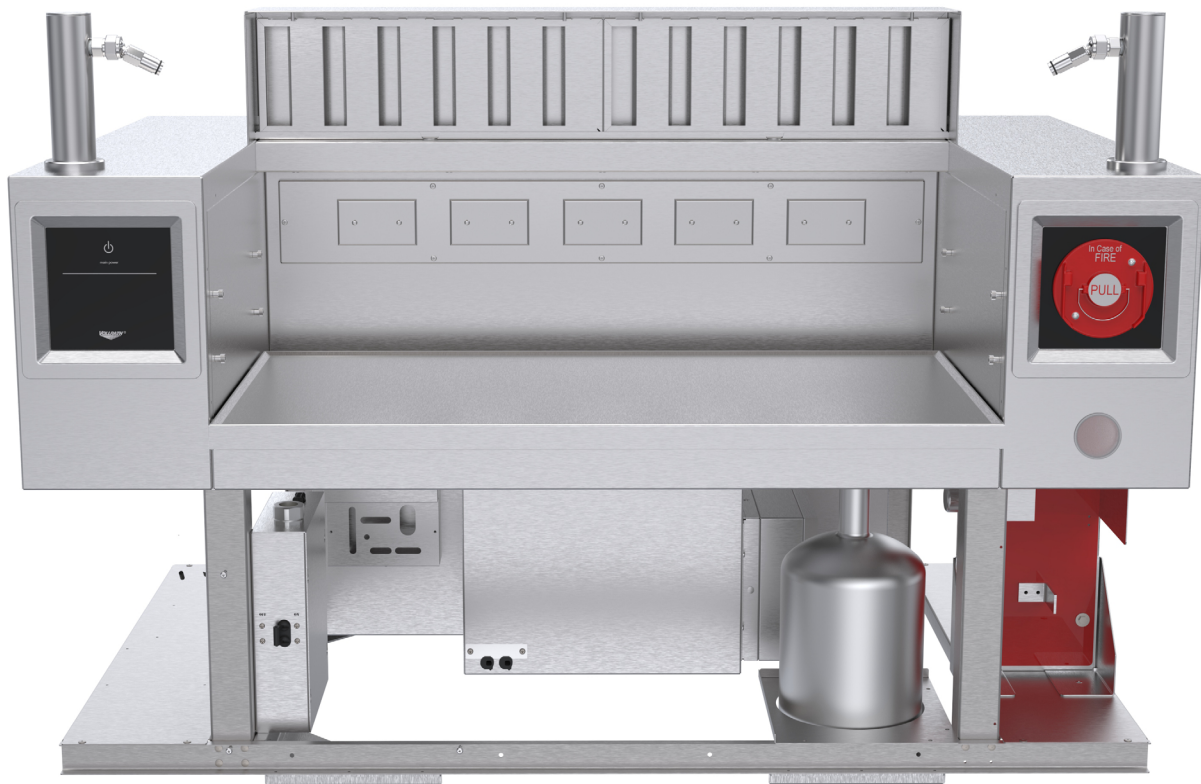




# INSTALLATION MANUAL

## FLEXVENT™ VERSATILE SLIDE-IN WITH DOWNDRAFT VENT SYSTEM AND FIRE SUPPRESSION





# FLEXVENT™ VERSATILE SLIDE-IN WITH DOWNDRAFT VENT SYSTEM AND FIRE SUPPRESSION

## SAFETY INFORMATION

This manual provides information for safely configuring, installing, operating, and maintaining FlexVent™. Always follow guidance from the Authority Having Jurisdiction (AHJ) for regulation and code compliance.

DO NOT install or operate the unit until all safety information and instructions are thoroughly read and understood. Installation and startup must be performed by a qualified technician. The warranty will be void if the unit is not installed correctly.

**NOTICE: This product is UL Recognized. UL Recognized components are incomplete in certain constructional features and require professional installation and subsequent evaluation to relevant standards prior to commissioning.**

For your safety, please observe the following precautions when installing, operating, or servicing FlexVent™.

**! WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**! CAUTION** indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE:** addresses practices not related to physical injury.

### **! WARNING — HAZARDOUS VOLTAGE**

- Failure to disconnect unit from electrical supply before any servicing could result in death, serious injury, or equipment damage.
- Unit must be installed by qualified personnel in accordance with applicable codes and ordinances.
- Install and use Recognized electrical components and grounded electrical outlets matching each intended cooking appliance's nameplate rated voltage.
- Ensure breaker panel service, circuit breaker, and wiring is appropriate for all intended cooking appliances and configurations.
- Do not steam clean, spray, or pour liquids on any part of the unit.
- Unit must be installed and secured level to the enclosure.
- Do not use extension cords for appliances.
- Before cleaning or maintenance, turn the unit off and disconnect the electrical supply.
- Always attend the unit when in operation.
- Do not operate the unit if damaged or malfunctioning.

### **! WARNING — COMBUSTION & FIRE HAZARDS**

- Do not attach ductwork to the Recirculating System exhaust; it is designed to prevent a fire from spreading outside of the unit.
- Ensure all flammable substances and vapors are stored away from this unit and other appliances.
- Ceiling height must be at least 96".
- Do not modify or in any way circumvent or defeat the Interlock Box as factory wired.
- Appliances and configurations must conform to Cooking Appliance Constraints noted in this manual.
- AHJ approvals are required for all potential appliances and configurations upon initial installation.

## **WARNING**

- Improper installation, adjustment, alteration, service or maintenance could result in serious injury, equipment or property damage, and may void the factory warranty.
- This product may contain chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

## **CAUTION**

- Avoid impact to the Touch Panel surface; damage may cause unit malfunction.
- Filters should not be altered in any way; damaged filters must be replaced prior to operation.
- DO NOT clean with corrosive chemicals, products containing chlorine, oven cleaners, or abrasive cloths or cleaners.
- DO NOT alter, add attachments or modify this unit unless specified in this manual.
- Ensure the enclosure provides adequate ventilation as specified in this manual.

## **NOTICE — UNPACKING & INSTALLATION**

- Ensure there is enough space to unpack; there will be layers of protective packaging.
- Use care when unpacking to prevent the unit from tipping and being damaged.
- Immediately inspect the unit and notify the freight company if damage is present.
- Remove crating materials, stretch wrap, and packaging. The unit is secured to the pallet; it is often helpful to leave the unit on the pallet to facilitate moving to its fabrication location.
- Fabricators and owners are responsible for installation materials not included with purchase.
- Move the unit with appropriate equipment and adequate people to avoid injuries and unit damage.  
**NOTICE: If the unit is removed from the pallet, move using the four mounting pads provided under the unit. Using other areas to lift will cause damage to the unit. DAMAGE RESULTING FROM IMPROPER HANDLING WILL VOID THE WARRANTY.**
- Remove and retain the envelope that contains included hardware, labels, and documentation.

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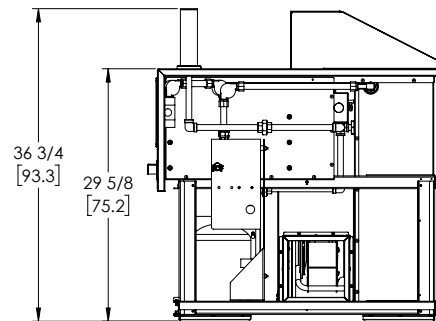
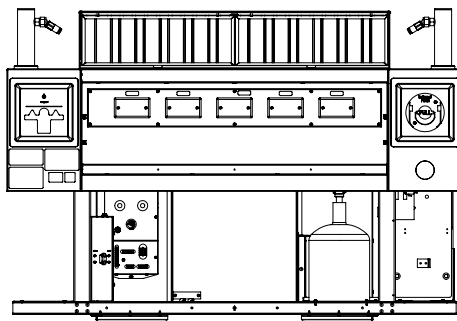
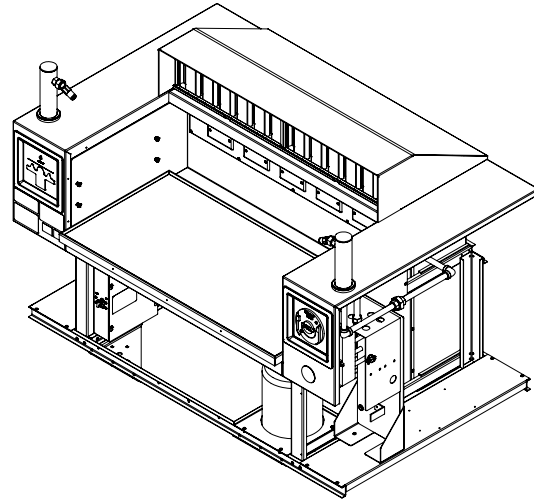
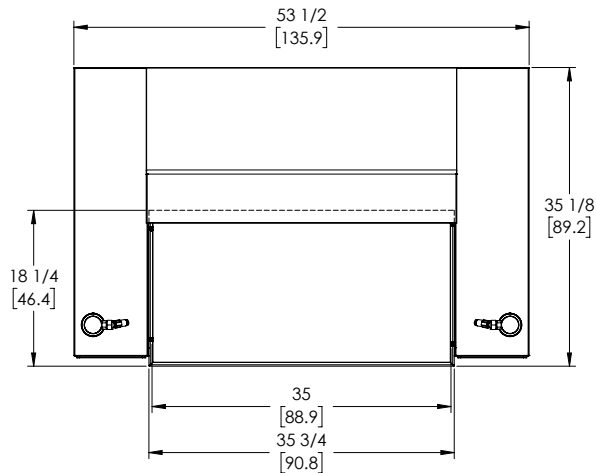


## INTRODUCTION

Carefully review and understand this manual thoroughly before proceeding with installation, commissioning, and operation of FlexVent™. This unit has been designed for customized over, under, or flush counter installation in the front or back of the house as determined by the Authority Having Jurisdiction (AHJ). The unit is UL Recognized and as such, must be completed by a fabricator in compliance with the applicable UL Certification, the UL Conditions of Acceptability, and requirements of the AHJ.

**NOTICE: Full responsibility is assumed by the fabricator, installer, and owner for additional components and preparation required for UL, NFPA, AHJ, and applicable code compliance. Appliances used with this unit should be UL and NFPA certified by a Nationally Recognized Testing Laboratory (NRTL).**

## SPECIFICATIONS



ITEM FC-6DV-36	MODEL FC-6DV
Dimensions	53 1/2"W [135.9 cm] X 36 3/4"H [93.3 cm] X 35 1/8"D [89.2 cm]
Approximate Weight	250 lbs
Primary Material	18 Ga 300 Series Stainless Steel
Recognitions & Classifications	UL 710B Recognized, UL Classified to NSF2
System CFM Lower Airflow Limit	456 CFM
Grease-Laden Effluents per NFPA 96	EPA 202 as prescribed by NFPA 96, <5 mg/m <sup>3</sup> limit
Clearance	Zero Clearance Surround, minimum 96" ceiling height



[BACK TO TOC](#)

## LOCATION

The space in which FlexVent™ is located is considered to be part of the kitchen. Therefore, regulations pertaining to a commercial kitchen may apply. These include but are not limited to: fresh air, airflow, air exchanges, floor area, and proximity to customer seating area. Location of the unit must comply with AHJ requirements and jurisdiction codes. Total amount of grease or particle effluent must be considered based on location, room size, appliances present, and types of food being prepared. Refer to the Constraints section for approximate appliance effluents measured when utilizing this unit.

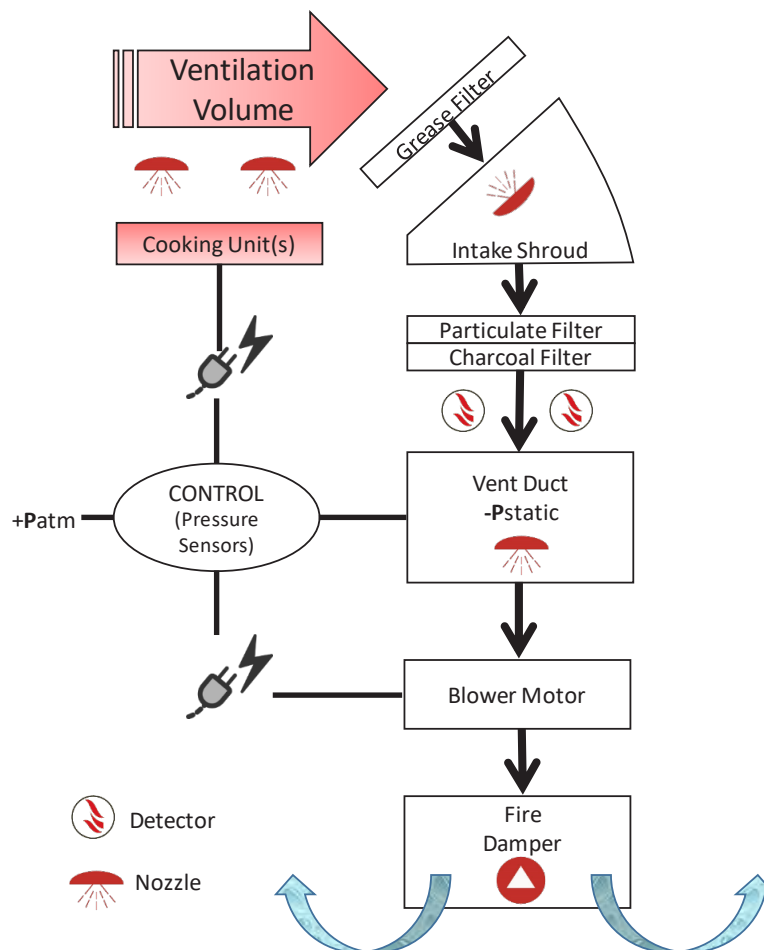
FlexVent has been evaluated for zero clearance surround installation. Ceiling height must be at least 96”.

## DESCRIPTION — MAIN SYSTEMS

FlexVent™ Downdraft Recirculating Ventilation Module is for use in commercial cooking and hot food holding applications. It is primarily constructed of 18 Ga 300 Series stainless steel and consists of:

- Cooking Station that allows for versatile configuration with a variety of cooking appliances
- Ventilation Control and Interlock System
- Recirculating Filtration Ductless Hood Assembly
- Ansul® R-102 Fire Suppression System

## BASIC OPERATION FLOW CHART



## FUNCTIONAL DESCRIPTION/SYSTEMS OVERVIEW

FlexVent™ has three 165 °F fusible links arranged in a series under the Vent Hood and behind the Particulate Filters. If any link is actuated, the Fire Suppression System is activated. In the event the Fire Suppression System is activated (automatically or manually), power to the cooking appliance(s) and fan motor is terminated. Negative pressure within the plenum is monitored with two pressure switches. One terminates power to the unit if the pressure is too high (e.g., filtration is obstructed), the other terminates power if pressure is too low (e.g., filtration wrong or missing, fan not operating properly).

Item	System	Components & Specs	Function
<b>A</b>	Cooking Station	<ul style="list-style-type: none"> <li>Adjustable-mount shelf 18 ¼"D X 35 ¾" W</li> </ul>	<ul style="list-style-type: none"> <li>Holds up to three approved appliances. <b>Total maximum weight limit for the shelf is 120 pounds, evenly distributed. Compliance with this limit is required for the safe operation of FlexVent.</b></li> </ul>
<b>B</b>	Ventilation Control and Interlock System	<ul style="list-style-type: none"> <li>Touchscreen User Interface (Vollrath® logo glows when unit has power)</li> <li>Pressure Control Box, power relay &amp; 30-amp circuit breaker</li> <li>Integral Interlock System</li> </ul>	<ul style="list-style-type: none"> <li>Controls function, displays status</li> <li>Activates lighting option</li> <li>Cuts Cooking Station outlet power if there is a pressure error or fire.</li> </ul>
<b>C</b>	Recirculating Filtration Ductless Hood Assembly	<ul style="list-style-type: none"> <li>Hood, plenum, and ductwork — stainless steel</li> <li>Baffle type grease filters — stainless steel (2) Item # 352035-2, UL File R37949*</li> <li>Activated carbon air filters (2) Item 352010-1*</li> <li>Recirculating fan</li> <li>Fire Damper</li> </ul>	<ul style="list-style-type: none"> <li>Captures grease</li> <li>Filters grease particles*</li> <li>Filters small particles and light odors*</li> <li>Interlock</li> </ul>
<b>D</b>	UL 300 Automated Fire Sup-pression System** Pre-plumbed for ANSUL R-102 wet chemical suppression system	<ul style="list-style-type: none"> <li>Piping</li> <li>Plenum discharge nozzles 1W</li> <li>Fire Detection Links 165 °F, Fusible (3)</li> <li>Appliance Discharge Nozzles 1W***</li> <li>1 ½ gal ANSULEX low pH Liquid Fire Suppressant</li> <li>Manual Pull</li> <li>Interlock Control Box with power relay and 30-amp circuit breaker</li> </ul>	<ul style="list-style-type: none"> <li>Automatic and manual fire suppression</li> <li>Distribution of suppressant inside plenum, behind grease filters, and for cooking appliances</li> <li>Interlock cuts power to unit and cooking appliances if fire is detected</li> </ul>

**\*Vollrath specified filters must be used as replacements to optimize performance.**

**\*\*The Fire Suppression System, field installation, set-up, testing and final charging shall be provided by an authorized ANSUL Distributor/Dealer and is the sole responsibility of the purchaser.**

**\*\*\*Do not adjust nozzle angles; they are factory set for optimal fire suppression.**





Final product may not appear as depicted.

**REQUIRED PARTS SUPPLIED BY INSTALLER**

Fire Suppression System	<ul style="list-style-type: none"> <li>• ANSUL LT-20-R Cartridge*</li> <li>• ANSUL 1 ½ gals of ANSULEX low pH Liquid Fire Suppressant*</li> </ul> <p>*Supplied by ANSUL Representative</p>
Electrical	<ul style="list-style-type: none"> <li>• Circuit breaker box</li> <li>• Circuit breakers</li> <li>• Appliance outlets</li> <li>• Appliance conduit and wiring, etc. for customized configuration</li> </ul>
Mechanical	<ul style="list-style-type: none"> <li>• Cabinet surround &amp; countertop</li> <li>• Ventilation cover — Separate Vollrath® purchase or fabricator provided. Must be removable and enable complete access for service. The cover must provide a minimum of 80 square inches of open area for proper ventilation and exhaust.</li> </ul>



## UL CONDITIONS OF ACCEPTABILITY

1. The Downdraft Table is to be used in conjunction with up to three Listed commercial cooking appliances. See III. 6 for specific cooking appliance that can be used and on which shelf height. Total electrical load does not exceed 50 A for all appliances combined (based on contactor employed). Downdraft units are marked with these details including shelf height.
2. The acceptability of the installation of the downdraft table assembly shall be determined under end-product application. The downdraft assembly shall be adequately enclosed to render inaccessible all or any parts of the equipment that involve a risk of electric shock or injury to persons, and preclude propagation of flame initiated by electrical disturbances occurring within. The assembly shall meet relevant end-product requirements, including the enclosure, accessibility of uninsulated live and/or moving parts that may involve a risk of electric shock and fire, and/or injury to persons, respectively, spacings and segregation, grounding, polarization, and marking requirements under the end-product application.  
  
In addition, the acceptability of the use of the downdraft table assembly shall be made in conjunction with the end-product requirements specified in the Standard for Commercial Electric Cooking Appliances, UL 197, for UL Listing (UL).
3. The acceptability of the supporting/mounting means and securement of the downdraft table assembly shall be determined under the end-product application.
4. The downdraft assembly terminations and wiring shall be suitable, protected from damage and sharp edges, etc., and enclosed. In addition, any flexing or movement of the leads/wiring during normal operation or any user servicing shall be investigated and determined to be acceptable.
5. The downdraft table assembly shall be provided with suitable grounding/bonding means under the end-product application.
6. The following tests have been conducted in accordance with UL 710B on the covered downdraft table with griddle assembly: Power Input (Rating), Normal Temperature (Normal), Dielectric Voltage-Withstand (Dielectric Strength), Insulation Resistance, Grounding and Bonding, Stability, Strain Relief, Push-Back Relief. Consideration shall be given to re-conducting any of the tests above with other end-product appliances.  
  
In addition to the above, the following tests have been conducted in accordance with UL 710B on the covered downdraft table with griddle assembly and fryer and hot plate: Lower Airflow Determination, Capture, Emissions (EPA 202), Fire Extinguishment (General), and Fire Extinguishment (Griddles). Consideration shall be given to re-conducting any of the tests above with end-product griddle paying attention to Griddle Watt, Griddle size, Griddle max temperature, and maximum food load and throughput.
7. The end-product report shall include a detailed description of the downdraft table including specific markings for applicable cooking appliance that may be used. Also includes the details for the cooking appliance shelf height for each appliance.
8. The covered Downdraft table assembly component is intended to be factory installed only.
9. If legs/feet or casters are not provided as part of the Recognized Component table, the supporting means should be evaluated in the end use and Stability Test should be considered.
10. Power comes into the interlock box and supplies the load center and receptacle bank. Consideration should be given to ensure that the all applicable appliance receptacles have suitable branch-circuit protection. See Figure 1, item 2 for applicable receptacles and Figure 3, item 1 for applicable load center, as shown below.

Fig. 1, Item 2: Receptacle Bank – Optional. May be provided by end product manufacturer. Receptacles are:

1. Of the grounding type.
2. Located in: a Listed junction box or a galvanized or stainless steel enclosure min. 0.029 in. (0.74 mm) thick, receptacle bank.
3. Mounted so that the face projects 0.015 in. (0.38 mm) minimum beyond a conductive surrounding surface or is at least even with a nonconductive surrounding surface.
4. Mounted so that the face is not less than 60 degrees from the horizontal.
5. Not located in an area with an elevated ambient temperature.

General Use Receptacles - All receptacles are UL Listed, single, grounding types, rated 15, 20, 30, 50, or 60 A, voltage ratings of 115 to 125 V ac or 220 to 250 V ac. Each receptacle is protected by applicable breaker of the same rating, located within the load center, figure 3, item 1.

Fig. 3, Item 1: Load Center – Optional. May be provided by end-product manufacturer. Listed, rated 120/208-240 V, 60, 80, or 100 A. Provided with Listed breakers, suitable for the load center. Each breaker voltage and current rating corresponds to the receptacles employed in the receptacle bank for each appliance. See figure 1, item 2. For example, when a 240 V, 30 A receptacle is employed, there is a Listed breaker rated 240 V, 30 A in the load center that protects that specific receptacle. All receptacles employed will be protected by its specific breaker. Load center is mounted as shown. Provided with Listed ground bar and neutral bar kits.

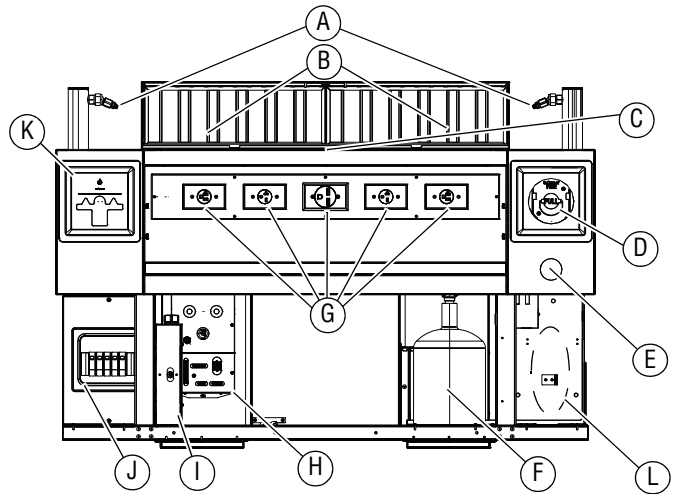


## SYSTEM OVERVIEW

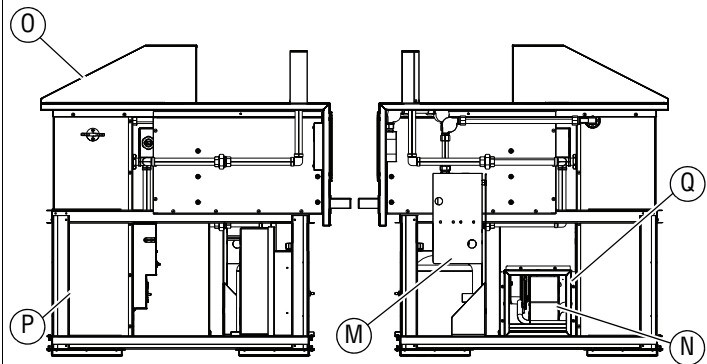
The FlexVent™ unit consists of three integrated systems:

- FlexVent Ventilation and Filtration System
- Fire Detection System
- ANSUL® R-102 Restaurant Fire Suppression System

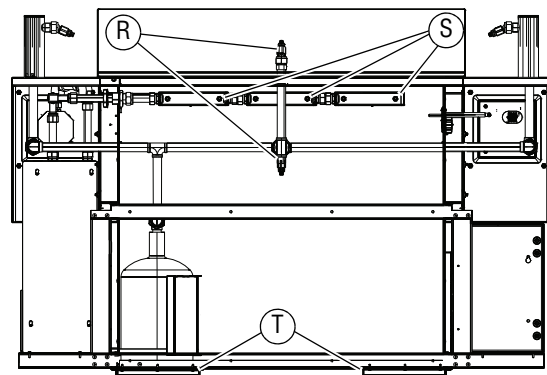
- A. Discharge Nozzles — Appliance (2)**
- B. Grease Filters (2)**
- C. Grease Tray (1)**
- D. Manual Pull Station**
- E. Fire Suppression System Arming View Window**
- F. 1.5 Gallon Ansulex R-102 Tank, Ansulex Fire Suppressant\***
- G. Electrical Outlets\***
- H. Pressure Control\*\***
- I. Interlock Box\*\***
- J. Circuit Breakers and Box\***
- K. User Control**
- L. Nitrogen (N) Cartridge LT-20-R\***



- M. ANSUL Automan Regulated Release Assembly**
- N. Fan Motor**
- O. Vent Hood**
- P. Plenum Assembly**
- Q. Damper Assembly**



- R. Discharge Nozzles (Duct) (2)**
- S. ANSUL Detector Brackets w/ Fusible Links (3)**
- T. Lift and Mounting Pads**

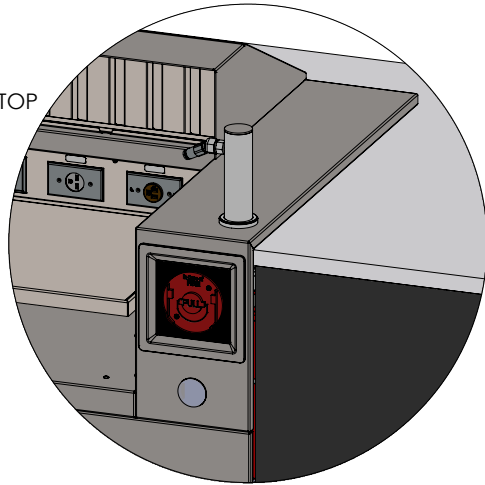
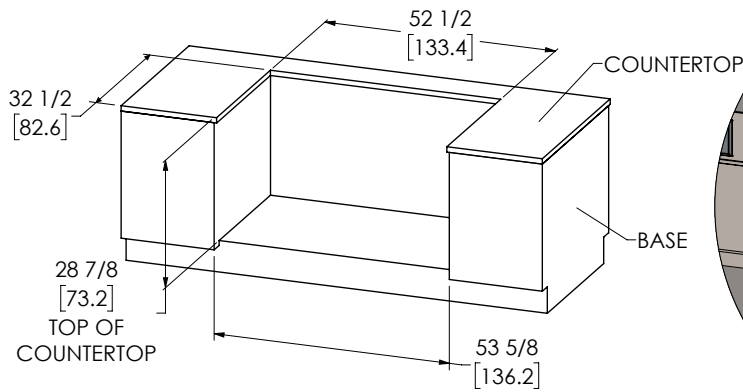


\*Supplied and installed separately.

\*\*For service technician use.

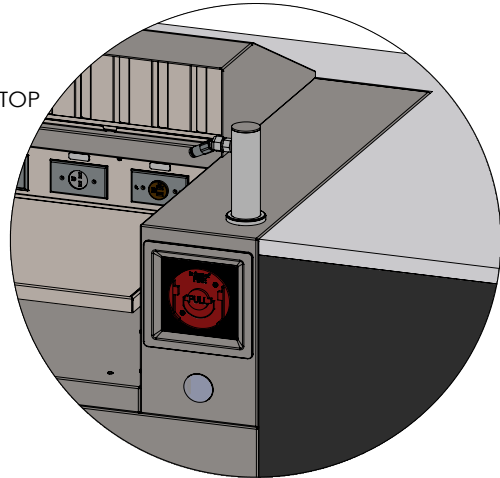
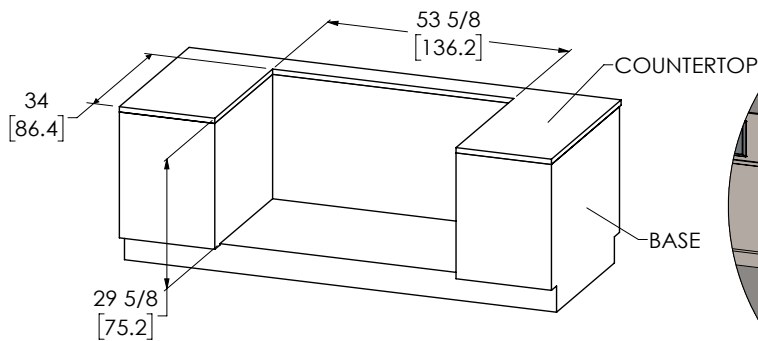
## CABINET CONSTRAINTS & INSTALLATION — ZERO CLEARANCE SLIDE-IN

### OVER COUNTER



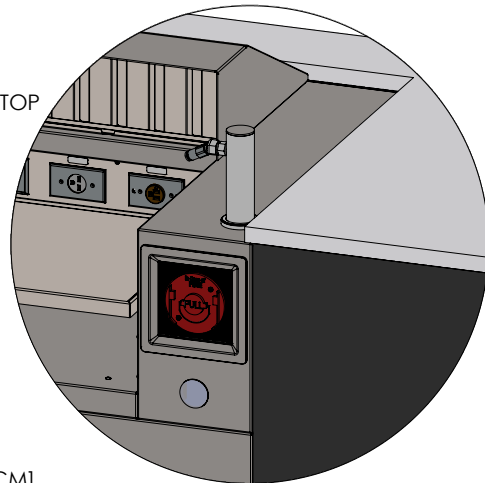
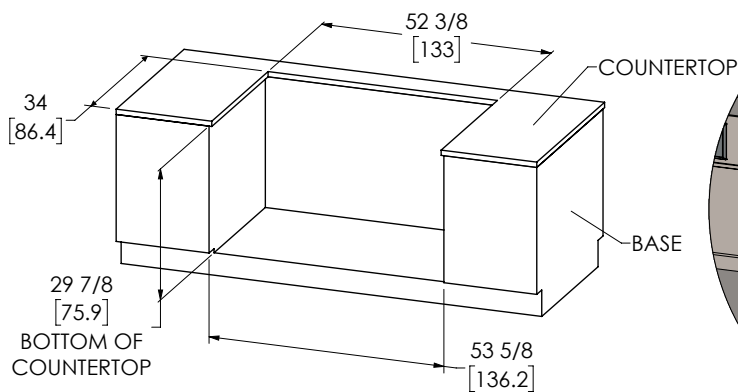
DIMENSIONS RESULT IN APPLIANCE 7/8" [2.2 CM] ABOVE COUNTERTOP. APPLIANCE OVERLAPS COUNTERTOP APPROXIMATELY 1/2" [1.3 CM] ON ALL SIDES.

### FLUSH WITH COUNTER



DIMENSIONS RESULT IN 1/8" [0.3 CM] GAP ON ALL SIDES OF APPLIANCE.

### UNDER COUNTER



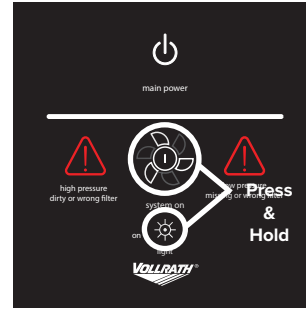
DIMENSIONS RESULT IN APPLIANCE UNDER COUNTERTOP. COUNTERTOP OVERLAPS APPLIANCE APPROXIMATELY 1/2" [1.3 CM] ON SIDES. COUNTERTOP WILL NOT OVERLAP APPLIANCE IN BACK.

## LED LIGHTING (OPTIONAL)

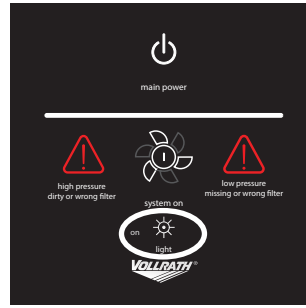
By default, the LED switch is disabled and the switch and indicator will not be visible.

To enable the LED function:

1. With power to touch panel (Vollrath logo lit) and main power off (no display), press and hold the system on/off switch AND the LED on/off switch locations simultaneously for three seconds.



2. Press the LED switch to enable the LED function; “ON” will display. Press again to disable; “OFF” will display.



3. Press Main Power switch to exit LED setup mode. **NOTICE: When the control is on and the function enabled, the switch and indicator will be visible.**



4. Press the LED switch to turn lights on or off.

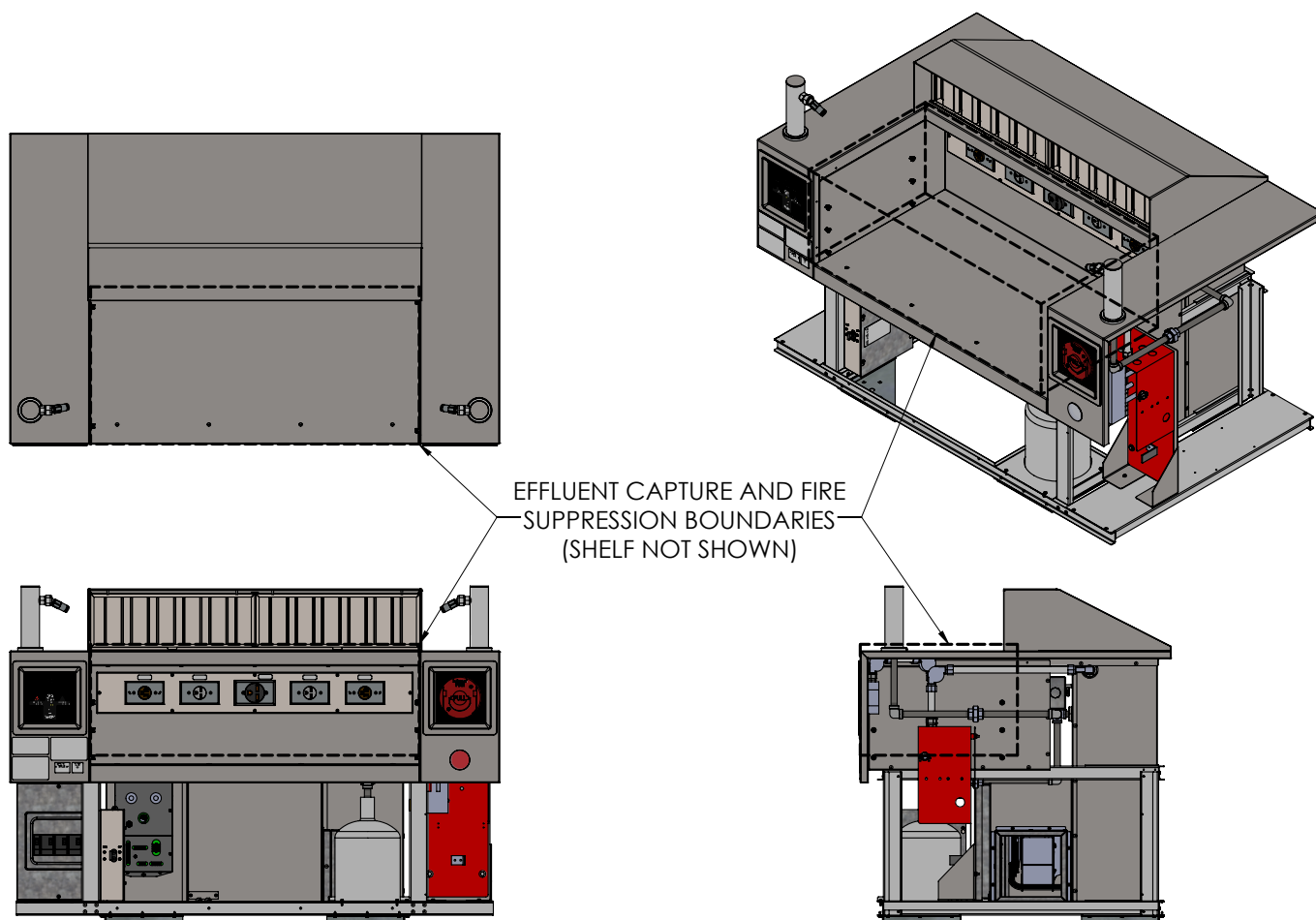
**NOTICE: An LED three-terminal connector with three wires (L1, N, G) is provided with the unit. The wires provide 120VAC output for a maximum 100 watt LED power supply when the LED option is enabled and on. LEDs purchased separately.**

Please refer to the wiring diagram.



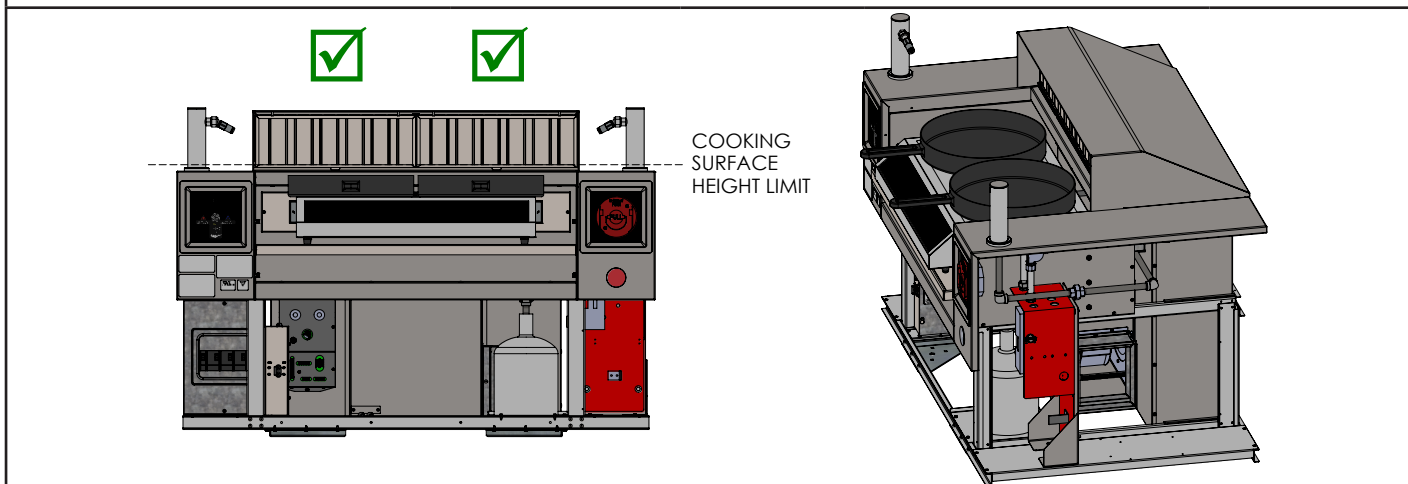
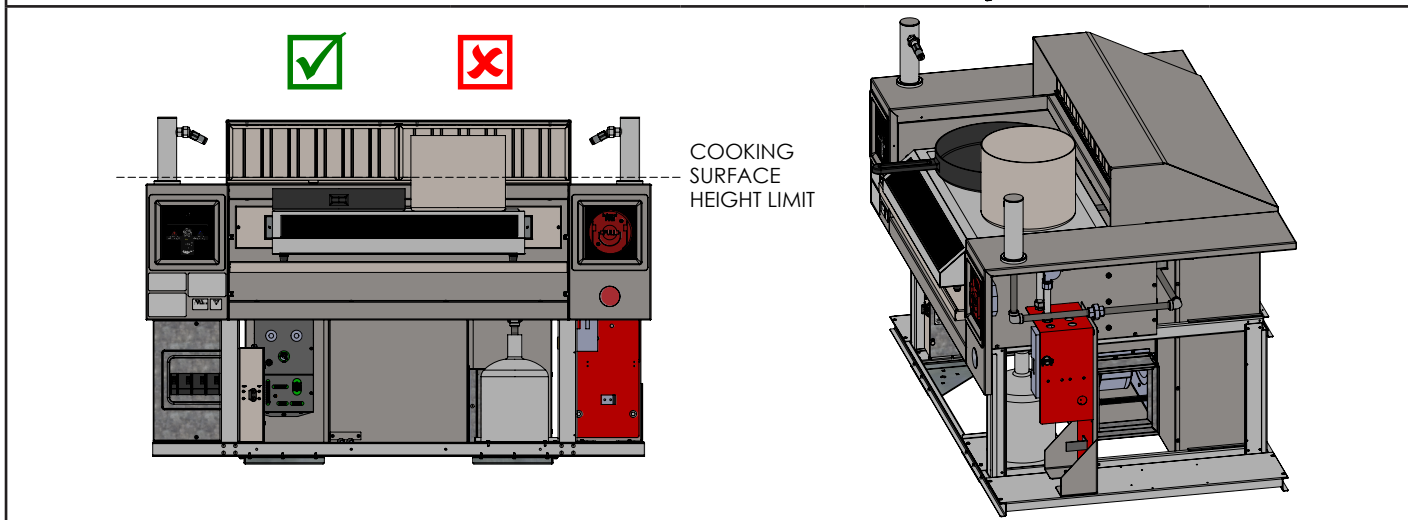
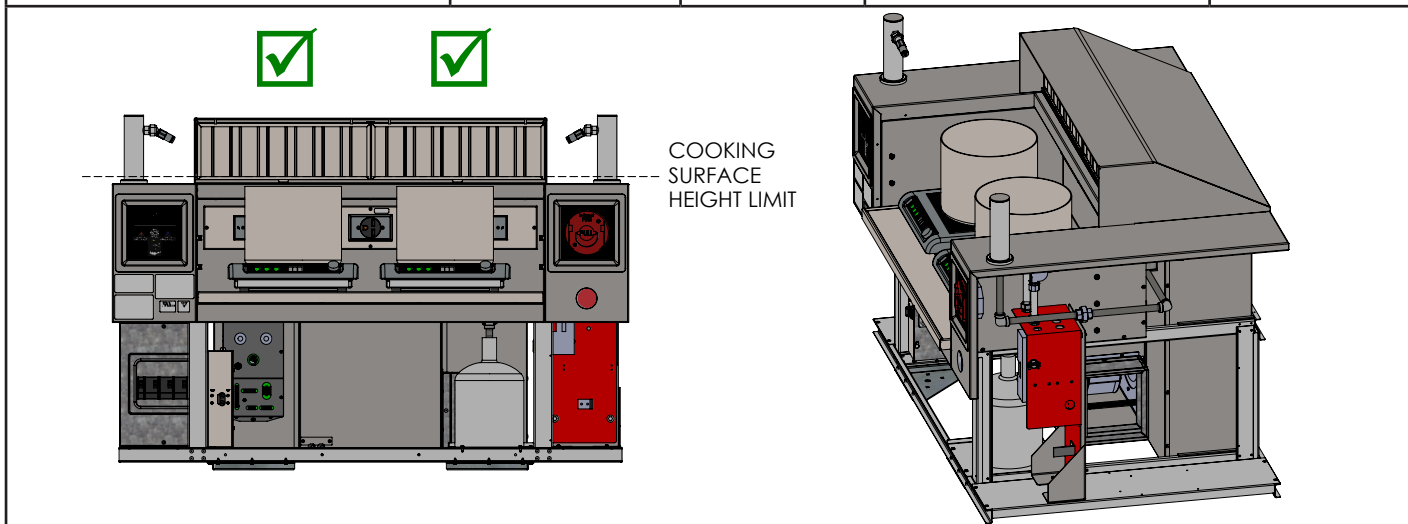
## COOKING APPLIANCE GENERAL CONSTRAINTS — ELECTRIC ONLY

- Total maximum weight limit for the shelf is 120 pounds, evenly distributed. Compliance with this limit is required for the safe operation of FlexVent.
- Appliances must not overhang shelf
- Cooking surfaces must fall within the Effluent Capture and Fire Suppression Boundaries
- 7,200 W maximum, 30 amps, 120 or 240 V
- AHJ approvals are required for all appliances and configurations
- Usable appliance space 18 1/4" D X 35" W
- Allowable grease discharge per UL 710B and NFPA 96 is 5 mg/m<sup>3</sup> (0.00018 oz/ft<sup>3</sup>). No configuration shall exceed the total allowable discharge.



## INDUCTION HOB/HOT PLATE CONSTRAINTS — ELECTRIC ONLY

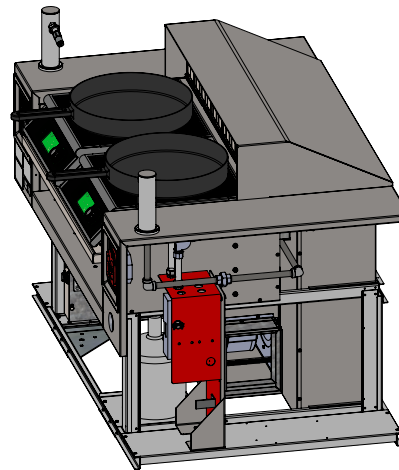
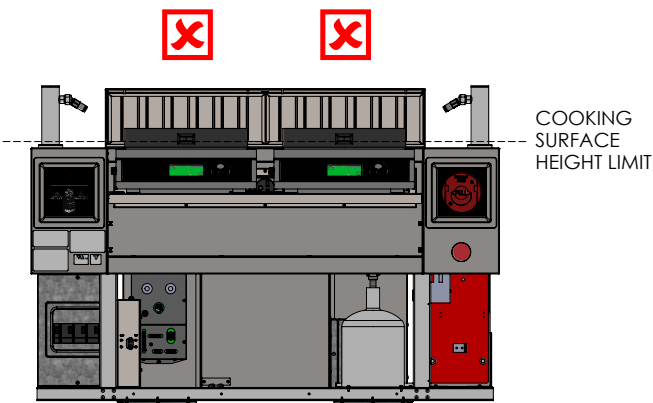
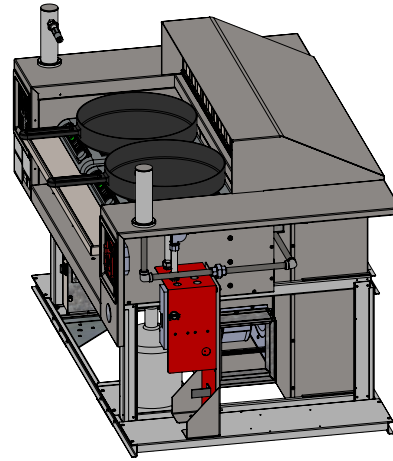
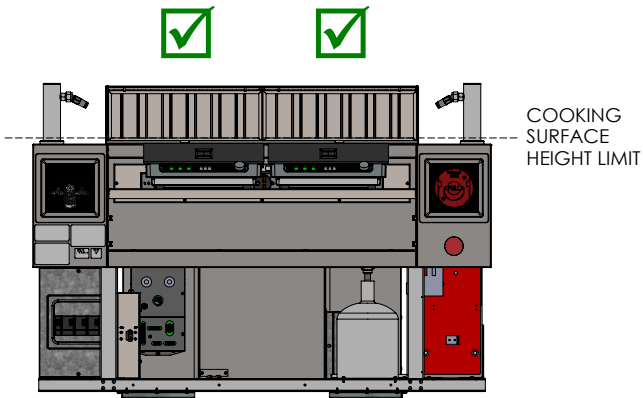
Induction HOB(s)/ Hot Plate(s)	Shelf Position	Max Temp	Max Watts	Pot/Pan Dia. Max.
1-3	Any*	550 °F	3600/hob — 7200 total	14"



\*Shelf positions are top, middle, and bottom.

## INDUCTION HOB/HOT PLATE CONSTRAINTS — ELECTRIC ONLY (Continued)

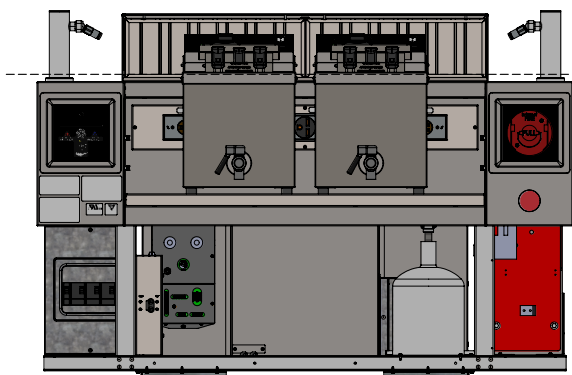
Induction HOB(s)/ Hot Plate(s)	Shelf Position	Max Temp	Max Watts	Pot/Pan Dia. Max
1-3	Any*	550 °F	3600/hob — 7200 total	14"



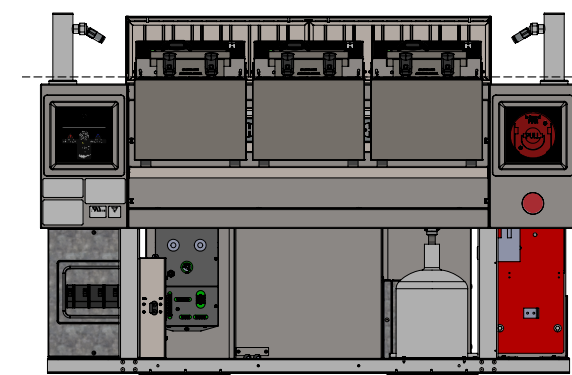
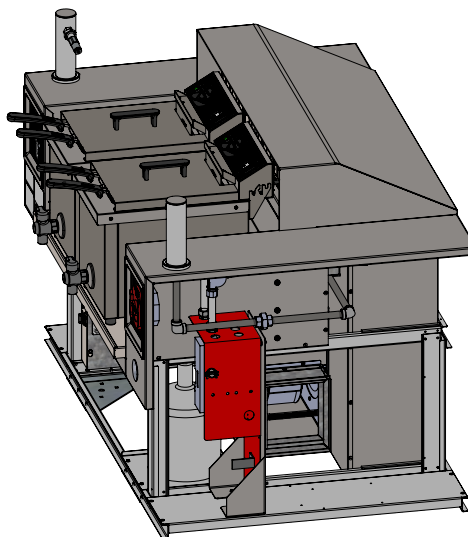
\*Shelf positions are top, middle, and bottom.

## FRYER CONSTRAINTS — ELECTRIC ONLY (.66 mg/m<sup>3</sup> per 15 lb vat)

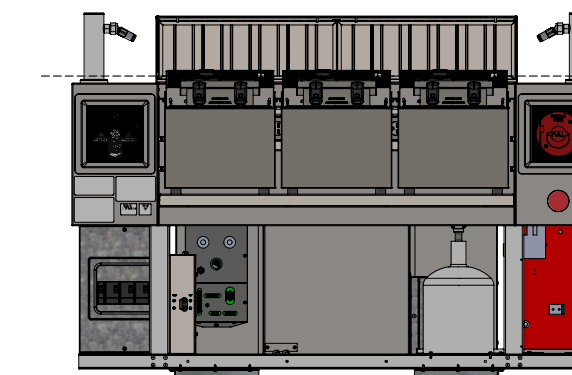
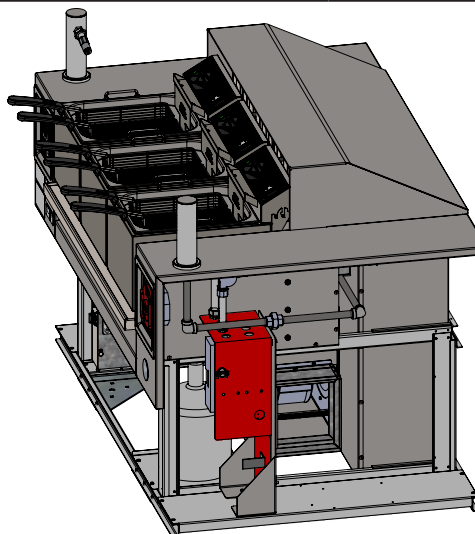
Fryer(s)	Max Capacity	Shelf Position	Max Temp	Max Watts	Max Surface Oil
1-3	15 lbs oil/vat	Bottom	375 °F	3600/vat —7200 total	132 sq in/vat



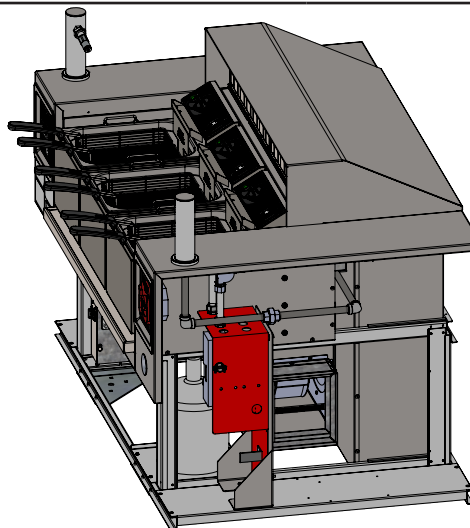
COOKING SURFACE HEIGHT LIMIT



COOKING SURFACE HEIGHT LIMIT



COOKING SURFACE HEIGHT LIMIT

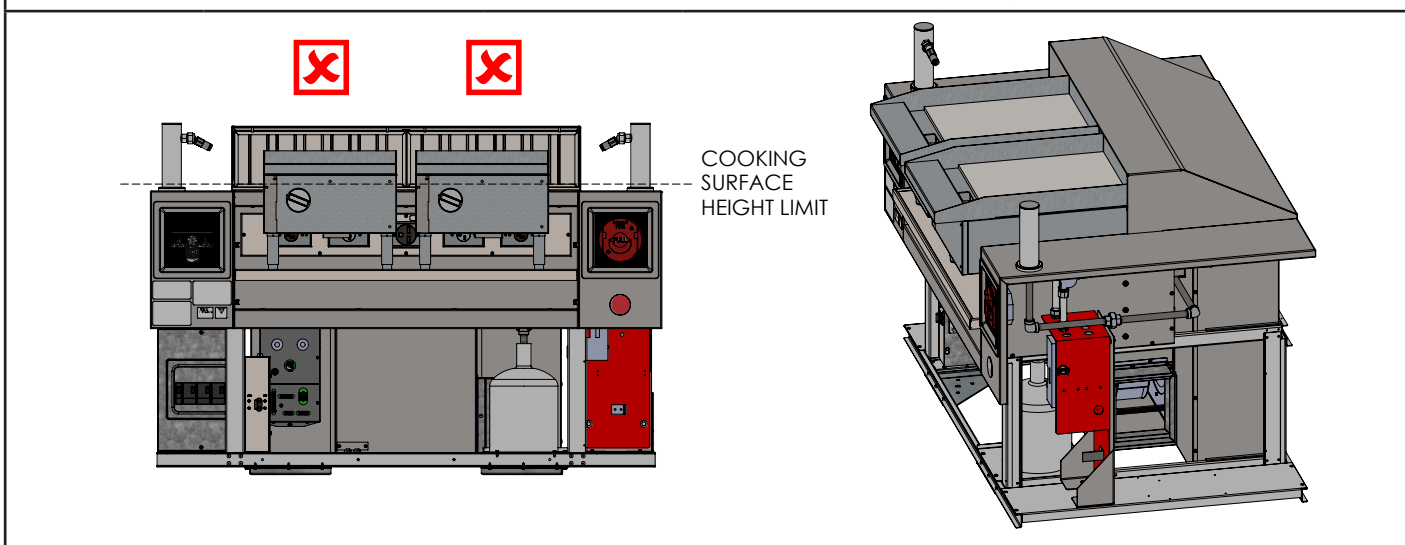
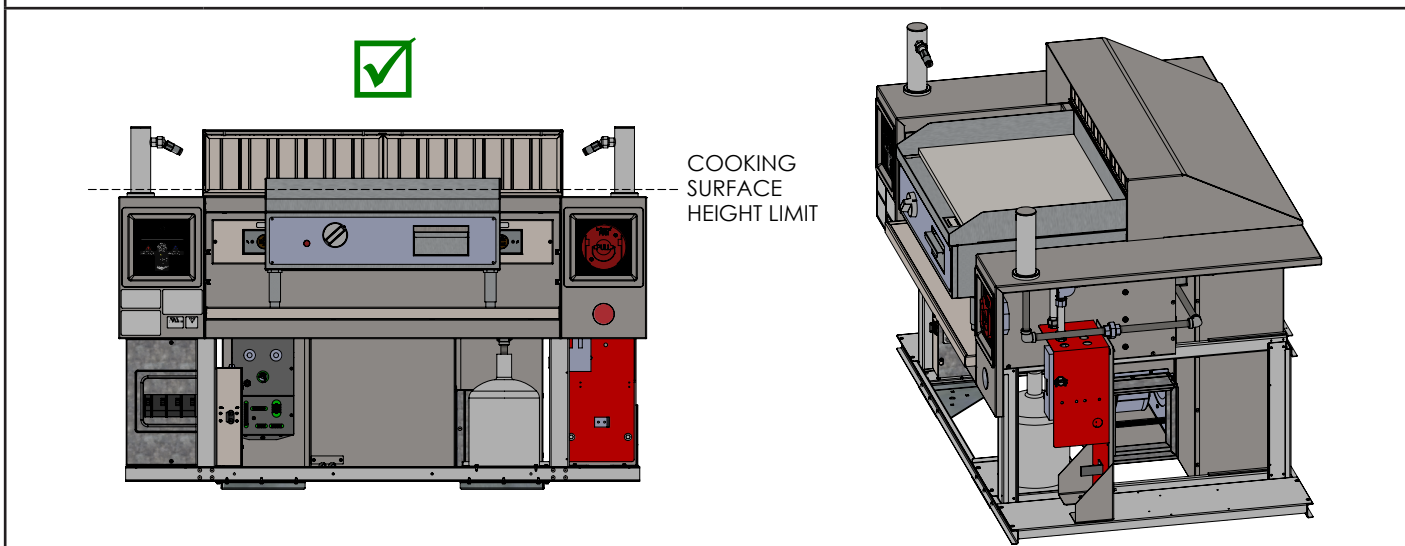
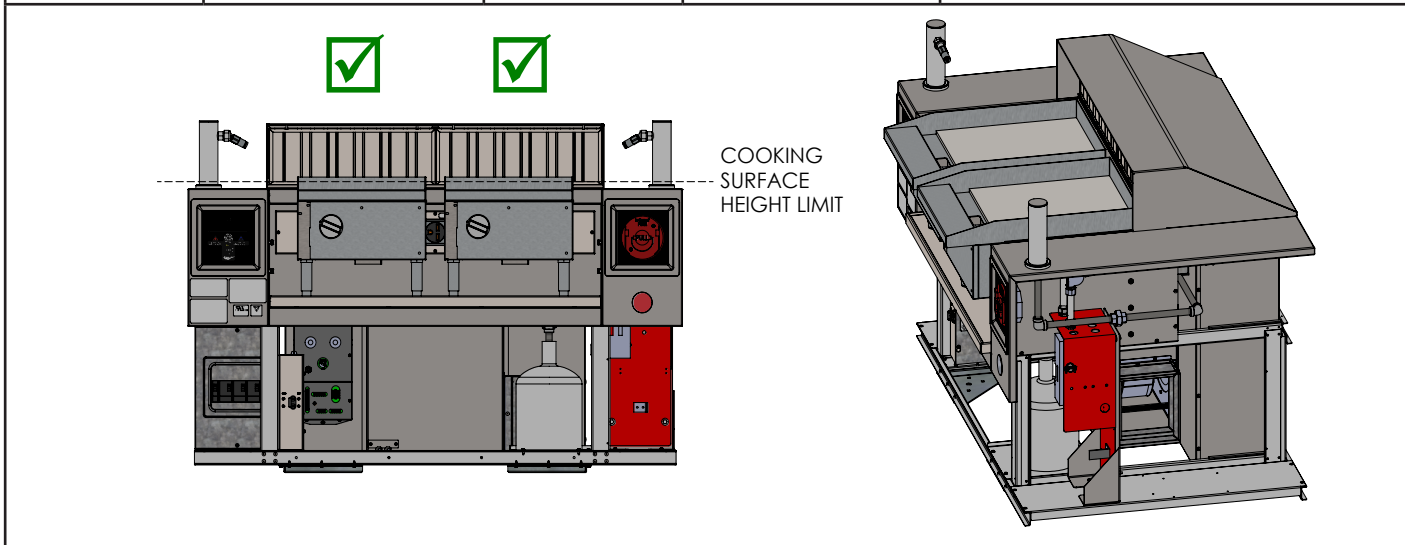




## GRIDDLE CONSTRAINTS — ELECTRIC ONLY

2.95 mg/m<sup>3</sup> per 396 sq in cooking surface(s)

Griddle(s)	Shelf Position	Max Temp	Max Watts	Max Surface Area
1-2	Bottom	550 °F	3600 total	396 sq in

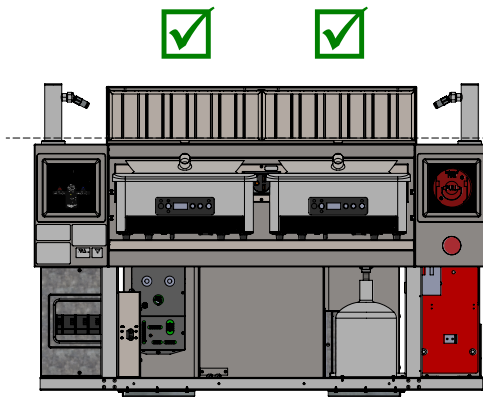


[BACK TO TOC](#)

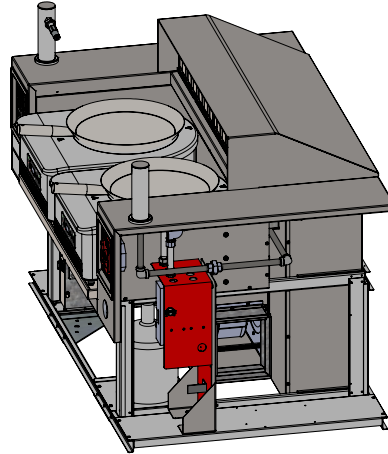


## INDUCTION WOK CONSTRAINTS — ELECTRIC ONLY

Induction Wok(s)	Shelf Position	Max Temp	Max Watts	Max. Pan Diameter
1-2	Bottom	550 °F	3600/hob — 7200 total	14"

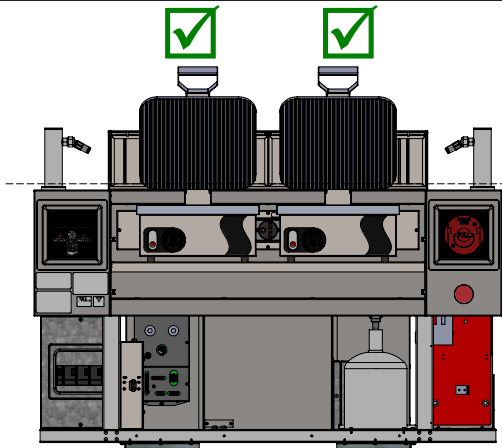


COOKING SURFACE HEIGHT LIMIT

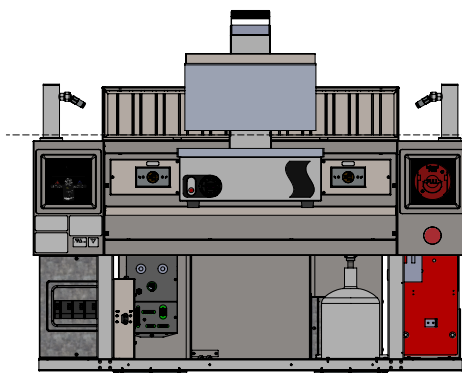
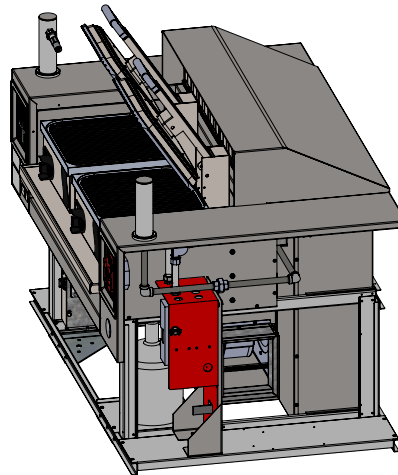


## SANDWICH/PANINI GRILL CONSTRAINTS — ELECTRIC ONLY

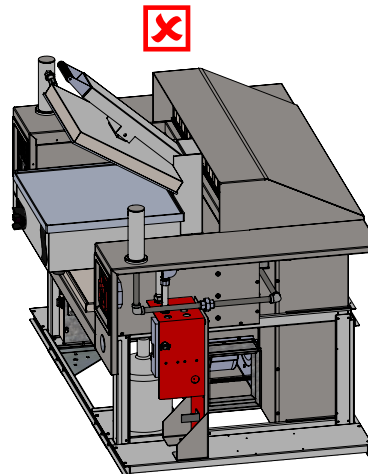
Sandwich/Panini Press(es)	Shelf Position	Max Temp	Max Watts
1-3	Any*	550 °F	3600/press — 7200 total



COOKING SURFACE HEIGHT LIMIT

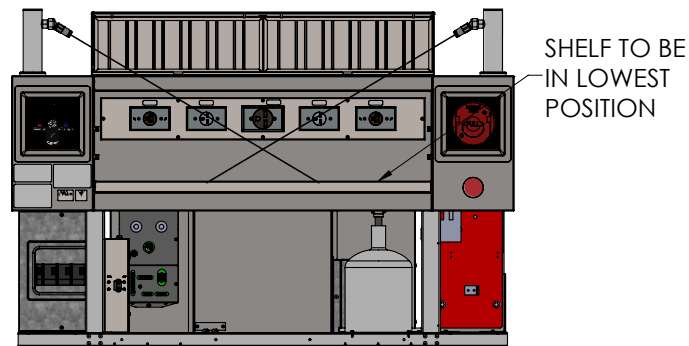
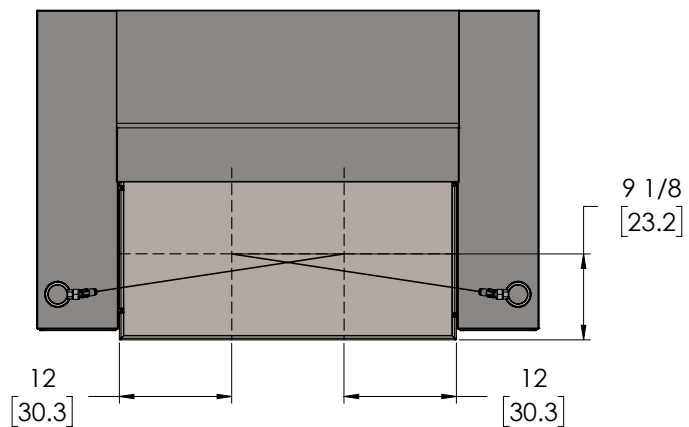


COOKING SURFACE HEIGHT LIMIT



\*Shelf positions are top, middle, and bottom.

# APPLIANCE NOZZLE LOCATIONS AND SETUP



## FIRE SUPPRESSION SYSTEM



### ⚠ WARNING

#### Fire, Injury, Death Hazard

This unit must be installed and adjusted by a qualified technician in accordance with all federal, state, and local codes. Failure to install, adjust, or maintain this unit properly can result in property damage, injury, or death.

**NOTICE:** The Fire Suppression System must be charged by an authorized ANSUL representative before it will operate.

**NOTICE:** The installer and owner assume full responsibility for the unit and electrical appliance set up and compliance with all applicable codes and regulations.

The following information is for use by authorized ANSUL representatives only. Refer to ANSUL documentation for the following steps.

ANSUL representative to supply:

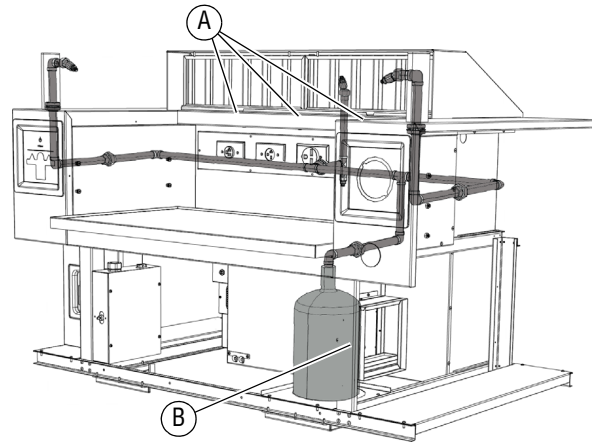
- Carbon Dioxide (CO<sub>2</sub>) or Nitrogen (N) cartridge
- ANSULEX Low pH Liquid Fire Suppressant

### Fusible Links and Gas Cartridges

**A** ANSUL Model SL Fusible Link 165°F

**B** LT-20-R Cartridge (Not supplied)

1. Replace the three temporary test links with the supplied 165°F SL Fusible Links.
2. Install the Carbon Dioxide (CO<sub>2</sub>) or Nitrogen (N) cartridges onto the ANSUL Automan Regulated Release Assembly.



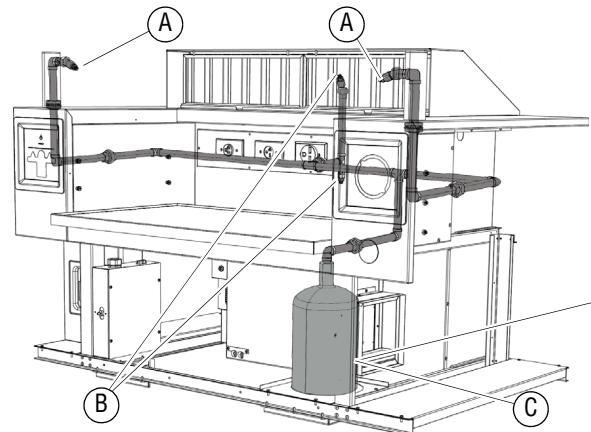
### Fire Extinguishing Tank and Nozzles

**A** ANSUL R-102 1W Nozzle (Appliance)

**B** ANSUL R-102 1W Nozzle (Duct)

**C** ANSUL R-102 1.5 Gallon Tank


Fill the agent tank with ANSULEX low pH Liquid Fire Suppressant.

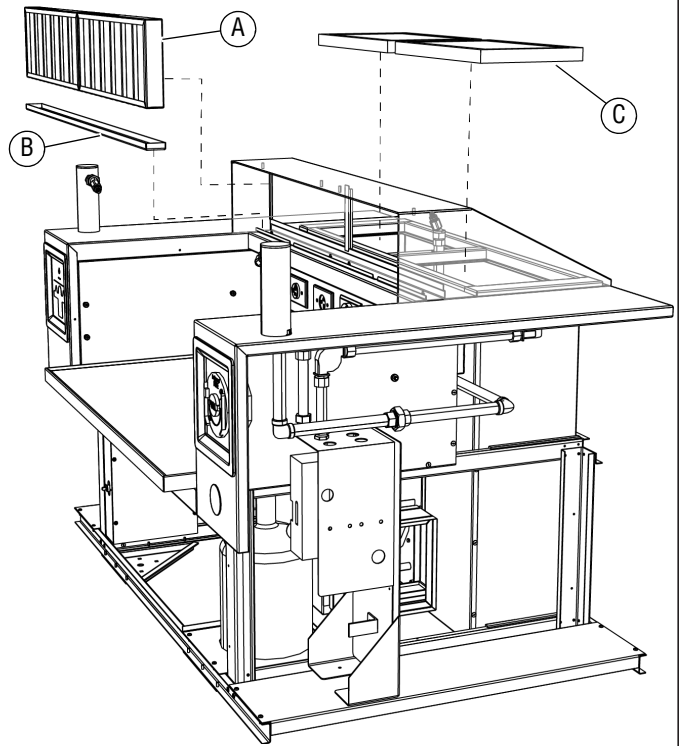


**NOTICE:** Final product may not appear as depicted.

# FILTERS

## Remove Filters

1. Turn off the electrical cooking appliances.
2. Touch  to turn the unit off.
3. Lift the Grease Filters up, pull the bottom forward, then down and out.
4. Lift the Drip Tray straight up to remove it.
5. Lift the Particulate Filters straight up to remove them.
6. Replace filters in reverse order.



**NOTICE:** Ensure the Particulate Filters are properly oriented per the label.

**A. Grease Filters (2) 352035-2**

**B. Drip Tray 352034-2**

**C. Particulate Filters (2) 352010-1**

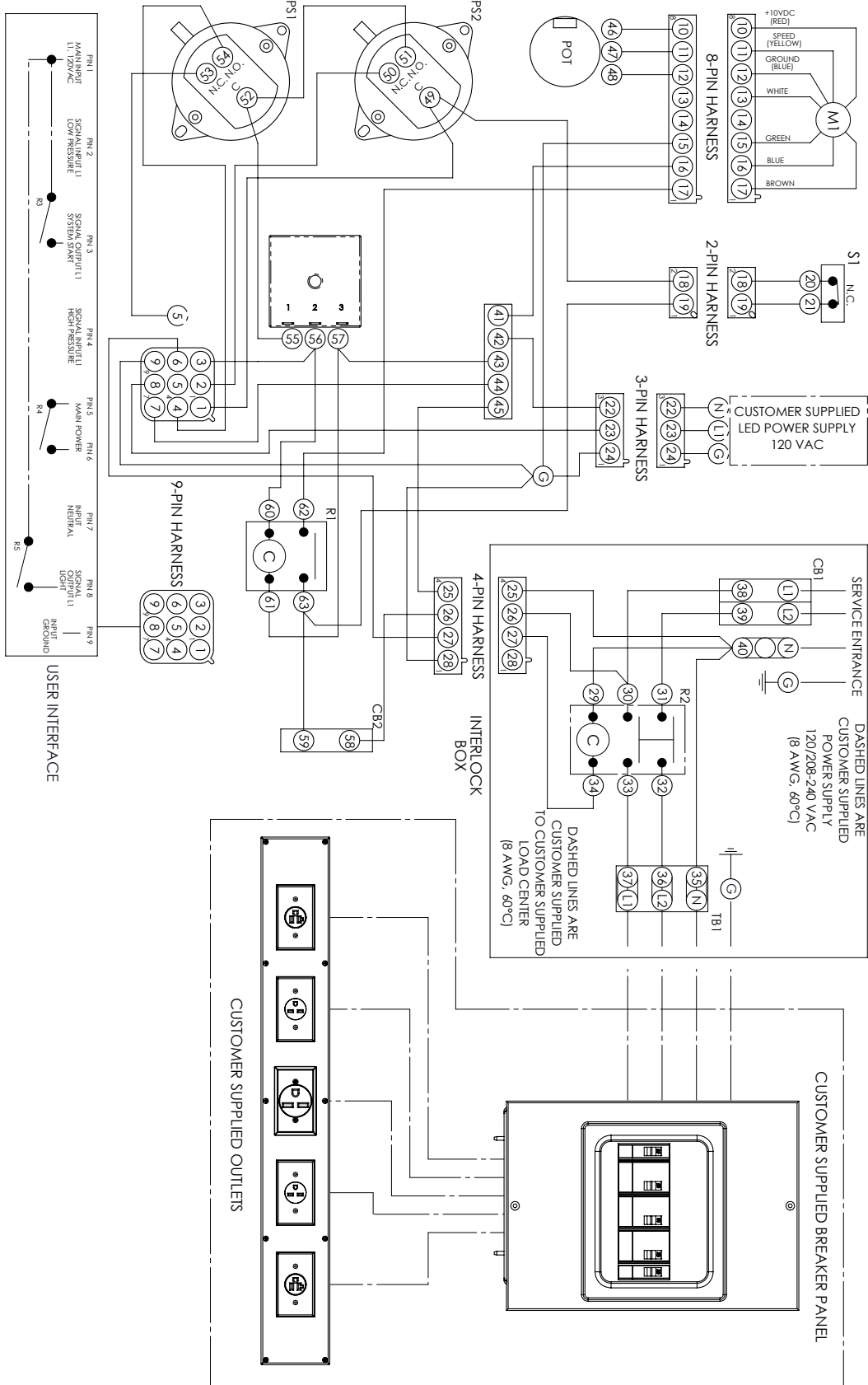
## MAINTENANCE & SERVICE LOG

**Service**

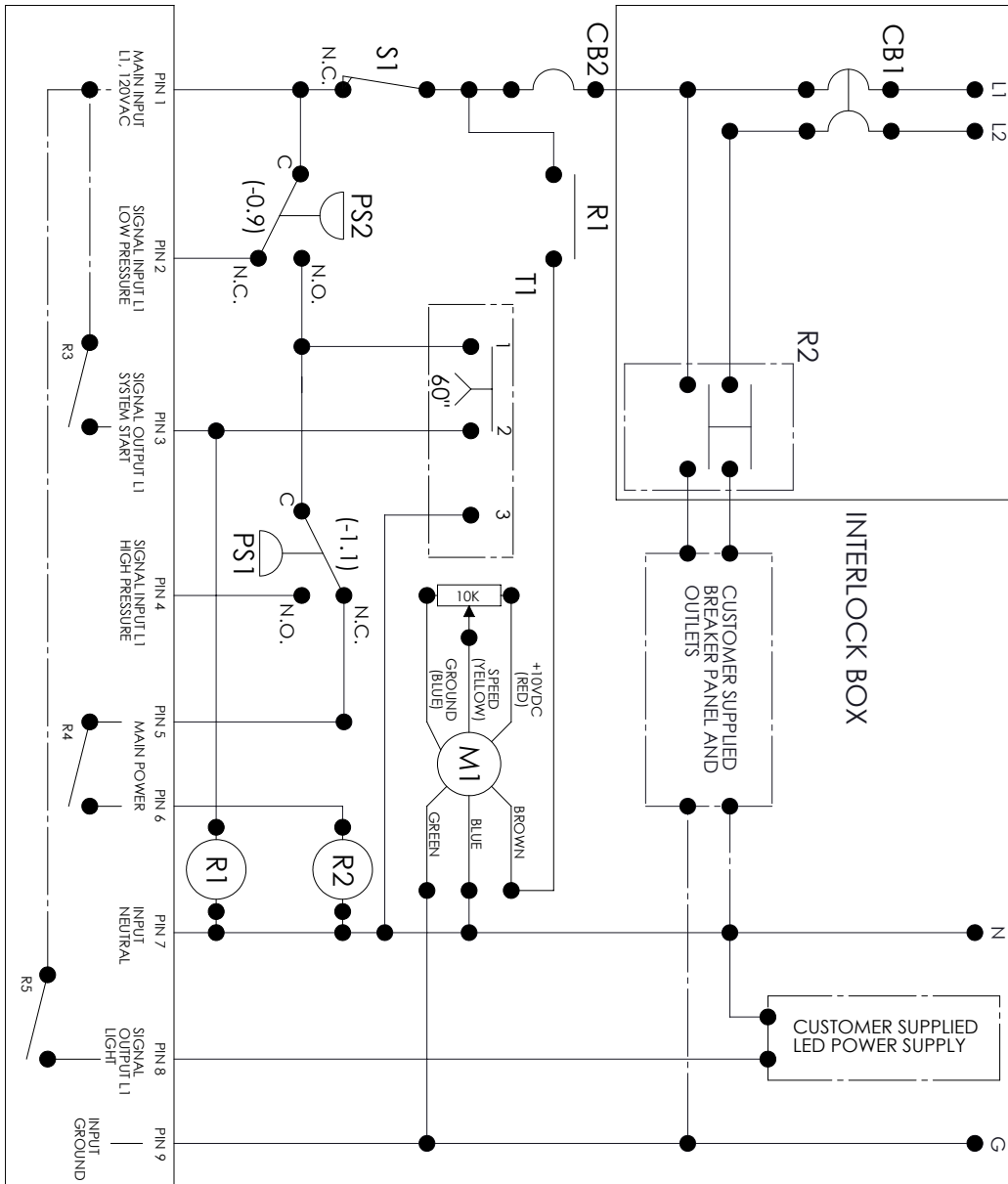
**Date**

Service	Date

# WIRING DIAGRAM & SCHEMATIC



# WIRING DIAGRAM & SCHEMATIC



USER INTERFACE

KEY	
LABEL	DESCRIPTION
S1	ANSUL SWITCH
R1	FAN RELAY
R2	POWER CONTACTOR
PS1	PRESSURE SWITCH, HIGH NEGATIVE
PS2	PRESSURE SWITCH, LOW NEGATIVE
T1	TIMER, NORMALLY OPEN, TIMED OPEN
M1	FAN MOTOR
CB1	MAIN OUTPUT BREAKER
CB2	CONTROL BREAKER

## WIRING DIAGRAM & SCHEMATIC

- S1 = ANSUL SWITCH  
WHEN ANSUL SYSTEM IS ACTIVATED, ANSUL SWITCH (S1) OPENS,  
DE-ENERGIZING USER INTERFACE.
- R1 = FAN RELAY  
ENERGIZED IF ANSUL SWITCH (S1) IS CLOSED, AND FAN RELAY (R1) IS  
ACTIVATED OR PRESSURE BEHIND FILTERS IS BETWEEN -0.9PS AND  
-1.1PS.
- R2 = POWER RELAY  
ENERGIZED WHEN (R4) IS CLOSED.
- R3 = FAN START RELAY  
ENERGIZED (CLOSED) WHEN START IS PRESSED (WILL DE-ENERGIZE  
ON SUBSEQUENT PRESS OF START). DELAY OPEN ON LOW  
PRESSURE FAULT, 220 SECONDS NO OPEN DELAY ON HIGH  
PRESSURE FAULT.
- R4 = POWER RELAY  
ENERGIZED WHEN START IS PRESSED (WILL DE-ENERGIZE ON  
SUBSEQUENT PRESS OF START). NO OPEN DELAY ON HIGH OR  
LOW PRESSURE FAULT.
- R5 = LIGHT RELAY  
ENERGIZED WHEN LIGHT IS PRESSED (WILL DE-ENERGIZE ON  
SUBSEQUENT PRESS OF LIGHT).
- PS1 = PRESSURE SWITCH, HIGH NEGATIVE (DETECTING MAXIMUM  
ALLOWABLE NEGATIVE PRESSURE)  
WHEN NEGATIVE PRESSURE REACHES SETPOINT OF -1.1PS  
(INDICATING AIR-FLOW BLOCKAGE), THE PRESSURE SWITCH (PS1)  
DISCONNECTS POWER TO R2 POWER RELAY AND PROVIDES  
SIGNAL POWER TO USER INTERFACE.
- PS2 = PRESSURE SWITCH, LOW NEGATIVE (DETECTING MINIMUM  
ALLOWABLE NEGATIVE PRESSURE)  
WHEN NEGATIVE PRESSURE REACHES SETPOINT OF -0.9PS  
(INDICATING AT LEAST MINIMAL AIR FLOW IS ACHIEVED) THE  
PRESSURE SWITCH (PS2) MAINTAINS POWER TO R2 POWER RELAY  
AS LONG AS MINIMUM PRESSURE IS SATISFIED AND ANSUL SWITCH  
(S1) IS CLOSED (NOT ACTIVATED).
- T1 = TIMER, NORMALLY CLOSED ON POWER, TIMED OPEN  
TIMER (T1) IS ACTIVATED WHEN SIGNAL POWER IS RECEIVED FROM  
USER INTERFACE AND MAINTAINS CLOSURE OF CONTROL RELAY  
(R1) FOR PRESET TIME (60 SECONDS). THIS ALLOWS THE SYSTEM  
TIME TO STABILIZE AT OPERATING PRESSURE.
- M1 = FAN MOTOR  
RUNS WHEN CONTROL RELAY (R1) IS CLOSED.
- CB1 = MAIN OUTPUT BREAKER  
FEEDS MAIN POWER TO CUSTOMER SUPPLIED  
DISTRIBUTION BREAKER BOX AND OUTLETS.

### ADDITIONAL NOTES:

- PIN 1: INPUTS 120VAC, L1 TO USER INTERFACE. ALWAYS LIVE UNLESS ANSUL  
SYSTEM IS ACTIVATED.
- PIN 2: INPUTS 120VAC, L1 TO USER INTERFACE WHEN SYSTEM DETECTS LOW  
PRESSURE. SYSTEM WILL DETECT LOW PRESSURE ON STARTUP UNTIL FAN IS UP  
TO SPEED AND PRESSURES ARE NORMAL. USER INTERFACE NEEDS TO APPLY  
ONE MINUTE DELAY BEFORE DISPLAYING LOW PRESSURE.
- PIN 3: OUTPUTS 120VAC, L1 WHEN SYSTEM START IS PRESSED TO ENGAGE T1. PIN  
4: INPUTS 120VAC, L1 TO USER INTERFACE WHEN SYSTEM DETECTS HIGH  
PRESSURE. THIS IS LIVE ONLY FOR A SHORT TIME BECAUSE WHEN MOTOR  
SHUTS DOWN THE PRESSURE IMMEDIATELY DROPS. SO THE HIGH PRESSURE  
DISPLAY WILL NEED TO BE "LATCHED" AND STAY ON UNTIL CONTROL IS RESET  
(POWER OFF).
- PIN 5: INPUTS 120VAC, L1 FROM PS1, HIGH PRESSURE SWITCH.
- PIN 6: OUTPUTS 120VAC, L1 FROM PIN 5 WHEN SYSTEM START IS PRESSED.
- PIN 7: INPUTS NEUTRAL TO THE USER INTERFACE.
- PIN 8: OUTPUTS 120VAC, L1 TO OPTIONAL LED POWER SUPPLY.
- PIN 9: INPUTS GROUND TO THE USER INTERFACE.





<b>TROUBLESHOOTING</b>		
<b>Problem</b>	<b>Might be Caused By</b>	<b>Course of Action</b>
Unit will not operate — logo is not illuminated.	<p>There is no power.</p> <p>The ANSUL® Fire Suppression System was not properly commissioned or needs service.</p>	<ul style="list-style-type: none"> <li>•Reconnect to electrical power.</li> <li>•Reset circuit breaker for unit.</li> <li>•Contact Vollrath Technical Services.</li> </ul> <p>Contact an authorized ANSUL® representative for repair.</p>
Low Pressure Indicator is illuminated and cooking unit will not turn on.	Particulate or Grease Filters are out of position, missing, or are not the correct type.	Properly install correct filters.
High Pressure Indicator is illuminated and cooking unit will not turn on.	Particulate or Grease Filters are dirty or are not the correct type.	Install correct, clean filters.



## SERVICE, REPAIR & WARRANTY

**DO NOT operate the unit until all safety information and instructions are thoroughly read and understood. Installation and startup must be performed by a qualified technician. The warranty will be void with improper installation.**

Serviceable parts are available on [vollrathfoodservices.com](http://vollrathfoodservices.com).

Understand Warnings & Cautions in this manual prior to servicing.

Do not send units directly to The Vollrath Company L.L.C. without return authorization.

Please contact Vollrath Technical Services at 1.800.825.6036 for instructions. Be ready with item, model, and serial numbers, as well as dated proof of purchase.

### WARRANTY STATEMENT FOR THE VOLLRATH CO.

This warranty does not apply to products purchased for personal, family, or household use, and The Vollrath Company LLC does not offer a written warranty to purchasers for such uses.

The Vollrath company LLC warrants the products it manufactures or distributes against defects in materials and workmanship as specifically described in our full warranty statement. Model shown comes with a Vollrath® 12-month sale to End User OR 18-month sale to Dealer warranty against defects in materials and workmanship. Damage from improper use, abuse, modification, or resulting from improper packaging during return shipment for warranty repair will not be covered under warranty.

For complete warranty information, product registration, and new product announcements, visit [vollrathfoodservice.com](http://vollrathfoodservice.com).

ANSUL components are warranted by ANSUL. For details please visit [ANSUL.com](http://ANSUL.com).

ANSUL® is a registered trademark of Tyco Fire Protection Products.



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[techservicereps@vollrathco.com](mailto:techservicereps@vollrathco.com)  
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Countertop Warming Products: 800.354.1970  
All Other Products: 800.628.0832