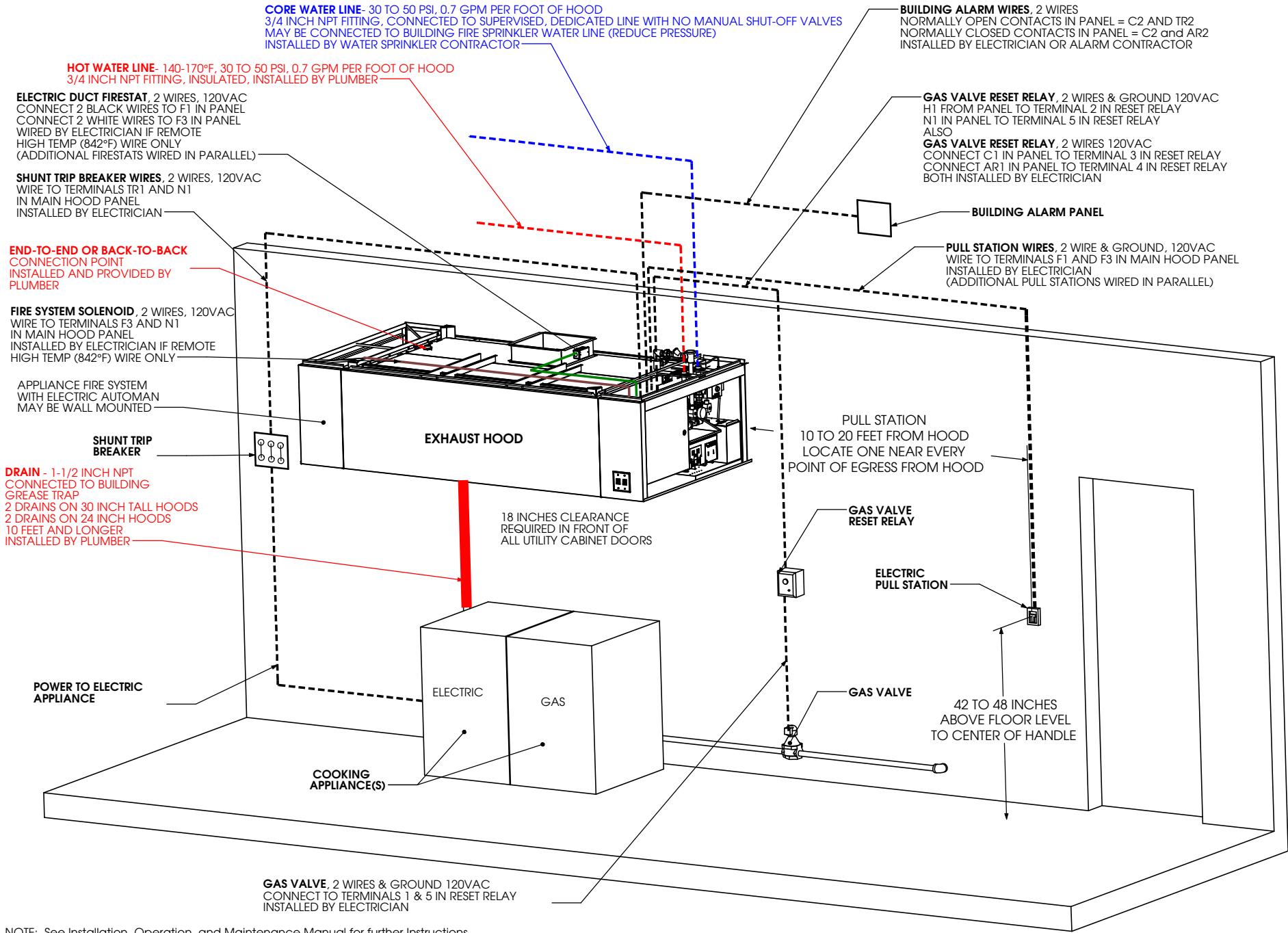


# CORE FIRE PROTECTION INSTALLATION SUMMARY



NOTE: See Installation, Operation, and Maintenance Manual for further instructions

# CORE INSTALLATION RESPONSIBILITY

- PLUMBER:**
- 1) Connect Hot Water Line.
  - 2) Connect Cold Water Line for Cold Water Mist Option. (Not Available with CORE)
  - 3) Connect Hood Drain(s).
  - 4) Connect all End-To-End and Back-To-Back Hood Water Line Connections. Plumbing is field supplied for this. Field plumbing must not exceed height of vacuum breaker in main utility cabinet. Remove plug from main hood spray bar and connect to next hood.

## PLUMBING CONTRACTOR REQUIREMENT

Item	Connection	Temperature	Pressure*	Flow Rate	Comments
Hot Water Line	3/4 Inch NPT	140 to 170°F	30 to 50 PSI	0.7 GPM Per Ft. of Hood	Insulate Hot Water Pipe
Cold Water Mist	3/4 Inch NPT	Non-Heated	20 to 40 PSI	0.7 GPM Per Ft. of Hood	Not Available with CORE Fire Protection
Hood Drain(s)	1-1/2 Inch NPT	N/A	Gravity Drain	7 GPM Per Drain	2 Drains on 30 Inch Tall Hoods and Hoods 10 Feet and Longer
End-To-End Hood Connection	3/4 Inch NPT	N/A	N/A	N/A	Connect with NPT Pipe, Seal All Threads, Hood Connection Provided
Back-To-Back Hood Connection	3/4 Inch NPT	N/A	N/A	N/A	Connect with NPT Pipe, Seal All Threads, Hood Connection Provided

\*Regulators are not included to meet this pressure and must be ordered separately. Part Numbers: N55BU-M1(3/4"), N55BU-M1(1"), or 25AUB-Z3(1-1/2"). Consult Factory for Sizing.

## BUILDING SPRINKLER CONTRACTOR:

- 1) Connect CORE Water Line to Building Wet Sprinkler System.

## SPRINKLER CONTRACTOR REQUIREMENT

Item	Connection	Temperature	Pressure**	Flow Rate	Comments
CORE Water Line	3/4 Inch NPT	Non-Heated	30 to 50 PSI	0.7 GPM Per Ft. of Hood	Water Line Must Be Supervised and Have No Manual Shut-Off Valves

\*\*Regulator is not included to meet this pressure from sprinkler line and must be provided by sprinkler contractor. A regulator such as the Elkhart Brass Model Number URFA-20S-2.5" should be utilized. This must be confirmed with Fire Marshal.

## ELECTRICIAN:

- 1) Wire main control panel per included schematic.
- 2) Wire all fans per included schematic.
- 3) Wire Electric Remote Pull Station(s). Multiple Pull Stations Wired in Parallel.
- 4) Wire Gas Valve and Gas Valve Reset Relay.
- 5) Wire Shunt Trip Breaker.
- 6) Wire Building Alarm Contacts.
- 7) Wire Remote Firestat Sensor(s) (If Equipped). Multiple Firestat Sensors Wired in Parallel.
- 8) Wire Remote Automan Solenoid (If Equipped).
- 9) Wire Remote Micro-Switch(es) (If Equipped).

## ELECTRICAL CONTRACTOR REQUIREMENT

Item	Connection in Panel	Connection on Device	Voltage	Amperage	Comments
Remote Pull Station(s)	F1 & F3	2 & 3	120 VAC	< 1.0 Amps	Wire Multiple Pull Stations in Parallel. Connect all to F1 & F3.
Gas Valve Reset Relay Power	H1 & N1	2 & 5	120VAC	< 1.0 Amps	2 Wires & Ground. H1 to 2 and N1 to 5.
Gas Valve Reset Relay Control	C1 & AR1	3 & 4	120VAC	< 1.0 Amps	2 Wires. C1 to 3 and AR1 to 4.
Gas Valve	1 & 5 in Reset Relay	Red / Red	120VAC	< 1.0 Amps	2 Wires and Ground. 1 to Red, 5 to Red, and Ground.
Shunt Trip Breaker	TR1 & N1	Coil (A1 & A2)	120VAC	< 1.0 Amps	Shunt Trip is Powered When Fire System Activates.
Building Alarm	C2, AR2, TR2	Varies	120VAC Max	Up to 10 Amps	Wire to C2 & AR2 for Normally Closed Contact. C2 & TR2 for Normally Open Contact.
Remote Firestat Sensor(s)	F1 & F3	Black & White	120VAC	< 1.0 Amps	F1 to Both Black Wires. F3 to Both White Wires. High Temp (842°F) Wire Only.
Remote Automan Solenoid	F3 & N1	Yellow & Orange	120VAC	< 1.0 Amps	High Temp (842°F) Wire Only.
Remote Automan Micro-Switch 1	C1, AR1, TR1	Red, Brown, Black	120VAC	Up to 10 Amps	Red to C1, Brown to AR1, Black to TR1
Remote Automan Micro-Switch 2	C2, AR2, TR2	Red, Brown, Black	120VAC	Up to 10 Amps	Red to C2, Brown to AR2, Black to TR2

## FIRE SYSTEM INSTALLER:

- 1) Perform Final Fire System Test.
- 2) Provide All Required Components not Supplied by Factory.
- 3) Complete Final Hookup of System.
- 4) Ensure Burst-Disks are in Place.
- 5) Ensure Ansul Tanks are Filled.
- 6) Ensure High Pressure Hoses are Connected to Tanks.
- 7) Place Automan in Armed Position.
- 8) Load High Pressure Cannister into Automan.

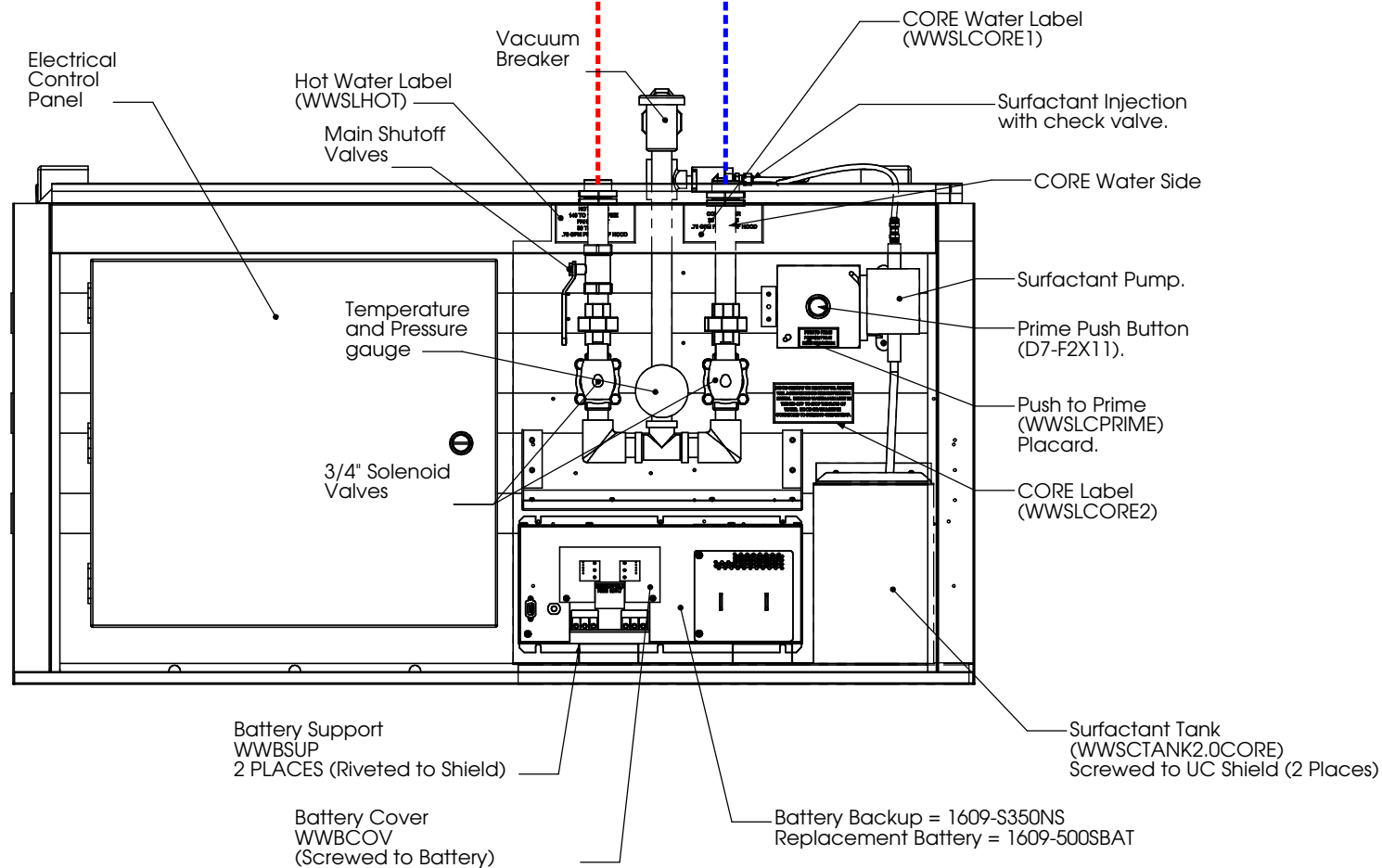
## APPLICABLE STANDARDS:

- 1) ETL listed under report number 3132231SAT-004 to Standard UL300 (Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment)
- 2) Meets requirements of NFPA 96 (Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment)
- 3) NFPA 17A (Standard on Wet Chemical Extinguishing Systems)
- 4) CORE System provides UL300 Listed Duct and Plenum Protection. A UL300 Listed Appliance Protection System must also be utilized.

# CORE UTILITY CABINET END VIEW

HOT WATER LINE- 140-170°F, 30 TO 50 PSI, 0.7 GPM PER FOOT OF HOOD  
3/4 INCH NPT FITTING, INSULATED, INSTALLED BY PLUMBER

CORE WATER LINE- 30 TO 50 PSI, 0.7 GPM PER FOOT OF HOOD  
3/4 INCH NPT FITTING, CONNECTED TO SUPERVISED,  
DEDICATED LINE WITH NO MANUAL SHUT-OFF VALVES  
MAY BE CONNECTED TO BUILDING FIRE SPRINKLER WATER LINE (REDUCE PRESSURE)  
INSTALLED BY WATER SPRINKLER CONTRACTOR



NOTE: Appliance Fire System Tanks and Automan Are Installed in a Separate Cabinet. The Automan is Pre-Wired if Second Cabinet is Installed on Same Hood as Electrical Control Panel Shown Above. The Automan and Microswitch, and FireStat must be field wired if installed on a Different Hood than the main Control Panel.

# CORE BASIC OPERATING INSTRUCTIONS

## CORE Protection Fire System

The Self Cleaning hood is required to be installed to achieve CORE Protection. The daily basic operation of the CORE Protection system is identical to the Self Cleaning hood. In the event of a hood fire, CORE Protection is activated.

If the hood Firestat installed in the riser senses a temperature hotter than its internal setpoint or if the remote manual pull station is pulled, an electric signal is sent to the appliance protection fire system and the hood duct and plenum water system. An electric solenoid operated Automan activates the appliance surface protection system. An electric water solenoid is energized allowing the flow of water to the hood duct and plenum through the Self Cleaning hood spray bar. At the same time, surfactant is continually injected into the water stream to help suppress the fire.

Once the fire system is activated, a "Fire System Activated" light is illuminated on the hood control panel and an audible alarm sounds. All gas and electric appliances under the hood must be electrically interlocked to shut off. This is achieved via a gas valve relay and/or a shunt trip breaker. A timer is also energized upon fire system activation. The timer is factory set for 30 minutes and keeps the water spray system running for a minimum of 30 minutes. This is necessary to help extinguish all remaining duct fire potential.

The fire system is electrically operated and thus requires a battery backup system. In the event of a loss of electrical power, all gas and electric appliances under the hood must be electrically interlocked to shut off. This is achieved via a gas valve relay and/or a shunt trip breaker. The battery backup will automatically energize upon a loss of power. The battery backup will monitor the fire system circuit for up to two hours and be able to operate the fire system circuit for a minimum of 30 minutes. Once power is restored, the battery will automatically recharge. In the event of an extended power outage, the battery must be manually reset.

## CORE Protection Reset Overview

There are multiple actions required to reset the fire system. First, the duct Firestat must be cooled to below its internal setpoint and the remote pull station must be reset using a standard allen wrench key. Once both of these devices have been reset, the timer will automatically stop the fire system once its time duration has ended. An alternative method to bypassing the timer is to press the fire system reset button on the face of the surfactant pump. This will de-energize the timer and reset the system. NOTE: The Firestat must be cool and the remote pull station must be reset for this button to work.

The appliance protection fire system must be recharged with liquid agent, a new canister must be installed and the fire system must be re-armed.

After a fire, full inspection by a certified professional must be conducted prior to restarting the fire system.

## CORE Application Specific Details

### Self Cleaning Hoods

Self Cleaning Hood option is required to apply CORE Protection. High Efficiency, High Velocity Cartridge, SOLO, or COMBO filters are required. If substitute filters are utilized, product warranty is void and there is no guarantee in performance.

### Solid Fuel Appliances

Solid Fuel Appliances produce sparks that can travel into ductwork. These appliances require SOLO filters and an additional Firestat at the duct discharge near the fan if the ductwork exceeds 10 feet in length or contains horizontal duct runs. Indicate on ductwork drawing where Firestat is to be installed with quick seal. All additional Firestats are wired in parallel with the first Firestat. Duct should be insulated per code requirements. If substitute filters are utilized, product warranty is void and there is no guarantee in performance. Self Cleaning Hoods and ETL listed ductwork are also required.

### IMPORTANT:

Any deviation from any of the manufacturer's recommendations in this document or the operation and installation manual must be approved by the owner of this equipment and voids the warranty and performance guarantee of this product.