



04/26/2018

# Commercial Hood/Exhaust Application and Checklist

All applications shall be submitted online via the Citizen Self Service portal. Refer to the attached documents for complete instructions. Please complete and submit the following Commercial Hood/Exhaust System Application and submit along with construction documents that demonstrate compliance.

Type of System:  Type I (fryers, grills, broilers, ovens or woks)  Type II (steamers and other non-grease producing appliances)

## Type of Materials

Is the hood stainless steel?  Yes  No If other, what type? \_\_\_\_\_

Is the duct work stainless steel?  Yes  No If other, what type? Stainless on core hood / 16ga Galv on 6' hood

Thickness of the steel for the hood? 18ga SS Thickness of the duct for the hood? 18ga SS / 16ga galv.

Type of hood and duct supports? Canopy Box Hood 1/2 thread rods hook into truss's

Type of seams? solid welded

Grease gutters provided?  Yes  No

Hood clearance reduction to combustibles design /specs? Insulated top on wood noncombustible material

Duct clearance reduction to combustibles design /specs? 3m grease duct wrap zero to combustibles

Vibration isolation system: N/A

Air velocity with the duct system: 9' Hood 4050 CFM 6' Hood 1200 CFM

Grease accumulation prevention system: N/A

Cleanouts: Duct run less than 10' Grease duct enclosure: 3m grease duct wrap

Exhaust termination:  Roof  Wall

Fire suppression system: Done By other 6' Hood / 9' core water system

Exhaust fan mounting and clearance from the roof/wall or combustibles: 10'

Exhaust fan distance from:

Property lines: 10' Other vents or openings: 10' Adjacent buildings: 10'

Height above adjoining grade: 15' plus 4'

## Hood Specs

Style of hood: Canopy Capacity of hood - CFM (cubic feet per minute): 4500 CFM / 1200 CFM

Type of filter: Caprate 600 Filters Height of filter (above nearest cooking surface): 48"

Make up air system description and capacity: Heated make up air returning 4560 CFM

I hereby certify that I am the owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: [Signature] Date: 3/19/18

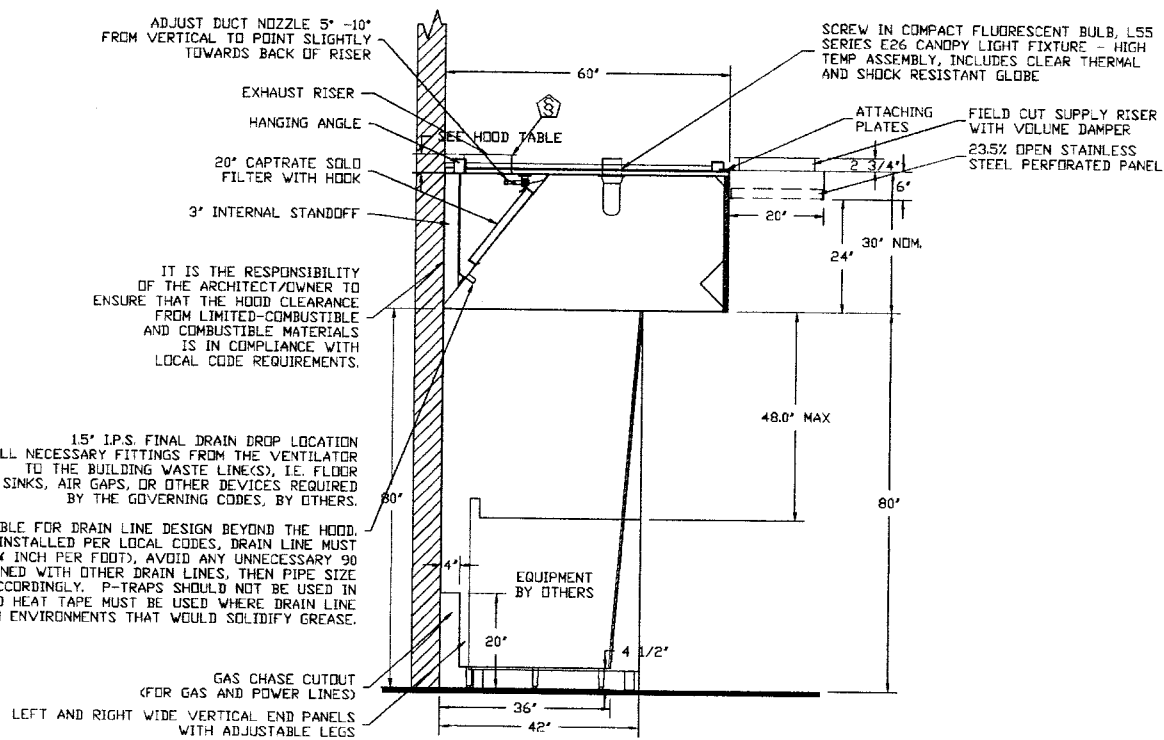
This is a legal document and your electronic signature is considered a legal signature per Maine state law.

Review of this application will not begin until the permit payment is received. Work may not commence until the permit is issued.

389 Congress Street, Room 315/Portland, Maine 04101/www.portlandmaine.gov/tel: 207-874-8703/fax: 207-874-8716



04/26/2018



**SECTION VIEW - MODEL 6030ND-2-PSP-F  
 HOOD - #1**

WARNING; FILTER NOISE MAY BE HIGHER THAN NORMAL DUE TO THE CFM REQUIREMENT OF THE APPLIANCE BEING USED AND TYPE OF FILTERS THAT ARE REQUIRED.

CUSTOMER APPROVAL TO MANUFACTURE:

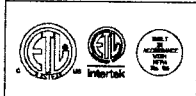
Approved as Noted

Approved with NO Exception Taken

Revise and Resubmit

SIGNATURE \_\_\_\_\_

Your Title \_\_\_\_\_ Date \_\_\_\_\_



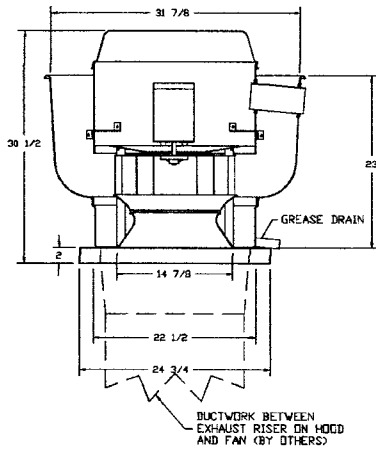
**CAPTIVEAIR**

JOB Ellsmere #2 r4	
LOCATION PORTLAND, ME, 04101	
DATE 3/14/2018	JOB # 3339140
DWG # 4	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"





FAN #2 DUBSHFA - EXHAUST FAN (6FT)



**FEATURES:**

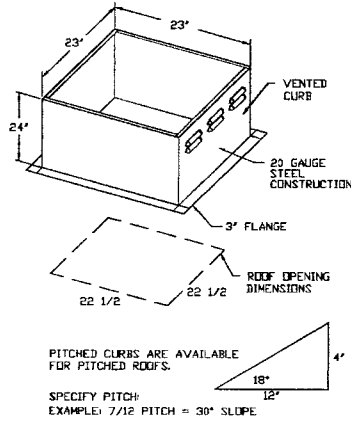
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762 AND ULCS-5645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHER-ROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

**NORMAL TEMPERATURE TEST**  
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERMINING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

**ABNORMAL FLARE-UP TEST**  
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT WOULD CAUSE AN UNSAFE CONDITION.

**OPTIONS**

- GREASE BOX
- FULL CRATING FOR EXHAUST FANS
- 3 YEAR EXTENDED MOTOR WARRANTY
- FAN BASE CERAMIC SEAL - SHIP LOOSE - FOR GREASE DUCTS
- ECM WIRING PACKAGE-EXHAUST - PWM SIGNAL FROM ECM'S PREWIRE (NIDEC MOTOR)



**CUSTOMER APPROVAL TO MANUFACTURE:**

Approved as Noted

Approved with NO Exception Taken

Revise and Resubmit

SIGNATURE \_\_\_\_\_

Your Title \_\_\_\_\_ Date \_\_\_\_\_

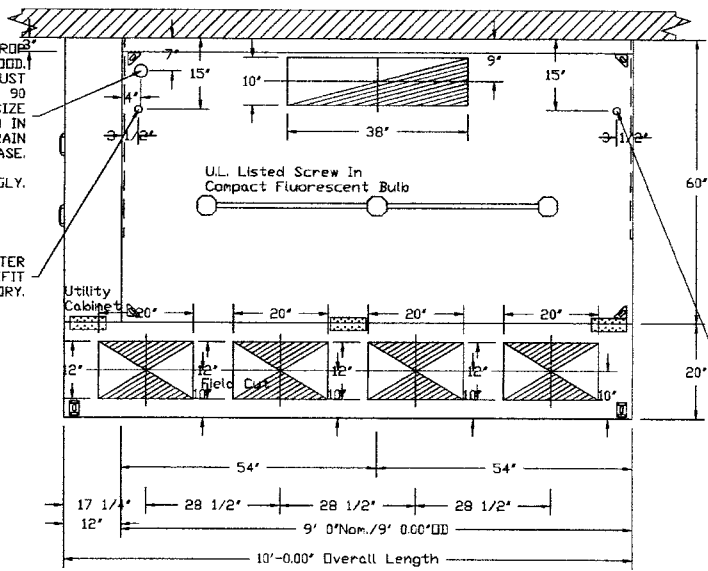


JOB Ellsmere #2 r4	
LOCATION PORTLAND, ME, 04101	
DATE 3/14/2018	JOB # 3339140
DWG # 11	DRAWN BY BFC-21
REV	SCALE 3/8" = 1'-0"



ENGINEER IS RESPONSIBLE FOR DRAIN LINE DESIGN BEYOND THE HOOD. DRAIN LINE MUST BE INSTALLED PER LOCAL CODES, DRAIN LINE MUST BE SLOPED (MINIMUM 1/8" INCH PER FOOT), AVOID ANY UNNECESSARY 90 DEGREE TURNS, IF COMBINED WITH OTHER DRAIN LINES, THEN PIPE SIZE SHOULD BE INCREASED ACCORDINGLY. P-TRAPS SHOULD NOT BE USED IN THE GREASE DRAIN LINE AND HEAT TAPE MUST BE USED WHERE DRAIN LINE IS RUN IN ENVIRONMENTS THAT WOULD SOLIDIFY GREASE. SIZE BUILDING GREASE INTERCEPTOR ACCORDINGLY.

3/4" I.P.S. (N.P.T.) HOT WATER CONNECTION STUBS ARE PREFIT BY FACTORY.



3/4" I.P.S. (N.P.T.) HOT WATER CONNECTION STUBS ARE PREFIT BY FACTORY.

PLAN VIEW - Hood #1  
 9' 0.00" LONG 6030ND-2-PSP-F

24" MINIMUM OVERHANG IS RECOMMENDED FOR THE FRONT AND BOTH ENDS OF SOLID FUEL COOKING APPLIANCES.

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted

Approved with MI Exception Taken

Revise and Resubmit

SIGNATURE \_\_\_\_\_

Your Title \_\_\_\_\_ Date \_\_\_\_\_



JOB Elsmere #2 r4	
LOCATION PORTLAND, ME, 04101	
DATE 3/14/2018	JOB # 3339140
DWG # 2	DRAWN BY BFC-21
REV.	SCALE 3/8" = 1'-0"



JOB NO <b>3339140</b>	MODEL NUMBER <b>SC-311110FP</b>	DRAWN BY <b>ELISABETH #2 R4</b>	SCHEMATIC TYPE INSTALL	DESCRIPTION OF OPERATION Fire System #1 CORE Protection CORE Appliance Manifold Package with Self Cleaning Installed in Hood Utility Cabinet with Integral hood pressure panel.
	JOB NAME <b>Elisabeth #2 R4</b>	DATE 3/14/2018	DWG NO ECP #2-6	

## CORE TOTAL FLOOD PROTECTION PLUMBING DETAIL

03/06/2017 Rev. 15

- PLUMBER:  
 1. CONNECT HOT WATER LINE; PVC, COPPER OR STAINLESS STEEL PIPE ONLY  
 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  
 4. FLOOR GAS VALVE STRAINER MUST BE INSTALLED UPSTREAM OF VALVE  
 5. INSTALL FLOOR DRAIN  
 6. INSTALL BACKFLOW PREVENTER IF CODE REQUIRES

FS-1 MASTER

ITEM	CONNECTION	TEMPERATURE	PRESSURE	PLUMBING CONTRACTOR REQUIREMENT		COMMENTS
				FLOW RATE		
HOT WATER LINE	0.75 INCH NPT	140 to 170°F	30 PSI TO 70 PSI	6.30 GPM		INSULATE HOT WATER PIPE, MINIMUM PRESSURE DEPENDENT ON LENGTH AND CONFIGURATION OF HOOD SYSTEM
HOOD DRAIN(S)	1-1/2 INCH NPT	N/A	GRAVITY DRAIN	SEE ABOVE		2 DRAINS ON 24 INCH TALL HOODS WITH 20 INCH TALL FILTERS AND HOODS 10 FEET AND LONGER
END-TO-END CORE CONNECTION	VARIABLES	N/A	N/A	N/A		CONNECT WITH NPT PIPE, SEAL ALL THREADS, HOOD CONNECTION PROVIDED
BACK-TO-BACK CORE CONNECTION	VARIABLES	N/A	N/A	N/A		CONNECT WITH NPT PIPE, SEAL ALL THREADS, HOOD CONNECTION PROVIDED
GAS VALVE	VARIABLES	N/A	SEE TABLE	N/A		UP TO 2 INCHES NPT WITH 24V CONTROLS, 2-1/2 AND 3 INCH USE 120V CONTROL
FLOOR DRAIN(S)	1-1/2 INCH	N/A	GRAVITY DRAIN	N/A		USED TO HELP CLEAN UP FIRE SYSTEM DISCHARGE, GREASE INTERCEPTOR MAY BE REQUIRED
BACKFLOW PREVENTER DRAIN LINE (OPTIONAL)	INLET/OUTLET DRAIN	N/A	VARIABLES	N/A		INSTALLED WHEN PACKAGE HAS A BACKFLOW PREVENTER VALVE, SEE BACKFLOW PREVENTER VALVE MANUAL FOR DETAILS

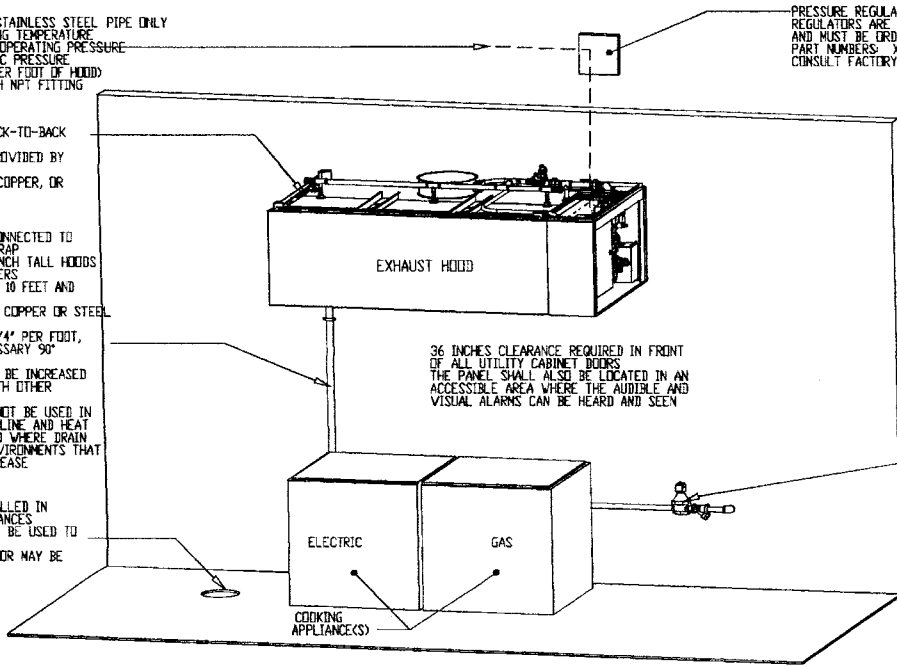
HOT WATER LINE  
 -PVC, COPPER, OR STAINLESS STEEL PIPE ONLY  
 -140-170°F OPERATING TEMPERATURE  
 -30 PSI TO 70 PSI OPERATING PRESSURE  
 -125 PSI MAX STATIC PRESSURE  
 -6.30 GPM @ 0.7 GPM PER FOOT OF HOOD  
 -0.75 INCH NPT INCH NPT FITTING  
 INSULATED

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

HOOD DRAIN(S)  
 -1-1/2 INCH NPT CONNECTED TO BUILDING GREASE TRAP  
 -2 DRAINS ON 24 INCH TALL HOODS WITH 20 INCH FILTERS  
 -2 DRAINS ON HOODS 10 FEET AND LONGER  
 -STAINLESS STEEL, COPPER OR STEEL PIPE ONLY  
 -SLOPE MINIMUM 1/4" PER FOOT, AVOID ANY UNNECESSARY 90° TURNS  
 -PIPE SIZE SHOULD BE INCREASED WHEN COMBINED WITH OTHER DRAINS  
 -P-TRAPS SHOULD NOT BE USED IN THE GREASE DRAIN LINE AND HEAT TAPE MUST BE USED WHERE DRAIN LINE IS RUN IN ENVIRONMENTS THAT WOULD SOLIDIFY GREASE

FLOOR DRAIN  
 -1-1/2 DRAIN INSTALLED IN FLOOR NEAR APPLIANCES  
 -FLOOR DRAINS MAY BE USED TO DRAIN HOOD  
 -GREASE INTERCEPTOR MAY BE REQUIRED

PRESSURE REGULATOR VALVE  
 REGULATORS ARE NOT INCLUDED TO MEET REQUIRED PRESSURE AND MUST BE ORDERED SEPARATELY  
 PART NUMBERS: X65BU(3/4"), X65BU(1"), OR X65BU(1-1/2")  
 CONSULT FACTORY FOR SIZING



3/4" MANIFOLD MINIMUM OPERATING PRESSURE REQUIREMENTS

LENGTH OF HOOD (FT)	MINIMUM INLET WATER PRESSURE FOR HOT WATER (PSI)	DISCHARGE COEFFICIENTS (K-FACTOR)
4	30	0.6
8	30	1.3
12	30	1.9
16	30	2.5
20	31	3.1
24	32	3.7
28	34	4.2
32	37	4.6
36	39	5.0
40	42	5.4
44	46	5.7
48	50	6.0

TOTAL FLOWRATE = K FACTOR x PRESSURE<sup>0.44</sup>

GAS VALVE  
 -THREADED NPT CONNECTION  
 -SEE TABLE BELOW FOR MAX PRESSURE  
 -STRAINER INSTALLED UPSTREAM OF VALVE

SIZE	MAX INLET PRESSURE (PSI)	VOLTAGE	BTU/HR
3/4"	5	24VDC	593,200
1"		24VDC	1,132,300
1-1/4"		24VDC	1,925,000
1-1/2"		24VDC	2,406,000
2"		24VDC	2,948,500
2-1/2"		120VAC	5,607,800
3"	120VAC	5,661,700	

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions  
04/26/2018

# ROXUL®

The Better Insulation™

## Technical Product Information

### ROXUL RHT® 80

BOARD INSULATION 15080\*  
PROCESS EQUIPMENT INSULATION  
40 42 23\*\*  
MINERAL BOARD INSULATION  
07 21 13\*\*

(Wall)

#### General Product Information:

ROXUL® products are mineral wool fibre insulations made from basalt rock and slag. This combination results in a non-combustible product with a melting point of approximately 2150°F (1177°C), which gives it excellent fire resistance properties. ROXUL mineral wool is a water repellent yet vapour permeable material.

#### Description & Common Applications:

The RHT® 80 product is a non-combustible, rigid mineral wool insulation board that is water repellent and designed for high temperature applications where durability and compressive resistance are required. Common application areas for the RHT series of board insulation include storage tank insulations, drying/oven equipment, petro-chemical and power generating equipment protection where high temperature, fire resistance, and moisture resistance are concerns.

#### Compliance and Performance:

ASTM C 612 Mineral Fiber Block and Board Thermal Insulation  
MEA Approval New York City Approval  
City Of Los Angeles Approval

Type IVB, Complies  
332-97-M  
RR 25444

#### Fire Performance:

ASTM E 136 Behaviour of Materials at 750°C (1382°F)  
CAN4 S114 Test for Non-Combustibility  
ASTM E 84(UL 723) Surface Burning Characteristics

Non-Combustible  
Non-Combustible  
Flame Spread = 0  
Smoke Developed = 0  
Flame Spread = 0  
Smoke Developed = 0

CAN/ULC S102 Surface Burning Characteristics

#### Maximum Service Temperature:

ASTM C 411 Hot Surface Performance

In Compliance with  
ASTM C612 @ 1200°F(650°C)

#### Dimensional Stability:

ASTM C 356 Linear Shrinkage

<1% @ 1200°F (650°C)

#### Moisture Resistance:

ASTM C 1104 Moisture Sorption

0.04%

#### Thermal Resistance:

ASTM C 518 (C 177) R-value/inch @ 75°F  
RSI value/25.4 mm @ 24°C

4.2 hr.ft².F/Btu\*\*\*  
0.74 m²KW

#### Corrosive Resistance:

ASTM C 665 Corrosiveness to Steel  
ASTM C 795 \*\*\*\* Stainless Steel Stress Corrosion Specification as per Test  
Methods C871 and C692: U.S. Nuclear Regulatory Commission,  
Reg. Guide #1.36: U.S. Military Specifications MIL-I-24244 (all  
versions including B and C)

#### Acoustical Performance

ASTM C 423 CO-EFFICIENTS AT FREQUENCIES							
Thickness	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
1.5"	0.17	0.58	1.06	1.07	1.00	0.99	0.95
2.0"	0.39	0.84	1.08	1.01	1.02	1.01	1.00
3.0"	0.68	0.92	1.08	1.03	1.03	1.03	1.10
4.0"	1.00	0.95	1.06	1.04	1.06	1.08	1.05

\*MASTER FORMAT 1995 EDITION \*\*MASTER FORMAT 2004 EDITION  
\*\*\* at the time of manufacturing

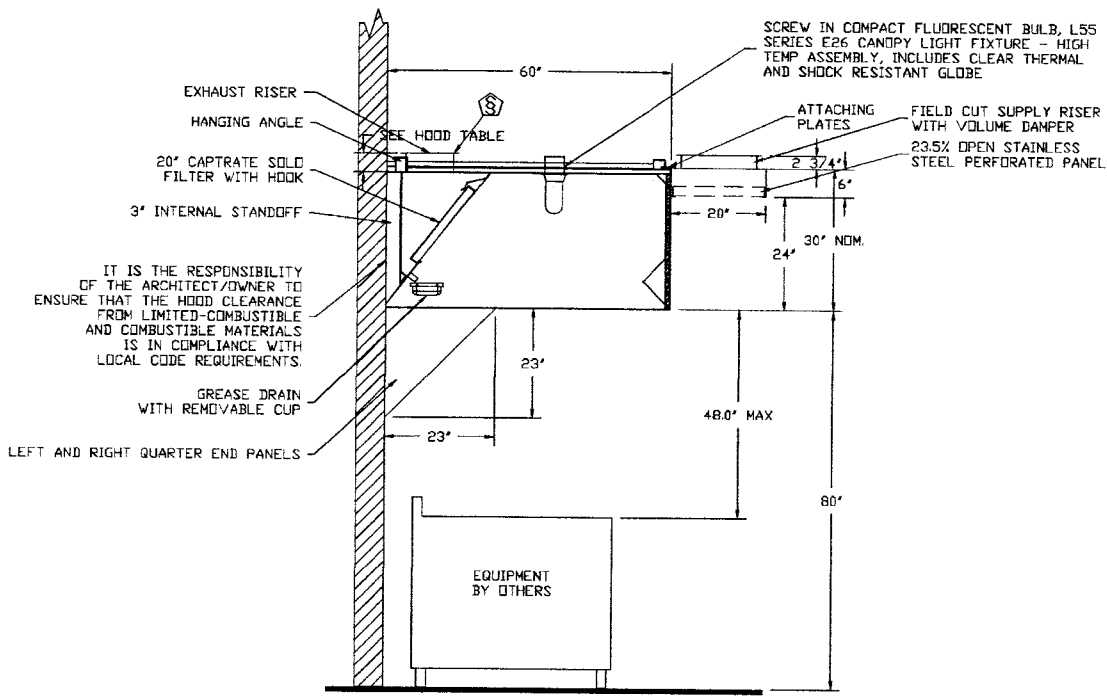








04/26/2018



**SECTION VIEW - MODEL 6030ND-2-PSP-F  
 HOOD - #2**

CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted

Approved with NE Exception Taken

Revise and Resubmit

SIGNATURE \_\_\_\_\_

Your Title \_\_\_\_\_ Date \_\_\_\_\_

	JOB Ellsmere #2 r4	
	LOCATION PORTLAND, ME, 04101	
	DATE 3/14/2018	JOB # 3339140
	DWG # 5	DRAWN BY BFC-21
	REV.	SCALE 3/8" = 1'-0"



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions  
04/26/2018

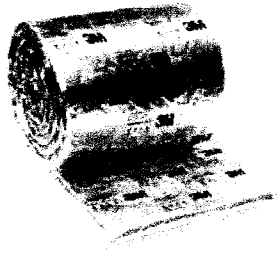
# 3M™ Fire Barrier Duct Wrap 615+

## Product Data Sheet and Installation Guide

### 1. Product Description

3M™ Fire Barrier Duct Wrap 615+ is a flexible fire-resistant wrap consisting of an inorganic fiber blanket encapsulated with a scrim-reinforced foil. The product is 1-1/2" thick, 6 pcf density.<sup>1</sup> It is used to fire rate commercial kitchen grease ducts as well as ventilation ducts. 3M™ Fire Barrier Duct Wrap 615+ is a proven alternative to 1- or 2-hour fire-resistant rated shaft enclosures for grease ducts (ICC-ES ESR-1255). With its excellent insulating capabilities, low weight and thin profile, it is an ideal choice for a duct enclosure system. This non-asbestos<sup>2</sup> wrap installs easily due to its high flexibility and strength.

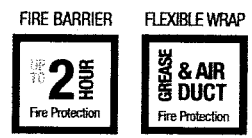
<sup>1</sup> In accordance with the tolerances in ASTM C 892 Standard Specification for High-Temperature Fiber Blanket Thermal Insulation.  
<sup>2</sup> These fibers are not biopersistent and are therefore non-carcinogenic per Note Q of EU Directive 67/548/EEC (guideline 97/69/EG).



Flexible and lightweight with a thin profile for easier application and reduced space requirements

### Product Features

- Two-layer wrap for grease ducts rated as a shaft alternative per ASTM E 2336
- Zero clearance to combustible throughout the entire enclosure system
- Butted inner layer in 2-layer grease duct applications
- One-layer wrap for fire-resistive ventilation ducts per ISO 6944
- High flexibility for installation ease
- Foil encapsulated for blanket protection, less dust, and high wrap strength
- Wide range of penetration seal systems
- Available in:  
24" x 25 ft. (609.6mm x 7.62m) and  
48" x 25 ft. (1219.2mm x 7.62m) rolls
- Blanket adhered to foil scrim helps prevent wrap from slumping



Intertek  
FIRE RESISTANT DUCT  
SEE INTERTEK DIRECTORY

Intertek  
FIRE RESISTANT DUCT  
SEE INTERTEK DIRECTORY



BATTS AND BLANKETS  
FOR USE IN FIRE RESISTIVE DUCT ASSEMBLIES  
SEE UL FIRE RESISTANCE DIRECTORY  
90G9



CSFM  
LISTING No.  
2440-0941:112

### 2. Applications

3M™ Fire Barrier Duct Wrap 615+ is an ideal fire resistive enclosure for commercial kitchen grease ducts and ventilation air ducts. It is a proven alternative to a 1- or 2-hour fire-resistant rated shaft enclosures for grease ducts and provides zero clearance to combustible construction throughout the entire enclosure system (per ICC-ES ESR-1255). 3M™ Fire Barrier Water Tight Sealant 1000 NS, 3M™ Fire Barrier Water Tight Sealant 1003 SL or 3M™ Fire Barrier Silicone Sealant 2000+ is used in combination with 3M™ Fire Barrier Duct Wrap 615+ to firestop the duct when the duct penetrates fire-rated floor or wall assemblies. 3M™ Fire Barrier Duct Wrap 615+ also provides a firestop solution where a T-rating is required for penetrations located outside wall cavities or outside fire-resistance rated shaft enclosures.

**Two-layer grease duct applications:** 3M™ Fire Barrier Duct Wrap 615+ meets the criteria of ASTM E 2336 Standard Test Methods for Fire Resistive Grease Duct Enclosure Systems.

**Single-layer ventilation duct applications:** 3M™ Fire Barrier Duct Wrap 615+ has passed ISO 6944-1985 Fire Resistance Tests – Ventilation Ducts.

**T-rating for metallic through-penetrating items:** 3M™ Fire Barrier Duct Wrap 615+ is used in conjunction with 3M Fire Barrier sealants to achieve up to 2-hour equal F & T-ratings in ASTM E 814 (UL 1479) tested through-penetrations.

### 3. Specifications

Installation shall be in strict accordance with manufacturer's written instructions, as shown on the approved shop drawings. 3M™ Fire Barrier Duct Wrap 615+ shall be a high-temperature fibrous thermal insulation blanket encapsulated in a fiberglass-reinforced aluminized polyester foil. Duct Wrap density shall be nominal 6 pcf (96 kg/m<sup>3</sup>) and have a nominal 1-1/2" (38.1mm) thickness. The fiber blanket shall have a continuous use limit of 1000°C (1832°F). The blanket thermal resistance (R-value) at ambient temperature shall be minimum  $6.3 \frac{^{\circ}\text{F}\cdot\text{ft}^2\cdot\text{hr}}{\text{Btu}}$ .

**Typically Specified Division or Section**  
Division 7 – Thermal and Moisture Protection  
Section 23 07 13 – Duct Insulation

**Related Sections**  
Section 07 21 00 – Thermal Protection  
Section 07 21 16 – Blanket Insulation  
Section 07 84 00 – Firestopping  
Section 23 00 00 – Heating, Ventilation and Air-Conditioning (HVAC)  
Section 23 31 13 – Metal Ducts

Smoke Developed Index and Flame Spread Index of the bare blanket, and of the foil encapsulated blanket shall be 0/0. The foil encapsulation shall be bonded to the core blanket material.



04/26/2018

# Construction Permit

## No. 25400

*In accordance with the provisions of M.R.S.A. Title 25, Chapter 317, Sec.317 and Title 5, Section 4594-F, permission is hereby granted to construct or alter the following referenced building according to the plans hitherto filed with the Commissioner and now approved. No departure from application form/plans shall be made without prior approval in writing. Nothing herein shall excuse the holder of this permit for failure to comply with local ordinances, zoning laws, or other pertinent legal restrictions.*

**Each permit issued shall be displayed at the site of construction.**

**Building:** ELSMERE BBQ  
**Location:** 476 STEVENS AVE, PORTLAND, ME 04103-2611  
**Owner:** ELSMERE HOSPITALITY GROUP  
**Owner Address:** 476 STEVENS AVE, PORTLAND, ME 04103-2611

Occupancy Type: Mercantile Class C  
Secondary Use:  
No Sprinkler System  
Fire Alarm System  
Construction Mode: Renovation  
Unprotected Wood Frame: Type V (000)  
Final Number of Stories: 1

**Permit Date:** 04/03/2018                      **Expiration Date:** 10/02/2018

**Notes and additional requirements:**  
NFPA 96 hood system permit only

COMMISSIONER OF PUBLIC SAFETY

**Copy 1 - Owner**

Project Information

Office of State Fire Marshal  
45 Commerce Dr, Suite  
Augusta, Maine 04333-0



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

04/26/2018

Project Name: Elsmere BBQ  
Street Location: 476 Steven Ave  
County: Umberland Zip Code: 04103 Town: Portland Me

Project Type:  
New Building/Addition   
Renovation   
Occupancy Change

Building Occupancy Use Layout:  
Single use   
Separated Use   
Mixed Use

Sprinkler System:  
No  Yes  Supervised   
Fire Alarm:  
No  Yes  Monitored

Project Information:  
Projected Start Date: 3/19/18  
Projected End Date: 5/19/18  
Total Project Cost: 54,190.50  
Number of Stories:  
Original # of Stories: 1  
Affected # of Stories: 1  
Total # of Stories: 1

Square Footage:  
Renovated s.f. 3404  
New Construction s.f.:  
Total s.f.: 3404

Adjusted Project Cost\* for Fee Calculation: 54,190.50 X 0.0015 = Construction Permit Fee: 81.29  
*\*see attached fee schedule for more information*

Occupancy Classification:  
 Apartments  Ambulatory Health Care  
 Business  Detention/Correctional  Educational  
 Health Care  Hotel/Dormitory  Industrial  
 Other  Rooming & Lodging  Storage

Approval Letter Only (\$50 fee):   
 Assembly  <300  >300 <1000  >1000  
 Daycare  >12  <12  
 Residential Board & Care  Large  Small  
 Mercantile  Class A  Class B  Class C

Construction Type  
Fire Resistive: Type I (443)  (332)   
Protected Non-Combustible: Type II (222)  (111)   
Unprotected Non-Combustible: Type II (000)   
Protected Ordinary: Type III (211)

Unprotected Ordinary: Type III (200)   
Heavy Timber: Type IV (2HH)   
Protected Wood Frame: Type V (111)   
Unprotected Wood Frame: Type V (000)

Brief description of work to be performed: \_\_\_\_\_

Owner's Name: Elsmere Hospitality Group Contact Information Phone: 207 321 9038 Fax: \_\_\_\_\_  
Mailing Address: 476 Steven Ave  
Town: Portland State: ME Zip Code: 04103 E-mail: \_\_\_\_\_  
Design Professional: Bourgois Sons Phone: 749 1878 Fax: \_\_\_\_\_  
Mailing Address: 123 Davis Rd  
Town: Durham State: ME Zip Code: 04222  
Maine Registration #: \_\_\_\_\_ E-mail: danbourgois@gmail.com  
Signature of Applicant: [Signature]

DEPARTMENT OF PUBLIC SAFETY USE ONLY

<input type="checkbox"/> Permit	<input type="checkbox"/> Approval Letter (when a permit is not required)	Approved By: _____	
Check #	Plan Reviewer	Date Permit Issued	Permit #

Office of State Fire Marshal  
45 Commerce Dr, Suite 1, Augusta, Maine 04333-0052  
207-626-3880 ph 207-287-6251 fax 207-287-3659 (TTY)









Paul LePage  
Governor

John E. Morris  
Commissioner

**Department of Public Safety  
State Fire Marshal's Office  
Building Codes and Standards Unit**

45 Commerce Drive  
52 State House Station  
Augusta, Maine  
04333-0052  
207-624-7007



Joseph Thomas  
State Fire Marshal  
Reviewed for Code Compliance  
by the Building and Inspections Department  
Approved with Conditions

Richard McCarthy  
Assistant State Fire Marshal

04/26/2018

**BUILDING CODE SURCHARGE**

**Project Information**

Project Name: Elsmere BBQ  
Street Location: 476 Stevens ave Town: Portland Me.  
Project Total Square Footage\*: 3404 Building Code Surcharge: 136.16

Sec. 13.25 MRSA §2450-A is enacted to read:

§2450-A. Surcharge on plan review fee for the Uniform Building Codes and Standards Fund

In addition to the fees established in section 2450, a surcharge of 4¢ per \*square foot of *occupied space* must be levied on the existing fee schedule for new construction, reconstruction, repairs, renovations or new use for the sole purpose of funding the activities of the Technical Building codes and Standards Board with respect to the Maine Uniform Building and Energy Code, established pursuant to the Title 10, chapter 1103, the activities of the Bureau of Building Codes and Standards under chapter 314 and the activities of the Executive Department, State Planning Office under Title 30-A, section 4451, subsection 3-A,

The fee for review of a plan for the renovation of a public school, including the fee established under section 2450, may not exceed \$450.

Revenue collected from this surcharge must be deposited into the Uniform Building codes and Standards Fund established by section 2374. **Please mail your Surcharge in the amount shown above to the address at the top of this letter.** Thank you in advance for your attention to this matter.

Date Fee received: \_\_\_\_\_

Paid by: \_\_\_\_\_

Check #: \_\_\_\_\_

***Payment for all fees, Construction Fee, Building Code Surcharge & Barrier-Free Fee, may be submitted on one check, payable to Treasurer, State of Maine.***

Central Maine Commerce Center  
45 Commerce Drive  
Augusta, Maine 04333  
(207) 287-6251 (Fax)

(207) 624-7007 (Voice)

(207) 287-3659 (TTY)



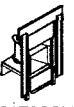
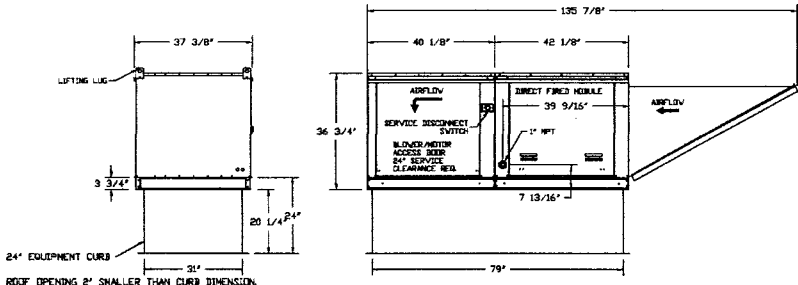
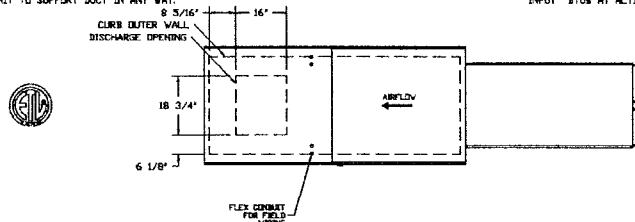


- FAN #2 A2-1250-200 - HEATER (9FT)
1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 20" DIRECT DRIVE FAN
  2. INTAKE HEED WITH 12 FILTERS
  3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
  4. CHILLING INTERLOCK RELAY, 24VAC COIL, 120V CONTACTS, LOCKS OUT BURNER CIRCUIT WHEN AC IS ENERGIZED
  5. AUTORIZED BACK DRAWT DAMPER 22"X 24" FOR SIZE, 2 STANDARD & HIGLWAY HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LF120S ACTUATOR INCLUDED
  6. FULL GRATING FOR COMMERCIAL HEATERS FOR SHIPPING
  7. LOW FIRE START, ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION
  8. GAS PRESSURE GAUGE, 0-35", 2 1/2" DIAMETER, 1/4" THREAD SIZE
  9. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC, 2 1/2" DIAMETER, 1/4" THREAD SIZE
  10. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS, OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREVIEW PANEL OR WITH DCV PACKAGE, PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MAIN SWITCH.
  11. 3 YEAR EXTENDED WARRANTY FOR FAN MOTOR, PARTS ONLY, DOES NOT INCLUDE LABOR.

SUPPLY SIDE HEATER INFORMATION

WINTER TEMPERATURE = 4°F, TEMP. RISE = 71°F.  
BTU<sub>s</sub> CALCULATED OFF ACTUAL AIR DENSITY  
OUTPUT BTU<sub>s</sub> AT ALTITUDE OF 0.0 FT. = 2282753  
INPUT BTU<sub>s</sub> AT ALTITUDE OF 0.0 FT. = 228363  
OUTPUT BTU<sub>s</sub> AT ALTITUDE OF 25 FT. = 202570  
INPUT BTU<sub>s</sub> AT ALTITUDE OF 25 FT. = 220184

NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS, A MINIMUM STRAIGHT DUCT LENGTH EQUAL TO THREE TIMES THE SUPPLY DUCT EQUIVALENT DIAMETER MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE UNLESS OTHERWISE SPECIFIED. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY.



Sheet Final 07/ Profile Curb Assembly

**WARRANTY**  
This warranty does not cover any damage to the equipment and its components caused by misuse, abuse, neglect, or improper installation. The manufacturer's warranty is void if the equipment is not installed in accordance with the manufacturer's instructions. The manufacturer's warranty is void if the equipment is not installed in accordance with the applicable code requirements. The manufacturer's warranty is void if the equipment is not installed in accordance with the applicable code requirements. The manufacturer's warranty is void if the equipment is not installed in accordance with the applicable code requirements.

CUSTOMER APPROVAL TO MANUFACTURE:	
Approved as Noted	<input type="checkbox"/>
Approved with NO Exception Taken	<input type="checkbox"/>
Revised and Resubmit	<input type="checkbox"/>
SERIAL NO.	_____
Your Title	_____

	<b>CAPTIVE AIR</b>	
	JOB Ellsmere #2 r4	
	LOCATION PORTLAND, ME, 04101	
	DATE 3/14/2018	JOB # 3339140
	DWG # 17	DRAWN BY BFC-21
REV.	SCALE 1/4" = 1'-0"	



JOB NO <b>3339140</b>	MODEL NUMBER <b>SC-311110FP</b>	DRAWN BY <b>INSTALL</b>	SCHEMATIC TYPE <b>INSTALL</b>	DESCRIPTION OF OPERATION Fire System #1 CORE Protection, CORE Appliance Retrofit Package with Self-Cleaning, Installed in Hood Utility Cabinet with Integral hood pressure panel.
	JOB NAME <b>Elmère #2 r4</b>	DATE <b>3/14/2018</b>	DATE NO <b>ECP #2-7</b>	

# CORE TOTAL FLOOD PROTECTION SPRINKLER DETAIL

03/06/2017 Rev. 13

BUILDING SPRINKLER CONTRACTOR:  
1. CONNECT CORE WATER LINE TO BUILDING WET SPRINKLER SYSTEM. STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY

FS-1: MASTER

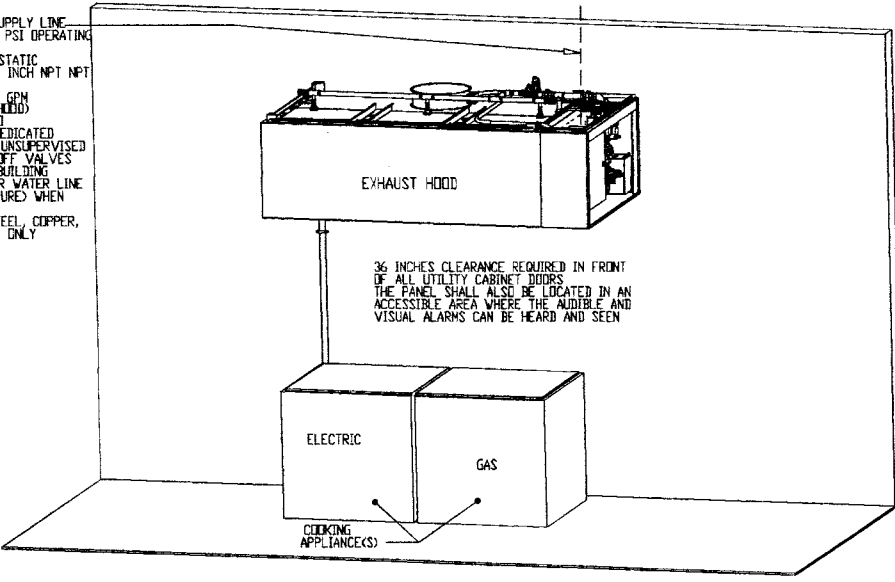
SPRINKLER CONTRACTOR REQUIREMENT					COMMENTS
ITEM	CONNECTION	OPERATING PRESSURE	K-FACTOR	FLOW RATE	
CORE WATER SUPPLY LINE	0.75 INCH NPT	30 PSI TO 70 PSI	3.0	13.50 GPM	WATER LINE MUST BE SUPERVISED AND HAVE NO UNSUPERVISED MANUAL SHUT-OFF VALVES MINIMUM PRESSURE AND FLOWRATE DEPENDENT ON LENGTH OF HOOD SYSTEM

PRESSURE REGULATOR VALVE (PRV)  
-PRV NOT INCLUDED AND MUST BE PROVIDED, INSTALLED, AND ADJUSTED BY THE SPRINKLER CONTRACTOR TO MEET INCOMING PRESSURE REQUIREMENTS  
-A REGULATOR SUCH AS THE ELKHART BRASS MODEL NUMBER URFA-20S-2.5" OR THE UR-20 SERIES PARTS KITS SHOULD BE UTILIZED  
-MUST BE CONFIRMED WITH THE FIRE MARSHAL OR LOCAL AUTHORITY HAVING JURISDICTION (A.H.)

3/4" MINIMUM OPERATING PRESSURE REQUIREMENTS			
LENGTH OF HOOD (FT)	MINIMUM INLET WATER PRESSURE FOR HOT WATER (PSI)	MINIMUM INLET WATER PRESSURE FOR CORE PROTECTION (PSI)	DISCHARGE COEFFICIENTS (K-FACTOR)
4	30	30	1.3
8	30	30	2.6
12	30	30	4.0
16	30	30	5.3
20	31	33	6.4
24	32	36	7.4
28	34	39	8.3
32	37	44	9.0
36	39	49	9.7
40	42	56	10.2
44	46	63	10.6
48	50	70	11.1

TOTAL FLOWRATE = K FACTOR x PRESSURE<sup>0.44</sup>

CORE WATER SUPPLY LINE  
-30 PSI TO 70 PSI OPERATING PRESSURE  
-125 PSI MAX STATIC PRESSURE, 0.75 INCH NPT NPT FITTING  
-13.50 GPM @ 3.0 GPM PER FOOT OF HOOD  
-CONNECTED TO SUPERVISED, DEDICATED LINE WITH NO UNSUPERVISED MANUAL SHUT-OFF VALVES  
-CONNECT TO BUILDING FIRE SPRINKLER WATER LINE (REDUCE PRESSURE) WHEN REQUIRED  
-STAINLESS STEEL, COPPER, OR STEEL PIPE ONLY



36 INCHES CLEARANCE REQUIRED IN FRONT OF ALL UTILITY CABINET DOORS  
THE PANEL SHALL ALSO BE LOCATED IN AN ACCESSIBLE AREA WHERE THE AUDIBLE AND VISUAL ALARMS CAN BE HEARD AND SEEN

NOZZLE PART NUMBER	NOZZLE ABOVE HAZARD	
	MIN	MAX
3070-3/8H-SS10	30"	55"

NOZZLES FOR CORE PROTECTION			
DESCRIPTION	PART NUMBER	NOZZLE	FLOW RATE
RISER NOZZLE	1/4TT+TP1530+CPI325	A0002784	2.6 GPM @ 30 PSI
SPRAY BAR NOZZLE	1/4TT+TG-4.3W	A0025166	6.7 GPM @ 30 PSI

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS



JOB NO <b>3339140</b>	MODEL NUMBER <b>SC-31110FP</b>	DRAWN BY	SCHEMATIC TYPE INSTALL	DESCRIPTION OF OPERATION: Fire System #1 CORE Protection, CORE Appliance Manifold Package with Self-Cleaning, Installed in Hood Utility Cabinet with Integral hood pressure panel.
	JOB NAME <b>Ellsworth #2 r4</b>	DATE 3/14/2018	DWG NO ECP-#2-3	

## CORE TOTAL FLOOD PROTECTION ELECTRICAL DETAIL

03/06/2017 Rev. 12

- ELECTRICIAN  
 1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC  
 2. WIRE ALL FANS PER INCLUDED SCHEMATIC  
 3. WIRE SHUNT TRIP BREAKER (OPTIONAL)  
 4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)  
 5. WIRE GAS VALVE

FS-1: MASTER

### ELECTRICAL CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	35 & N1D (CF 24 VDC) GAS & N1 (CF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC - 2 WIRES & GROUND, N1D TO RED, 35 TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND

