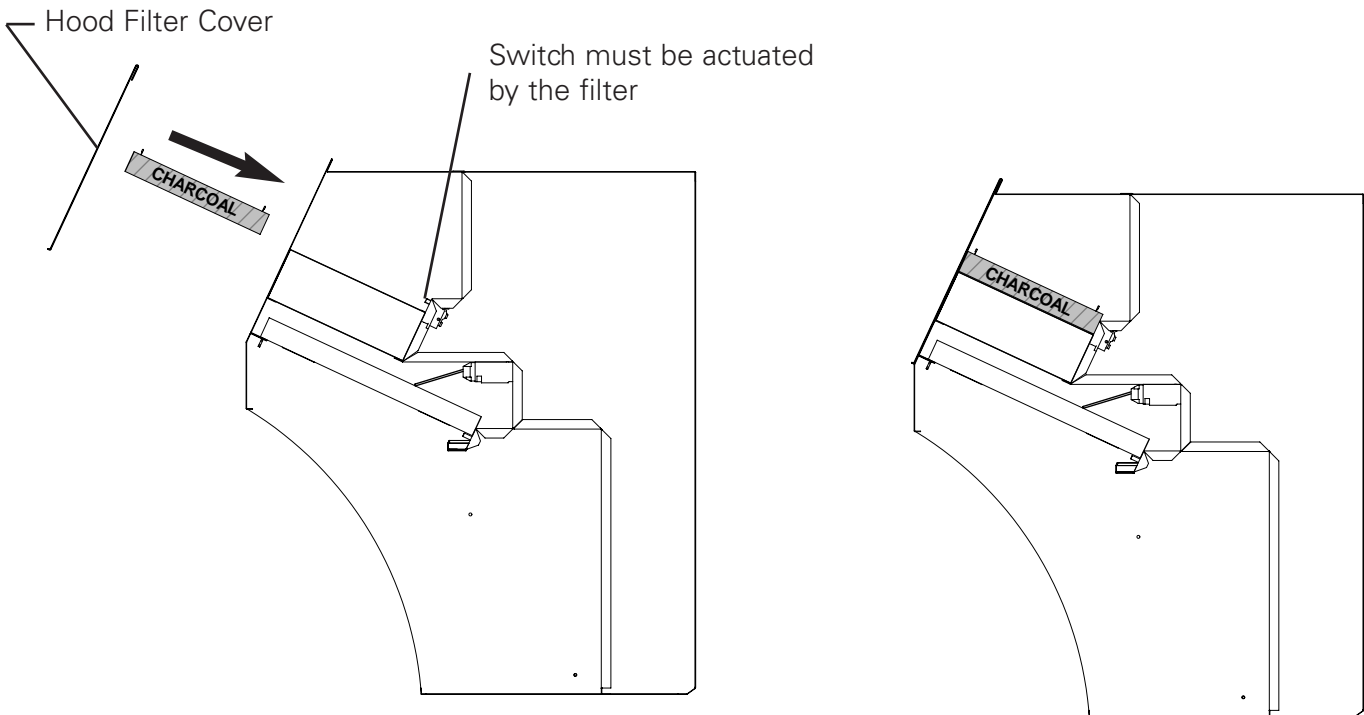
Operation

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

4-02.10. Charcoal Filter Removal

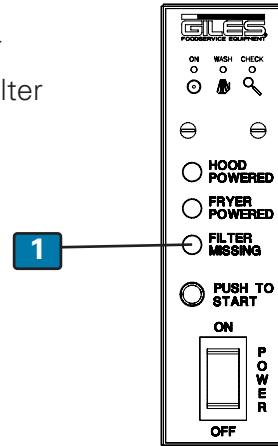


4-02.11. Charcoal Filter Installaton



4-02.12. Charcoal Filter Missing

If the Charcoal Filter is missing or not correctly in place the Filter Missing Light **1** will come on. See Section 4-02.11 Charcoal Filter Installation.



4-02.13. Charcoal Replacement Procedure

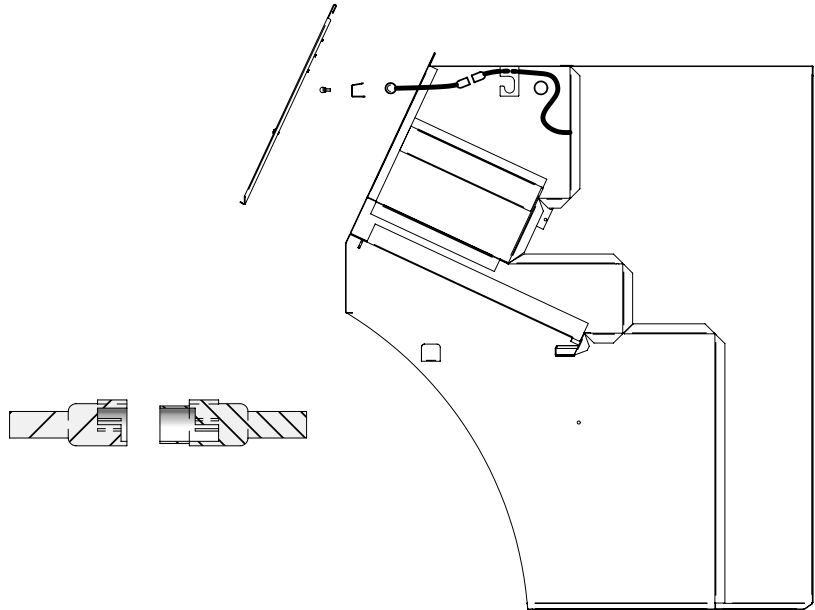
CAUTION

- **Never attempt to clean the Charcoal Filter. Replace the Filter. The reuse of a Charcoal Filter can cause damage to the unit.**

Replace the Charcoal Filter every 30 days. Use Replacement Part No. 30248.

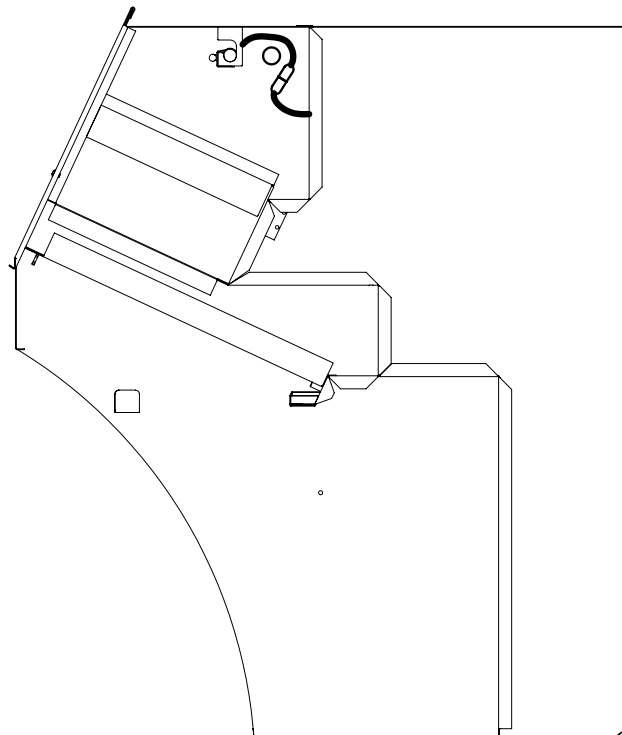
4-02.14. Ultra Violet Lamp Removal

1. Place hood power switch off.
2. Remove filter access cover
3. Disconnect UV Lamp wiring harness from power supply wiring harness .
4. Loosen and remove thumb screws on each side of lamp guard.
5. Remove Lamp from holding brackets.



4-02.15. Ultra Violet Lamp Installation

1. Install new UV Lamp in holding brackets.
2. Install lamp guard and tighten thumb screws.
3. Connect UV Lamp wiring harness to power supply wiring harness.
4. Install all filters and access cover.
5. Place hood power switch on



CAUTION

- Do Not touch or handle UV Lamp with bare hands. This will greatly reduce the life of bulb.

4-02.16. Ultra Violet Lamp Cleaning

To be accomplished every 30 days

1. Place hood power switch off.
2. Remove filter access cover
3. Loosen and remove thumb screws at top of lamp guard.
4. Lightly spray a mild non-caustic biodegradable degreaser, such as Simple Green, onto the UV Light and wipe off residue with a dry, lint free cloth
5. Re-install lamp guard.

4-03. Maintenance

This Section describes periodic maintenance for the Ventless Hood System. Performance of these procedures will maintain the unit's efficiency over time.

A **Maintenance and Service Log** is provided in this manual, see Section 4-03.06.

4-03.01. Monthly Interlock Check

Your Giles Ventless Hood System incorporates an Interlock System to ensure the unit is operated in a safe and effective manner. Testing of the Interlock System should be conducted MONTHLY in the following manner. Use the form located in Section 4-06.06 Maintenance and Service Log, place a check in the box that corresponds to the test being performed. If a problem is found, call your service representative.

1. **Baffle Filter Check**-With the Power Switch in the "OFF" position remove the grease baffle. Place the Power Switch in the "ON" position. Check appliance power underneath the Hood, the appliance should not turn on. Turn the Power Switch to the "OFF" position and reinstall the grease baffle into the hood.
2. **EAC Filter Check**-With the Power Switch in the "OFF" position remove the EAC. Place the Power Switch in the "ON" position, wait two minutes. Check appliance power underneath the Hood, the appliance should not turn on. Reinstall the EAC.
3. **Charcoal Filter Check**-With the Power Switch in the "OFF" position remove the Charcoal Filter. Place the Power Switch in the "ON" position. Check appliance power underneath the Hood, the appliance should not turn on. Return the Power Switch to the "OFF" position. Reinstall the charcoal filter.
4. **Filter Clogged Check**-Place Hood power switch in the "ON" position. The blower will start and a continuous tone alarm should sound for 2 to 8 seconds until the blower reaches speed, then silence. Check appliance(s) power during this time; there should be no power supplied to appliance(s) until the alarm silences. If the alarm tone does not sound, fails to silence, and/or the appliance(s) fails to come on or comes on before the alarm silences, contact service agent and have the Clogged Filter interlock checked. Return Hood power switch to the "OFF" position.

4-03.02. Quarterly Hood Cleaning

CAUTION

- During cleaning of the unit
 - **DO NOT** steam clean.
 - **DO NOT** use products containing chlorine.
 - **DO NOT** use abrasive products, steel wool or scouring pads.

Remove power from the unit. Remove the Hood Filter Cover and all Filters from the hood. Using a mild degreaser clean the entire Hood Plenum and Blower Sections. The hood must be cleaned every 3 months.

4-03.03. Semi-Annual Fire Suppression System Servicing

Service of the Fire Suppression System is to be conducted by qualified fire equipment personnel. As a minimum, field inspection of the Fire Suppression System is to be accomplished semi-annually by qualified fire equipment service personnel. Such maintenance shall consist of the following **(Consult the Giles Enterprises Design Installation, Recharge and Maintenance Manual for complete servicing guidelines)**.

Place fire extinguishing system locking bar on fire system when servicing hood.

1. Remove charging cartridge, inspect gasket for cuts and elasticity, coat gasket with extreme temperature grease and reinstall. See Section 2-06.01. Fusible Link and Gas Cartridge Locations
2. Remove tank, verify chemical is at proper level, clean and coat O-ring with extreme temperature grease and reinstall. See Section 2-06.02. Fire Extinguisher Nozzle and Tank Locations
3. Check all nozzles to insure they are free of cooking grease buildup.
4. Test the remote manual pull station for activation and wear.
5. Install test link and cut to simulate automatic actuation.
6. Clean and inspect fusible links. See Section 2-06.01. for Fusible Link and Gas Cartridge Locations
7. Inspect wire rope for wear at pulleys and detectors and replace if necessary.
8. Record maintenance date and maintain in a permanent file.

4-03.04. Annual Fire Suppression System Servicing

Same as Semi-Annual but all fusible links must be replaced with new fusible links. See Section 2-06.01. Fusible Link and Gas Cartridge Locations.

4-03.05. Annual UV System Servicing

CAUTION

- **Do Not touch or handle UV Lamp with bare hands. This will greatly reduce the life of bulb.**

Replace Ultraviolet Lamp annually.

4-03.06. Twelve Year Suppression System Servicing

Same as Annual except for the following.

1. Replace R-102 fire suppression chemical.
2. Hydrostatically test the tank and cartridge.
3. Flow test the regulator.

Operation

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

4-03.06. Maintenance and Service Log

Check								Initial/Date	Check								Initial/Date			
✓	✓	✓	✓					ABC 1/2/03	1	2	3	4								
1	2	3	4						1	2	3	4								
1	2	3	4	5					1	2	3	4	5							
1	2	3	4						1	2	3	4								
1	2	3	4						1	2	3	4								
1	2	3	4	5	6*				1	2	3	4	5	6*						
1	2	3	4						1	2	3	4								
1	2	3	4						1	2	3	4								
1	2	3	4	5					1	2	3	4	5							
1	2	3	4						1	2	3	4								
1	2	3	4						1	2	3	4								
1	2	3	4	5	6*	7*	8		1	2	3	4	5	6*	7*	8				
1	2	3	4						1	2	3	4								
1	2	3	4						1	2	3	4								
1	2	3	4	5					1	2	3	4	5							
1	2	3	4						1	2	3	4								
1	2	3	4						1	2	3	4								
1	2	3	4	5	6*				1	2	3	4	5	6*						
1	2	3	4						1	2	3	4								
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1	2	3	4	5					1	2	3	4	5							
1	2	3	4						1	2	3	4								
1	2	3	4						1	2	3	4								
1	2	3	4	5	6*	7*	8		1	2	3	4	5	6*	7*	8				
1	2	3	4						1	2	3	4								
1	2	3	4	5					1	2	3	4	5							
1	2	3	4						1	2	3	4								
1	2	3	4						1	2	3	4								
1	2	3	4	5	6*				1	2	3	4	5	6*						
1	2	3	4						1	2	3	4								
1	2	3	4	5					1	2	3	4	5							
1	2	3	4	5					1	2	3	4								
1	2	3	4	5					1	2	3	4								
1	2	3	4	5	6*	7*	8		1	2	3	4	5	6*	7*	8				

- | | | | | | |
|---|---|---|--------------------|---|-------------------------------------|
| 1 | Baffle Filter Check | 2 | EAC Filter Check | 3 | Charcoal Filter Check |
| 4 | Filter Clogged | 5 | Quarterly Cleaning | 6 | Fire Suppression System |
| 7 | Fire Suppression System replace Fusible Links | | | 8 | Replace UV Lamp
(UV Option Only) |

* Inspection performed by a qualified fire equipment company.



Notes:

5. Hood Cleaning

This section describes the cleaning of the hood. The hood must be cleaned every 3 months.

5-01. Cleaning

Interior -Disconnect power to the unit. Remove the Filter Cover and all Filters from the hood. Using a soft cloth, sponge or towel and a mild non-caustic biodegradable degreaser, clean the entire Hood Plenum area and Filter Channels.

Exterior -remove power from the unit. Using a stainless steel cleaner, clean all external stainless steel parts.

Filters -To clean and replace Filters, see Section 4.02.01 Hood Filter Table.

UV Lamp -To clean and replace UV Lamp, see Section 4.02.01 Hood Filter Table.

**Model: FSH-2, FSH-2A,
FSH-2A-99, & FSH-2A-99W**

Hood Cleaning



Notes:

6. Troubleshooting

This section describes troubleshooting procedures for the FSH-2, FSH-2A, FSH-2A-99, FSH-2A-99W. Refer to the wiring diagrams in Section 8 for more detailed analysis.

DANGER

- Electrical troubleshooting procedures should be performed **ONLY** by qualified service personnel. Death or serious injury will result from contact with energized electrical components.
- Failure to comply with these **DANGER** notices will result in death or serious injury, equipment/property damage, and void the warranty.

6-01. Troubleshooting Procedures

Problem	Probable Cause	Repair Procedure
Hood will not turn on	a. (ILS only) "Push and Hold" button not held for 5 seconds	a. Hold down "Push and Hold" button until unit remains running
	b. Power switch bad	b. Replace power switch.
	c. Improper supply voltage	c. Connect to proper voltage source.
	d. Hood cover not closed	d. Close hood cover.
	e. Not connected to power source	e. Connect to proper power source.
	f. Circuit breaker tripped	f. Reset Circuit breaker.
Filter Missing Light on	a. Baffle filter is not installed	a. Install Baffle filter.
	b. Charcoal filter is not installed	b. Install charcoal filter.
Check or Wash Light on	a. EAC shorted	a. Replace or repair EAC.
	b. EAC dirty	b. Clean EAC.
	c. High voltage power supply faulty.	c. Replace high voltage power supply
	d. High voltage wires shorted.	d. Correct shorted condition.
	e. Bad contact plate	e. Replace contact plate.

6-01. Troubleshooting Procedures (Cont'd.)		
Problem	Probable Cause	Repair Procedure
Fryer or Oven will not turn on <ul style="list-style-type: none"> • Hood Power Light on • Filter Missing Light on 	a. Baffle Filter missing	a. Install Baffle Filter
	b. Baffle Filter not installed properly	b. Reinstall Baffle Filter
	c. Charcoal Filter missing	c. Install Charcoal Filter
Fryer or Oven will not turn on <ul style="list-style-type: none"> • Hood Power Light on • Buzzer emitting a continuous tone • Fryer Powered light off 	a. Charcoal Filter clogged	a. Replace Charcoal Filter
	b. Baffle Filter clogged	b. Clean Baffle Filter
	c. Vacuum switch out of adjustment	c. Adjust Vacuum switch only.
	d. Kinked vacuum line	d. Remove vacuum line kinks
	e. Fan running slow	e. Check voltage
Fryer or Oven will not turn on <ul style="list-style-type: none"> • Hood Power Light on • Buzzer emitting a pulsating tone • Fryer Powered Light off 	a. EAC shorted	a. Repair EAC
	b. EAC dirty	b. Clean EAC
	c. EAC power supply faulty	c. Replace EAC power supply
	d. EAC wires shorted	d. Check voltage
	e. Bad contact plate	e. Replace contact plate
	f. EAC module faulty	f. Replace EAC module
	g. EAC ionizer wire broken or missing	g. Replace ionizer wire
UV Lamp not illuminated	a. Bad Connection	a. Reconnect
	b. Lamp Blown	b. Replace Lamp
	c. Filters not installed correctly	c. Install filters
	d. Access Pannel not installed	d. Install Access Panel
	e. Bad Ballast	e. Replace Ballast

7. Parts List

This section lists various parts that are available for replacement on the FSH2, FSH-2A, FSH-2A-99, and FSH-2A-99W.

7-01. Parts Ordering and Service Information

If you require assistance or need repairs, please contact your area developer for a service agency in your area. For further assistance, please contact the Giles Enterprises, Inc. factory at the following phone numbers:

IN THE UNITED STATES, CANADA or MEXICO

Please call 1-800-288-1555 during normal business hours, 8:00AM-5:00PM Central Time Zone. For emergency equipment repair service, after normal business hours, call 1-800-288-1555, extension 314.

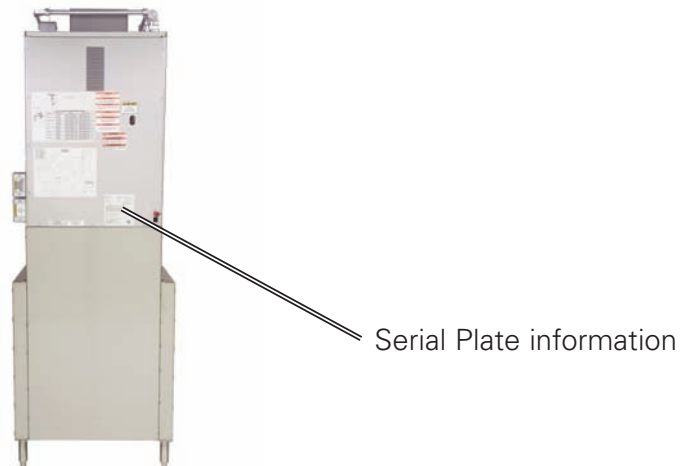
IN ALL OTHER COUNTRIES

Please call 1-334-272-3528 during normal business hours, 8:00AM-5:00PM Central Time Zone; For emergency equipment repair service, after normal business hours call, 1-334-272-3528 extension 314.

INTERNET

Please visit our website on the world wide web at: www.gilesent.com.

The goal of the Giles team of professionals is to provide you with the highest quality of service and assistance. You can help us accomplish this by obtaining the following information and having it readily available when calling. The information is recorded on the Serial Plate attached to the rear of the unit.



The area below may be helpful in recording information for use as a quick reference.

Model: _____
Serial Number: _____
Phase: _____
Voltage: _____

7-02. Ventless Hood -Front



* -Not shown

** -UV Only

*** -Not shown and ILS only

Parts List

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

7-02. Parts List for Front Ventless Hood -Front

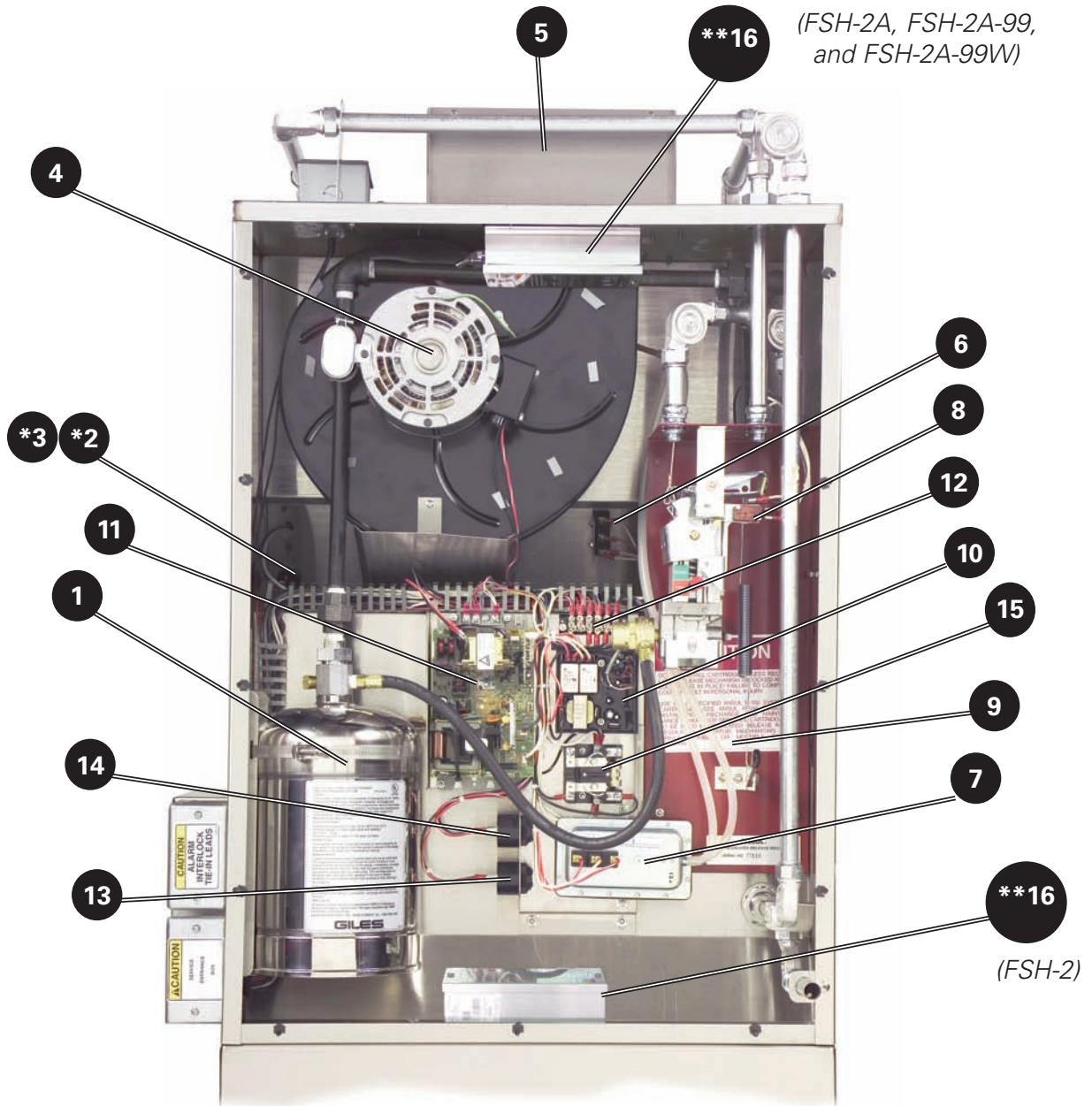
Item No.	Part No.	Qty.	Description
*1	90254	1	FILTER ACCESS PANEL, WELD ASSY (NON UV)
**1	90262	1	FILTER ACCESS PANEL, ASSY, FSH-2-UV
2	20520	1	FILTER, EAC, 20 IN
3	30248	1	FILTER, CHARCOAL, ASSY, 20 X 12.375 X 2
**4	90226	1	LAMP, ASSY, 16-IN, UV, REPLACEMENT ONLY
*5	23200	1	SWITCH, SNAP ACTION, ROLLER TYP
6	21125	1	BOARD, CONTACT, EAC, VH UNITS
7	30206	1	DRIP CUP, WELD ASSY
8	34750	1	PIN, DRIP CUP SAFETY
9	42300	1	FILTER, BAFFLE, 20X20, S/S, LARGE VH
10	24209	1	LED, AIR FILTER, EAC
***11	23173	1	SWITCH, MOMENTARY
12	22277	1	INDICATOR LIGHT, GREEN
13	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
14	64460	1	LABEL, CONTROL PANEL, FSH-2
15	38213	1	INDICATOR LIGHT, ORANGE
16	38214	1	INDICATOR LIGHT, RED

* -Not shown

** -UV Only

*** -Not shown and ILS only

7-03. Ventless Hood -Rear



* -Not shown

** -UV Only

*** -Not shown, ILS only

Parts List

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

7-03. Parts List for Ventless Hood -Rear

Item No.	Part No.	Qty.	Description
1	39272	1	TANK, 1.5 GAL. & LABEL ASSY.
*2	23778	1	SWITCH, SIDE ROTARY, 240V, 30A, W/O ARM
*3	23779	1	ROD, ADJUSTMENT
4	33589	1	BLOWER, ASSY, VH-FRYERS
5	46125	1	DAMPER, FIRE, 10 X 10, 285 DEG LINK
6	24237	1	SWITCH, PLUNGER, 250V, 15A
7	23001	1	SWITCH, VACUUM, HOSE BARB
8	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
9	40132	1	BRACKET & RELEASE, ANSUL
10	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
11	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
12	23751	1	TERMINAL BLOCK, MA106
13	23782	1	SONALERT, 250V, CONTINUOUS BEEP
14	22950	1	SONALERT, 250V, INTERMITTENT
15	21191	1	RELAY, 30A, 208V, 2PL
15	21174	1	RELAY, 30A, 240V, 2PL
**16	20373	1	UV-LAMP, ASSY (BALLSAT & LAMP)

* -Not shown

** -UV Only

*** -Not shown, ILS only

**Model: FSH-2, FSH-2A-99,
& FSH-2A-99W**

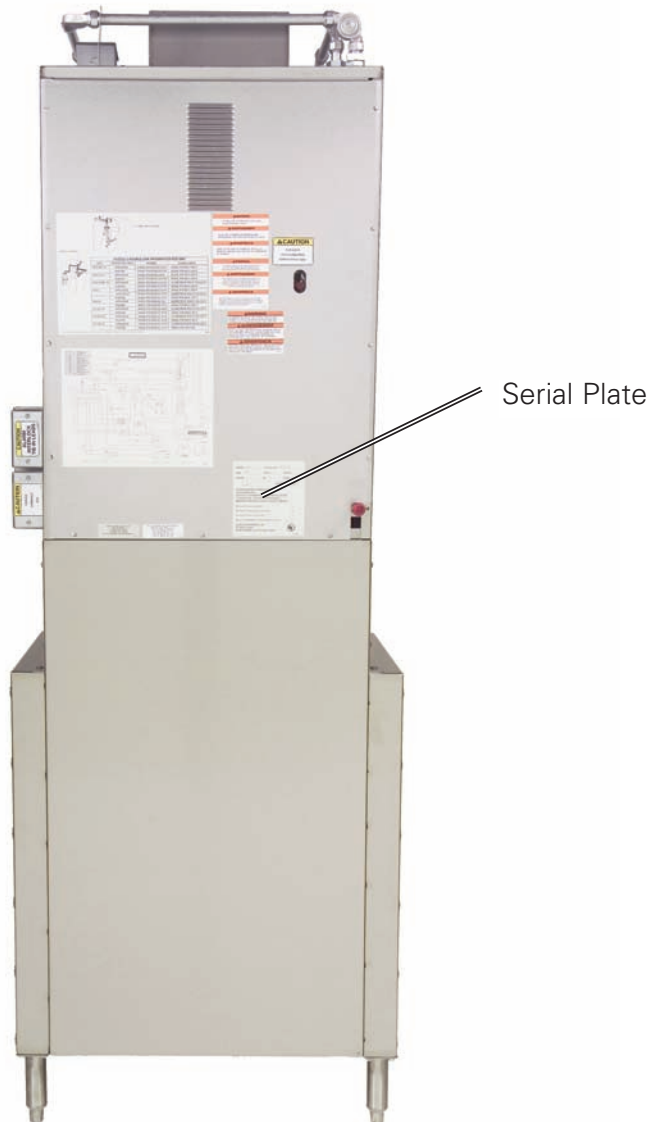
Parts List



Notes:

8. *Wiring Diagrams*

The following section contains various Wiring Diagrams for the FSH-2, FSH-2A, FSH-2A-99, and FSH-2A-99W. Please check the Serial Plate, as shown below, for the units Model Name, Voltage, Hertz, and Phase.



Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-01. Parts List for Wiring Diagram FSH-2, FSH-2A, & FSH-2A-99W 208-240/60/1

Item	Part No.	Qty.	Description
1	21125	1	BOARD, CONTACT, EAC, VH UNITS
2	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
3	23001	1	SWITCH, VACUUM, HOSE BARB
4	38215	1	INDICATOR LIGHT, GREEN
5	23751	1	TERMINAL BLOCK, MA106,6 POLE
6	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
7	24300	2	BOX, 1/2" UTILITY
8	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
9	24237	1	SWITCH, PLUNGER, 250V, 15A
10	21174	1	RELAY, 30A, 240V, 2 POLE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	----	1	CONTACTOR
20	----	1	LOAD CENTER
21	20298	1	BRAID, COPPER SHIELDING
22	25275	2	WIRENUT, IDEAL BLUE
23	38214	1	INDICATOR LIGHT, ORANGE
24	38213	1	INDICATOR LIGHT, RED

Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-02. Parts List for Wiring Diagram FSH-2, FSH-2A, & FSH-2A-99W 208-240/60/1 w/ILS

Item	Part No.	Qty.	Description
1	21125	1	BOARD, CONTACT, EAC, VH UNITS
2	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
3	23001	1	SWITCH, VACUUM, HOSE BARB
4	38215	1	INDICATOR LIGHT, GREEN
5	23751	1	TERMINAL BLOCK, MA106,6 POLE
6	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
7	24300	2	BOX, 1/2" UTILITY
8	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
9	24237	1	SWITCH, PLUNGER, 250V, 15A
10	21174	1	RELAY, 30A, 240V, 2 POLE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	----	1	CONTACTOR
20	----	1	LOAD CENTER
21	23173	1	SWITCH, PUSH-BUTTON, MOMENTARY
22	20298	1	BRAID, COPPER SHIELDING
23	25275	2	WIRENUT, IDEAL BLUE
24	38214	1	INDICATOR LIGHT, ORANGE
25	38213	1	INDICATOR LIGHT, RED

Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-03. Parts List for Wiring Diagram FSH-2, FSH-2A, & FSH-2A-99W 208-240/60/1 w/ UV

Item	Part No.	Qty.	Description
01	21125	1	BOARD, CONTACT, EAC, VH UNITS
02	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
03	23001	1	SWITCH, VACUUM, HOSE BARB
04	38215	1	INDICATOR LIGHT, GREEN
05	23751	1	TERMINAL BLOCK, MA106,6 POLE
06	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
07	24300	2	BOX, 1/2" UTILITY
08	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
09	24237	1	SWITCH, PLUNGER, 250V, 15A
10	21174	1	RELAY, 30A, 240V, 2 POLE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	----	1	CONTACTOR
20	----	1	LOAD CENTER
21	20298	1	BRAID, COPPER SHIELDING
22	25275	1	WIRENUT, IDEAL BLUE
23	38214	1	INDICATOR LIGHT, ORANGE
24	38213	1	INDICATOR LIGHT, RED
25	25300	1	WIRENUT, ORANGE
26	20373	1	UV-LAMP, ASSY (BALLAST AND LAMP)
27	90226	1	LAMP, ASSY, 16-IN, UV, REPLACEMENT ONLY

Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-04. Parts List for Wiring Diagram FSH-2, FSH-2A, & FSH-2A-99W 208-240/60/1 w/ UV & ILS

Item	Part No.	Qty.	Description
01	21125	1	BOARD, CONTACT, EAC, VH UNITS
02	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
03	23001	1	SWITCH, VACUUM, HOSE BARB
04	38215	1	INDICATOR LIGHT, GREEN
05	23751	1	TERMINAL BLOCK, MA106,6 POLE
06	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
07	24300	2	BOX, 1/2" UTILITY
08	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
09	24237	1	SWITCH, PLUNGER, 250V, 15A
10	21174	1	RELAY, 30A, 240V, 2 POLE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	----	1	CONTACTOR
20	----	1	LOAD CENTER
21	20298	1	BRAID, COPPER SHIELDING
22	25275	2	WIRENUT, BLUE
23	38214	1	LIGHT, INDICATOR, RED
24	38213	1	LIGHT, INDICATOR, ORANGE
25	25300	1	WIRENUT, ORANGE
26	20373	1	UV-LAMP, ASSY (BALLAST AND LAMP)
27	90226	1	LAMP, ASSY, 16-IN, UV, REPLACEMENT ONLY
28	23173	1	SWITCH, PUSH-BUTTON, MOMENTARY

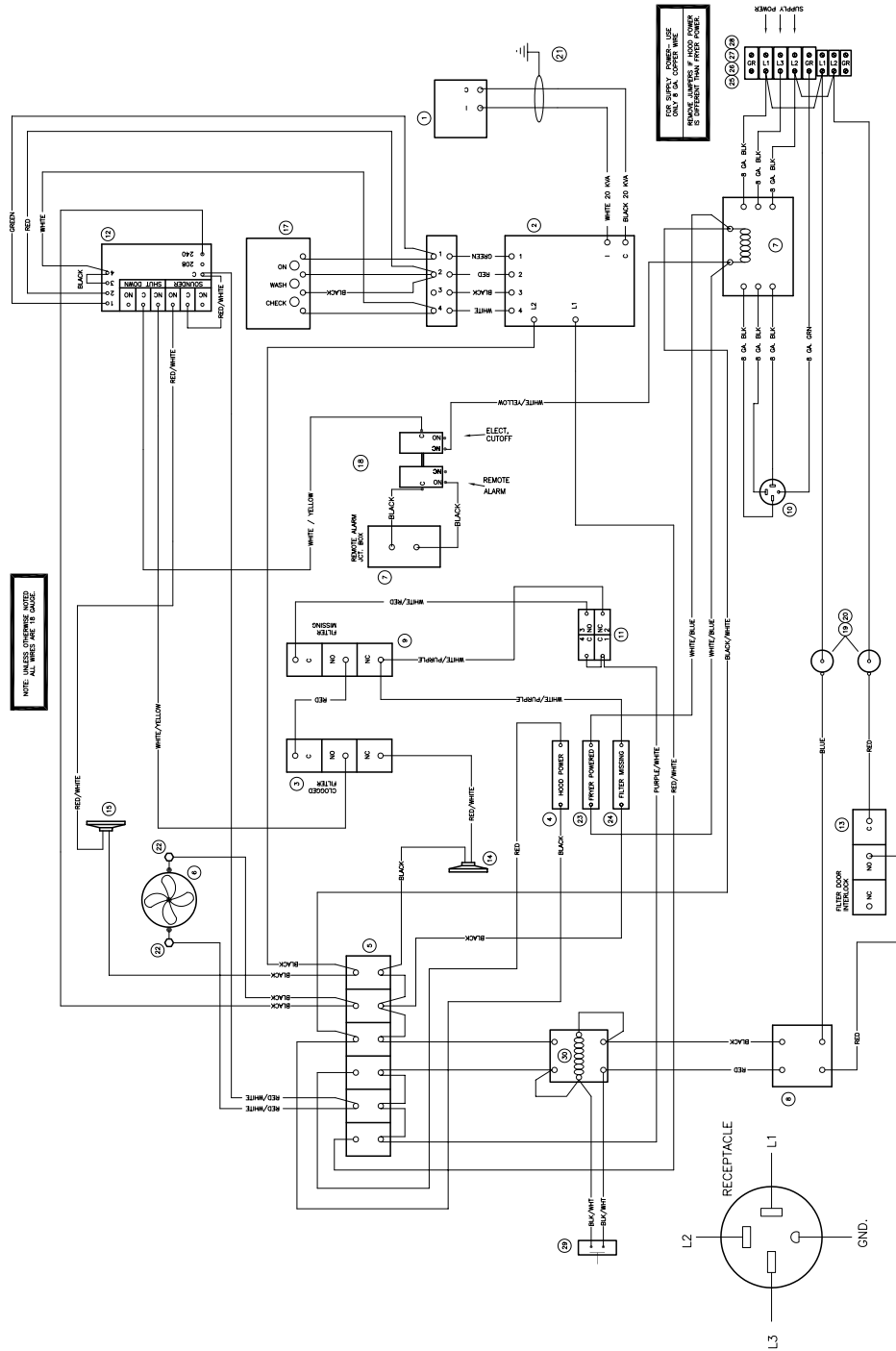
Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-05. Parts List for Wiring Diagram FSH-2A-99 ONLY 208-240/60/1

Item	Part No.	Qty.	Description
01	21125	1	BOARD, CONTACT, EAC, VH UNITS
02	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
03	23001	1	SWITCH, VACUUM, HOSE BARB
04	38215	1	INDICATOR LIGHT, GREEN
05	23751	1	TERMINAL BLOCK, MA106,6 POLE
06	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
07	32208	2	CONTACTOR, ASSY, 208/240VAC, 3PH
08	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
09	24237	1	SWITCH, PLUNGER, 250V, 15A
10	20370	1	RECEPTACLE, 50A, 3PH, 4 WIRE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	21900	1	FUSE, 15-AMP, SC-15
20	21950	1	HOLDER, FUSE, 300V, 15A, SC 0 TO 15
21	20298	1	BRAID, COPPER SHIELDING
22	25275	1	WIRENUT, IDEAL BLUE
23	38214	1	INDICATOR LIGHT, ORANGE
24	38213	1	INDICATOR LIGHT, RED
25	20303	1	TERMINAL BLOCK, 4-12 GA WIRE
26	20304	1	TERMINAL BLOCK, GROUND, 4-12 GA WIRE
27	20319	1	TERMINAL BLOCK, 50 AMP, AWG 8-24
28	20320	1	TERMINAL BLOCK, GROUND, AWG 8-24

8-06. Wiring Diagram FSH-2A-99 ONLY 208-240/60/1 w/ ILS



Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-06. Parts List for Wiring Diagram FSH-2A-99 ONLY 208-240/60/1 w/ ILS

Item	Part No.	Qty.	Description
01	21125	1	BOARD, CONTACT, EAC, VH UNITS
02	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
03	23001	1	SWITCH, VACUUM, HOSE BARB
04	38215	1	INDICATOR LIGHT, GREEN
05	23751	1	TERMINAL BLOCK, MA106,6 POLE
06	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
07	32208	2	CONTACTOR, ASSY, 208/240VAC, 3PH
08	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
09	24237	1	SWITCH, PLUNGER, 250V, 15A
10	20370	1	RECEPTACLE, 50A, 3PH, 4 WIRE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	21900	1	FUSE, 15-AMP, SC-15
20	21950	1	HOLDER, FUSE, 300V, 15A, SC 0 TO 15
21	20298	1	BRAID, COPPER SHIELDING
22	25275	1	WIRENUT, IDEAL BLUE
23	38214	1	INDICATOR LIGHT, ORANGE
24	38213	1	INDICATOR LIGHT, RED
25	20303	1	TERMINAL BLOCK, 4-12 GA WIRE
26	20304	1	TERMINAL BLOCK, GROUND, 4-12 GA WIRE
27	20319	1	TERMINAL BLOCK, 50 AMP, AWG 8-24
28	20320	1	TERMINAL BLOCK, GROUND, AWG 8-24
29	23173	1	SWITCH, PUSH-BUTTON, MOMENTARY
30	21174	1	RELAY, 30A, 240V, 2PL

Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-07. Parts List for Wiring Diagram FSH-2A-99 ONLY 208-240/60/1 w/ UV

Item	Part No.	Qty.	Description
01	21125	1	BOARD, CONTACT, EAC, VH UNITS
02	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
03	23001	1	SWITCH, VACUUM, HOSE BARB
04	38215	1	INDICATOR LIGHT, GREEN
05	23751	1	TERMINAL BLOCK, MA106,6 POLE
06	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
07	32208	2	CONTACTOR, ASSY, 208/240VAC, 3PH
08	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
09	24237	1	SWITCH, PLUNGER, 250V, 15A
10	20370	1	RECEPTACLE, 50A, 3PH, 4 WIRE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	21900	1	FUSE, 15-AMP, SC-15
20	21950	1	HOLDER, FUSE, 300V, 15A, SC 0 TO 15
21	20298	1	BRAID, COPPER SHIELDING
22	25275	1	WIRENUT, IDEAL BLUE
23	38214	1	INDICATOR LIGHT, ORANGE
24	38213	1	INDICATOR LIGHT, RED
25	20303	3	TERMINAL BLOCK, 4-12 GA WIRE
26	20304	2	TERMINAL BLOCK, GROUND, 4-12 GA WIRE
27	20319	2	TERMINAL BLOCK, 50 AMP, AWG 8-24
28	20320	1	TERMINAL BLOCK, GROUND, AWG 8-24
29	20304	2	TERMINAL BLOCK, GROUND, 4-12 GA WIRE
30	20373	1	UV-LAMP, ASSY (BALLAST AND LAMP)
31	90226	1	LAMP, ASSY, 16-IN, UV, REPLACEMENT ONLY

Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-08. Parts List for Wiring Diagram FSH-2A-99 ONLY 208-240/60/1 w/ UV & ILS

Item	Part No.	Qty.	Description
01	21125	1	BOARD, CONTACT, EAC, VH UNITS
02	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
03	23001	1	SWITCH, VACUUM, HOSE BARB
04	38215	1	INDICATOR LIGHT, GREEN
05	23751	1	TERMINAL BLOCK, MA106,6 POLE
06	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
07	32208	2	CONTACTOR, ASSY, 208/240VAC, 3PH
08	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
09	24237	1	SWITCH, PLUNGER, 250V, 15A
10	20370	1	RECEPTACLE, 50A, 3PH, 4 WIRE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	21900	1	FUSE, 15-AMP, SC-15
20	21950	1	HOLDER, FUSE, 300V, 15A, SC 0 TO 15
21	20298	1	BRAID, COPPER SHIELDING
22	25275	1	WIRENUT, IDEAL BLUE
23	38214	1	INDICATOR LIGHT, ORANGE
24	38213	1	INDICATOR LIGHT, RED
25	20303	1	TERMINAL BLOCK, 4-12 GA WIRE
26	20304	1	TERMINAL BLOCK, GROUND, 4-12 GA WIRE
27	20319	1	TERMINAL BLOCK, 50 AMP, AWG 8-24
28	20320	1	TERMINAL BLOCK, GROUND, AWG 8-24
29	20304	1	TERMINAL BLOCK, GROUND, 4-12 GA WIRE
30	20373	1	UV-LAMP, ASSY (BALLAST AND LAMP)
31	90226	1	LAMP, ASSY, 16-IN, UV, REPLACEMENT ONLY
32	23173	1	SWITCH, PUSH-BUTTON, MOMENTARY
33	21174	1	RELAY, 30A, 240V, 2PL

Wiring Diagram

Model: FSH-2, FSH-2A-99,
& FSH-2A-99W

8-09. Parts List for Wiring Diagram FSH-2, FSH-2A, FSH-2A-99, & FSH-2A-99W 220/50/1

Item	Part No.	Qty.	Description
1	21125	1	BOARD, CONTACT, EAC, VH UNITS
2	24208	1	POWER SUPPLY, W/DRIVER BRD, 208-240V,EAC
3	23001	1	SWITCH, VACUUM, HOSE BARB
4	38215	1	INDICATOR LIGHT, GREEN
5	23751	1	TERMINAL BLOCK, MA106,6 POLE
6	33589	1	BLOWER, ASSY, CF-400VH, CF-500VH
7	24300	2	BOX, 1/2" UTILITY
8	21190	1	SWITCH, ROCKER, ON-OFF, 250V, 20A, DPST
9	24237	1	SWITCH, PLUNGER, 250V, 15A
10	21174	1	RELAY, 30A, 240V, 2 POLE
11	32114	1	BAFFLE FILTER SWITCH, ASSY, CF-400/500VH
12	23776	1	MODULE, AIR FILTER, ALARM AND SHUTDOWN
13	23200	1	SWITCH, SNAP ACTION, ROLLER TYPE
14	23782	1	SONALERT, 250V, CONTINUOUS BEEP
15	22950	1	SONALERT, 250V, INTERMITTENT
16	21182	1	SWITCH, PRESSURE, FIREBUTLER, 40PSI
17	24209	1	LED, AIR FILTER, EAC
18	20002	1	SWITCH, ANSUL, SHUTDOWN/ALARM, 15A, 120V
19	----	1	CONTACTOR
20	----	1	LOAD CENTER
21	20298	1	BRAID, COPPER SHIELDING
22	25275	1	WIRENUT, IDEAL BLUE
23	38214	1	INDICATOR LIGHT, RED
24	38213	1	INDICATOR LIGHT, ORANGE

**Model: FSH-2, FSH-2A-99,
& FSH-2A-99W**

Wiring Diagram



Notes:



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