



Ventless Exhaust Hood Operators Manual And Parts List



for 421VHSF24, 421VHSFN24, 421VHSF42, 421VHSNF35FT,
421VHSF48, 421VHSFN48, 421VHSF24C, 421VHSFN24C, 421VHSFP24



FACTORY CONTROL #E206700
CONFORMS TO NSF ANSI 2

Revised 12/2025



Specific Safety Precautions

Installation of this equipment should only be performed by a qualified professional.
Please read this manual thoroughly before installing or servicing this equipment.

Care must be taken when cleaning the impeller to remove grease and other foreign particles. Damage to the impeller can occur if it is hit or if pressure is applied causing the impeller to be distorted. Either case can cause serious vibration and damage to the blower.

CAUTION/WARNING!

- Consult a qualified electrician to ensure all of the following guidelines are met:
 - All electrical specifications and codes are followed.
 - Circuit breakers and wiring are of sufficient rating and gauge.
 - The unit is properly grounded, and all electrical specifications were followed during installation.
- Improper installation, adjustment, alteration, service, or maintenance could result in death or serious injury and/or equipment/property damage and will 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 DANGER notices may result in death or serious injury and/or equipment/property damage and will void the warranty.

WARNING!

- DO NOT operate the unit unless you understand the components and the intended use.
- The unit must remain in the upright position.
- Exercise care when removing the wooden crate from around the unit.
- Failure to comply with WARNING notices could result in death or serious injury and/or equipment/property damage and will void the warranty.

CAUTION

- Ensure the unit is positioned to maintain 6" of clearance above the hood body (excluding safety cage), and 30" clear to the left (side with the pull station when equipped with Fire System), 0" to the rear, and 0" to the right. If the pull station is on the right per special request, maintain 30" clearance on the right side and 0" on the left. Failure to maintain safe distances may result in fire.
- The unit must be adequately and properly grounded. Improper grounding may result in electrical shock.



- 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.
- Exercise care around the Control Panel to maintain proper operation. The electronic components of the Control Panel are impact-sensitive.
- 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.

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 will void the warranty.

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 this equipment.

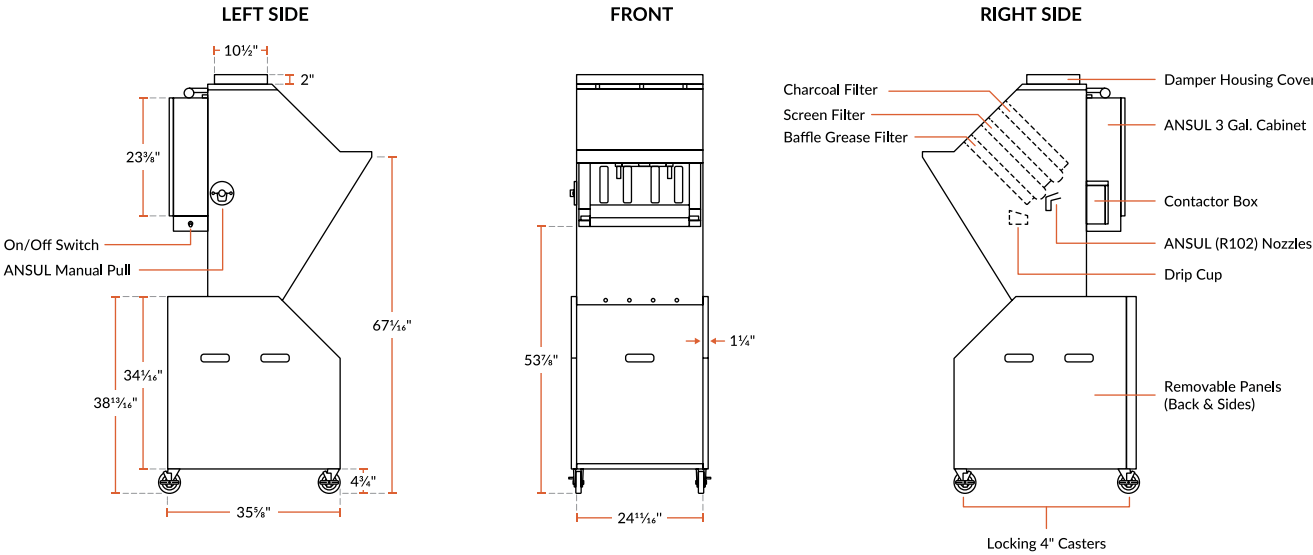
DISCLAIMER FOR THE USE OF VENTLESS HOODS IN DONUT/FUNNEL CAKE FRYING APPLICATIONS

While our ventless hoods are guaranteed to pass state code, the larger exposed frying surface of donuts/funnel cakes generates more vapors than most frying applications. Our ventless hood will filter the vapors from frying donuts/funnel cakes, but more heat and smell may be present than in typical frying applications. Adequate air replacement or recirculation in the room or space in which the fryer will be located is important in these situations. This disclaimer does not affect the warranty on the ventless unit in any way.



Model VH-24

DIMENSIONS





REGULATORY LISTINGS (CERTIFICATIONS):

The Ventless System shall be built in accordance to NFPA96, be UL listed, and comply with UL710B Standards. Hoods shall be tested to comply with NSF Sanitation Mark.

Remote Pull Station is 4¼" round and 1" deep.

Mounting is 60" AFF and 2½" from rear of hood body (10½" off the rear of the unit).

Unit Weight: 565 lbs.

UNPACKING:

Your unit will arrive enclosed in a wooden crate. The Hood is secured to a wooden platform inside of the enclosure.

NOTE:

- If the crate is damaged, immediately inspect the unit and notify the carrier of any damage to the unit.
- Exercise care when lifting or moving the unit.
- Exercise care when removing the wooden crate from around the unit.

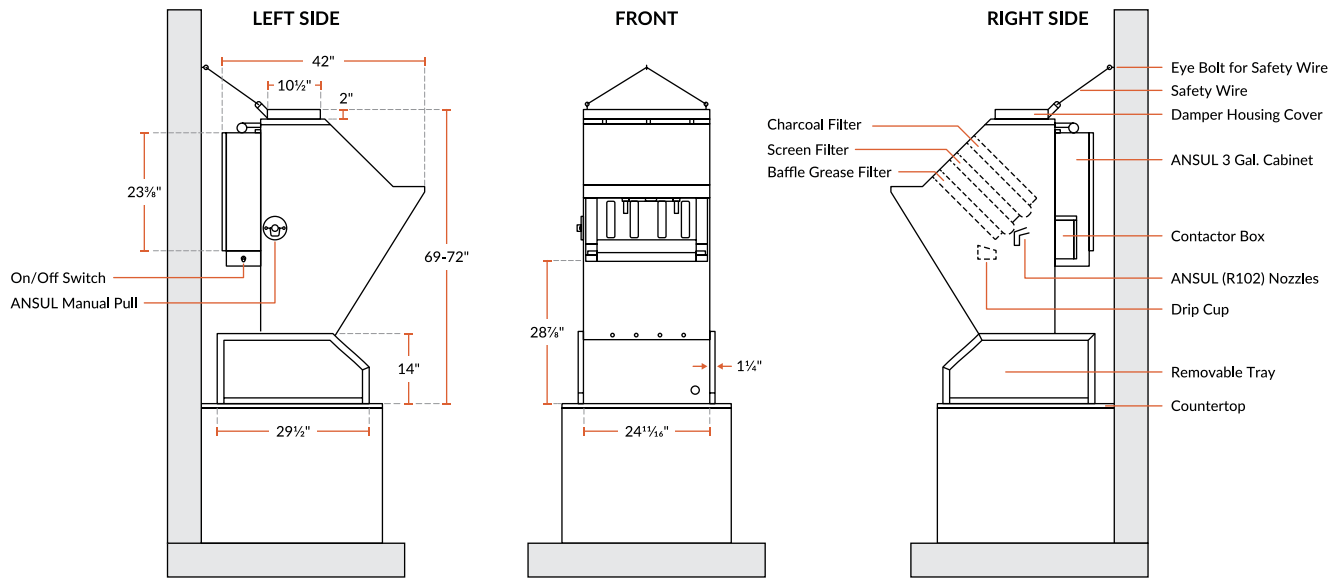
LOCATE AND IDENTIFY THE FOLLOWING COMPONENTS AFTER UNPACKING:

- Hood and Fire Suppression System
- Floor Stand and Contactor Box
- ANSULEX® Fire Suppressant, 3.0 Gallon
- Drip Cup
- Grease (baffle) Filter, Air (Mesh) Filter, Charcoal Filter



Model VH-24-C

DIMENSIONS



REGULATORY LISTINGS (CERTIFICATIONS):

The Ventless System shall be built in accordance to NFPA96, be UL listed, and comply with UL710B Standards. Hoods shall be tested to comply with NSF Sanitation Mark.

Remote Pull Station is 4¼" round and 1" deep.

Mounting is 35" from countertop and 2 1/2" from rear of hood body (10½" off the rear of the unit).

Unit Weight: 240 lbs.

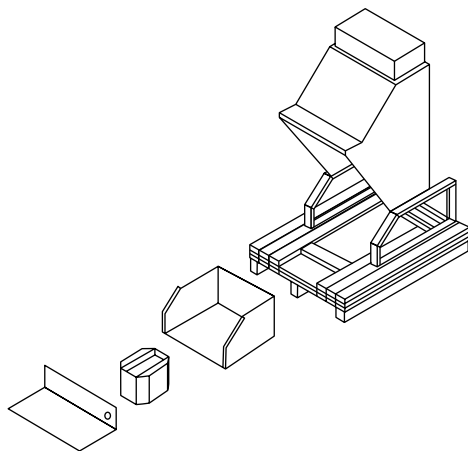


Figure 1.1

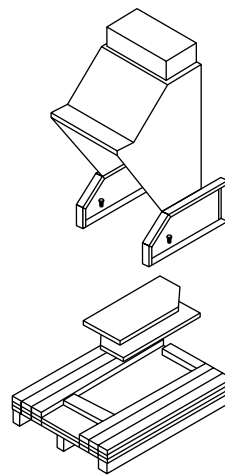


Figure 1.2

UNPACKING:

Your unit may arrive enclosed in a wooden crate. The Hood is secured to a wooden platform by means of high-tensile strength $\frac{1}{4}$ "-20 x 2" lag bolt. Remove back panel, ANSULEX[®] Fire Suppressant, 3.0 Gallon, and tray (Figure 1.1). Remove lag bolts from frame. Remove frame and side panels (Figure 1.2).

NOTE:

- If the crate is damaged, immediately inspect the unit and notify the carrier of any damage to the unit.
- Exercise care when lifting or moving the unit.
- Exercise care when removing the wooden crate from around the unit.

LOCATE AND IDENTIFY THE FOLLOWING COMPONENTS AFTER UNPACKING:

- Hood and Fire Suppression System
- Floor Stand and Contactor Box
- ANSULEX[®] Fire Suppressant, 3.0 Gallon
- Drip Cup
- Grease (baffle) Filter, Air (Mesh) Filter, Charcoal Filter



Installation

CAUTION/WARNING!

The unit **MUST** be installed on a surface (table/equipment) which can support a minimum weight of 350 lbs. (240 lbs. unit, 110 lbs. equipment). The $\frac{1}{4}$ "-20 x 1" lag bolt **MUST** be properly installed to a depth of $\frac{3}{4}$ ". It should be located on a load-bearing stud. This **MUST** be used with supplied $\frac{1}{8}$ " wire rope, preinstalled on hood. **Failure to install safety anchor will void manufacturer warranty.**

INSTALLING:

Mark holes if using frame mounting holes (Figure 2.1). Place unit on mounting surface. The Hood is secured to the wall by means of high-tensile strength $\frac{1}{4}$ "-20 x 1" lag eyebolt, using supplied $\frac{1}{8}$ " wire rope (Figure 2.2). Disconnect wire rope from D-ring, pass wire rope through eyebolt. Ensure that the wire rope is loose and unobstructed. Reconnect wire rope to D-ring. Add optional frame mounting: Bolt (Figure 2.3), Screw (Figure 2.4). Place back panel, then install side panels with supplied screws (Figure 2.5). Place tray and install with supplied screws, caulking around top edge is optional (Figure 2.6).

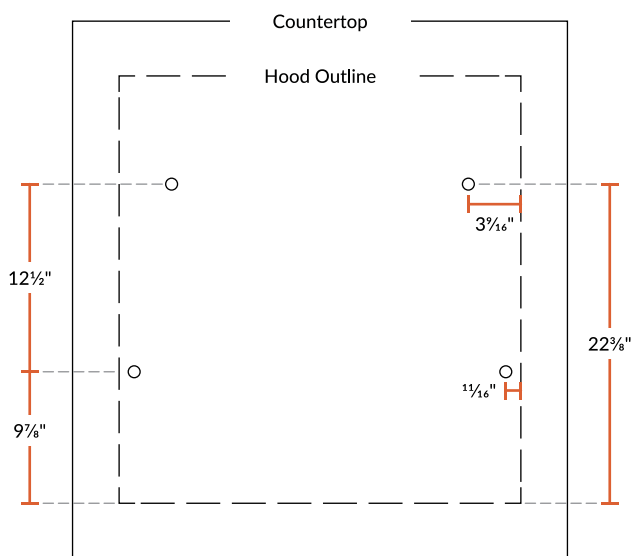


Figure 2.1

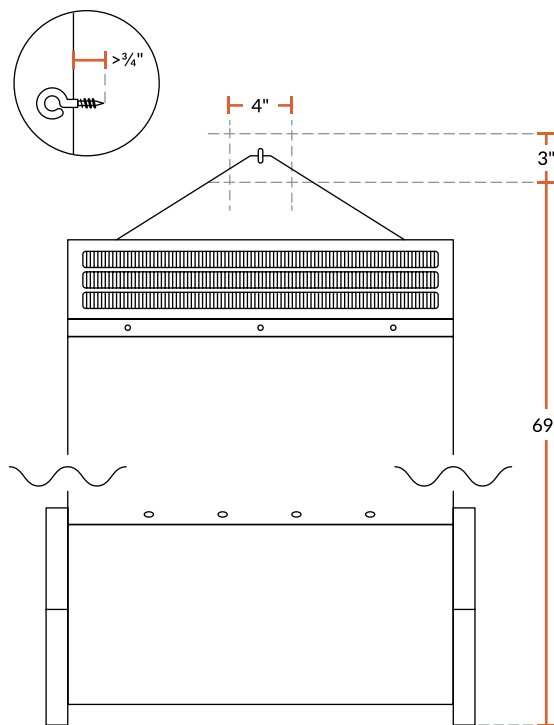
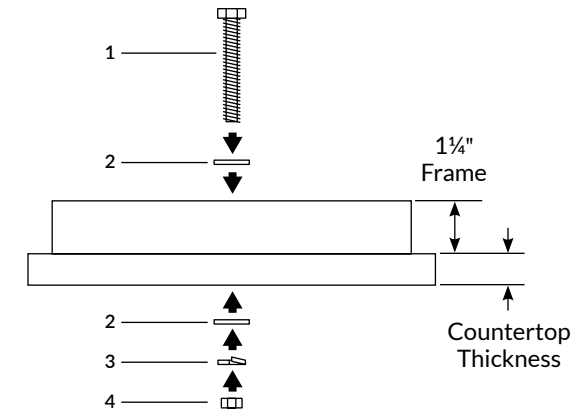
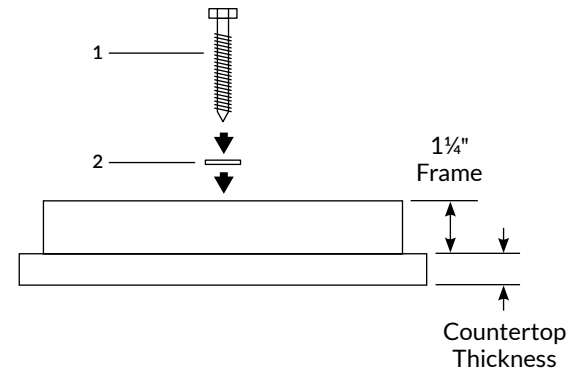


Figure 2.2



No.	Description
1	1/4"-20 Hex Head Bolt
2	1/4" Washer
3	1/4" Lock Washer
4	1/4"-20 Hex Nut
Note: Bolt length is determined by countertop thickness + 1 3/4"	

Figure 2.3



No.	Description
1	1/4"-20 Hex Head Lag Bolt
2	1/4" Washer
Note: Bolt length is determined by countertop thickness + 1 3/4"	

Figure 2.4

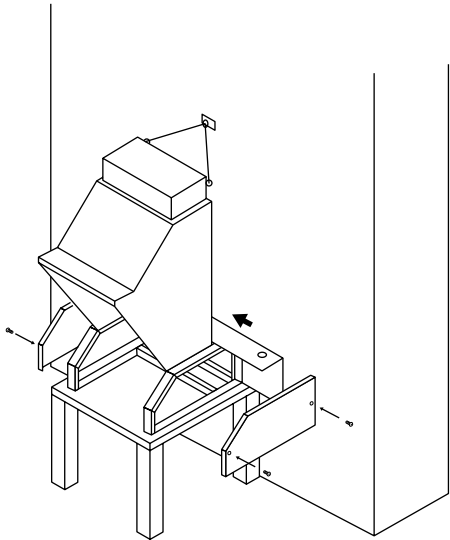


Figure 2.5

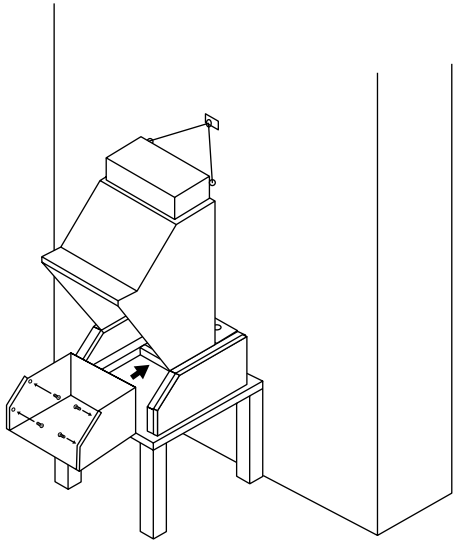
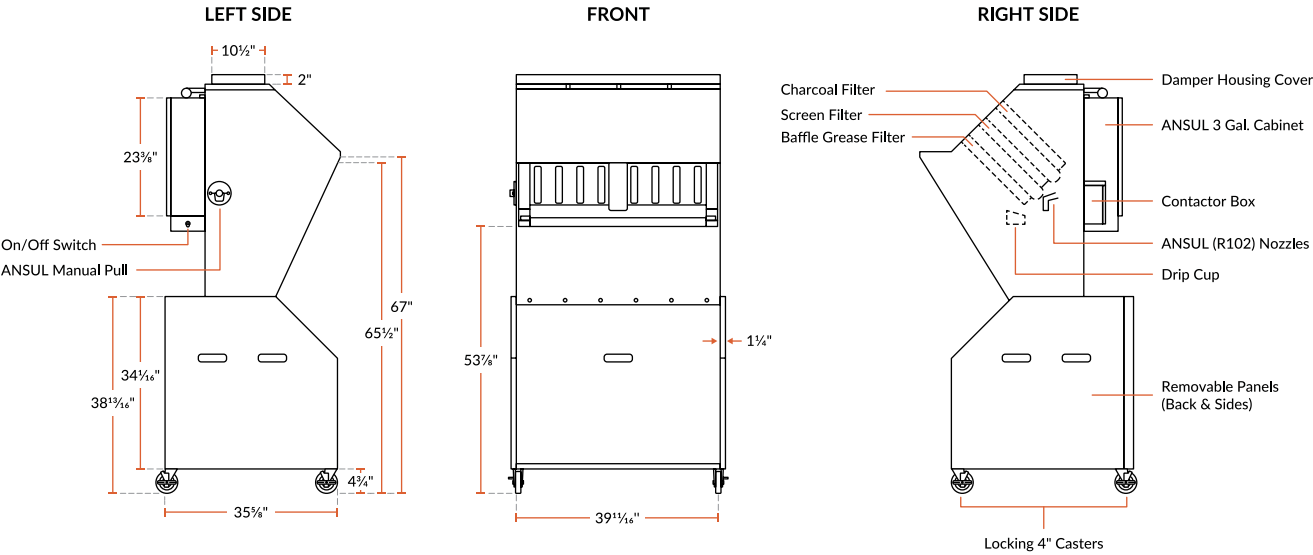


Figure 2.6



Model VH-42

DIMENSIONS





REGULATORY LISTINGS (CERTIFICATIONS):

The Ventless System shall be built in accordance to NFPA96, be UL listed, and comply with UL710B Standards. Hoods shall be tested to comply with NSF Sanitation Mark.

Remote Pull Station is 4¼" round and 1" deep.

Mounting is 60" AFF and 2½" from rear of hood body (10½" off the rear of the unit).

Unit Weight: 845 lbs.

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.
- Exercise care when lifting or moving the unit.
- Exercise care when removing the wooden crate from around the unit.

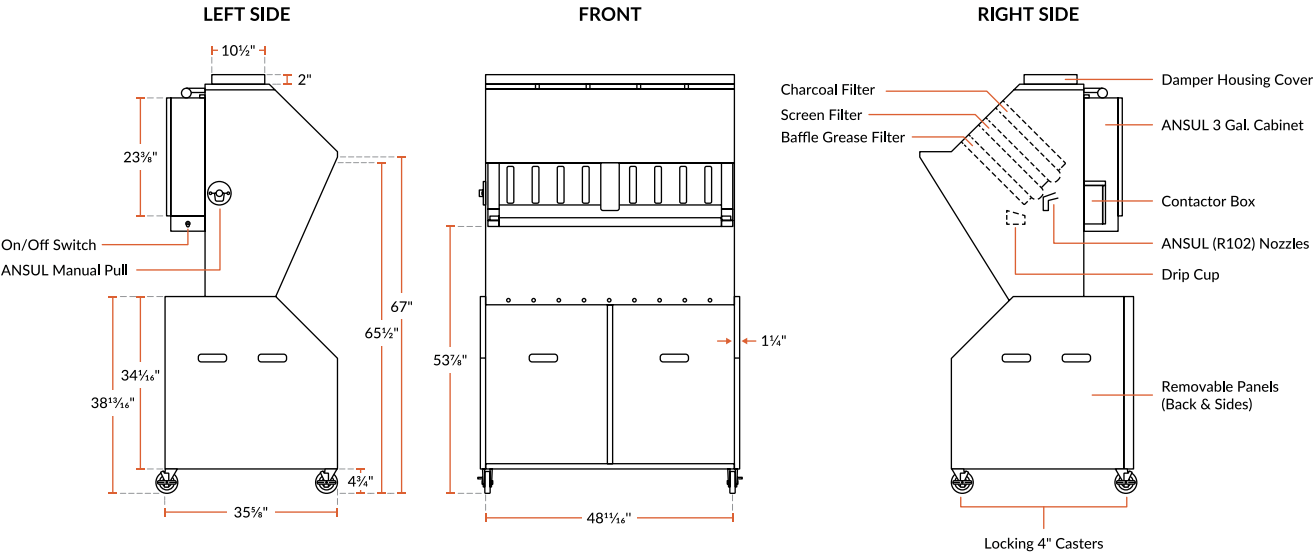
LOCATE AND IDENTIFY THE FOLLOWING COMPONENTS AFTER UNPACKING:

- Hood and Fire Suppression System
- Floor Stand and Contactor Box
- ANSULEX® Fire Suppressant, 3.0 Gallon
- Drip Cup
- Grease (baffle) Filter, Air (Mesh) Filter, Charcoal Filter



Model VH-48

DIMENSIONS





REGULATORY LISTINGS (CERTIFICATIONS):

The Ventless System shall be built in accordance to NFPA96, be UL listed, and comply with UL710B Standards. Hoods shall be tested to comply with NSF Sanitation Mark.

Remote Pull Station is 4¼" round and 1" deep.

Mounting is 60" AFF and 2½" from rear of hood body (10½" off the rear of the unit).

Unit Weight: 985 lbs.

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.
- Exercise care when lifting or moving the unit.
- Exercise care when removing the wooden crate from around the unit.

LOCATE AND IDENTIFY THE FOLLOWING COMPONENTS AFTER UNPACKING:

- Hood and Fire Suppression System
- Floor Stand and Contactor Box
- ANSULEX® Fire Suppressant, 3.0 Gallon
- Drip Cup
- Grease (baffle) Filter, Air (Mesh) Filter, Charcoal Filter



Electrical Requirements

- Consult a qualified electrician to ensure all electrical specifications have been met.
- 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 and 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 and/or equipment/property damage, and void the warranty.

Model #	Voltage	Hz	Phase	Amps
VH-24	208-240	60	1-3	75
VH-24-C	208-240	60	1-3	75

Note: 3 Amps for Hood

Model #	Voltage	Hz	Phase	Amps
VH-42	208-240	60	1-3	75

Note: 4.5 Amps for Hood

Model #	Voltage	Hz	Phase	Amps
VH-48	208-240	60	1-3	75

Note: 6 Amps for Hood

CONNECT HOOD POWER:

- Apply AC power to the Contactor box.
- The power requirement of the equipment will determine the input.
- Remove plug (if present) from the AC power cord of the equipment; connect the equipment power cord to the contactor output.
- All connections should be made by a qualified electrician to ensure all electrical specifications have been met and comply with all local codes.



Hood And Appliance Interlock Connection

This connection will cause the appliance below the hood to shut down if any of the following occurs:

- Any filter becomes excessively dirty and does not allow proper airflow through the hood.
- Any filter is missing or not installed properly.
- Fire Extinguisher System is activated.

NOTE:

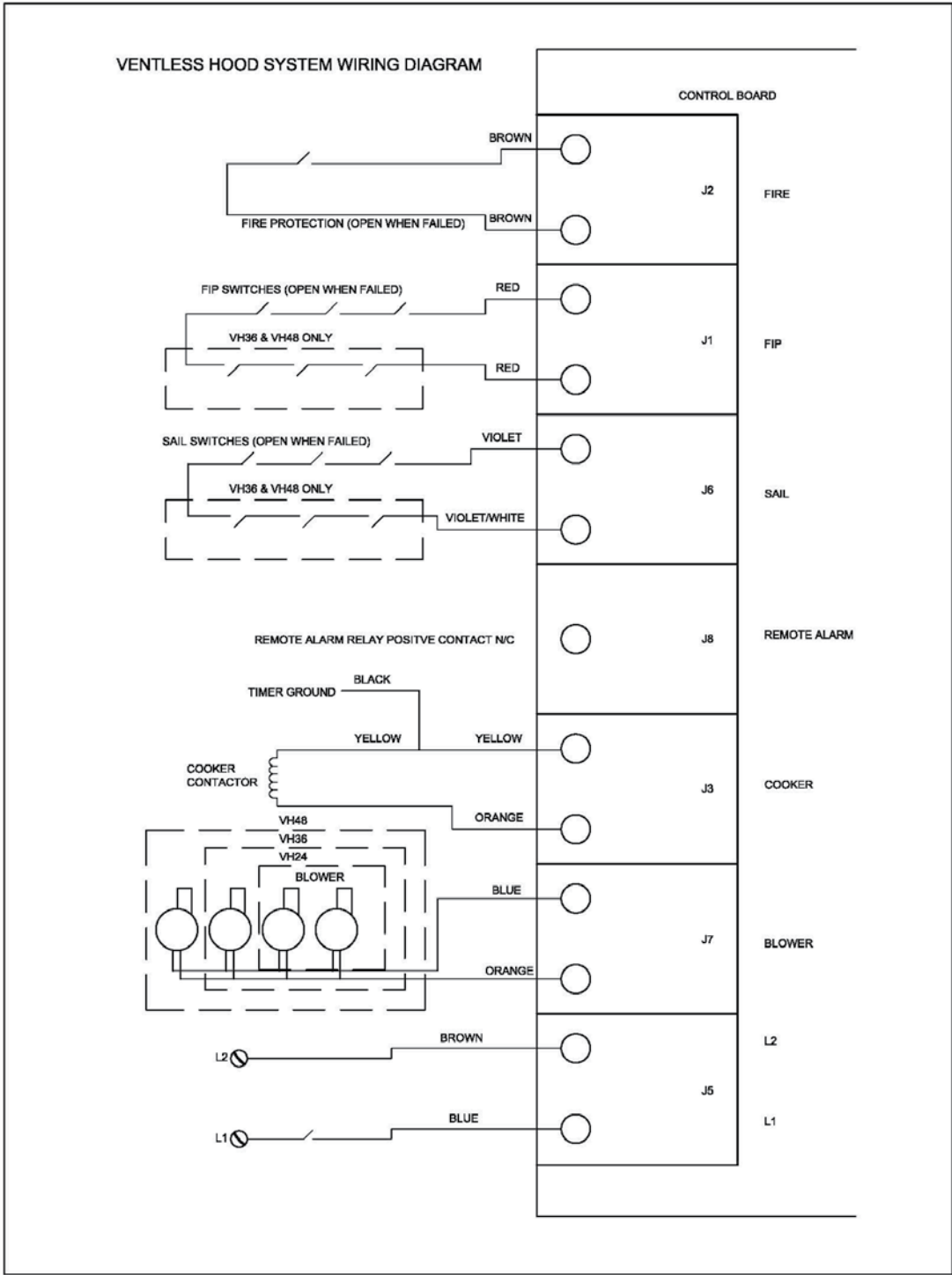
If fire system is field installed, wiring must be verified by licensed Ansul system installer and performed to meet all state and local codes.

NOTE:

Prior to installation, power must be disconnected. Wiring diagram to be followed in order to integrate into fire system.

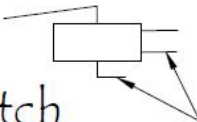
Installation shall be performed to meet all state and local codes. All wiring to be per pages 16 & 17 of the installation manual.

Wiring Diagram



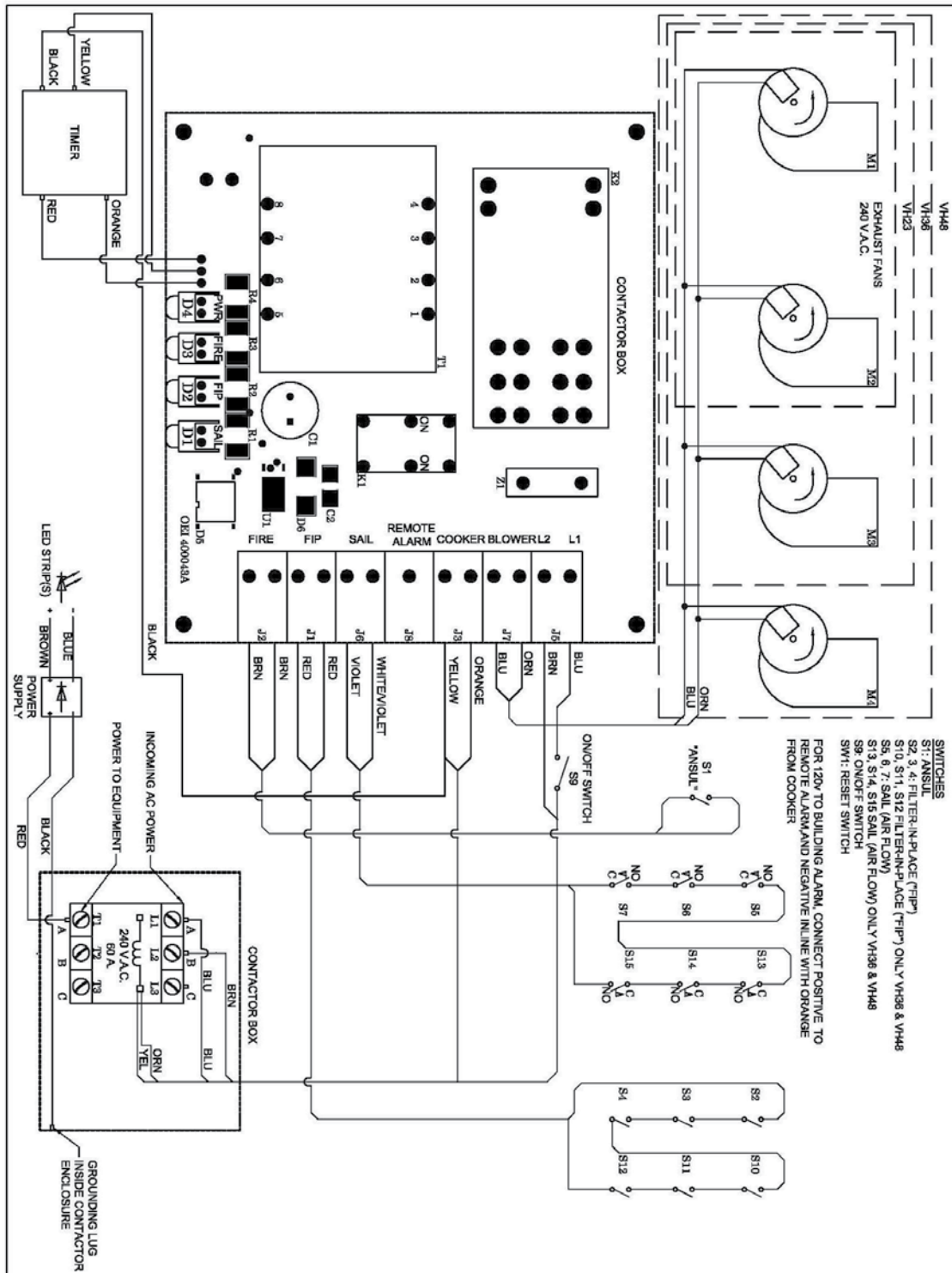
Ansul

Microswitch



Wires

Wiring Diagram Cont.





CLEARANCES AND COVERAGE:

- Ceiling 6" and Pull Station side 30".

Model	Surface Nozzles	Tank Size
VH-24	1N	3.0
VH-42	290	3.0
VH-48	290	3.0

NOTE:

Coverage for Fryers, Griddles, and Ranges - Cooking surface of each appliance cannot exceed 480 square inches.

Fire Suppression System

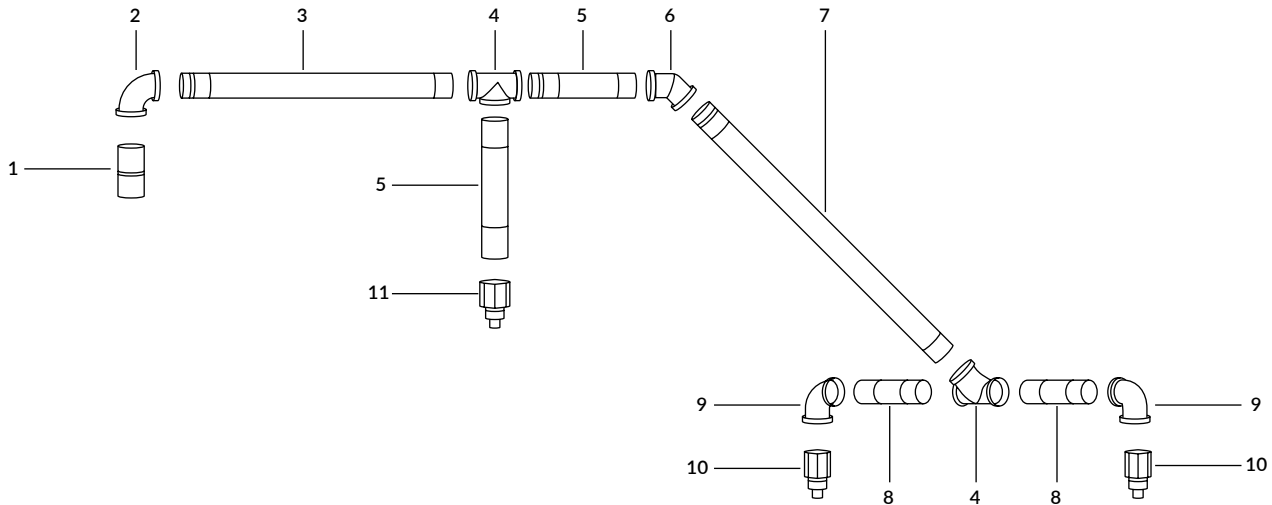
The fire suppression system used in your Ventless Hood System is an Ansul R-102 Restaurant Fire Suppression System (Standard UL 300 Listed).

- In accordance with the system's listing, a licensed Ansul fire system installer must perform final installation, charge, and test the system.
- The fire suppression system is designed and UL-listed to provide fire protection for cooking appliances such as fryers. It automatically protects your unit 24 hours per day.
- The integrated Ansul system contains piping and nozzles.
- All nozzles have been factory installed in the proper operating position. DO NOT MOVE OR ADJUST.

This Hood also requires use of a Manual Pull System. The Manual Pull System is already integrated into your system if fire suppression system is factory installed.

NOTE:

If Field installed, fire suppression system to be installed per the Field Installation Diagram for Conduit/Piping supplement attached to this manual.



Item	Part No.	
1	11-20018	10 5/8", 3/8" Black Pipe
2	11-20109	Elbow, 3/8" Black Pipe
3	11-20111	Pipe, 3/8"x 8 5/8" Black Pipe
4	11-20094	Tee, 3/8" Black Pipe
5	11-20110	Pipe, 3/8"x 6" Black Pipe
6	11-20097	45 Elbow, 3/8" Black Pipe
7	11-20112	Pipe, 3/8" x 16" Black Pipe
8	11-20013	Nipple, 3/8" x 2" Black Pipe
9	11-20096	Elbow, 3/8" Black Pipe
10	11-20120	Nozzle, Chromed (Ansul)
11	11-20121	Nozzle, Chromed (Ansul) (2 required for 3 & 4 Foot)



Field Install Suppression Directions

All Fire System Components to be installed by an **AUTHORIZED ANSUL INSTALLER**.

COMPONENTS FOR INSTALLATION MUST INCLUDE ANSUL PARTS AS FOLLOWS:

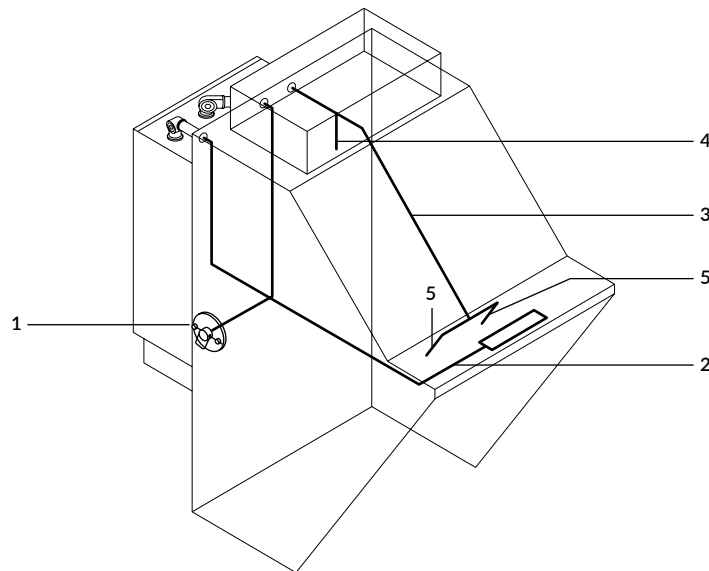
- Single Tank Nitrogen Cartridge 34 oz or LT-20-R
- Terminal Detector P/N 6538
- Pull Elbows - 7 Required, P/N 7423250
- Pull Station P/N 4835
- Electric Switch P/N 423878
- Fusible Link 439245
- Ansul Tank - 3 Gallon
- Fire Suppression System Enclosure:
 - Stainless Steel, 0.026" In. Thick Min, 23½" x 16½" x 7½"

PRIOR TO INSTALLATION, POWER MUST BE DISCONNECTED. WIRING DIAGRAM TO BE FOLLOWED IN ORDER TO INTEGRATE INTO FIRE SYSTEM. INSTALLATION SHALL BE PERFORMED TO MEET ALL LOCAL CODES.

ALL PIPING TO BE ROUTED AND INSTALLED PER THIS DIAGRAM AND PAGES 17 AND 18 OF THE INSTALLATION MANUAL.

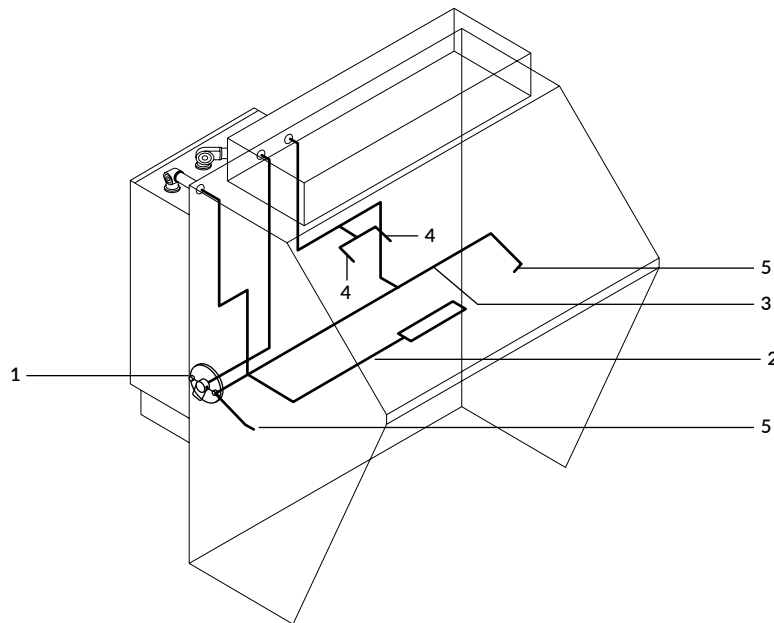
FIRE SYSTEM ENCLOSURE TO BE INSTALLED ON THE REAR OF THE HOOD SYSTEM AS SHOWN ON THE DIAGRAMS.

VH-24 Ventless Diagram



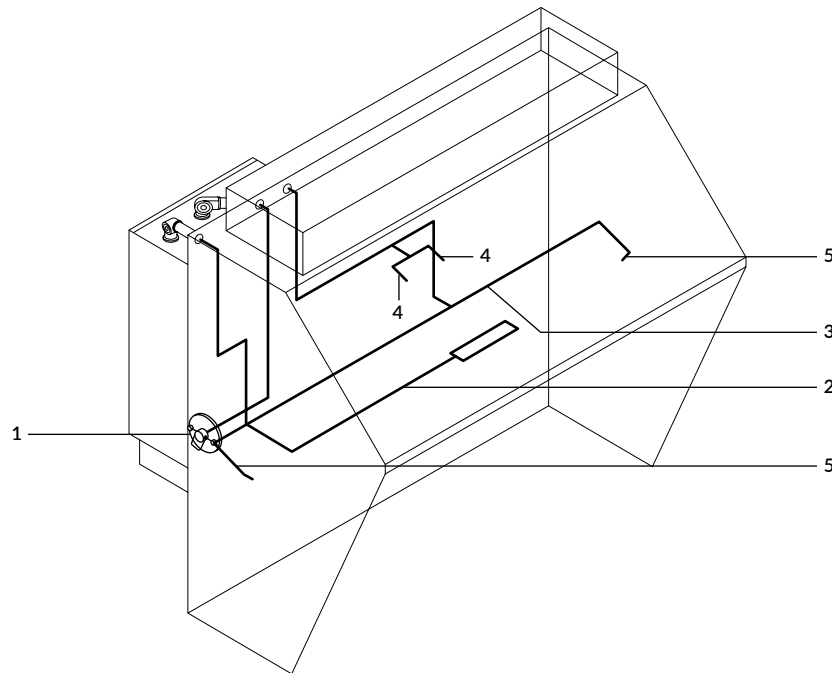
Item	Part No.	Description
1	16000-501	Remote Pull Station
2	16000-502	Detection Line
3	16000-503	$\frac{3}{8}$ " Piping
4	16000-504	1N Plenum Nozzles
5	16000-505	1N Surface Nozzles

VH42 - Ventless Diagram



Item	Part No.	Description
1	16000-501	Remote Pull Station
2	16000-502	Detection Line
3	16000-503	3/8" Piping
4	16000-504	1N Nozzle
5	16000-505	290 Nozzle

VH48 - Ventless Diagram



Item	Part No.	Description
1	16000-501	Remote Pull Station
2	16000-502	Detection Line
3	16000-503	$\frac{3}{8}$ " Piping
4	16000-504	1N Nozzle
5	16000-505	290 Nozzle



Maintenance

Maintenance is necessary for your Ventless Hood System to maintain the unit's efficiency over time.

QUARTERLY HOOD CLEANING:

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.

INTERIOR:

Disconnect power from the unit! Remove all filters from the hood. Using a mild degreaser with a soft towel or sponge, clean the entire Hood Plenum and Blower Sections. The hood must be cleaned every 3 months.

EXTERIOR:

Disconnect power from the unit. Clean all external stainless steel parts using a stainless steel cleaner.

FILTERS:

Baffle filter: 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.

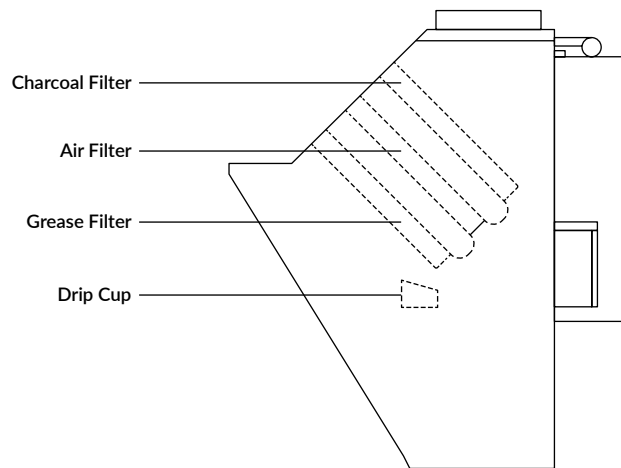
MESH FILTER:

Should be cleaned daily. Place the filter in a sink and clean with a mild degreaser. Dry thoroughly, then reinstall in the unit.



CHARCOAL FILTER:

Never attempt to clean the Charcoal Filter. Replace every 90 days. The reuse of a Charcoal Filter can cause damage to the unit.



Filter Installation Sequence



SEMI-ANNUAL FIRE SUPPRESSION SYSTEM SERVICING:

Service of the Fire Suppression System is to be conducted by qualified fire equipment personnel ONLY! Semi-annual (at minimum) servicing and inspections should be performed on the Fire Suppression System.

Such service shall consist of the following:

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.
2. Remove tank, verify chemical is at proper level, clean and coat O-ring with extreme temperature grease and reinstall.
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.
7. Inspect wire rope for wear at pulleys and detectors and replace if necessary.
8. Record maintenance date and maintain in a permanent file.

ANNUAL FIRE SUPPRESSION SYSTEM SERVICING:

Same as Semi-Annual but all fusible links must be replaced with new fusible links.

MAINTENANCE SCHEDULE

MAINTENANCE LOG				
Procedure	Daily	Quarterly	Semi-Annually	Annually
Clean baffle filter	✓			
Clean wire mesh Filter.	✓			
Replace Charcoal filter.		✓		
Interior hood cleaning.		✓		
Exterior hood cleaning.		✓		
Fire suppression system servicing.			✓	✓