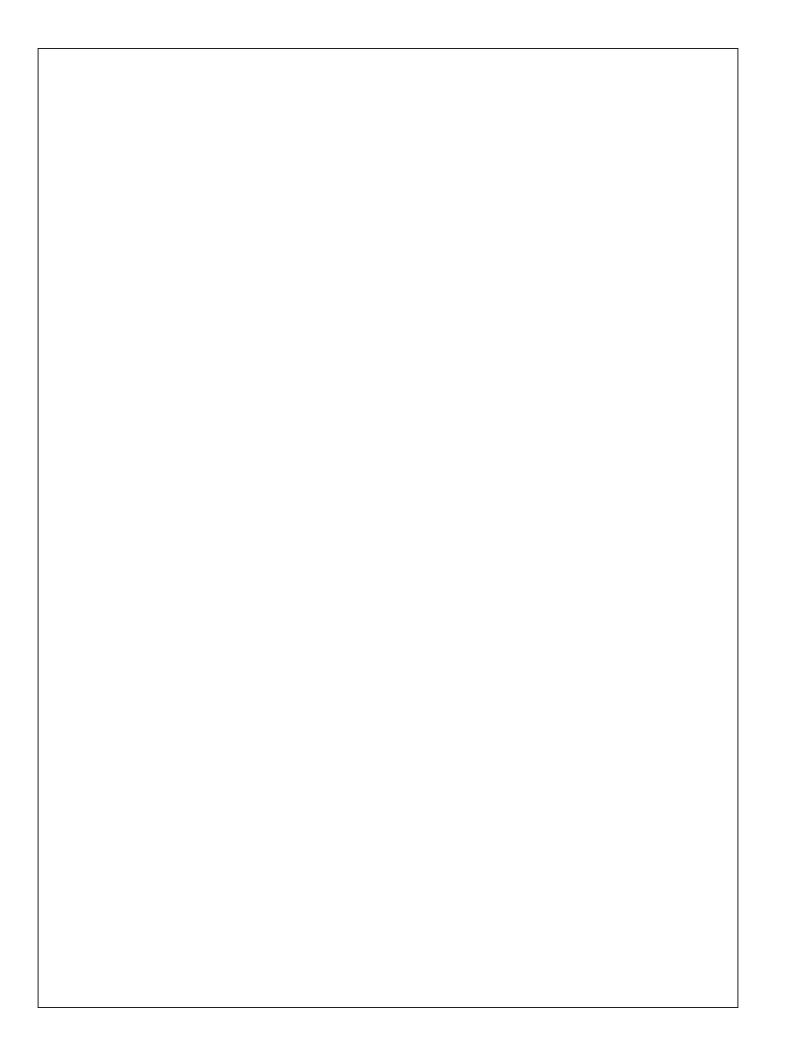




Responsive. Reliable.

ISO 9001-2015 Registered • Committed to Quality 2750 Gunter Park Drive West • Montgomery, AL 36109 USA Toll Free: 800.554.4537 (USA & Canada Only) Other: 334.272.1457 Fax: 334.239.4117 • Website: <u>www.gfse.com</u> • Email: <u>services@gfse.com</u>





LIMITED WARRANTY

- Subject to the terms and conditions of this Limited Warranty as herein stated, all Giles Enterprises Inc. (hereafter referred to as "Giles") food service equipment and parts purchased new from an authorized Giles representative are warranted as to defects in material or workmanship for a period of twenty-four (24) 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 only to the original owner and is void if the unit is resold.
- During the Limited Warranty period, Giles will replace or recondition, at its factory, any part or parts of this unit which Giles inspectors judge defective, provided the unit has been properly installed, subjected to normal usage, and operated and maintained in accordance with specified procedures. This Limited Warranty does not cover cosmetic damage, and damage due to acts of God, accident, misuse, alteration, negligence, abuse, or 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 service representative.
- If Limited Warranty service is requested, Giles will dispatch factory-authorized service representatives to inspect, repair, recondition, or replace units of its manufacture with such labor being rendered without cost to owner for twenty-four (24) months 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 representative.
- Failure to use Giles OEM replacement parts and Giles OEM filters may void this Warranty.
- Giles reserves the right to change or improve its equipment and/or parts in any way without obligation to alter such equipment or parts previously manufactured.
- Giles 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 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 food service equipment or parts, or Giles food service equipment or parts not purchased from an authorized Giles representative, carry no warranties, express or implied.

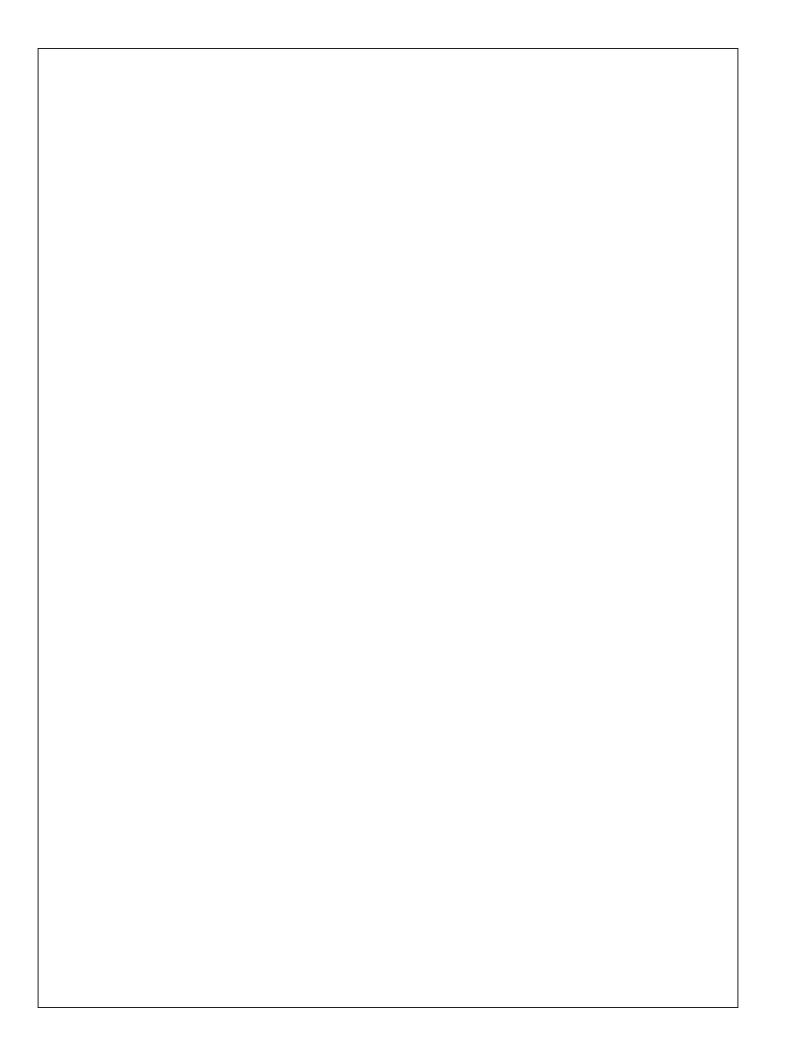


Table Of Contents

FSH-4 Hood

1.	Introduction
1.01	Construction
1.02	Standard Features
	Optional Features1
	Specifications
-	Overall Dimensions
1.04.2	Agency Certifications
1.04.3	Weights

2.	Installation	5
2.01	Location	5
2.02	Unpacking	6
2.03	Stand & Hood Assembly	6
2.04	Cooking Appliance Limitations & Clearances	8
2.04.1	Fryer Limitations	8
2.04.2	Fryer Clearances	8
2.04.3	Oven Limitations	9
2.04.4	Oven Clearances	9
2.04.5	Griddle Limitations1	0
2.04.6	Griddle Clearances	0
2.04.7	Range Limitations1	1
2.04.8	Range Clearances	1
2.05	Electrical Specifications - Hood Only1	2
2.05.1	Electrical Connections	2
2.05.2	Routing Power Conduit & Wiring1	3
2.05.3	Hood and Appliance Interlock Diagram1	3
2.06	Fire Suppression System Installation1	4
2.06.1	Fire Suppression System Connection 1	4
2.06.2	Fire Suppression Detector Links & Location1	5
2.06.3	Appliance Nozzles	
2.06.4	Fire Extinguisher Nozzle Locations 1	6

3.	Overview	1
3.01	Control Panel	3
3.02	Filter Chamber & Exhaust)
3.03	Accessories Items Included w/Hood	2

Table Of Contents

4.	Operation & Filter Maintenance25
4.01	Starting the Hood
4.02	Filter System, Filter Maintenance & Filter Alarms
4.02.1	Ventless Hood Filter Table
4.02.2	Baffle Filter Removal
4.02.3	Baffle Filter Installation
4.02.4	Pre-Filter Removal
4.02.5	Pre-Filter Installation
4.02.6	E.A.C. Filter Cell Removal
4.02.7	E.A.C. Filter Cell Installation
4.02.8	Charcoal Filter Removal
4.02.9	Charcoal Filter Installation
4.03	Hood Filter Alarms
4.03.1	Baffle, Pre-Filter or Charcoal Filter Missing
4.03.2	Baffle, Pre-Filter or Charcoal Filter Clogged
4.03.3	E.A.C. Filter Status & Alarm
4.04	Filter Maintenance
4.04.1	Baffle Filter Cleaning
4.04.2	E.A.C. Collector Cell Cleaning
4.04.3	E.A.C. Collector Cell Cleaning Timer
4.04.4	Pre-Filter Maintenance
4.04.5	Charcoal Filter Maintenance
5.	Hood Cleaning and Maintenance
5.01	Monthly Hood Interlock Inspection
5.02	Quarterly Hood Cleaning
5.03	Fire Suppression System Maintenance
5.03.1	Semi-Annual Fire Suppression Inspection & Maintenance
5.03.2	Annual Fire Suppression System Inspection & Maintenance
5.03.3	12-Year Fire Suppression System Inspection & Maintenance
5.04	Maintenance & Service Log
5101	
6.	Troubleshooting
6.01	Troubleshooting Procedures
7.	Parts List
7.01	Parts Ordering & Service Information
7.01	Component Drawer & Control Panel
7.02	Hood Front - Opened
7.03	Under-Hood Filters & Light
7.04	Doors & Front Panel

Safety

Safety Overview:

The information contained in this manual has been prepared to describe the proper procedures for safely installing, operating & maintaining your *Giles Food Service Equipment*.

Throughout the manual, safety precautions are identified by a hazard alert symbol and key words **DANGER**, **WARNING** or **CAUTION**. Safety information will generally precede the process to which it applies. Suggested, recommended, and other noteworthy information will be identified as **NOTES**, or noted as **IMPORTANT!**. Additionally, certain words are used to indicate a specific meaning, or to add emphasis as follows:

Shall:understood to be mandatory.Should:understood to be advisory.May:understood to be permissive.Will:indicates a future event or condition to occur.

Hazard Alert Symbols are used to alert users to potential personal injury hazards and poor operating practices. The symbol will immediately precede precautionary measures pertaining to avoiding such hazards or practices. Adhere to all information following these symbols to avoid possible injury, or even death. Failure to do so may also void the factory warranty.

This product can expose users to chemicals including lead, nickel, aluminum, brass, carbon, copper or BPA which are known in the state of California to cause cancer, birth defects and other reproductive harm. For more information go to: www.p65warnings.ca.gov.

A DANGER

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

WARNING

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

ACAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor to moderate injury. This notification is also used as an alert to unsafe practices.

CAUTION

If used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, may result in equipment and/or property damage, and may void the factory warranty.

NOTE or IMPORTANT!

Identifies suggested, recommended, or other important information.

Safety

Specific Safety Precautions:

For your safety, please observe the following precautions when operating or servicing this *GILES* food service equipment. Adhering to the following important safety information will help to prevent personal injury and/or damage to the equipment.

A DANGER

- Before cleaning or performing maintenance, place **POWER** switch in the **[OFF]** position. To remove all power from the appliance, unplug power cord or turn OFF breaker in the electrical panel supplying the unit.
- Failure to place **POWER** switch in the **[OFF]** position when replacing filters, could result in equipment damage, electrical shock or other serious personal injury.
- **<u>DO</u> <u>NOT</u>** wash down interior or exterior of hood with water spray hose.
- Failure to comply with **DANGER** notices will result in serious injury, even death; or damage to equipment and/or property and may void the factory warranty.

WARNING

- Ventless/recirculating hoods are <u>not</u> suitable for every commercial food service application. Failure to fully comply with all site requirements and installation limitations as outlined in the <u>GFSE Hood Approval Letter &</u> <u>this Manual</u>, may result in poor or highly unsatisfactory hood performance.
- <u>DO NOT</u> use ventless/recirculating hoods with gas-fired cooking appliances ... a high potential for inhalation hazards from carbon monoxide build-up in the operating space will exist. *Hood is approved <u>ONLY</u> for use with electrically heated appliances*.
- Consult a qualified electrical contractor, or kitchen equipment specialist, to ensure that installation will comply
 with all electrical requirements & codes, and that breakers and wiring are of sufficient rating and gauge to power
 this equipment (check the rating label ... a wiring diagram is provided). The unit must be installed and
 electrically grounded in accordance with local codes, or in the absence of local codes, in accordance with the
 National Electrical Code, NFPA 70. Improper or inadequate grounding may result in electrical shock to users.
- Improper installation, alteration of the unit, or improper service & maintenance could result in serious injury, even death; equipment and/or property damage; and will potentially void the factory warranty.
- <u>DO</u> <u>NOT</u> use or store flammable liquids, or materials that produce flammable vapors, in the vicinity of this or any other appliance!
- Failure to comply with **WARNING** notices could result in serious injury, even death; damage to equipment and/or property; and will potentially void the factory warranty.

Specific Safety Precautions:

ACAUTION

- Exercise care when removing wooden crate framework and the unit from shipping pallet. The hood is very
 heavy; extreme precaution must be exercised when handling and assembling stand & lifting the hood unit for
 mounting atop stand.
- Use extreme caution when moving and positioning the assembled unit into the final location ... it will be very top-heavy. Once located, be sure unit is properly leveled and anchored.
- <u>DO NOT</u> operate the appliance unless you understand the function of all components and proper operating
 procedures (read <u>Section 3</u>). Closely follow the instructions in this manual to avoid equipment damage and/or
 malfunction.
- The equipment is not intended to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given adequate instruction and/or supervision concerning use by a person responsible for their safety.
- When working in a kitchen environment, take necessary precautions to avoid injury due to <u>HOT</u> surfaces (cooking appliances, utensils, tools, etc.). As applicable, always wear thermal protection, such as oven mitts or gloves, when handling hot pans, utensils or foods.
- Failure to comply with **CAUTION** notices may result in minor to moderate personal injury, damage to equipment or property, and potentially void the warranty.

CAUTION

- Some components & controls are impact-sensitive. To avoid damage and maintain proper operation, exercise due care when working near the hood.
- Handle the *electronic air cleaner (E.A.C.) collector cell* carefully. <u>DO NOT</u> bend the collection plates (*fins*) or break the fine wires stretched across the cell face ... result will be to significantly reduce the performance of the air cleaning system and can eventually result in shutdown of power to cooking appliances under hood.
- After cleaning the cell, <u>DO NOT</u> attempt to dry it by installing in hood & running. NEVER PLACE A WET CELL INTO HOOD ... can potentially damage the system and cause improper operation. Such damage is NOT cover by the factory warranty. If desired, drying after cleaning can be expedited by setting a small electric fan to blow room air across the cell.
- When cleaning this equipment:
 - DO NOT steam clean.
 - DO NOT clean with products containing chlorine, or other corrosive chemicals.
 - DO NOT use abrasive products, steel wool or scouring pads.
 - DO NOT use oven cleaner products.
- <u>DO NOT</u> alter, add attachments, or otherwise modify the equipment! <u>DO NOT</u> attach any type of ductwork extensions to the hood exhaust in an attempt to redirect the exhaust airflow.
- Failure to comply with CAUTION notices may result in damage to equipment or property. Such damages are <u>NOT</u> covered by the factory warranty.

Specific Safety Precautions:

NOTE:

- Comply with all appropriate state and/or local heath regulations regarding cleaning and sanitation of food service equipment.
- To clean difficult surface areas, having excessive grease residue build-up, GILES recommends using a mild, biodegradable, non-toxic degreasing cleaner such as Simple Green® Crystal Foaming Spray Cleaner/Degreaser.
- GILES assumes no responsibility with regard to code compliance during installation or when using ventless recirculating ventilation equipment. The customer shall be responsible for obtaining all necessary approvals from Authorities Having Jurisdiction (AHJ) before installation & operation.

Introduction

FSH-4 Hood

1. Introduction

THANK YOU for purchasing the *Giles Model FSH-4 Ventless Recirculating Hood w/72" Floor Stand*, manufactured by *Giles Enterprises, Inc.*, Montgomery, Alabama (USA), hereafter referred to as "*GILES*". Giles ventless technology is the result of extensive engineering, research and development. Every unit is thoroughly inspected and tested prior to shipment to ensure it operates flawlessly after installation. With proper care and maintenance this unit should provide years of trouble-free service.

To help protect your investment, we recommend that you take the time to review this *Manual* and become familiar with the procedures pertaining to installation, operation, cleaning and maintenance. Adherence to these recommended procedures will minimize potential for costly "downtime" and future repair expense.

Please retain this Manual for future reference.

1.01 Construction

Constructed of high-grade, formed & welded stainless steel sheet metal of various gauges (16, 18 & 20).

1.02 Design Features

Control Panel:

- LED indicator lights show the operational status for each of the two (2) Electronic Air Cleaner collector cells.
- Indicator lights display hood performance status & provide signals when operator attention is required to correct conditions negatively affecting hood performance ... *missing filters, mis-aligned filters, clogged filters, airflow obstructions, etc.*
- APPLIANCE POWERED light indicates that cooking appliances under hood are being supplied with power.
- *Filter Cleaning Timer* ... built-in to alert operators when E.A.C. filter collector cells should be cleaned & all other filters inspected. Timely & routine cleaning of the E.A.C. collector cells is essential to maintain optimum air cleaning performance.

Filters:

- (2) Baffle Filters captures & removes the largest grease particulate from cooking vapor.
- (2) Pre-Filters captures & removes smaller particulate and helps remove moisture.
- (2) Electronic Air Cleaner (E.A.C.) Collector Cells electrostatically capture fine particle air contaminates.
- (2) Charcoal Filters help to control undesirable cooking aromas in the exhaust air.

Push-To-Start Power:

After a power interruption, neither the hood nor interlocked cooking appliances underneath will automatically restart when power is restored ... hood **POWER** switch must be pressed for restart. Once hood restarts, power is then supplied to the cooking appliances. Features complies with code requirement, where applicable.

Pre-plumbed for Fire Suppression System:

Factory pre-plumbed for connection to a listed fire suppression system ... **Ansul® R-102 wet chemical**. Includes piping, plenum nozzles (*no appliance drop-downs*), detector link brackets and conduit. **The Ansul system, field** *installation, set-up, testing & final commissioning shall be provided by the purchaser, and must be supplied by an authorized Ansul® Distributor/Dealer ... not included with purchase.*

1.03 Optional Model

HEPA Filter Model:

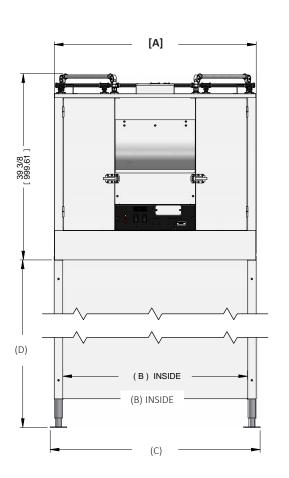
Hood design utilizing (2) disposable **HEPA** filters instead of the sustainable Electronic Air Cleaning system.

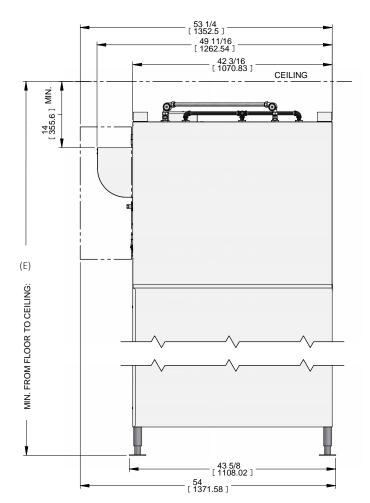
Introduction

1.04 Specifications

1.04.1 Overall Dimensions

Code	Dimension
[A]	48-11/16 [1236.7]
[B]	45-1/16 [1144.6]
[C]	50-3/8 [1279.5]
[D]	72 [1828.8]
[E]	115-5/8 [2936.9]





INCHES [mm]

Introduction

FSH-4 Hood

1.04.2 Agency Certifications



1.04.3 Hood Weights

Model	Crated Weight	Uncrated Weight (approx.)	
FSH-4 (w/Stand)	835 lbs [379 kg]	710 lbs [322 kg]	

Installation

2. Installation

This section summarizes procedures for proper equipment installation. To help avoid personal injury or damage to the equipment or property, be sure to follow all of these recommended procedures.

Installation expense (materials & labor) is the sole responsibility of the purchaser. Generally, it is advisable to engage the services of professional commercial kitchen equipment specialists, licensed electricians, and/or qualified HVAC contractors to assist with the details of installation. Call *Giles Technical Support* @ 800.554.4537, if assistance is required.

The hood is factory-assembled with internal fire suppression components (*piping, nozzles, detector link brackets, cable conduit, exhaust fire damper*) and is ready be to connected to a, **customer provided**, fire suppression system specified by the UL listing ... **Ansul® R-102 Wet Chemical System**. The system. field installation, set-up, testing and final commissioning shall be provided for by the purchaser, and must be supplied by an authorized **Ansul Distributor/Dealer**.

2.01 Location

IMPORTANT!!

Before installing a *GILES* Recirculating/Ventless Hood system ensure that ... A). All necessary approvals have been obtained from local code authorities ... B). The appliances to be placed under the hood are all within the hood's listing limitations, as outlined in <u>Section 2.04</u> ... C). The installation site complies with the specific requirements & limitations outlined in the <u>GFSE Recirculating/Ventless Hood Approval Letter (HAL)</u>. The <u>HAL</u> is available for review & download at <u>www.gfse.com</u> on the <u>SUPPORT</u> menu under <u>VENTLESS DOCUMENTS</u>.

To ensure satisfactory hood performance when installed, the intended site <u>MUST</u> comply with minimum requirements for kitchen size (>600 sq ft), ceiling height, fresh outdoor air make-up, room air exchange rate, supplemental exhaust ventilation, clearances, etc. as stipulated in <u>Giles Hood Approval Letter</u>.

- MAXIMUM of 1 hood per 600 sq ft of commercial kitchen space.
- Fresh outside air make-up must be equal to a <u>MINIMUM</u> of fifteen (15) complete room air exchanges per hour.
- Giles makes no representations as to the proper layout design for an establishment in which the ventless hood will be used. Further, Giles does not perform site inspections prior to installation of its units.
- The hood produces a sound level of approximately **75 dB** when in operation.

ACAUTION

- DO NOT ALTER, ADD ATTACHMENTS OR OTHERWISE MODIFY THIS EQUIPMENT.
- Failure to comply with installation requirements as specified by the <u>Giles Hood Approval Letter</u> will void the factory warranty.
- 1. A minimum clearance of **14**" (**355.6 mm**) must be maintained between the top of the hood exhaust outlet and ceiling, or other large overhead obstructions.
- <u>DO NOT</u> attach additional ductwork to the exhaust outlet in an attempt to redirect airflow. The back-pressure created can significantly reduce hood capture and result in unsatisfactory performance.
 <u>DO NOT</u> attempt to by-pass the ceiling clearance requirement by directing exhaust air into a ceiling niche, or the space above a suspended ceiling. These actions are considered as improper installations and can void the factory warranty.

2.02 Unpacking

IMPORTANT NOTE!!

If there is evidence of damage to the palletized unit, or any of the accompanying items, immediately and thoroughly inspect the unit and all components. Notify the freight company of all damages. Generally, it is the responsibility of the customer to file and negotiate freight damage claims with the carrier.

Unit is shipped on a wooden pallet, secured by high-tensile plastic strapping & wrapped in machine-applied stretch film. In most cases a wooden crating framework is built around the unit for added protection. Unpack as follows:

- 1. Position pallet in an area that provides adequate work space.
- 2. Remove the plastic stretch wrap, strapping and any other packaging materials.
- 3. Using suitable equipment or sufficient manpower & safe work practices, carefully remove the hood stand components (sides, back panels, trim pieces & appliance channels) from the load & stage them for assembly and installation.
- 4. Generally, the two (2) stainless baffle filters are placed on top of the hood for shipment. If so, secure them & place for safe place for future installation.
- 5. Carefully remove any wooden supports and crating framework that might be attached.
- 6. Locate & secure the envelope containing *Warranty Card* and any other documentation or hardware provided for installation.
- 7. It is preferable to leave the hood unit on the pallet so that handling equipment can be used to easily move it for final installation.

ACAUTION

- Unit is very heavy and bulky! Use suitable equipment and sufficient manpower to lift and handle the hood. See *Section 1.04.3, Weights*.
- Take care when removing and disposing of packaging materials.
- When moving & handling the hood, take special care not damage the bottom skirting. Dragging unit along the floor or lifting by using the bottom edge has the potential to damage the skirt.
- Failure to comply with these **CAUTION** notices may result in moderate to minor injury, equipment or property damage, and could void the warranty.

2.03 Stand & Hood Assembly

NOTE:

Items needed for stand and hood assembly (fasteners & high-temp silicone) are provided. All other expenses for material, labor, equipment rentals, etc. are the responsibility of the purchaser ... not included with hood purchase.

IMPORTANT! The hood stand is the only installation method now approved by Giles ... the former "ceiling suspended" installation method is <u>no longer an acceptable</u> <u>option</u>. Attempting to install the hood in such a way can void the factory warranty.

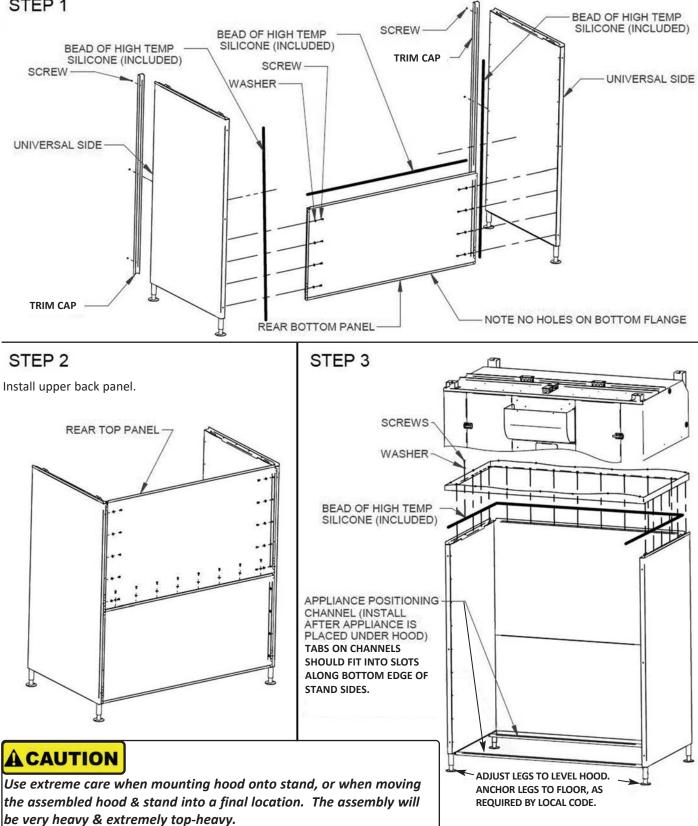
Assemble stand with provided hardware as shown by the following instruction. Use the provided silicone, as shown, to seal gap between panels. Position the stand as close as possible to the final intended operating position, before beginning *step #3*.

Installation

FSH-4 Hood







Installation

2.04 Cooking Appliance Limitations & Clearances

IMPORTANT!

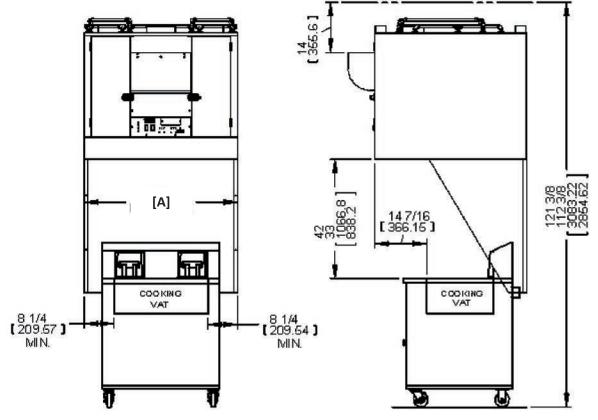
The clearance diagrams in this section depict a "ceiling suspended" hood over various appliances. <u>Ceiling mounting</u> is no longer an acceptable installation method. "Side clearance minimum" dimensions shown in these illustrations will not apply for the free-standing hood versions ... the entire width of the hood stand skirt can be utilized.

2.04.1 Fryer Limitations (Electrically Heated Appliances ONLY)

Hood	Max. Temp.	Max. kW Input	Max. Shortening Capacity	Max Cooking Surface (per Fryer)	Max Cooking Surface (Total)
FSH-4	350°	20 kW per Fryer 40 kW Total	20 gal.	576 sq. in.	576 sq. in.

2.04.2 Fryer Clearances (Side-to-Side Overhang Not Applicable w/Floor Stand)

Dim.	FSH-4
[A]	48-11/16 [1236.7]



Installation

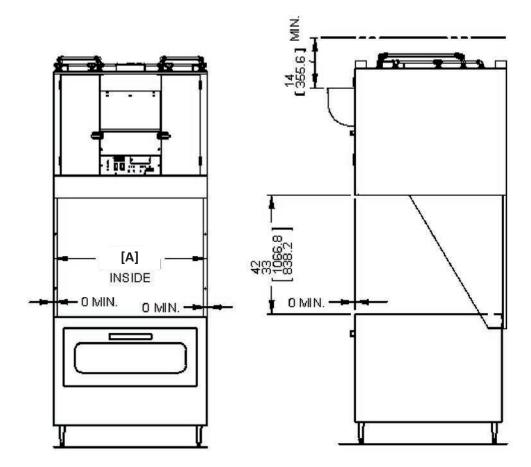
FSH-4 Hood

2.04.3 Oven Limitations (Electrically Heated Appliances ONLY)

Hood	Max. Temp.	Max. kW Input (Total)
FSH-4	500°	55 kW

2.04.4 Oven Clearances

Dim.	FSH-4
[A]	48-11/16 [1236.7]



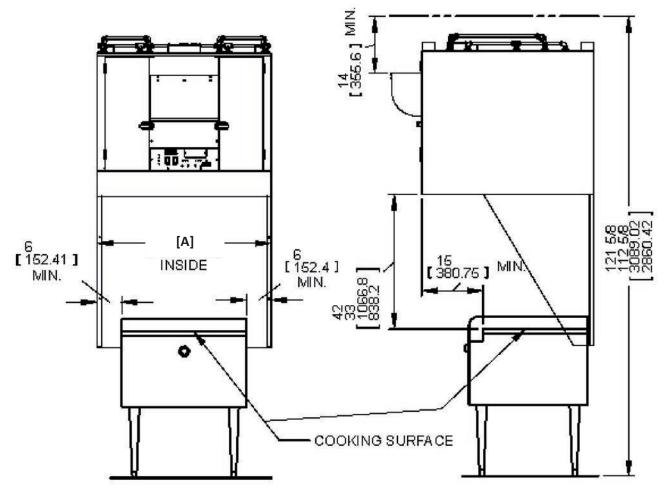
Installation

2.04.5 Griddle Limitations (Electrically Heated Appliances ONLY)

Hood	Max. Temp.	Max. kW Input	Max Cooking Surface
FSH-4	400°	25	42 X 42

2.04.6 Griddle Clearances (Side-to-Side Overhang Not Applicable w/Floor Stand)

Dim.	FSH-4
[A]	48-11/16 [1236.7]



Installation

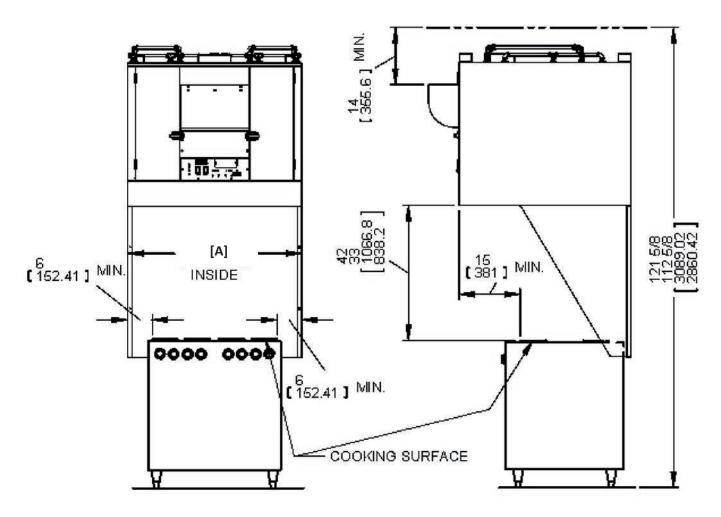
FSH-4 Hood

2.04.7 Range Limitations (Electrically Heated Appliances ONLY)

Hood	Max. Temp.	Max. kW Input	Max Burners
FSH-4	400°	25 kW	8

2.04.8 Range Clearances (Side-to-Side Overhang Not Applicable w/Floor Stand)

Dim.	FSH-4
[A]	48-11/16 [1236.7]



Installation

2.05 Electrical Specifications - Hood ONLY

WARNING

- Food service equipment must be properly grounded in accordance with local code, or in the absence of local code, with the <u>National Electrical Code</u>, <u>ANSI/NFPA 70</u>. Improper grounding may result in electrical shock to users. Check local electrical code to ensure that proper grounding is applied.
- Always consult a certified electrician, or other qualified service technician, prior to installation to ensure that electrical circuits are of sufficient rating for the hood and appliance load.
- Improper installation, adjustment, alteration, service or maintenance could result in serious injury or possible death, equipment or property damage, and could void the warranty.

Electrical Specifications (Hood Only)					
Unit	Voltage	Hz	Phase	Amps	Breaker
FSH-4	208-240	60	1	15	20

IMPORTANT!

- Hood is designed to operate with either 208V or 240V supply power.
- Breaker size shown applies to <u>hood power only</u>. Under-hood appliances are to be powered by a separate circuit with an interlock relay controlled through the hood circuitry, such that the appliances do receive power unless the hood is running properly.

2.05.1 Electrical Connections

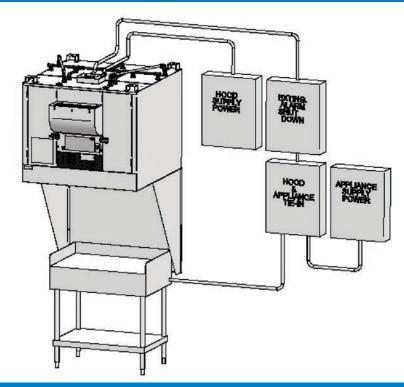
- 1. Install appropriate circuit breaker in main electrical panel, see *Section 2.05, Electrical Specifications*.
- 2. As required by code, route suitable sized flexible conduit from main panel to service box on hood top and attach using appropriate connectors. See *Section 2.05.2, Routing Conduit & Wiring*.
- 3. Pull appropriately sized wire from the electrical panel to the hood service box. Securely connect power supply wires to the proper terminal blocks inside the service box & reinstall cover.
- 4. Turn ON breaker supplying power to the hood.
- 5. Press & briefly hold in the top **[START]** portion of the **POWER** switch, then release when the hood fan starts running. Switch will spring back and remain in the **[ON]** position. The green **[POWER]** light turns ON ... an alarm may briefly sound until the fan reaches full speed. The amber **[APPLIANCE POWERED]** turns ON.
- 6. Place **POWER** switch in the **[OFF]** position & continue installation.
- 7. Section 2.05.3 shows detail for connecting the appliance power supply through a hood interlocked relay.

Installation

2.05.2 Routing Power Conduit & Wiring

- This diagram shows a typical conduit & wiring setup for connecting hood and appliance power.
- 2. See *Section 2.05.3, Hood & Appliance Interlock Diagram* for details on setting up an interlock circuit for the under-hood cooking appliances.

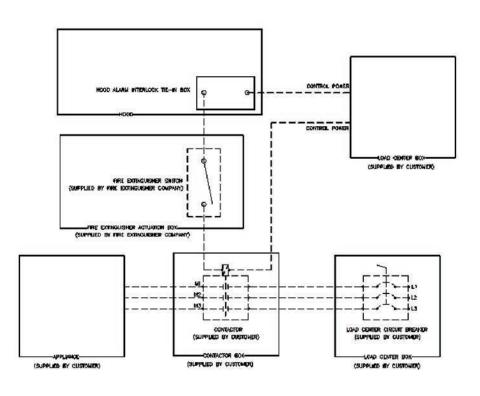
Once properly connected, the appliances should not receive service power unless the hood is running properly.



2.05.3 Hood & Appliance Interlock Diagram

IMPORTANT!

Failure to interlock cooking appliances with the hood, so that they are not powered unless the hood is operating, *will not be compliant with the hood's UL listing* and may be in violation of local codes (*building, fire & health*). A typical interlock circuit for under-hood cooking appliances is shown below.



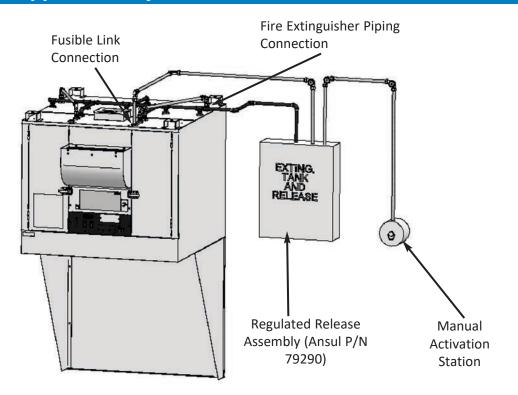
Installation

2.06 Fire Suppression System Installation

Giles ventless hoods (*plus under-hood cooking appliances*) must be protected by an **Ansul**[®] **R-102 Restaurant Fire Suppression System** in accordance with the hood listing. Hood includes factory-installed piping, plenum discharge nozzles (*appliance drop-down nozzles not included*), detector link brackets, and cable conduit. Piping & conduit are stubbed out on either side of hood to connect the fire suppression system. **Procurement of the Ansul system, field installation, set-up, testing & certification is the sole responsibility of the purchaser (***NOT included with hood***). The system & installation must be provided by an authorized Ansul[®] distributor/dealer**.

- 1. Appliance nozzles shall be positioned 11" [279.4 mm] below the lowermost front edge of the hood.
- 2. Both appliance nozzles must be installed & remain in place at all times.
- 3. A manual activation station for the fire system *(NOT included)* shall be installed in a conspicuous location in a path of egress (exit) from the area. The pull station must be clearly marked & easily accessible.
- 4. The regulated *release mechanism* shall be the mechanical type (*Ansul® Automan #79290*) ... 3-gal wetchemical suppressant storage tank shall be included.
- 5. Installation, operation & maintenance of this hood must comply with the *Standard for Ventilation Control* & *Fire Protection of Commercial Cooking Operations, NFPA 96.*

2.06.1 Fire Suppression System Connection

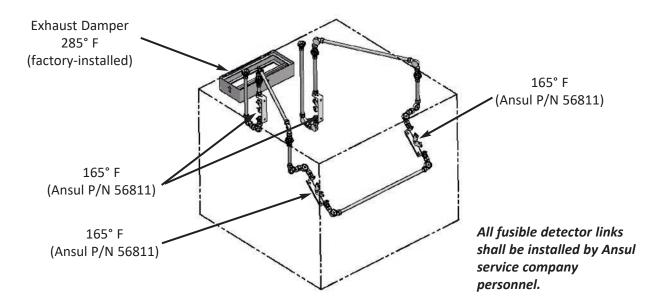


NOTE: System can be connected at either side of the hood.

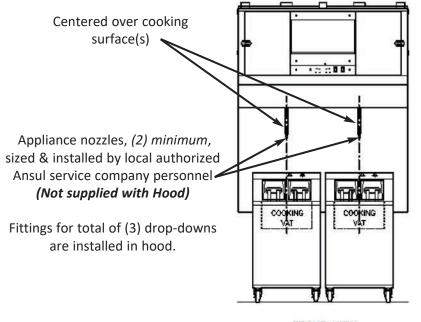
Installation

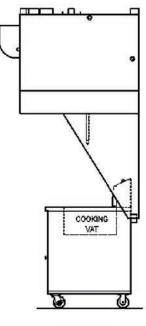
FSH-4 Hood

2.06.2 Fire Suppression Fusible Detector Links & Location



2.06.3 Appliance Nozzles

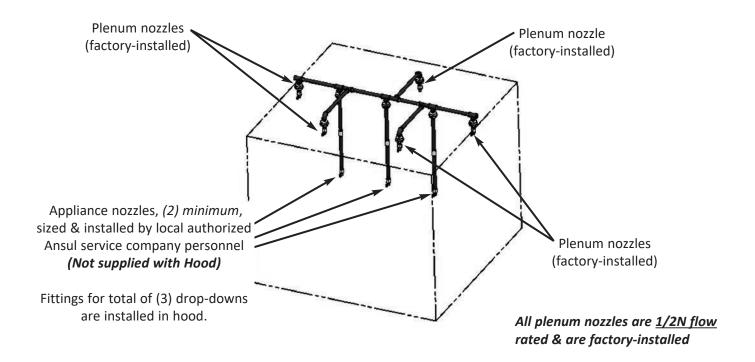




SIDE VIEW

Installation

2.06.4 Fire Extinguisher Nozzle Locations

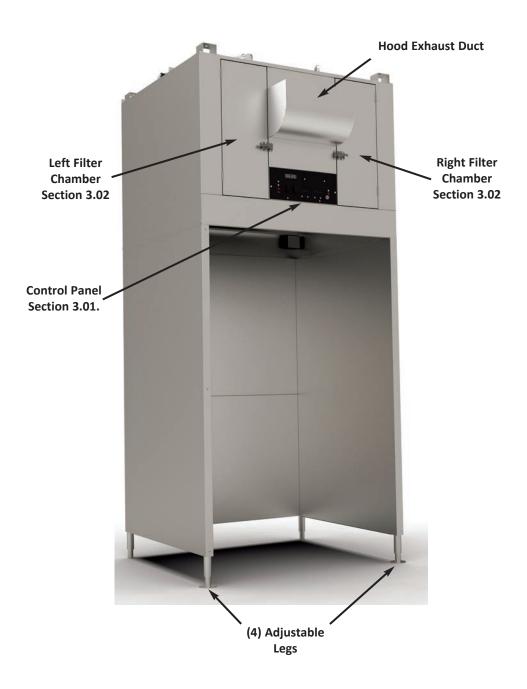


Overview

FSH-4 Hood

3. Overview

This section provides a brief overview of hood components, functions and accessories. Please review carefully before attempting to operate the hood.



Overview

3.01 Control Panel



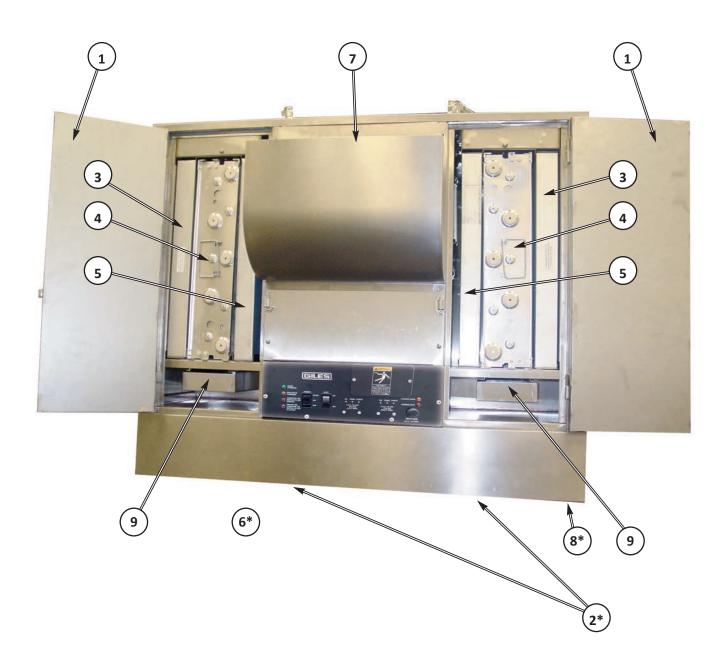
Overview

FSH-4 Hood

Item	Description	Function		
1	LIGHT Switch	Controls under-hood lighting.		
2	POWER Switch "Push-to-Start"	Press & momentarily hold the top [START] portion of switch to start hood & supply power to cooking appliances underneath. Switch remains in [ON] position (center) when released. To turn hood OFF & shutdown power supply to appliances, press the bottom of switch. Hood must be restarted with this switch after any interruption of power supply.		
3	E.A.C. Filter Status Indicators ON WASH CHECK	 LED lights indicate the status of the electronic air cleaner (E.A.C.) on each side of the hood. [ON] - illuminates when hood is powered & indicates that E.A.C. system is powered & functioning normally to clean air. Should be the only light ON when operating normally. [WASH] - turns ON to indicate excessive build-up on collector fins (dirty), collector cell missing, poor contact, missing ionizer wires, etc. Approximately 2 minutes after this light turns ON, a beeping alarm will begin sounding & power to cooking appliances is shutdown. IMPORTANT! Do not rely on this light as a signal for routine cleaning; cell must be cleaned daily to maintain peak performance & extend the useful life of charcoal filters. [CHECK] - indicates that collector cell has stopped operating damaged, shorted to ground, fins shorted due to excessive moisture, etc. No alarm sounds & the cooking appliances remain powered, but air cleaning system is not functioning. <u>DO NOT continue operation check system & determine cause</u>. Service may be required. 		
4	PRE-FILTER, CHARCOAL OR BAFFLE FILTER CLOGGED Light	Turns ON if filters (<i>baffle, pre-filter, charcoal filter</i> } are excessively dirty and restricting airflow through hood. Other obstructions can also be cause blocked exhaust, etc. A constant (steady) alarm will sound.		
5	CHARCOAL OR BAFFLE FILTER MISSING Light	Turns ON to indicate that a required filter (<i>baffle, pre-filter, charcoal</i>) is missing or installed improperly. There will be no alarm sounding.		
6	APPLIANCE POWERED Light	Turns ON to indicate that power is being supplied to cooking appliances under hood. When light turns OFF while the hood is powered, there is typically a an alarm condition that has disabled appliance power.		
7	HOOD POWERED Light	Turns ON indicating the hood is powered.		
8	E.A.C. Cleaning Timer CHANGE SOON CHANGE NOW SNOOZE	 Helps users maintain the electronic air cleaner (E.A.C.) collector cells in a timely manner for optimum performance. [CHANGE SOON] - turns ON when timer enters [WARNING] mode indicates that collector cells should be cleaned within the next <u>24 hours</u>. [CHANGE NOW] - turns ON when timer enters [TIMEOUT] mode indicates that the maximum time between required cleaning has expired. Cells <u>must</u> be cleaned (<i>or exchanged</i>) immediately. A constant tone alarm sounds & power to hood (<i>and cooking appliances</i>) is shutdown until cleaning is performed timer will reset automatically after cleaning & hood can be restarted to power appliances. [SNOOZE] - after entering [TIMEOUT], pressing this button will temporarily return timer to [WARNING] mode & silences alarm for <i>two</i> (2) hours only two (2) [SNOOZE] periods can be used. 		

Overview

3.02 Filter Chamber & Exhaust



Overview

FSH-4 Hood

3.02 Filter Chamber & Exhaust				
ltem	Description	Function		
1	Hood Filter Doors (2)	Provides access the pre-filters, EAC collector cells and charcoal filters. Both doors must be closed & latched before hood will operate.		
2*	Baffle Filter (2)	First stage of the ventless air cleaning system. Stainless steel filters capture largest grease particulate in cooking vapor. Easy to remove for daily cleaning. <i>Baffle filters should be cleaned daily & can be washed in a dishwasher.</i>		
3	Pre-Filter (2)	Single-use, disposable filters removes moisture & some smaller grease particulate from the air stream. Helps keep the EAC cells performing effectively. <i>NEVER attempt to clean & re-use pre-filters replace every 7-10 days with fresh new filters.</i>		
4	E.A.C. Collector Cells (Left & Right)	EAC collector cells are sustainable electrostatic devices that remove fine grease particulate and smoke generated by the cooking appliances. <i>To maintain peak performance, cells must be cleaned <u>DAILY</u> as described later in this manual.</i>		
5	Charcoal Filter (2)	Single-use, disposable filters that help to control cooking aromas in exhausted air. Filters must be replaced periodically. <u>NEVER</u> attempt to clean & re-use charcoal filters Typically, replace with fresh new filters every 30 to 45 days. Actual replacement frequency is highly dependent of cooking appliances in use & type of foods cooked.		
6*	Self-Supporting Hood Stand	Self-supporting hood stand side & rear stand skirts help contain cooking vapors & improve hood capture performance. Maximizes usable hood width.		
7	Exhaust Outlet	Directs cleaned air back into the room. <i>A minimum clearance of 14"</i> <u>MUST</u> be maintained between the top of the exhaust outlet and the ceiling, or other large overhead obstructions. <u>DO NOT</u> attempt to direct exhaust into a different space by attaching ductwork will result in poor performance.		
8*	Grease Drip Cup	Catches & collects grease condensate generated at the baffle filters. Cup should be checked & emptied daily cleaned as needed.		
9	EAC Drip Cups (2)	Catches & collects grease residue that may drip down from E.A.C. filter cells. Should be checked & emptied daily cleaned as needed.		

Model: FSH-4

Overview

3.03 Accessory Items Included w/Hood

Part	Description/Part Number	Function	
	Baffle Filter (2) required P/N 40943	Captures larger grease particulate contaminant.	
	Pre-Filter (2) required P/N 91707	Removes additional grease-laden vapor and moisture from the air. Single-use only, disposable, must be replaced weekly (approx.).	
	E.A.C. Collector Cell P/N 20521 (Left Side) P/N 20520 (Right Side)	Captures fine grease particulate and some smoke contaminant from the air. Sustainable, must be cleaned DAILY .	

Overview

FSH-4 Hood

3.03 Accessory Items Included w/Hood - continued

Part	Description/Part Number	Function
	Charcoal Filter (2) required P/N 30248	Helps to control cooking aromas in the exhausted air. Single use, must be replace periodically (30- 40 days approx.) <u>Will not completely eliminate</u> odor.
FORMUNC CRYSTAL SINDLE OCCEPT Units HEAD TO LIMIT TO LIMI	(1) Sample Can Foaming Crystal Cleaner/Degreaser P/N 41510 12-count Case NSF approved	<u>GILES recommended collector cell</u> <u>cleaner.</u> Spray foam degreaser for cleaning EAC collector cells. It is readily available from Giles and on-line distributors, as well as many national retail outlets.

Overview

Operation & Filter Maintenance

FSH-4 Hood

4. Operation & Filter Maintenance

4.01 Starting the Hood

Be sure that all filters are in place & both filter access doors are closed & latched securely before starting the hood. *Hood will NOT power-up if either filter door is open, or ajar.*

To Start Hood:

- Press & momentarily hold the top [START] portion of the POWER switch ① until both hood blowers start running. Release & switch will spring back to remain ON.
- 2 The green **HOOD POWER** light ② and both small **EAC** [**ON**] lights ③ should turn ON. A constant tone alarm may sound briefly ... it should stop as blowers reach full speed.
- 3. At that time, the amber **APPLIANCE POWERED** light (4) should turn ON to indicate that power is being supplied to the cooking appliances and they are ready for use.
- 4. If desired, place LIGHT switch (5) in [ON] position to turn on under-hood lighting.



Should this sequence not occur, other lights turn ON or alarms sound, see Section 6, Troubleshooting for possible causes and corrective actions.

To Shutdown Hood:

- 1. Press the bottom **[OFF]** portion of the **POWER** switch (1).
- 2 Blowers stop running & all indicator lights turn OFF.
- 3. Power to the cooking appliances is shutdown.

4.02 Filter System, Filter Maintenance & Filter Alarms

4.02.1 Ventless Hood Filter Table

Filter	When to Clean/Replace	How to Remove	How to Clean	How to Install
Baffle Filter	Clean daily	Section 4.02.2	Section 4.04.1	Section 4.02.3
Pre-Filter	Replace every 7 to 10 days	Section 4.02.4	DO NOT attempt to clean; replace ONLY! Section 4.03.4	Section 4.02.5
E.A.C. Collector Cell	Clean daily	Section 4.02.6	Section 4.04.2	Section 4.02.7
Charcoal Filter	Replace every 30 to 40 days,	Section 4.02.8	DO NOT attempt to clean; replace ONLY! Section 4.03.5	Section 4.02.9

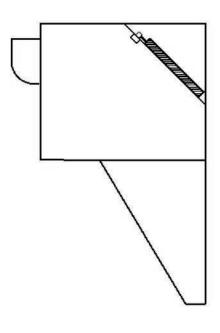
Operation & Filter Maintenance

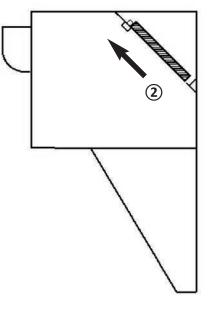
4.02.2 Baffle Filter Removal

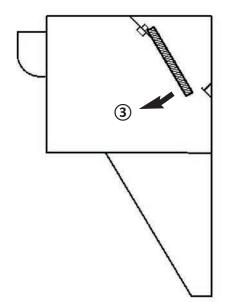


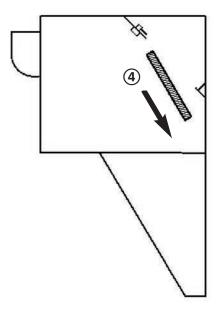
① Turn hood power **OFF**

The (2) baffle filters are accessed from underneath the hood & directly above cooking appliances.



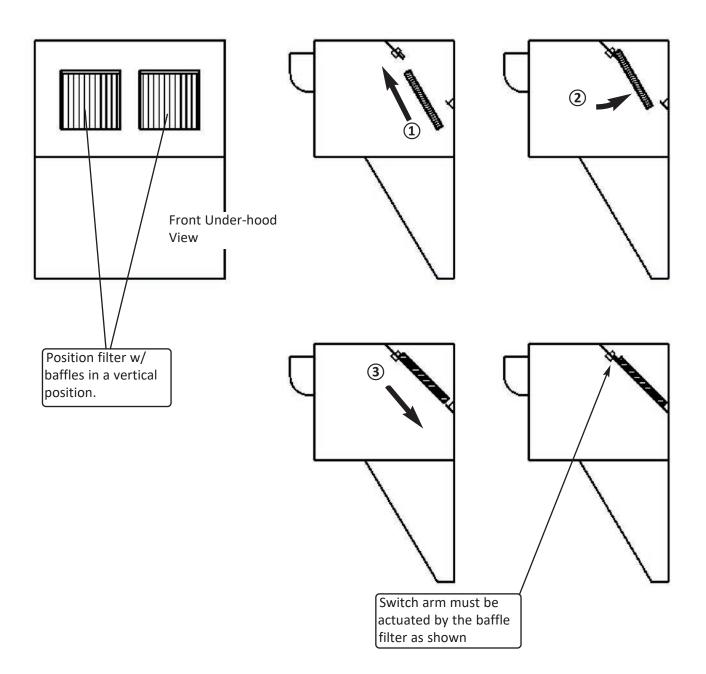






FSH-4 Hood

4.02.3 Baffle Filter Installation

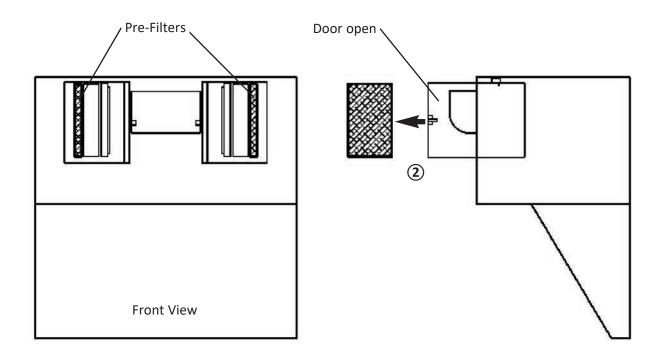


Operation & Filter Maintenance

4.02.4 Pre-Filter Removal

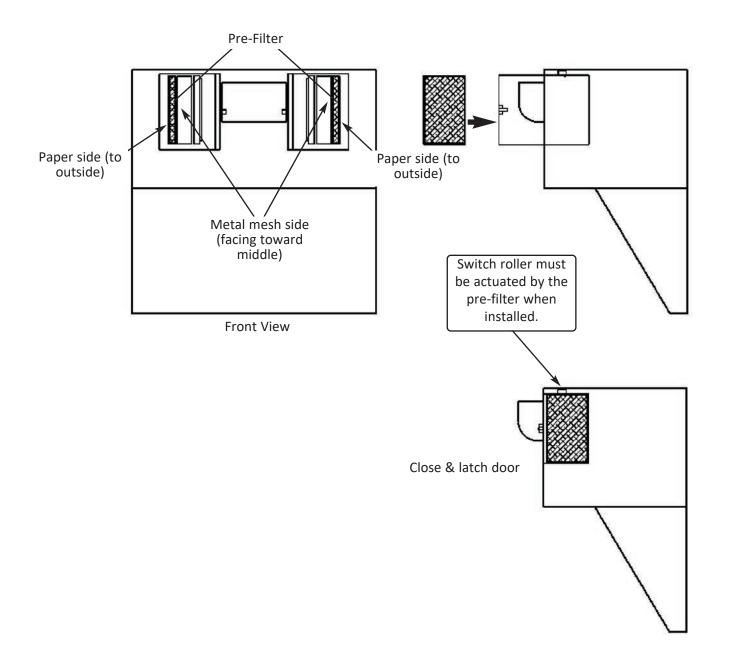


1 Turn hood power OFF



FSH-4 Hood



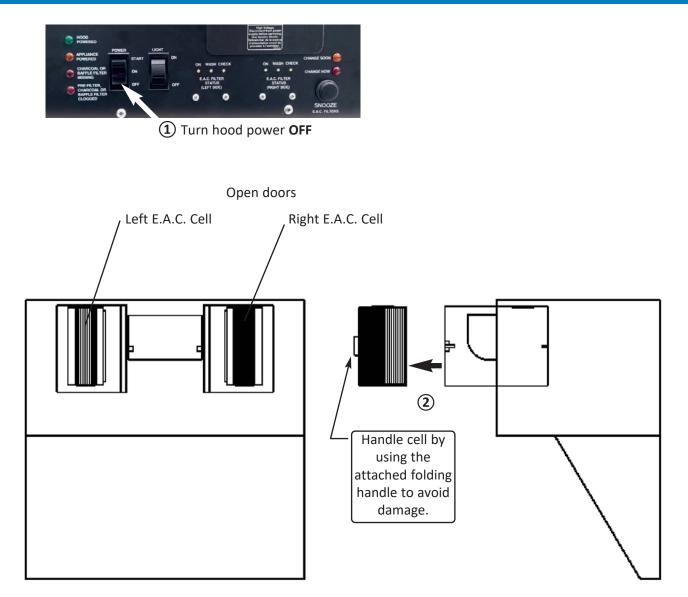


NOTE:

When filters are changed, always record the installation date in the space provided on the filter label.

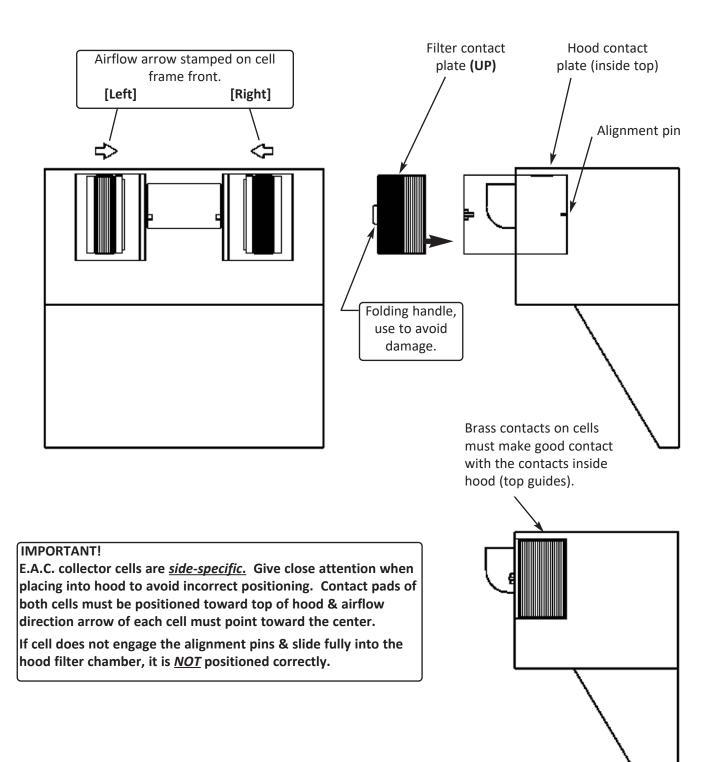
Operation & Filter Maintenance

4.02.6 E.A.C. Collector Cell Removal



FSH-4 Hood

4.02.7 E.A.C. Collector Cell Installation

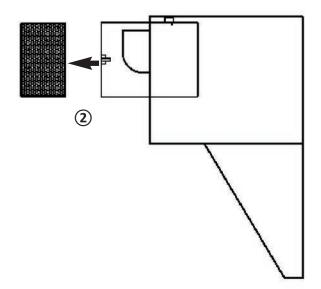


Operation & Filter Maintenance

4.02.8 Charcoal Filter Removal

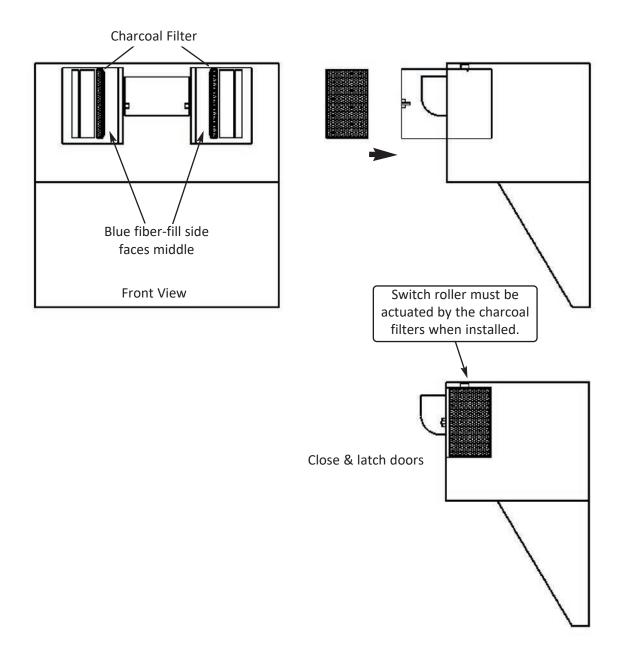


Charcoal Filter



FSH-4 Hood

4.02.9 Charcoal Filter Installation



Operation & Filter Maintenance

4.03 Hood Filter Alarms

4.03.1 Baffle, Pre-Filter or Charcoal Filter Missing

If either *baffle filter, pre-filter, or charcoal filter* is not in place, or positioned incorrectly, the red **[CHARCOAL OR BAFFLE FILTER MISSING]** light will turn ON. Power to cooking appliances under hood is shutdown until the

condition is corrected ... the amber [APPLIANCE POWERED] light turns OFF. No audible alarm will sound.

- Hood blowers continues to run ... turn OFF hood power.
- Confirm that all filters are in place.
 See <u>Sections 4.02.3</u> <u>4.02.5</u> <u>4.02.9, Filter Installation</u>.
- Remove & reinstall the filters to ensure that they are seated properly in guides, pushed fully into the filter compartment & that doors close properly. Each filter must also actuate a proofing switch located in the filter channels (charcoal & prefilter quitables are in the tare of the compartment; heffle filter of the second sec



filter switches are in the top of the compartment; baffle filter switches are located in the filter rack under hood).

• Restart hood ... if condition persist, call for service.

4.03.2 Baffle, Pre-Filter or Charcoal Filter Clogged

If *baffle filters, pre-filters, or charcoal filters* become clogged, or other conditions exist that obstruct airflow through the hood such that it falls below the minimum required for effective capture of cooking vapors, the **[PRE-FILTER,**

CHARCOAL OR BAFFLE FILTER CLOGGED] light will turn ON. Power to all cooking appliances under hood is shutdown until the condition is corrected ... the amber **[APPLIANCE POWERED]** light turns OFF. A steady (constant) tone audible alarm will begin sounding.

- Hood blowers continue to run ... turn OFF hood power.
- Clean the baffle filter (Section 4.04.1, Baffle Filter Cleaning).
- Replace pre-filters or charcoal filters with fresh new filters
 (Section 4.03.4, Pre-Filter Maintenance Section 4.03.5,
 Charcoal Filter Maintenance)
- Inspect inside the hood plenum to ensure that no other obstructions are present.
- Check the hood exhaust outlet & be sure that nothing is obstructing it or the surrounding area.
- Restart hood ... if condition persist, call for service.



FSH-4 Hood

4.03.3 E.A.C. Filter Status & Alarm

Two LED indicator light clusters on the control panel show the operational status of the Electronic Air Cleaner (EAC) filter system for each side of the hood.

- **[ON]** Indicates that the collector cell is installed, powered & operating. This will be only light ON when the system is operating properly.
- **[WASH]** This light turns ON to indicate:
 - Filter cell is not installed or is mis-aligned.
 - Collection fins are dirty ... contain excessive amounts of captured grease residue.
 - Poor contact between cell & contact plate inside hood.
 - Too many ionizer wires are broken or missing.

When **[WASH]** light is ON, an alarm condition exists & air cleaning is not occurring. Approximately two (2) minutes

after light turns ON, a beeping alarm will begin to sound & shortly thereafter, power to the cooking appliances under hood is shutdown ... **[APPLIANCE POWERED]** light turns OFF.

[WASH] light is <u>NOT</u> intented as the signal for routine cleaning of the cell, <u>DO NOT</u> use it as such. Typically, the collection cell must be cleaned **DAILY** to ensure optimum performance. See <u>Section 4.04.2</u>, <u>EAC Filter Cell Cleaning</u>.

[CHECK] This light turns ON to indicate:

- Ionizer wire broken & shorted out against collector cell frame.
- Cell is damaged & shorted out to ground.
- Collection fins are shorted out due to of excessive moisture.

When **[CHECK]** light is ON, system is no longer operating to clean the air, even though hood continues to run & the cooking appliances continue to receive power. <u>DO NOT CONTINUE</u> TO OPERATE HOOD WHEN THIS CONDITION EXIST ... DAMAGE TO SYSTEM CAN OCCUR ... DETERMINE CAUSE & CORRECT!

NOTE: If none of the LED lights turn ON when hood is started, the EAC power supply may be faulty ... call for service.

Before calling for service, try the following to clear the alarm condition:

- 1. Turn OFF hood **POWER** switch.
- 2. Remove the EAC collector cells, clean & dry as described in Section 4.04.2.
- Inspect the cell for broken or missing ionizer wires, bent fins, or other damage. Ionizer wires are replaceable (when ordering replacements, specify 20" wires). Bent fins may be gently straightened by hand, such that no fins are touching adjacent fins. If collector cell has excessive damage (broken/badly bent frame, broken insulators, etc.), it must be replaced.
- 4. Inspect the EAC contact plates inside hood compartment. Clean any grease accumulation from contacts with a mild degreasing cleaner & dry thoroughly.
- 5. Replace collector cells (*Section 4.02.7*) in hood & restart (*Section 4.01*). If the condition persist, contact a factory-authorized equipment service company.

4.04 Filter Maintenance

The following sections describe procedures necessary for cleaning & maintaining filters in the **FSH-4 Ventless Hood**. **Conscientious adherence to these procedures is essential for maintaining optimum & satisfactory hood performance.**



Operation & Filter Maintenance

4.04.1 Baffle Filter Cleaning



Stainless steel Baffle Filters are fabricated from thin gauge sheet metal that has potential to present sharp edges. Exercise due care when handling & cleaning the filters to avoid injury. *Recommend wearing heavy-duty rubber gloves as precaution.*

Ideally, grease baffle filters should be cleaned daily. Remove & clean in sink with a mild, bio-degradable, degreasing cleaner (*Giles recommends Simple Green® Crystal Foaming Spray Cleaner*). Rinse & dry thoroughly ... reinstall dry filters in hood. Generally, baffle filters can be washed in a dishwasher.

Ensure that filters are completely dry before reinstalling in hood. <u>NEVER PLACE A WET FILTER INTO THE HOOD</u>!

4.04.2 E.A.C. Collector Cell Cleaning



The EAC collector cell contains parts fabricated from thin gauge sheet metal that can potentially have sharp edges, which may cause cuts if not handled properly. To avoid injury, exercise due care when handling & cleaning the cells.

Recommend wearing heavy-duty rubber gloves as precaution.

The EAC collector cell is sustainable & renewable ... it should last for years if cleaned and handled properly. To maintain peak performance, It <u>MUST BE CLEANED DAILY</u> ... failure to do so can lead to an interruption of cooking appliance operations, premature failure of the EAC system, or reduced useful life of consumable charcoal filters. Follow the procedures detailed below for effective cleaning.

IMPORTANT: The cell <u>CANNOT</u> withstand washing in commercial dishwashing equipment, and some commercial cleaners/detergents will cause oxidation, or create a layer of contamination on the aluminum collection fins that can lead to system malfunction and result in interruption of power to cooking appliances under the hood.

Two (2) different cleaning methods are endorsed by GILES Food Service, as follows.

• <u>Preferred</u>: Spray Method ... uses Simple Green® Crystal Foaming Spray Cleaner/Degreaser. A readily available foaming aerosol that is an exceptionally effective cleaner, and safe for use on aluminum (NSF approved, food-grade, non-toxic & biodegradable). Cleaning the collector cell is quick & easy with this convenient ready-to-use cleaner. A complimentary sample is supplied with new equipment. It can be ordered from Giles, item #41510 (12-count case). When used as directed, a case of cleaner should provide approximately a 4 to 5 week supply, depending on equipment usage



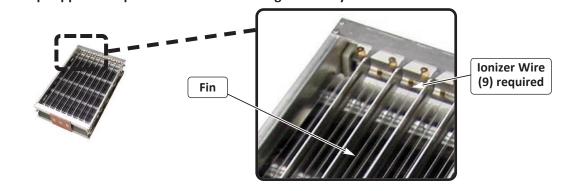
• <u>Alternative</u>: *Soaking Method ...* uses a diluted solution of *Simple Green® Pro-HD* & water. Although not as convenient as the spray method, requiring more planning & time, the procedure has proven to be very satisfactory for cleaning EAC collector cells for many years. This product has the same characteristics of the spray product, but requires mixing with water before use in the *dilution factor of 1:12*, e.g. 1/2 gal. of cleaner to 6 gals. of water.

With proper care, cleaning, and handling, the EAC collector cell is designed to provide years of service.

FSH-4 Hood

E.A.C. Collector Cell Cleaning - continued 4.04.2

While handling & cleaning the cell, take care not to bend the collection fins or break the fine CAUTION ionizer wires stretched across the face of the cell. Bent fins and broken & missing wires can prevent the electronic collection system from performing properly. System faults & alarms will occur that can potentially interrupt appliance operations or cause damage to the system.

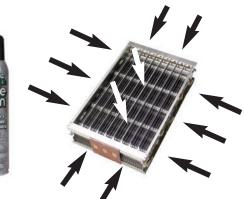


Damage from abusive handling and/or improper maintenance may not be covered by the factory warranty.

A. Preferred - Spray Cleaner Method

- 1. Remove collector cells from hood (see Section 4.02.6) and lay on a drain board or other suitable surface.
- 2. Hold can at an appropriate distance & spray Simple Green® Crystal Foaming Degreaser onto the cell, completely covering all surfaces ... collection fins, contact plate, brass fittings & inside corners of the frame. Turn cell over & apply to the other side in like manner, ensuring that both sides of all collector fins are completely covered with foam.
- 3. Allow foam to soak for 5 to 10 minutes. In cases of extreme build-up, a second application may be required after rinsing.
- 4. Carefully move cell to sink & rinse thoroughly, using hot water spray. Rinse ONLY, DO NOT scrub with brushes.
- 5. Stand cell upright on end on a drain board, w/contact plate up ... allow it to drain & air dry overnight. The cell must be completely dry before being replaced in hood. If desired, a small electric fan can be set up to blow across the cell to help expedite drying.
- 6. Before replacing cell in hood, inspect for broken & missing ionizer wires and bent fins. Broken or missing wires need to be replaced promptly. Bent fins may be straightened by hand so that no fins are touching adjacent fins.

IMPORTANT! ONLY Simple Green[®] Crystal Foaming Cleaner/Degreaser is recommended by GILES for cleaning the EAC cell in this manner. Other spray cleaners can contain corrosive ingredients that can damage the metal components of the cell, causing it to fail or not perform properly. Such damages are not covered by the factory warranty.







4.04.2 E.A.C. Collector Cell Cleaning - continued

B. Alternate - Soaking Method

The factory-recommended product to use for cleaning the collector cell in this manner is <u>Simple Green® Pro-HD</u>. It is a readily available, biodegradable, non-toxic degreasing cleaner that is safe for use on aluminum. It performs well to clean collector cells when diluted with water in a 1:12 ratio (e.g. 1/2 gal. cleaner to 6 gals clean water). DO NOT use DISHWASHING DETERGENTS or CORROSIVE CLEANERS as they can contain ingredients that may damage the metal cell components, causing failure or unsatisfactory performance. Such damages are not covered by the factory warranty.

- The soaking method requires a suitable, leakproof container, such as a tall trash bin, recycle bin, plastic tote, or the *GILES soak tank**. Container must be large enough to hold the cell along with enough diluted degreasing solution to submerge it completely for soaking.
- Fill container with fresh water to a level that will basically cover the cell. Measure the water as container is filled & note the quantity. Add *Simple Green® Pro-HD* in the *ratio of 1:12* to the water *(e.g. <u>8 gals.</u> of water will require <u>85-1/2 ozs.</u> degreaser. Stir solution to mix.*
 - * NOTE: The GILES soak tank (*purchased separately, Item# 91123*) is specifically designed & sized for soaking the cell. Add 1/2 gal. of cleaner & fill tank to the marked "FILL" line with clean water.
- 3. After preparing a quantity of degreaser solution sufficient to completely cover the cell in the soaking container, hold cell by the contact plate, the frame, or the handle and carefully place it into the solution. Be sure that it is fully submerged.
- 4. Allow cell to soak for approximately **20** *minutes (no more than 30 mins)*, then lift it slightly and briefly agitate up & down in the solution to help dislodge grease residue.
- 5. Carefully remove cell from container and follow *Steps 4 thru 6* as described in the previous section.

NOTE:

The degreasing solution may be used multiple times ... cover container with a lid or other suitable cover when not in use to prevent contamination. Discard & replenish solution when a greasy film remains visible, floating on the liquid. When soaking, always ensure that solution completely covers the cell ... add some water if needed.



4.04.3 E.A.C. Collector Cell Cleaning Timer

The hood is equipped with an *E.A.C. Collector Cell Cleaning Timer*. It is designed to help users maintain a proper cleaning routine for the collector cells. Timely cleaning is essential in ensuring that the hood continues to effectively remove grease-laden vapor from the recirculated air.

After a preset amount of time, an alert is issued, reminding user that it is time for the collector cells to be cleaned *(or alternatively, exchanged with previously cleaned cells).* If action is not completed within an allowed preset time, the timer expires, an audible alarm sounds & hood/appliance power is shutdown. The alarm & appliance shutdown will continue until cleaning has been completed (alarm can be silenced by placing hood power in OFF). When the necessary filter maintenance is performed, the alarm is silenced, timer automatically resets and begins a new countdown.

Should the reminder alarm occur during an inopportune time or while cooking is in progress, a **SNOOZE** feature is provided to temporarily silence the alarm and reset the timer for a short period.

Timer indicator lights & [SNOOZE] button are located on the hood's control panel.

Timer Operation:

1 <u>CHANGE SOON</u>

The amber indicator turns ON when timer enters **[WARNING]** mode ... no audible alarm will sound. If the collector cells are cleaned *(or exchanged with clean)* within the next <u>24 hours</u>, the timer automatically resets and starts a new countdown.

2 CHANGE NOW

If no action is taken within the allowed period, the timer enters **[TIMEOUT]** mode, the red indicator turns

ON & an audible alarm sounds, signaling that allowed time between cleanings has expired. The alarm will continue to sound until cleaning activities are performed, or the **[SNOOZE]** button is pressed, *see #3 below*.

Placing the hood **POWER** switch in the **[OFF]** position will silence the alarm, but it will start sounding again when placed back to **[ON]**, unless cleaning *(or exchange)* has been completed.

3 SNOOZE Button

In the event that **[TIMEOUT]** occurred during an inopportune time, or while cooking is in progress, the snooze feature may be used to silence the alarm & temporarily reset the timer for a short period. Pressing the **[SNOOZE]** button temporarily sets the timer back to **[WARNING]** mode for a period of <u>two (2) hours</u>.



Snooze can only be used twice. During a second period, the [CHANGE

<u>SOON</u>] light flashes, indicating final snooze period. After exercising a second snooze period, alarm & appliance shutdown will continue until collector cells are cleaned *(or exchanged with clean)* ... timer will then automatically reset.

Operation & Filter Maintenance

4.04.4 Pre-Filter Maintenance

CAUTION Pre-Filters are <u>single-use</u>, disposable filters. NEVER attempt to clean and reuse; doing so can cause damage to the unit.

Typically, pre-filters should be replaced weekly (see *Sections 4.02.4 & 4.02.5*). They *CANNOT* be cleaned and are not intended for long-term use.

Use GILES replacement Item No. 91707. Write the replacement date on the new filter.

IMPORTANT: Failure to use Giles OEM parts and OEM replacement filters may void the factory warranty.

4.04.5 Charcoal Filter Maintenance

CAUTION Charcoal filters are <u>single-use</u>, disposable filters. NEVER attempt to clean and reuse; doing so can cause damage to the unit.

Charcoal filters are consumable items which must be replaced periodically (see <u>Sections 4.02.8 & 4.02.9</u>). They <u>CANNOT</u> be cleaned and reused. Typical replacement frequency is every **30 to 40 days**, depending on cooking activities & volume.

Use GILES replacement Item No. 30248. Write the replacement date on the new filter.

IMPORTANT: Failure to use Giles OEM parts and OEM replacement filters may void the factory warranty.

5. Hood Cleaning & Maintenance

This section describes the steps for general maintenance & cleaning of the *FSH-4 Hood*. Attention to these procedures will help ensure the hood remains in good operating condition and continues to run efficiently and safely.

A Maintenance & Service Log is provided, see Section 5.04.

5.01 Monthly Hood Interlock Inspection (can be performed by user)

The hood is designed with various interlock switches to that will cause the unit to shutdown when conditions exist that are not consistent with safe & effective operation. These interlocks should be tested **MONTHLY** as described below. Record completion of these tests on a **Maintenance & Service Log** (see example in <u>Section 5.04</u>). If problems are detected, contact *GILES* or an authorized service provider. **NOTE:** Anytime a filter access door is opened & closed, the hood must be restarted with the POWER switch (press & momentarily hold the top of switch).

- 1. **Door Interlock Test:** Start hood. With hood running, unlatch & slightly open each access door, one at a time. With each side confirm that hood powers OFF when opened & cooking appliances under the hood cannot be powered up.
- Baffle Filter Test: Remove the baffle filter from one side, then start hood. Verify that the red [BAFFLE OR CHARCOAL FILTER MISSING] light turns ON and the [APPLIANCE POWERED] light turns OFF. Check to ensure that cooking appliances under hood will not power up. Replace filter and repeat test on the other side. See Sections 4.02.2 & 4.02.3, Removal & Installation.
- 3. **Pre-Filter/Charcoal Filter Test:** Same procedure as **#2** except perform for each pre-filter & charcoal filter, *one at a time in succession*. Reinstall the filters. See <u>Sections 4.02.4, 4.02.5, 4.02.8 & 4.02.9, Removal & Installation</u>.
- 3. <u>E.A.C. Filter Test</u>: Remove one of the EAC collector cells, close & latch door, then start hood. Verify that [WASH] light on EAC Status turns ON for the side without cell & that the amber [APPLIANCE POWERED] light is also ON initially. Wait approx. two (2) minutes. A beeping alarm should begin sounding. In several seconds the [APPLIANCE POWERED] light should turn OFF. Check to ensure that cooking appliances under hood cannot be powered up. Turn off hood, reinstall cell, and repeat for other side. See <u>Section 4.02.6. & 4.02.7, Removal & Installation</u>.
- 5. Filter Clogged Test: Perform this test ONLY after installing new prefilters & charcoal filters. Start hood normally and allow to run. Use cardboard, or other suitable material, to completely block the hood exhaust outlet, holding it firmly in place so that no air is escaping. Within a few seconds, a continuous tone alarm should begin sounding. The red [BAFFLE, PREFILTER OR CHARCOAL FILTER CLOGGED] light should turn ON and the [APPLIANCE POWERED] light should turn OFF. Check to ensure that cooking appliances under hood cannot be powered up. Remove the obstruction the alarm should silence & the [APPLIANCE POWERED] light should turn ON again.

Should any of these tests fail to give the described results, contact a factory-authorized service company and have the unit evaluated & repaired. A *Giles Manufacturer's Representative* can provide information about nearby authorized service providers, or call *GILES Services* at 800-554-4537 for assistance.

5.02 Quarterly Hood Cleaning

CAUTION

DO NOT wash down hood with water from a spray hose.

- **DO NOT** steam clean or use pressure washing equipment.
- **DO NOT** use products containing chlorine or other caustic chemicals.
- **DO NOT** use abrasive products, steel wool or scouring pads.

The factory-recommended product for general cleaning & degreasing of this equipment is **Simple Green® Crystal Foaming Spray Degreaser/Cleaner**, a readily available, biodegradable, non-toxic degreasing cleaner.

To maintain effectiveness & performance, the hood should be deep cleaned *every 3 months*, at a minimum.

- 1. Disconnect power from the unit at circuit breaker panel.
- 2. If possible, unplug & remove cooking appliances from underneath hood.
- 3. Remove all of the hood filters.
- 4. Use a soft cloth or sponge, and the mild bio-degradable decreasing cleaner (Simple Green® Crystal Foaming Spray Degreaser/Cleaner is recommended) to clean the entire hood plenum, removing grease film accumulation from interior surfaces.
- 5. Inspect the hood blowers on each side. If possible, clean grease build-up from the blades using degreaser and a small brush (*use cleaner sparingly*). *NOTE: When restarting hood after cleaning, hold a cardboard box, or other suitable item, over the exhaust outlet to catch cleaning residue which may be discharged from the blowers*.
- 5. Thoroughly clean the under-hood area & all exterior surfaces with mild degreaser or a good quality stainless steel cleaner.
- 6. Wipe dry with clean dry cloth ... ensure it is completely dry before starting.
- 7. Clean baffle filters & EAC collector cells see <u>Sections 4.04.1</u> & <u>4.04.2</u>. If necessary, obtain and install a new fresh pre-filters and charcoal filters. Ensure all filters are reinstalled.
- 8. As necessary, reposition cooking appliances under hood & restore power supply.

5.03 Fire Suppression System Maintenance

The fire extinguishing system connected to the hood must be maintained in accordance with the <u>Standard for Wet</u> <u>Chemical Extinguishing Systems, NFPA 17A</u> and with the instructions of the system's installer.

All inspections, maintenance, troubleshooting, repairs and general servicing of the fire extinguishing system must be performed by an authorized **Ansul®** Service Company. Required maintenance activities are explained in the following sections.

Consult fire suppression system documentation provided by the system installer for complete maintenance guidelines.

Hood Cleaning & Maintenance

5.03.1 Semi-Annual Fire Suppression System Inspection & Maintenance

Inspection & service of the fire suppression system must be performed by a qualified **Ansul® Service Company**. Field inspection of the fire suppression system must be conducted semi-annually (every 6 months) and shall consist of the following:

- Confirm that the fire hazard potential has not changed.
- Inspect suppressant storage tank for chemical level and charge pressure.
- Inspect & test the Automan release mechanism.
- Check all nozzles to ensure they are free of grease build-up. Confirm that all nozzle blow-off caps are in place & in good condition ... replace as needed. See *Section 2.06.4, Fire Extinguisher Nozzle Locations*.
- Inspect & test the remote manual activation station for function and wear.
- Install test link in detector & cut to test automatic actuation.
- Inspect & clean detector fusible links. Verify that detector links are of the correct temperature rating. See <u>Section 2.06.2, Fire Suppression Detector Links & Location</u>.
- Inspect conduit & wire cable for wear at pulleys & detectors ... replace if necessary.
- Record maintenance date and service performed in a permanent file ... complete sign-off tag & attach to system in a conspicuous location.

5.03.2 Annual Fire Suppression System Inspection & Maintenance

Same as *Semi-Annual* maintenance plus the following item:

 All fusible detector links must be replaced with new. See Section 2.06.2, Fire Suppression Detector Link Specification & Location.

5.03.3 12-Year Fire Suppression System Inspection & Maintenance

Same as Semi-Annual & Annual maintenance plus the following items:

- Replace wet-chemical fire suppressant.
- Hydrostatic test & certify suppressant tank & compressed gas charging cartridge. As alternative, components can be replaced with new.
- Flow test the regulator.

Hood Cleaning & Maintenance

5.04 Inspection & Maintenance Log

Cł	neck						Initial/Date	Cł	neck							Initial/Date
7	7	7	1	3	<u> </u>		RT 1-2-15	1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6			1	2	3	4	5	6			
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6	7		1	2	3	4	5	6	7		
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6			1	2	3	4	5	6			
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6	7		1	2	3	4	5	6	7		
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6			1	2	3	4	5	6			
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6	7		1	2	3	4	5	6	7		
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6			1	2	3	4	5	6			
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6	7		1	2	3	4	5	6	7		
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6			1	2	3	4	5	6			
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6	7		1	2	3	4	5	6	7		
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6			1	2	3	4	5	6			
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5				1	2	3	4	5				
1	2	3	4	5	6	7		1	2	3	4	5	6	7		
1 1	Door	- hock								octio		1	-			
1 Door Check								3	Sectio	11 3.0.	T		* Mi	ıst be	e performed by	

1	Door Check	Section 5.01
2	Baffle Filter Check	Section 5.01
3	EAC Filter Check	Section 5.01
4	Pre-Filter/Charcoal Filter Check	Section 5.01
5	Filter Clogged	Section 5.01
6	Quarterly Cleaning	Section 5.02
7*	Semi-Annual Fire Suppression System	Section 5.03.1
8*	Annual Fire Suppression System	Section 5.03.2

* Must be performed by an authorized Ansul[®] Service Company

Troubleshooting

6. Troubleshooting

This section describes basic troubleshooting procedures for *FSH Recirculating Hoods*. Generally, troubleshooting and/or repairs should only be performed by trained & qualified service technicians. Troubleshooting by users should be limited to issues that are operational or procedural in nature.

A DANGER

• Troubleshooting for electrical problems should be performed <u>ONLY</u> by trained service technicians or electricians. Serious injury, even death, will result from contact with energized electrical circuits.

6.01 Procedures

Problem	Probable Cause	Corrective Action	
Hood will not turn ON	a. A filter access door is open	Close & latch both doors.	
	b. Improper start-up method	Press & momentarily hold [START] portion (top) of POWER switch.	
	c. Power switch is faulty	Replace switch.	
	c. Improper supply voltage	Connect to proper electrical supply.	
	e. Not properly connected to power source.	Confirm connections & correct.	
	f. Blown fuse or tripped circuit breaker.	Check main electrical panel.	
	g. EAC cleansing timer has timed out.	Clean EAC cells to reset timer.	
[CHARCOAL OR BAFFLE FILTER MISSING] light ON at start-up	a. Baffle or charcoal filters not installed or not properly seated	Install filter and/or check filter positioning inside hood.	
EAC [WASH] light ON & beeping	a. Excessive film build-up on fins	Clean the EAC cell, <u>Section</u> <u>4.04.2</u>	
alarm sounding	b. EAC cell is not installed	Install EAC cell	
	c. Poor connection at contact plate inside hood.	Check cell position, clean contacts.	
	d. Faulty EAC contact plate	Have plate inspected, replace if needed.	
	e. Missing ionizer wires	Replace wires, (9) required.	
EAC [CHECK] light ON; no alarm sounding	a. EAC shorted to ground (damaged)	Replace or repair the EAC cell.	
	 b. High voltage wires shorted to ground. 	Correct shorted condition.	
	c. Collector fins shorted out due to excessive moisture.	Eliminate condensation causes - cold air being drawn into hood, etc.	

Troubleshooting

6.01 Procedures - continued

Problem	Probable Cause	Corrective Action	
Under-hood appliances will not power-up:	 A baffle filter is missing or not properly installed 	Install filter / check positioning.	
 [HOOD POWERED] light ON [CHARCOAL OR BAFFLE FILTER MISSING] light ON 	b. A charcoal or pre-filter is missing or not properly installed	Install filter / check positioning.	
• [APPLIANCE POWERED] light OFF	c. Faulty filter switches.	Test & replace as needed.	
Under-hood appliances will not power-up:	a. Baffle, pre-filter or charcoal filter clogged	Replace charcoal or pre-filter • Clean baffle filter.	
 [HOOD POWERED] light ON [CHARCOAL OR BAFFLE FILTER CLOGGED] light ON 	b. Hood exhaust outlet excessively block	Clear of any obstructions.	
 [APPLIANCE POWERED] light OFF Continuous (steady) tone alarm 	 Vacuum switch is out of adjustment 	Test & adjust vacuum switch.	
sounding.	d. Kinked or blocked vacuum line	Remove vacuum line kinks or blockage.	
	e. Fans running slow or blades are loaded with grease build-up.	Check voltage and inspect blowers & clean if needed	
Under-hood appliances will not power-up:	a. Excessive grease film built up on collector fins; too dirty	Clean the EAC cell, Section 4.04.2.	
 [HOOD POWERED] light ON [WASH] light ON 	b. EAC cell is not installed	Install clean EAC cell.	
 [APPLIANCE POWERED] light OFF Beeping tone alarm sounding. 	c. EAC driver board is faulty	Test & replace EAC power supply if needed.	
	 d. Poor connection at contact plate; dirty contacts, mis- alignment, faulty contacts. 	Check cell position, clean contacts, inspect contact plate & replace if needed.	
	e. Ionizer wire(s) missing	Replace missing wire(s)	
Under-hood appliances operating: • [HOOD POWERED] light ON • [CHECK] light ON	a. Ionizer wire broken & touching chassis.	Replace ionizer wire.	
 [APPLIANCE POWERED] light ON No alarm sounding, but cell is NOT cleaning air. 	b. Collector fins shorted to ground by moisture.	Dry cell, determine cause of moisture, cool air being drawn into hood creating condensation.	
Under-hood lighting does not come ON.	a. Bulb burned out	Replace bulb.	
	b. Faulty light switch	Check & replace switch.	
 Under-hood appliances operating: Hood is not running [CHANGE NOW] light ON Constant alarm sounding 	 a. EAC cleaning timer has timed out & collector cells have not been cleaned. 	Turn POWER switch OFF & clean collector cells to reset timer.	

Parts List

7. Parts List

This section lists some of the various parts that are available for replacement on the unit. This is not an all inclusive listing and is intended as an aid for qualified service providers.

7.01 Parts Ordering & Service Information

Giles is an equipment manufacturer and does not sell parts direct. Parts for our equipment are available through authorized service companies, part distributors, and/or kitchen equipment dealers. If assistance with sourcing parts or equipment repair service is required, please contact a *GILES* Manufacturer's Representative to assist with locating a parts source or authorized service provider near you. For further assistance you may contact the *GILES Technical/Customer Service Support* as follows:

IN THE UNITED STATES & CANADA call: 800.554.4537

ALL OTHERS call: 334.272.1457

Normal business hours are 8:00 AM to 5:00 PM Central Time ... calls are handled by an auto-attendant answering system. Please follow the recorded instructions to route your call appropriately. If necessary after hours, leave a voicemail message and a representative should respond within 30 minutes.

Website: www.gfse.com Email: services@gfse.com

Our goal at Giles is to provide the highest possible quality of service and assistance. To help us accomplish this, please have the following information readily available when calling, along with a brief description of the problem being experienced. Please record the unit information in the table below for quick reference.

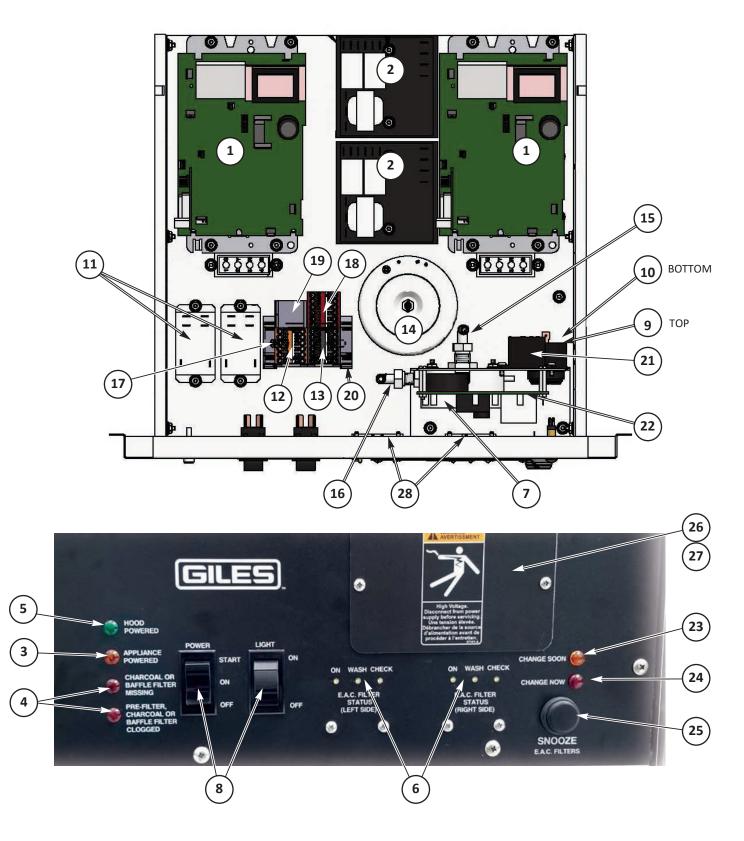
Model:	
Serial Number:	
Voltage:	
Phase:	

MODEL	LMODELE	SERIAL NO/NO. DE SERIE:			
GE	F-720	70848	011713 05		
VAC/VCA:	HZ:	PHASE:	AMPS:	WATTS:	
208	60	3	58	20000	
	DESCR	RIPTION/DE	SCRIPCIÓN:		
FRY	ER. GF	F-720	COMP, 2	00/00/2	
			00mr, 2	00/00/3	
ULUSTED					
I			RPRISE	COMMENT COMMENT REFERENCE REFERENCE REFERENCE	

The information can be found on a serial/data label similar to this, located on the hood side.

Parts List

7.02 Component Drawer & Control Panel



Parts List

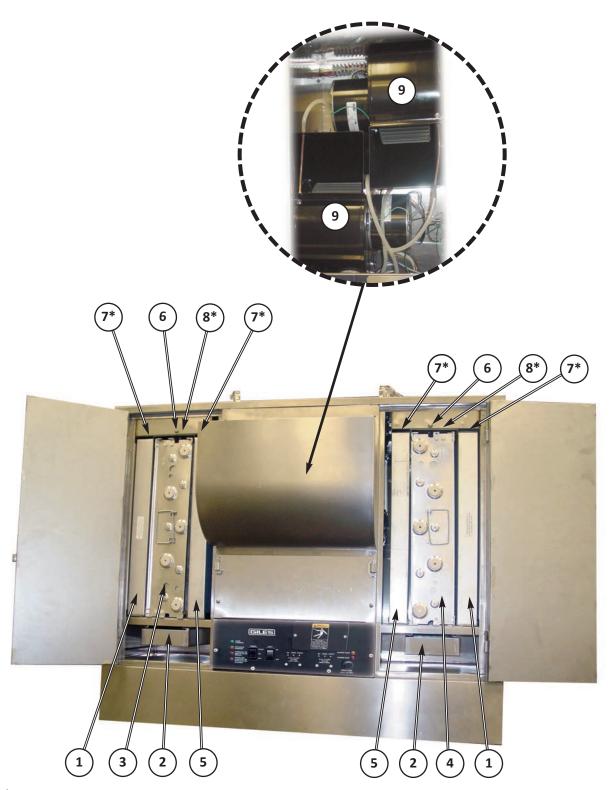
FSH-4 Hood

7.02 Parts List for Component Drawer & Control Panel

Item	Part No.	Qty.	Description	
1	21296	2	POWER PACK DRIVER BRD, 120V W/JMPR	
2	23776	2	ALARM & SHUTDOWN MODULE, AIR FILTER	
3	21674	1	INDICATOR LIGHT, AMBER, 125-250V	
4	21673	2	INDICATOR LIGHT, RED, 125-250V	
5	21678	1	INDICATOR LIGHT, GREEN, 125-250V	
6	24209	2	LED, EAC STATUS INDICATOR	
7	20390	1	VACUUM SWITCH, ADJUSTABLE	
8	21441	2	SWITCH, ROCKER, (ON)-0N-OFF, 250V, 20A	
9	23782	1	SONALERT, 250V, CONTINUOUS TONE (TOP)	
10	21659	1	SONALERT, 120V, INTERMITTENT BEEP TONE (BOTTOM)	
11	21417	2	RELAY, POWER SWITCH, 30A/2.5HP, 240V	
12	21512	1	DIST.BLOCK, 12-PL, 12-26 AWG, ORANGE	
13	21510	1	DIST.BLOCK, 12-PL, 12-26 AWG, BLACK	
14	21337	1	TRANSFORMER, 230VAC >115VAC	
15	40880	1	FITTING, 1/4 BARBED, 90-EL, NYL, 1/4 NPT	
16	40877	1	FITTING, 1/4 BARBED, 90-EL, NYL, 1/8 NPT	
17	37585	1	RAIL, TERMINAL BLOCK MOUNT, 3.0 IN	
18	21509	1	DIST.BLOCK, 12-PL, 12-26 AWG, RED	
19	21495	2	ADAPTER, DIN RAIL, PTFIX	
20	21496	2	CLIP, DIN RAIL, END BRACKET, PTFIX, NS-35	
21	21203	1	RELAY, SPST-NO-NC, 240VAC	
22	20572	1	GMT, EAC TIMER, BOARD	
23	20694	1	PILOT LIGHT, YELLOW, EAC TIMER	
24	20693	1	PILOT LIGHT, RED, EAC TIMER	
25	20692	1	SWITCH, MOMENTARY PUSH-BUTTON, EAC TIMER	
26	98595	1	COVER, VACUUM SWITCH	
27	67141	1	LABEL, VACUUM SWITCH COVER (REQUIRED IF REPLACING COVER)	
28	30833	2	BRACKET, E.A.C. LED	

Parts List

7.03 Hood Front - Opened



* Not seen

Parts List

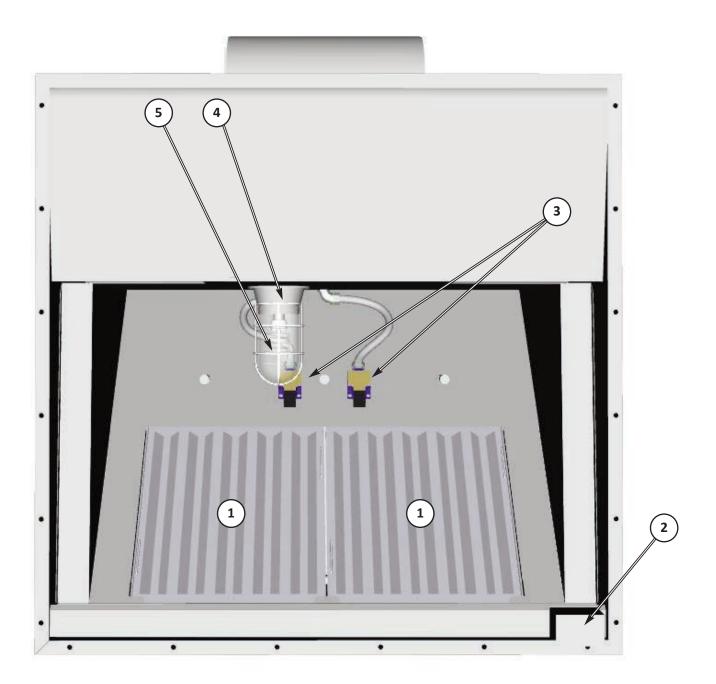
FSH-4 Hood

7.03 Parts List for Hood Front

Item	Part No.	Qty.	Description
1	91707	2	PRE-FILTER, ASSY, 12 X 20 X 2
2	91545	2	DRIP CUP, EAC FILTER
3	20521	1	FILTER, EAC 12 X 20, LEFT SIDE ONLY
4	20520	1	FILTER, EAC 12 X 20, RIGHT SIDE ONLY
5	30248	2	CHARCOAL FILTER, ASSY
6	24237	2	SWITCH, PLUNGER, 250V, 15A
7*	23175	4	SWITCH, SNAP ACTION, LEVER TYPE
8*	21125	2	CONTACT BOARD, EAC FILTER
9	33589	2	BLOWER ASSEMBLY

Parts List

7.04 Under-Hood Filters & Light



* Not shown

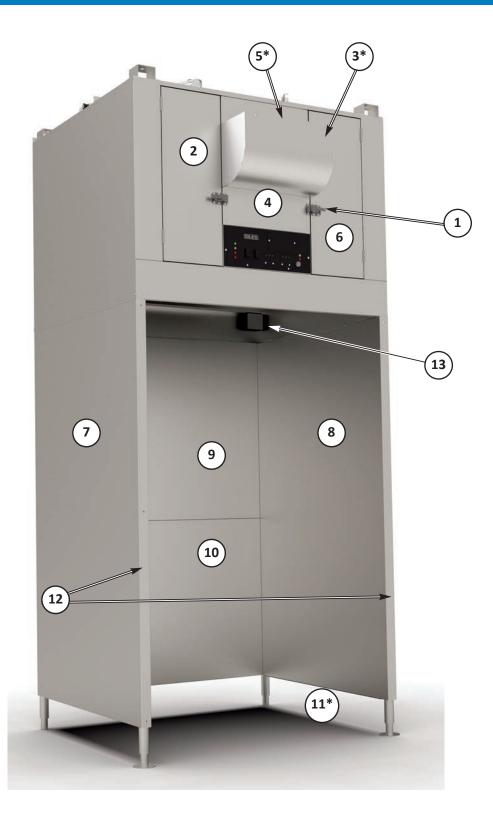
Parts List

FSH-4 Hood

7.04 Parts List for Under-Hood

Item	Part No.	Qty.	Description
1	40943	2	BAFFLE FILTER, S/S, 16 X 20
2	32776	1	DRIP CUP
3	32102	2	BAFFLE FILTER SWITCH ASSY.
4	40625	1	LIGHT FIXTURE
5	20395	1	FLUORESCENT BULB, COATED

7.05 Doors & Front Panel



* Not seen

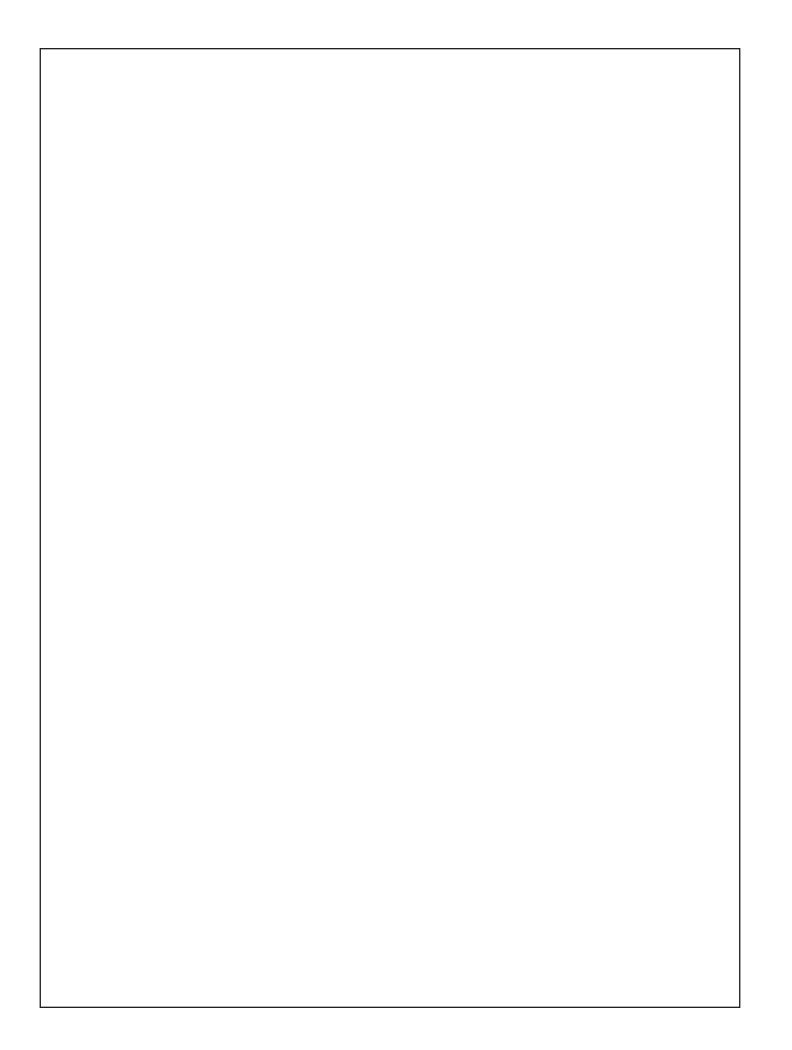
Parts List

Parts List

7.05 Parts List for Doors & Front Panel

ITEM	PART NO.	QTY	DESCRIPTION
1	42827	2	DOOR LATCH
2	91476	1	ACCESS DOOR ASSY, LEFT
3*	40929	1	FIRE DAMPER
4	98596	1	FAN COVER & EXHAUST DUCT (one piece)
5*	91699	1	GUARD, FIRE DAMPER
6	91475	1	ACCESS DOOR ASSY, RIGHT
7	91583	1	72" HOOD STAND SIDE, LEFT
8	91586	1	72" HOOD STAND SIDE, RIGHT
9	92100	1	72" HOOD STAND, TOP BACK PANEL
10	92127	1	72" HOOD STAND, BOTTOM BACK PANEL
11*	92128	2	CHANNEL, APPLIANCE POSITIONING
12	91708	2	CHANNEL, FRONT TRIM, HOOD STAND-72
13	32776	1	DRIP CUP

NOTE: Legs are welded in place ... not replaceable.





2750 Gunter Park Drive West • Montgomery, Al 36109 USA Phone: 334.272.1457 • Toll Free: 800.554.4537 (USA & Canada Only) • FAX: 334.239.4117 • www.gfse.com

Form No. 65497 (Rel. Date: Apr.2009, Rev. Date: Aug.2022, Rev. I)