

24V CORE FIRE PROTECTION INSTALLATION SUMMARY

CORE WATER LINE - 30 TO 70 PSI OPERATING PRESSURE, 90 PSI MAX STATIC PRESSURE,
0.7 GPM PER FOOT OF HOOD

3/4 INCH NPT FITTING, CONNECTED TO SUPERVISED, DEDICATED LINE WITH NO MANUAL SHUT-OFF VALVES
CONNECT TO BUILDING FIRE SPRINKLER WATER LINE (REDUCE PRESSURE)
INSTALLED BY WATER SPRINKLER CONTRACTOR
STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

HOT WATER LINE - 140-170°F, 30 TO 70 PSI OPERATING PRESSURE,
125 PSI MAX STATIC PRESSURE, 0.7 GPM PER FOOT OF HOOD
3/4 INCH NPT FITTING, INSULATED,
INSTALLED BY PLUMBER

ELECTRIC DUCT FIRESTAT, 4 WIRES, 24VDC
CONNECT BLACK WIRES BETWEEN 25 AND 23
CONNECT WHITE WIRES BETWEEN 26 AND 24
HIGH TEMP (842°F) WIRE ONLY
(ADDITIONAL FIRESTATS WIRED IN SUPERVISED LOOP)
INSTALLED BY THE FIRE SYSTEM CONTRACTOR

SHUNT TRIP BREAKER WIRES, 2 WIRES, 120VAC
WIRE 120VAC POWER TO SKC, WIRE
BETWEEN ST AND A1 ON SHUNT TRIP
INSTALLED BY ELECTRICIAN

END-TO-END OR BACK-TO-BACK
CONNECTION POINT
INSTALLED AND PROVIDED BY PLUMBER
STAINLESS STEEL, COPPER, OR STEEL PIPE
ONLY

FIRE SYSTEM SOLENOID, 2 WIRES, 24VDC
WIRE TERMINAL 4 TO 310 IN PANEL AND
TERMINAL 8 TO N1D HOOD PANEL
FIRE SYSTEM GAS CYLINDER SUPERVISION,
2 WIRES, 24VDC, WIRED TERMINAL 9 TO
H1D IN MAIN PAEN AND 10 TO 49 IN
MAIN HOOD PANEL
INSTALLED BY FIRE SYSTEM CONTRACTOR
HIGH TEMP (842°F) WIRE ONLY

APPLIANCE FIRE SYSTEM
WITH ELECTRIC AUTOMAN
MAY BE WALL MOUNTED

**SHUNT TRIP
BREAKER**

DRAIN - 1-1/2 INCH NPT CONNECTED TO
BUILDING GREASE TRAP
2 DRAINS ON 30 INCH TALL HOODS
2 DRAINS ON 24 INCH HOODS
10 FEET AND LONGER
INSTALLED BY PLUMBER
STAINLESS STEEL, COPPER OR STEEL PIPE
ONLY

**POWER TO ELECTRIC
APPLIANCE**

GAS VALVE RESET
Assembly Part Number - CORE-GVR
Faceplate Part Number - SC-MT-GVR
Pushbutton Part Number - D7-F2X11
Lamp Part Number - PF50CG5-24VDC-W6

**COOKING
APPLIANCE(S)**

EXHAUST HOOD

18 INCHES CLEARANCE
REQUIRED IN FRONT OF
ALL UTILITY CABINET DOORS

ELECTRIC

GAS

BUILDING ALARM WIRES, 2 WIRES, BUILDING ALARM CONNECTS TO FIRE
ALARM INITIATING SWITCH ON ANSUL REGULATED RELEASE
INSTALLED BY FIRE SYSTEM CONTRACTOR

GAS VALVE RESET, 4 WIRES, 24 VDC
WIRE PUSHBUTTON H1D TO 3 AND 41I TO 4
WIRE LAMP 35 TO RED AND N1D TO BLACK
INSTALLED BY FIRE SYSTEM CONTRACTOR

BUILDING ALARM PANEL

PULL STATION WIRES, 4 WIRES, 24VDC
WIRE (TERMINAL 1) BETWEEN 22 AND 25
WIRE (TERMINAL 2) BETWEEN 21 AND 26
(ADDITIONAL FIRESTATS, PULL STATIONS
WIRED IN SUPERVISED LOOP)
INSTALLED BY FIRE SYSTEM CONTRACTOR

CONTROL PANEL POWER, 2 WIRES & GROUND,
120 VAC, 15 AMP SERVICE, WIRE TO H1 AND N1
WIRED BY ELECTRICIAN

PULL STATION
10 TO 20 FEET FROM HOOD
LOCATE ONE NEAR EVERY
POINT OF EGRESS FROM HOOD

**ELECTRIC
PULL STATION**

GAS VALVE

42 TO 48 INCHES
ABOVE FLOOR LEVEL
TO CENTER OF HANDLE

GAS VALVE POWER, 2 WIRES & GROUND, 24 VDC WIRE TO 35 AND N1D
INSTALLED BY FIRE SYSTEM CONTRACTOR

GAS VALVE BODY, THREADED NPT CONNECTIONS, MAX 15 PSI
INSTALLED BY PLUMBER

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

24V WALL MOUNTED CORE FIRE PROTECTION INSTALLATION SUMMARY

03/11/2011 Rev. 6

CORE WATER LINE- 30 TO 70 PSI OPERATING PRESSURE, 90 PSI MAX STATIC PRESSURE, 0.7 GPM PER FOOT OF HOOD, SIZED TO MATCH WALL MOUNT PACKAGE, CONNECTED TO SUPERVISED, DEDICATED LINE WITH NO MANUAL SHUT-OFF VALVES CONNECT TO BUILDING FIRE SPRINKLER WATER LINE (REDUCE PRESSURE) INSTALLED BY WATER SPRINKLER CONTRACTOR
STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

HOT WATER LINE- 140-170°F, 30 TO 70 PSI OPERATING PRESSURE, 125 PSI MAX STATIC PRESSURE, 0.7 GPM PER FOOT OF HOOD SIZED TO MATCH WALL MOUNT PACKAGE, INSULATED, INSTALLED BY PLUMBER

ELECTRIC DUCT FIRESTAT, 4 WIRES, 24VDC
CONNECT BLACK WIRES BETWEEN 25 AND 23
CONNECT WHITE WIRES BETWEEN 26 AND 24
HIGH TEMP (842°F) WIRE ONLY
(ADDITIONAL FIRESTATS WIRED IN SUPERVISED LOOP)
INSTALLED BY THE FIRE SYSTEM CONTRACTOR

SHUNT TRIP BREAKER WIRES, 2 WIRES, 120VAC
WIRE 120 VAC POWER TO SKC, WIRE BETWEEN
ST AND A1 ON SHUNT TRIP
INSTALLED BY ELECTRICIAN

FIRE SYSTEM SOLENOID, 2 WIRES, 24VDC
WIRE TERMINAL 4 TO 310 IN PANEL AND
TERMINAL 8 TO N1D HOOD PANEL
FIRE SYSTEM GAS CYLINDER SUPERVISION,
2 WIRES, 24VDC, WIRED TERMINAL 9 TO
HTD IN MAIN PAEN, AND 10 TO 49 IN
MAIN HOOD PANEL
INSTALLED BY FIRE SYSTEM CONTRACTOR
HIGH TEMP (842°F) WIRE ONLY

**END-TO-END OR BACK-TO-BACK
CONNECTION POINT**
INSTALLED AND PROVIDED BY
PLUMBER

**SHUNT TRIP
BREAKER**

**APPLIANCE FIRE SYSTEM
WITH ELECTRIC AUTOMAN
MAY BE WALL MOUNTED**

**POWER TO ELECTRIC
APPLIANCE**

DRAIN - 1-1/2 INCH NPT
CONNECTED TO BUILDING GREASE TRAP
2 DRAINS ON 30 INCH TALL HOODS
2 DRAINS ON 24 INCH HOODS
10 FEET AND LONGER
INSTALLED BY PLUMBER
STAINLESS STEEL, COPPER, OR STEEL PIPE
ONLY

**COOKING
APPLIANCE(S)**

GAS VALVE RESET
Assembly Part Number - CORE-GVR
Faceplate Part Number - SC-MI-GVR
Pushbutton Part Number - D7-F2X11
Lamp Part Number - PF50CG5-24VDC-W6

GAS VALVE BODY, THREADED NPT CONNECTIONS,
MAX 15 PSI. INSTALLED BY PLUMBER

GAS VALVE POWER, 2 WIRES & GROUND,
24 VDC WIRE TO 35 AND N1D
INSTALLED BY FIRE SYSTEM CONTRACTOR

HOOD WATER LINE, 30 TO 70 PSI OPERATING PRESSURE, SIZED TO
MATCH PRESSURE DROP BETWEEN WALL MOUNT PACKAGE AND
HOOD. DEDICATED LINE WITH NO MANUAL SHUT-OFF VALVE.
SURFACTANT INJECTION INSTALLED AFTER FIELD INSTALLED VACUUM
BREAKER. VACUUM BREAKER INSTALLED AT HIGHEST POINT
BETWEEN PACKAGE AND HOOD
INSTALLED BY PLUMBER
STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

GAS VALVE RESET, 4 WIRES , 24 VDC
WIRE PUSHBUTTON HTD TO 3 AND 411 TO 4
WIRE LAMP 35 TO RED AND N1D TO BLACK
INSTALLED BY FIRE SYSTEM CONTRACTOR

BUILDING ALARM WIRES, 2 WIRES, BUILDING
ALARM CONNECTS TO FIRE ALARM INITIATING
SWITCH ON ANSUL REGULATED RELEASE
INSTALLED BY FIRE SYSTEM CONTRACTOR

CONTROL PANEL POWER, 2 WIRES & GROUND,
120 VAC, 15 AMP SERVICE, WIRE TO H1 AND N1
WIRED BY ELECTRICIAN

BUILDING ALARM PANEL

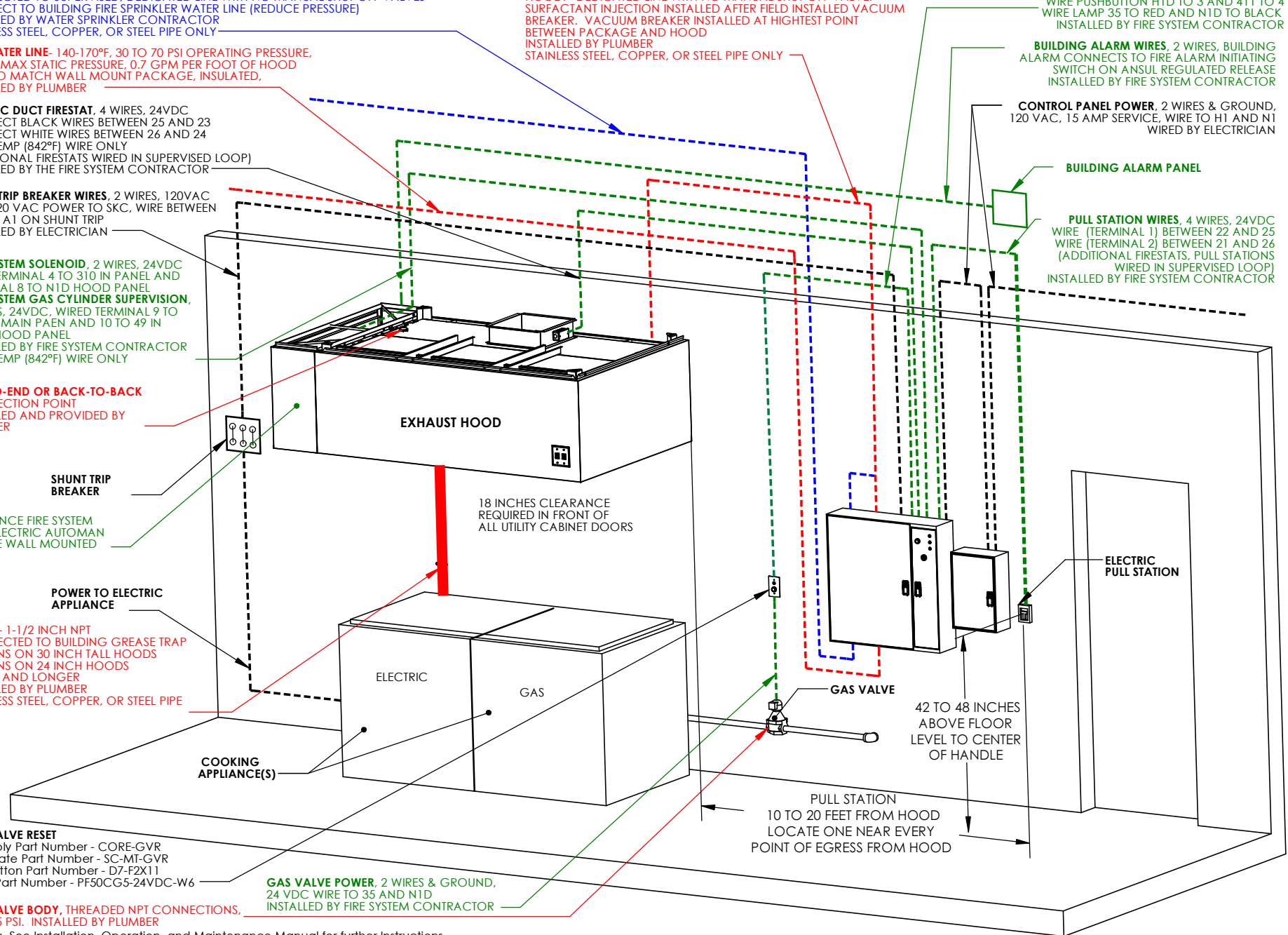
PULL STATION WIRES, 4 WIRES, 24VDC
WIRE (TERMINAL 1) BETWEEN 22 AND 25
WIRE (TERMINAL 2) BETWEEN 21 AND 24
(ADDITIONAL FIRESTATS, PULL STATIONS
WIRED IN SUPERVISED LOOP)
INSTALLED BY FIRE SYSTEM CONTRACTOR

18 INCHES CLEARANCE
REQUIRED IN FRONT OF
ALL UTILITY CABINET DOORS

42 TO 48 INCHES
ABOVE FLOOR
LEVEL TO CENTER
OF HANDLE

PULL STATION
10 TO 20 FEET FROM HOOD
LOCATE ONE NEAR EVERY
POINT OF EGRESS FROM HOOD

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



24V WALL MOUNTED CORE FIRE PROTECTION INSTALLATION SUMMARY

03/11/2011 Rev. 1

CORE WATER LINE - 30 TO 70 PSI OPERATING PRESSURE, 90 PSI MAX STATIC PRESSURE, 0.7 GPM PER FOOT OF HOOD, SIZED TO MATCH WALL MOUNT PACKAGE, CONNECTED TO SUPERVISED, DEDICATED LINE WITH NO MANUAL SHUT-OFF VALVES. CONNECT TO BUILDING FIRE SPRINKLER WATER LINE (REDUCE PRESSURE) INSTALLED BY WATER SPRINKLER CONTRACTOR
STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

HOOD WATER LINE - 30 TO 70 PSI OPERATING PRESSURE, SIZED TO MATCH PRESSURE DROP BETWEEN WALL MOUNT PACKAGE AND HOOD. DEDICATED LINE WITH NO MANUAL SHUT-OFF VALVE. SURFACTANT INJECTION INSTALLED AFTER FIELD INSTALLED VACUUM BREAKER. VACUUM BREAKER INSTALLED AT HIGHEST POINT BETWEEN PACKAGE AND HOOD
INSTALLED BY PLUMBER
STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

ELECTRIC DUCT FIRESTAT, 4 WIRES, 24VDC
CONNECT BLACK WIRES BETWEEN 25 AND 23
CONNECT WHITE WIRES BETWEEN 26 AND 24
HIGH TEMP (842°F) WIRE ONLY
(ADDITIONAL FIRESTATS WIRED IN SUPERVISED LOOP)
INSTALLED BY THE FIRE SYSTEM CONTRACTOR

HOT WATER LINE - 140-170°F, 30 TO 70 PSI OPERATING PRESSURE, 125 PSI MAX STATIC PRESSURE, 0.7 GPM PER FOOT OF HOOD SIZED TO MATCH WALL MOUNT PACKAGE, INSULATED, INSTALLED BY PLUMBER

SHUNT TRIP BREAKER WIRES, 2 WIRES, 120VAC
WIRE 120 VAC POWER TO SKC, WIRE BETWEEN ST AND A1 ON SHUNT TRIP
INSTALLED BY ELECTRICIAN

END-TO-END OR BACK-TO-BACK CONNECTION POINT
INSTALLED AND PROVIDED BY PLUMBER

DRAIN - 1-1/2 INCH NPT
CONNECTED TO BUILDING GREASE TRAP
2 DRAINS ON 30 INCH TALL HOODS
2 DRAINS ON 24 INCH HOODS
10 FEET AND LONGER
INSTALLED BY PLUMBER
STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

GAS VALVE RESET
Assembly Part Number - CORE-GVR
Faceplate Part Number - SC-MT-GVR
Pushbutton Part Number - D7-F2X11
Lamp Part Number - PF50CG5-24VDC-W6

POWER TO ELECTRIC APPLIANCE

COOKING APPLIANCE(S)

PULL STATION WIRES, 4 WIRES, 24VDC
WIRE (TERMINAL 1) BETWEEN 22 AND 25
WIRE (TERMINAL 2) BETWEEN 21 AND 26
(ADDITIONAL FIRESTATS, PULL STATIONS WIRED IN SUPERVISED LOOP)
INSTALLED BY FIRE SYSTEM CONTRACTOR

GAS VALVE RESET, 4 WIRES, 24 VDC
WIRE PUSHBUTTON H1D TO 3 AND 411 TO 4
WIRE LAMP 35 TO RED AND N1D TO BLACK
INSTALLED BY FIRE SYSTEM CONTRACTOR

FIRE SYSTEM SOLENOID, 2 WIRES, 24VDC.
WIRE TERMINAL 4 TO 310 IN PANEL AND
TERMINAL 8 TO N1D HOOD PANEL
FIRE SYSTEM GAS CYLINDER SUPERVISION,
2 WIRES, 24VDC, WIRED TERMINAL 9 TO
H1D IN MAIN PAEN AND 10 TO 49 IN MAIN
HOOD PANEL
INSTALLED BY FIRE SYSTEM CONTRACTOR

CONTROL PANEL POWER,
2 WIRES & GROUND, 120
VAC, 15 AMP SERVICE,
WIRE TO H1 AND N1
WIRED BY ELECTRICIAN

BUILDING ALARM WIRES,
2 WIRES, BUILDING
ALARM CONNECTS TO
FIRE ALARM INITIATING
SWITCH ON ANSUL
REGULATED RELEASE
INSTALLED BY FIRE
SYSTEM CONTRACTOR

BUILDING ALARM PANEL

SHUNT TRIP BREAKER

EXHAUST HOOD

ELECTRIC

GAS

GAS VALVE

ELECTRIC PULL STATION

UTILITY CABINET CONTAINING ELECTRICAL CONTROL PANEL AND APPLIANCE FIRE SYSTEM WITH ELECTRIC AUTOMAN

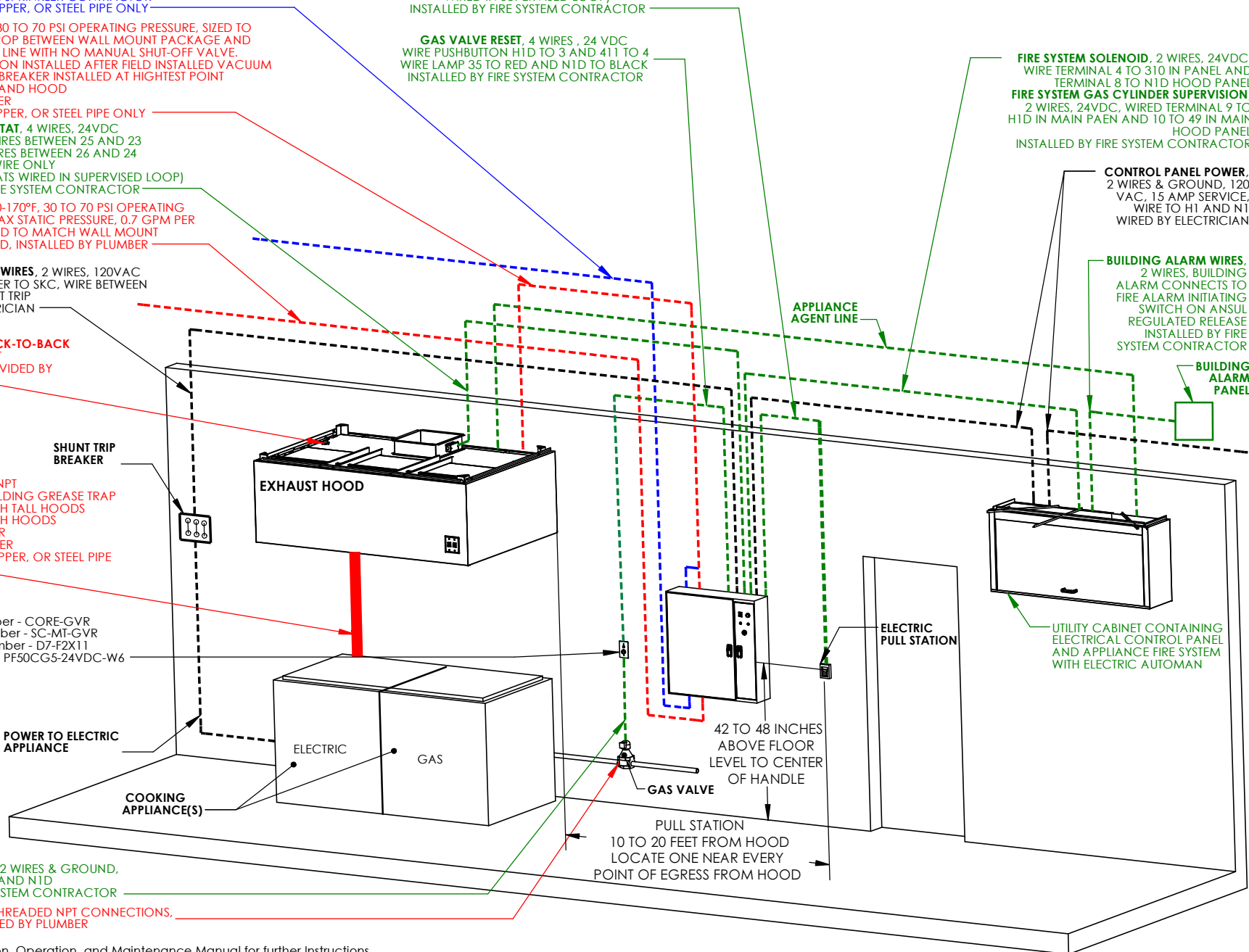
42 TO 48 INCHES ABOVE FLOOR LEVEL TO CENTER OF HANDLE

PULL STATION
10 TO 20 FEET FROM HOOD
LOCATE ONE NEAR EVERY
POINT OF EGRESS FROM HOOD

GAS VALVE POWER, 2 WIRES & GROUND,
24 VDC WIRE TO 35 AND N1D
INSTALLED BY FIRE SYSTEM CONTRACTOR

GAS VALVE BODY, THREADED NPT CONNECTIONS,
MAX 15 PSI. INSTALLED BY PLUMBER

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



24V HOOD CORE INSTALLATION RESPONSIBILITY

- PLUMBER:**
1. Connect Hot Water Line.
 2. Connect Hood Drain(s). Stainless Steel, Copper, or Steel Pipe Only.
 3. 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. Stainless Steel, Copper, or Steel Pipe Only.

PLUMBING CONTRACTOR REQUIREMENT

Item	Connection	Temperature	Pressure*	Flow Rate	Comments
Hot Water Line	3/4 Inch NPT	140 to 170°F	30 to 70 PSI	0.7 GPM Per Ft. of Hood	Insulate Hot Water Pipe
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
Gas Valve	Up to 2" NPT	N/A	15 PSI	N/A	Up To 2" NPT with 24v Controls. Max 15 PSI or 3,251,000 BTU/hr

BUILDING SPRINKLER CONTRACTOR:

1. Connect CORE Water Line to Building Wet Sprinkler System. Stainless Steel, Copper, Or Steel Pipe Only

* 125 psi max static pressure.
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.

SPRINKLER CONTRACTOR REQUIREMENT

Item	Connection	Temperature	Pressure**	Flow Rate	Comments
CORE Water Line	3/4 Inch NPT	Non-Heated	30 to 70 PSI	0.7 GPM Per Ft. of Hood	Water Line Must Be Supervised and Have No Manual Shut-Off Valves

ELECTRICIAN:

1. Wire main control panel per included schematic.
2. Wire all fans per included schematic.
3. Wire Shunt Trip Breaker.
4. Wire UDS Appliance Kill Switch, if equipped.

**30 to 70 psi operating pressure. 90 psi max static pressure.
Regulator is not included to meet this pressure from sprinkler line and must be provided by, installed by, and adjusted by the sprinkler contractor to meet incoming water pressure requirements.
A regulator such as the Elkhart Brass Model Number URFA-20S-2.5" should be utilized. This must be confirmed with Fire Marshal.

ELECTRICAL CONTRACTOR REQUIREMENT

Item	Connection in Panel	Connection on Device	Voltage	Amperage	Comments
Shunt Trip Breaker	SKC & ST	Coil (A1 & A2)	120 VAC	< 1.0 Amps	Connect 120VAC to SKC, ST to A1 on shunt coil. 120VAC may not come from CORE panel.
Control Panel Power	H1 & N1	Circuit Breaker	120 VAC	15 Amps	Control Panel Power MUST NOT Be Run Through Shunt Trip Breaker
UDS Appliance Kill Switch	SKC & KS	AR1 & KS	120 VAC	< 1.0 Amps	Kill Switch Terminals Must Be In Series With Other Kill Switches

FIRE SYSTEM INSTALLER:

1. Wire Gas valve, Gas Valve Reset, Remote Pull Stations, Remote Automans, CORE interlocks, Fire Sensors and Building Alarm Contacts.
2. Perform Final Fire System Test.
3. Provide All Required Components not Supplied by Factory.
4. Complete Final Hookup of System.
5. Ensure Burst-Disks are in Place.
6. Ensure Ansul Tanks are Filled.
7. Ensure High Pressure Hoses are Connected to Tanks.
8. Place Automan in Armed Position.
9. Load New High Pressure Cartridge into Automan.
10. Fill Surfactant Tank.

FIRE SYSTEM CONTRACTOR REQUIREMENT

Item	Connection in Panel	Connection on Device	Voltage	Amperage	Comments
Gas Valve	35 & N1D	Red / Red	24 VDC	< 1.0 Amps	2 Wires and Ground. N1D to Red, 35 to Red, and Ground.
Gas Valve Reset Button	PUSHBUTTON H1D & 411 LAMP 35 & N1D	PUSHBUTTON 3 & 4 LAMP RED & BLACK	24 VDC	< 1.0 Amps	4 Wires. PUSHBUTTON, H1D to 3, 411 to 4. LAMP, 35 to RED, N1D to BLACK.
Remote Pull Station(s)	22 and 25 = Line 1 21 and 26 = Line 2	1 & 2	24 VDC	< 1.0 Amps	Wire pull station terminal 1 between terminals 22 and 25. Wire pull station terminal 2 between hood terminals 21 and 26.
Remote Firestat Sensor(s)	25 and 23 = Line 1 26 and 24 = Line 2	Black & White	24 VDC	< 1.0 Amps	Wire fire sensor black wires between terminals 25 and 23. Wire fire sensor white wire between hood terminals 26 and 24. High Temp (842°F) Wire Only.
Remote Automan Solenoid	310 & N1D	4 & 8	24 VDC	< 1.0 Amps	Match Polarity, Wire 310 to 4 and N1D to 8. High Temp (842°F) Wire Only.
Remote Automan Gas Cartridge Supervision	H1D & 49	9 & 10	24 VDC	< 1.0 Amps	Wire H1D to 9 and 49 to 10. High Temp (842°F) Wire Only.
Building Alarm	COM, NO ON ALARM INITIATING SWITCH	Varies	MAX 28 VDC	< 0.05 Amps	Wired From Alarm Initiating Switch Only.
PCU & Other CORE Interlocks	ILA, ILB, ILC	ILA, ILB, ILC	24 VDC	< 1.0 Amps	CORE SYSTEM 1 ILA, to CORE SYSTEM 2 ILA. CORE SYSTEM 1 ILB, to CORE SYSTEM 2 ILB. CORE SYSTEM 1 ILC, to CORE SYSTEM 2 ILC.
Trouble Relay	TBC, TBL, TOK	Varies	MAX 120 VAC	Up To 10 Amps	Trouble Relay Contacts for Building Mangement System Trouble Input or Building Fire Alarm System Trouble Input.

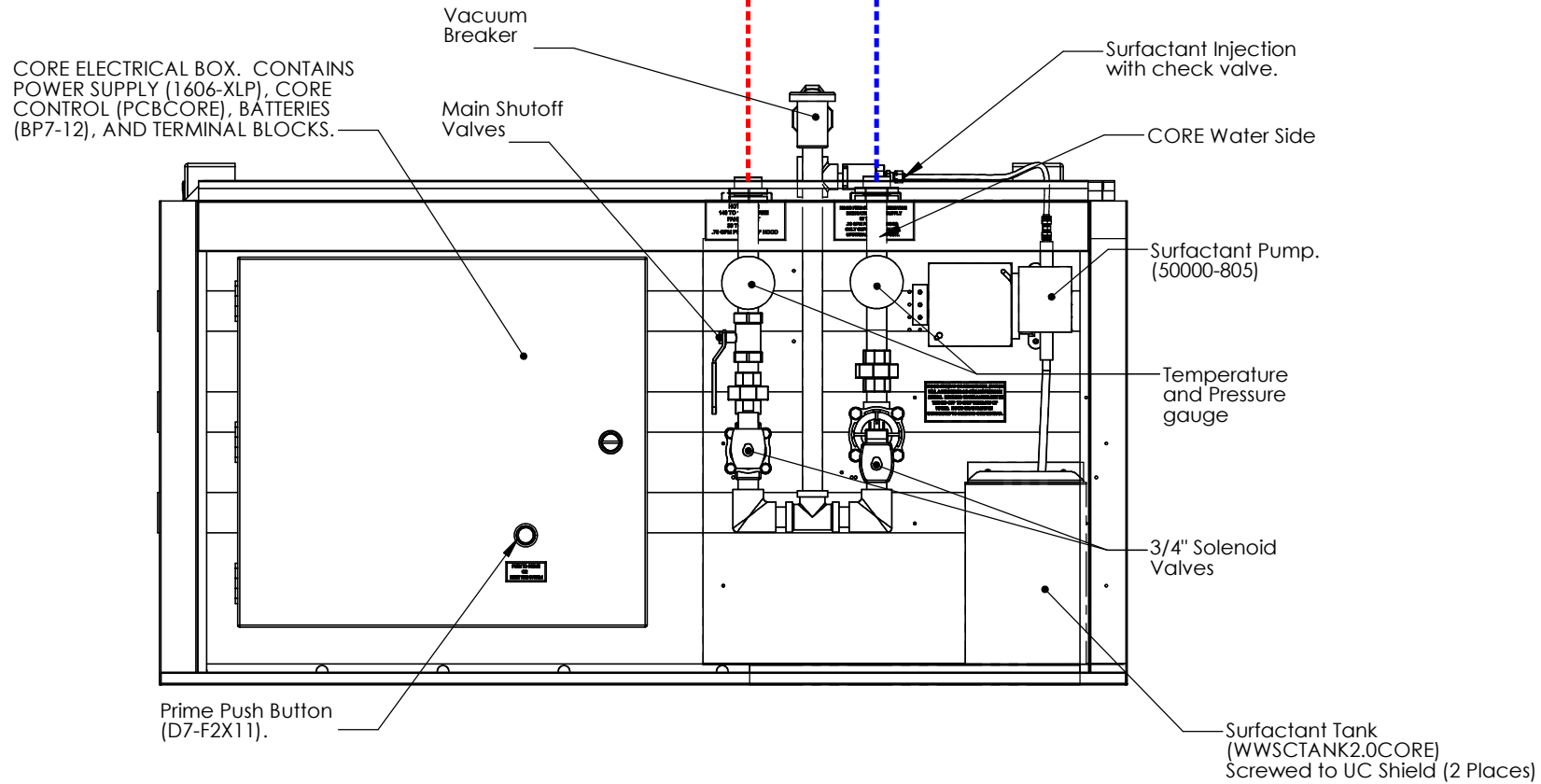
APPLICABLE STANDARDS:

- 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.

24V CORE UTILITY CABINET END VIEW

HOT WATER LINE - 140-170°F, 30 TO 70 PSI OPERATING PRESSURE,
125 PSI MAX STATIC PRESSURE,
0.7 GPM PER FOOT OF HOOD
3/4 INCH NPT FITTING, INSULATED, INSTALLED BY PLUMBER

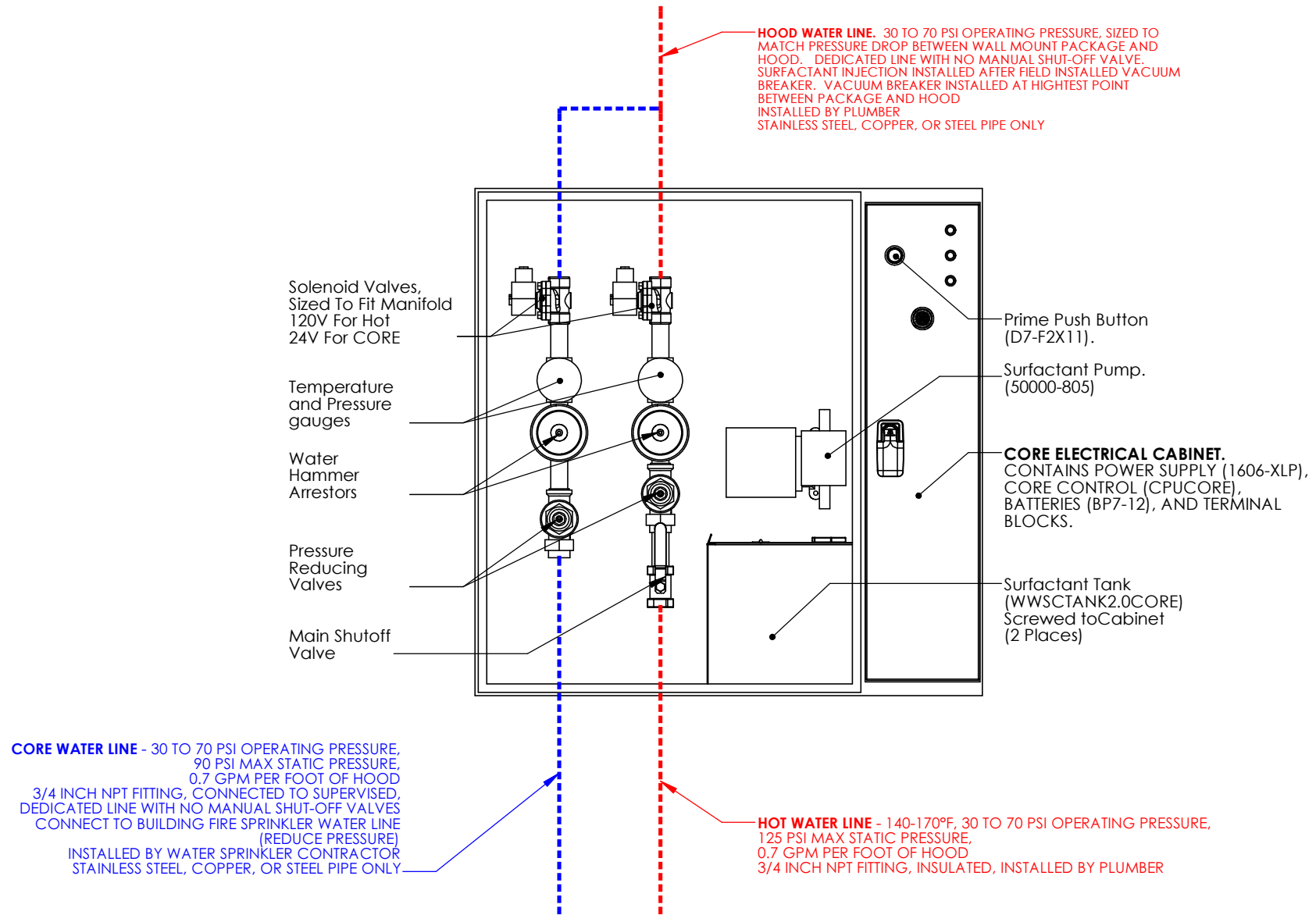
CORE WATER LINE - 30 TO 70 PSI OPERATING PRESSURE,
90 PSI MAX STATIC PRESSURE,
0.7 GPM PER FOOT OF HOOD
3/4 INCH NPT FITTING, CONNECTED TO SUPERVISED, DEDICATED LINE WITH
NO MANUAL SHUT-OFF VALVES,
CONNECT TO BUILDING FIRE SPRINKLER WATER LINE (REDUCE PRESSURE)
INSTALLED BY WATER SPRINKLER CONTRACTOR
STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY



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.

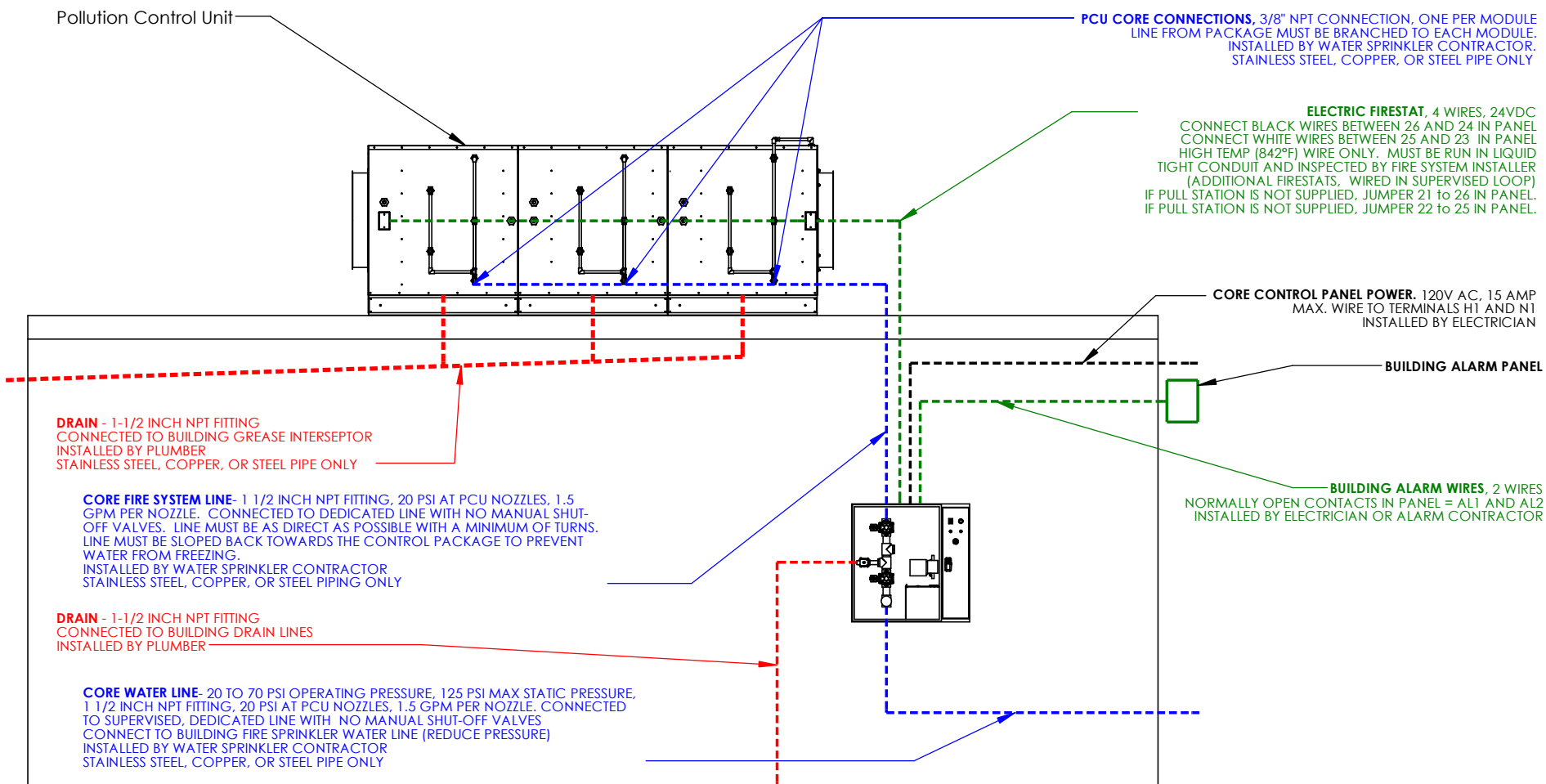
24V WALL MOUNTED CORE CONTROL CABINET VIEW

3/15/2010 Rev. 1



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 then the main Control Panel.

24V PCU CORE FIRE PROTECTION INSTALLATION SUMMARY



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

24V PCU CORE INSTALLATION RESPONSIBILITY

PLUMBER:

- 1) Connect Package Drain.
- 2) Connect Pollution Control Drain. **Stainless Steel, Copper, Steel Pipe Only**

PLUMBING CONTRACTOR REQUIREMENT					
Item	Connection	Temperature	Pressure*	Flow Rate	Comments
Package Drain	1 1/2 NPT	N/A	Sprinkler System Pressure	Capacity of the Sprinkler System	Connect to Building Drain Capable of Handling Water Volume. Line must be sloped away from panel.
Pollution Control Unit Drain	1 1/2 NPT	N/A	N/A	Capacity of the Sprinkler System	Connect to Building Grease Interceptor. Line must be sloped away from Pollution Control Unit.

BUILDING SPRINKLER CONTRACTOR:

- 1) Connect CORE Water Line to Building Wet Sprinkler System. **Stainless Steel, Copper, Steel Pipe Only**
- 2) Connect CORE Package to PCU Spray Bars. **Stainless Steel, Copper, Steel Pipe Only**

SPRINKLER CONTRACTOR REQUIREMENT					
Item	Connection	Temperature	Pressure**	Flow Rate	Comments
CORE Package Water Line	1 1/2" NPT	Non-Heated	20 to 70 PSI	See Table Below	Water Line Must Be Supervised and Have No Manual Shut-Off Valves
CORE Package to PCU	1 1/2" NPT	Non-Heated	20 to 70 PSI	See Table Below	Water Line Must Sloped Back to Control Package To Prevent Standing Water

**20 to 70 psi operating pressure. 125 psi max static pressure. Regulator is not included to meet this pressure from sprinkler line and must be provided by, installed by, and adjusted by the sprinkler contractor to meet our incoming pressure requirements. A regulator such as the Elkhart Brass Model Number URFA-20S-2.5" should be utilized. This must be confirmed with Fire Marshal.

Fire System Water Consumption Based on PCU Size In GPM

PCU Size	# of Modules				
	1	2	3	4	5
PCU 1	7.5	14	20	26	32
PCU 2	11	18	26	33	41
PCU 3	11	18	26	33	41
PCU 4	15	24	33	42	51
PCU 5	17	27	38	48	59
PCU 6	17	27	38	48	59

FIRE SYSTEM INSTALLER:

1. Wire Remote Firestat Sensor(s). Link CORE systems and Building Alarm Contacts.
2. Perform Final Fire System Test.
3. Complete Final Hookup of System.
4. Inspect all wiring to Pollution Control Unit.
5. Fill Surfactant Tank.

FIRE SYSTEM CONTRACTOR REQUIREMENT					
Item	Connection in Panel	Connection on Device	Voltage	Amperage	Comments
Remote Firestat Sensor(s)	25 and 23 = Line 1 26 and 24 = Line 2	Black & White	24 VDC	< 1.0 Amps	Wire fire sensor black wires between terminals 25 and 23. Wire fire sensor white wire between hood terminals 26 and 24. High Temp (842°F) Wire Only.
Building Alarm	AL1, AL2	Varies	MAX 120 VAC	Up to 10 Amps	Wire to AL1 & AL2 for Normally Open Contact.
Hood/PCU CORE interlock	ILA, ILB, ILC	ILA, ILB, ILC	24 VDC	<1.0 Amps	CORE SYSTEM 1 ILA, to CORE SYSTEM 2 ILA. CORE SYSTEM 1 ILB, to CORE SYSTEM 2 ILB. CORE SYSTEM 1 ILC, to CORE SYSTEM 2 ILC.
Trouble Relay	TBC, TBL, TOK	Varies	MAX 120 VAC	Up to 10 Amps	Trouble Relay Contacts for Building Mangement System Trouble Input or Building Fire Alarm System Trouble Input.

ELECTRICIAN:

- 1) Wire main control panel per included schematic.

ELECTRICAL CONTRACTOR REQUIREMENT					
Item	Connection in Panel	Connection on Device	Voltage	Amperage	Comments
Control Panel Power	H1 & N1	Circuit Breaker	120 VAC	15 Amps	Control Panel Power MUST Not Be Run Through Shunt Trip Breaker

APPLICABLE STANDARDS:

- 1) Meets requirements of NFPA 96 (Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment)
- 2) NFPA 17A (Standard on Wet Chemical Extinguishing Systems)

24V PCU CORE CONTROL CABINET VIEW

CORE WATER LINE- 20 TO 70 PSI OPERATING PRESSURE, 125 PSI MAX STATIC PRESSURE. 1.5 GPM PER NOZZLE, QUANTITY VARIES BY UNIT SIZE.
 1 1/2 INCH NPT FITTING, LINE MUST BE INSTALLED WITH MINIMUM OF FITTINGS. CONNECTED WITH NO MANUAL SHUT-OFF VALVES. INSTALLED BY WATER SPRINKLER CONTRACTOR
 PIPE MUST SLOPE FROM PCU DOWN TO CONTROL PANEL FOR FREEZE PROTECTION.
 STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

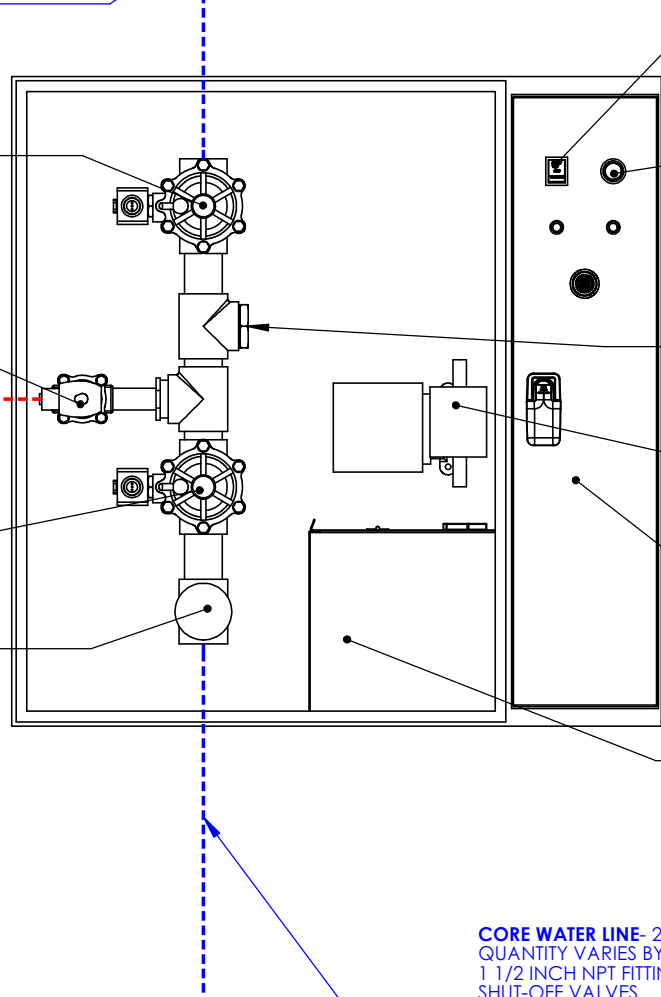
1 1/2" Solenoid Normally Open

3/4" Solenoid Normally Open

1 1/2" Solenoid Normally Closed

Temperature and Pressure gauge

PANEL DRAIN, 1 1/2 INCH NPT FITTING, DRAINS TO BUILDING DRAIN LINE. FLOW RATE AND VOLUME WILL MATCH INCOMING SPRINKLER LINE
 INSTALLED BY PLUMBER



Test/Armed Switch. (RB24GD1100)

Prime Push Button (D7-F2X11).

Surfactant Injection with check valve.

Surfactant Pump. (50000-805)

CORE ELECTRICAL CABINET. CONTAINS POWER SUPPLY (1606-XLP), CORE CONTROL (CPUCORE), BATTERIES (BP7-12), AND TERMINAL BLOCKS.

Surfactant Tank (WWSTANK2.0CORE) Screwed to Cabinet (2 Places)

CORE WATER LINE- 20 TO 70 PSI OPERATING PRESSURE, 1.5 GPM PER PCU NOZZLE, QUANTITY VARIES BY UNIT SIZE. 125 PSI MAX STATIC PRESSURE. 1 1/2 INCH NPT FITTING, CONNECTED TO SUPERVISED, DEDICATED LINE WITH NO MANUAL SHUT-OFF VALVES
 CONNECT TO BUILDING FIRE SPRINKLER WATER LINE (REDUCE PRESSURE)
 INSTALLED BY WATER SPRINKLER CONTRACTOR
 STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

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 then the main Control Panel.

24V CORE BASIC OPERATING INSTRUCTIONS

3/15/2010 Rev. 1

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 set point 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 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 three days and be able to operate the fire system circuit for a minimum of 30 minutes. Once power is restored, the battery will automatically recharge.

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 set point 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 CORE control cabinet. 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. Fill the surfactant tank with surfactant.

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 into the supervised loop 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.

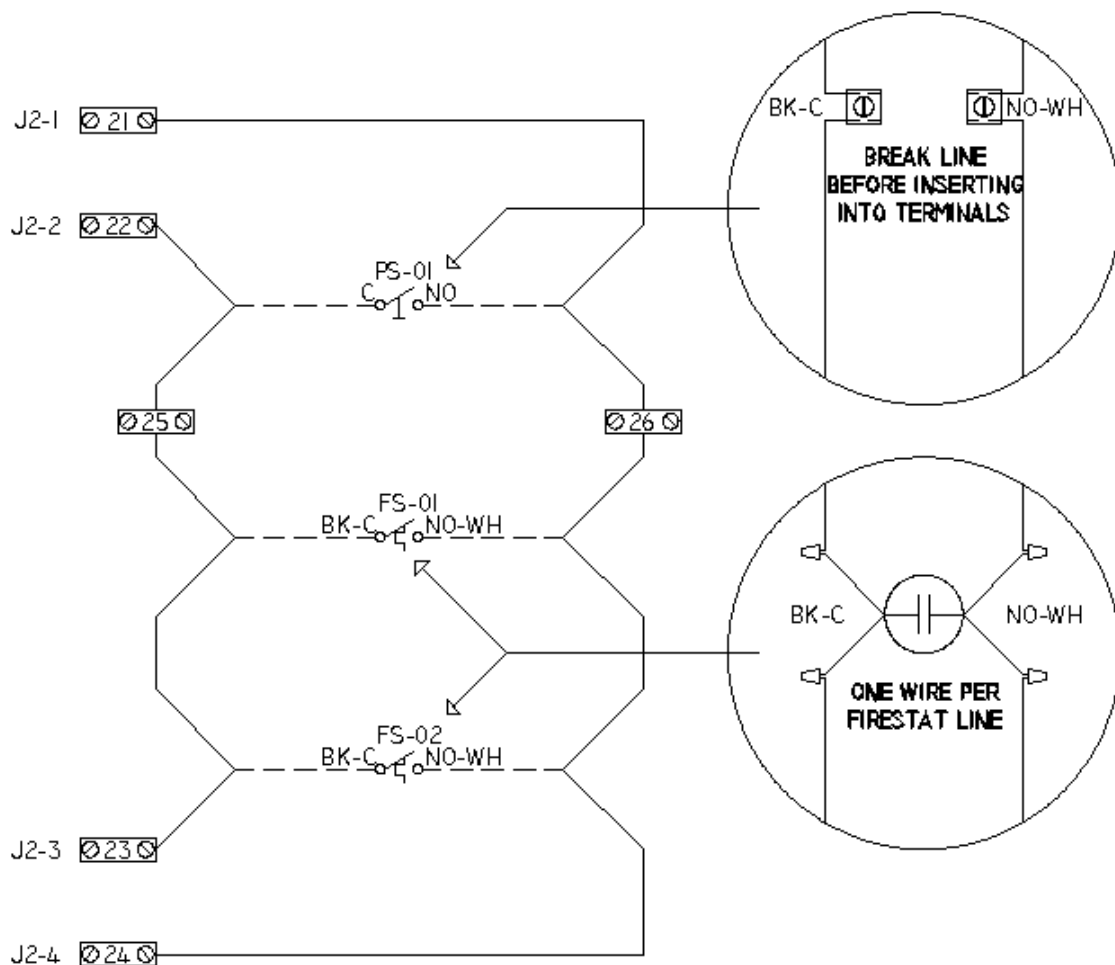
Duct Firestats

A Firestat must be installed at 50 Feet intervals when the duct length exceeds 50 Feet.

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.

24V SUPERVISED LOOP INSTRUCTIONS



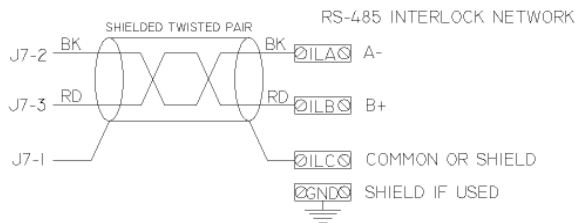
Supervised Loop Installation

Loop must be continuous between the Firestats and Pull Stations. Quantity of each components may vary.

Pollution Control Unit may not have a pull station installed.

Multiple pull stations and fire sensors can be used on each panel.

Connection Between Multiple CORE Systems



There is an RS-485 connection in each CORE panel. To connect multiple CORE panels, simply connect matching terminlas from one panel to the next in series. Use 18 to 24 GA shielded, single twisted pair wire for wire runs.