



Non-Water-Based Fire Suppression System Permit

If you or the property owner owes real estate or property taxes or user charges on any property within the city, payment arrangements must be made before permits of any kind are accepted.

Installation address: 25 Fore St. Portland, ME 04101 CBL: _____

Exact location: (within structure) In left hand kitchen hood panel over appliances in 1st floor kitchen

Type of occupancy(s) (NFPA & ICC): Commercial Restaurant

Building owner: East Brown Cow Management (tenant: 5 Guys Burgers & Fries)

Managing Supervisor: Tod Dominski (East Brown Cow) License No: _____

Supervisor phone: 207-650-0606 E-mail: tdominski@eastbrowncow.com

Installing contractor: SimplexGrinnell License No: N/A

Contractor phone: 207-842-6440 (Tim Hinman, ext. 220) E-mail: thinman@simplexgrinnell.com

The suppression work to be done will be: New: Renovation: Addition to existing system:

This is an amendment to an existing permit: Yes: NO: Permit no: _____

System Type: Ansul R102 wet chemical (UL300)

NFPA Standard: 17A & 96 Edition: 2009 & 2008

*Non-NFPA systems are not approved for use within the City of Portland.

Download a new copy of this document from www.portlandmaine.gov/fire for every submittal. Attach all working documents as required on electronic PDF's in addition to full sized plans.

COST OF WORK: \$900.00
PERMIT FEE: \$30.00
(\$10 PER \$1,000 + \$30 FOR THE FIRST \$1,000)

Submit all information to the Building Inspections Department, 389 Congress Street, Room 315, Portland, Maine 04101.

Prior to acceptance of any fire protection system, a complete commissioning and acceptance test must be coordinated with all fire system contractors and the Fire Department, and proper documentation of such test(s) provided.

All installation(s) must comply with NFPA and the Fire Department Technical Standard(s).

Applicant signature: [Signature] Date: March 29, 2011

SimplexGrinnell
20 Thomas Dr.
Westbrook, ME 04092
Tel: 207-842-6440

PROPOSED INSTALLATION

Customer	5 Guys Burgers & Fries
Address	425 Fore St. Portland, ME 04101
Property inspected	(same)
Hazard location	(2) 9' hoods in kitchen over (4) fryers and (2) griddles
System location	Cylinder and controls inside top left hood panel (facing hood)
System Type	Ansul, UL300 wet chemical per NFPA 17A & 96 and Ansul design manual UL EX 3470, dated 7-1-09.
System size	6-gallon (2 cylinders)
Remarks	A. Pre-piped by CaptiveAire, system includes: (2) 3-gallon cylinders, (9) discharge nozzles, (6) fusible link detectors, (1) pull station, (1) 2" mechanical gas shutoff valve and (1) micro-switch for supply air shutdown. (No fire alarm in tenant space.) B. System nozzles: (2) 1N nozzle for plenums, (2) 2W nozzle for ducts, (4) 230 nozzle for 4 fryers. (3) 260 nozzles for 2 griddles.
Installation date	March 29, 2011
Next inspection due	Semi-annual: September 2011, March. 2012 etc.
Installed by	Roger Blanchette



7815A Old Georgetown Rd.
Bethesda, MD 20814
301-986-1676 - office / 301-986-1795 - fax

FIRE SYSTEM PURCHASE ORDER # 1259625-32

SUBCONTRACTOR: Simplex Grinnell
ADDRESS: 20 Thomas Drive
Westbrook, ME 04092
PHONE: (207) 482-2335
EMAIL: thinman@simplexgrinnell.com
ATTENTION: Tim Hinman

DATE: 3/29/2011
JOB NAME: Five Guys - Portland, ME
JOB ADDRESS: 425 Fore Street
Portland, Maine 04101
CONTACT: Tom Burrill
PHONE: (207) 756-2542

SCOPE OF WORK: Contract and coordinate system installation, hookup, and test with jobsite contact person listed above. Secure necessary permits. Furnish all labor and loose parts necessary to complete system installation including required final demonstration and inspection with fire official. **CaptiveAire will not be responsible for any costs incurred as a result of additional trips to the jobsite.** Review attached drawing and parts lists for system details. **Subcontractors must obtain a written change order from CaptiveAire prior to performing any additional work or for additional parts as CaptiveAire will not pay above the issued PO amount.**

Number of Hoods 2 Number of Fire Systems 1 Size of Fire System Ansul 6.0 gal

Type of Fire System: Ansul Pyrochem Other Fire Cabinet: Built In Wall Mount

Late Night Hook Up: Authorized Not Authorized

Complete Field Install: Factory Pre-Piped:

Gas Valve: By Captive-Aire By Distributor Size: by CAPTIVE AIRE
 Mechanical (with air cylinder) Electric (with RESET RELAY)

Total Price for this Installation of Fire System (price includes items listed below excluding permit): \$900.00

- All loose parts not supplied with hood system
- All mileage to jobsite
- Gas valves as indicated above
- System installation costs/hook-up
- Trip test fee if applicable
- All test fees
- All drawing fees

Total Price for Permits (permit & receipt must be attached): \$ Verify # 30.00

PULL PERMITS ASAP AND SEND VERIFICATION OF PERMITS TO CAPTIVE-AIRE

CaptiveAire must approve request for additional fees, parts, labor or any charges not stated on this purchase order prior to performing work in order to receive payment.

Payment will be delayed if the following is not submitted with invoices;

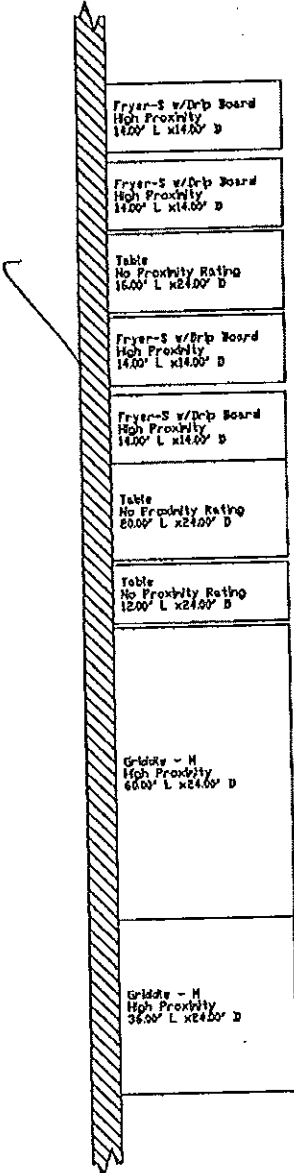
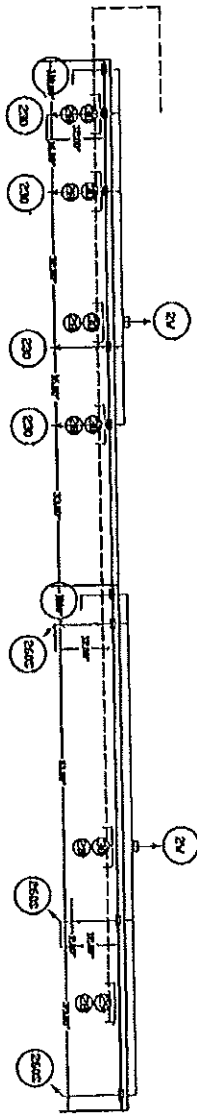
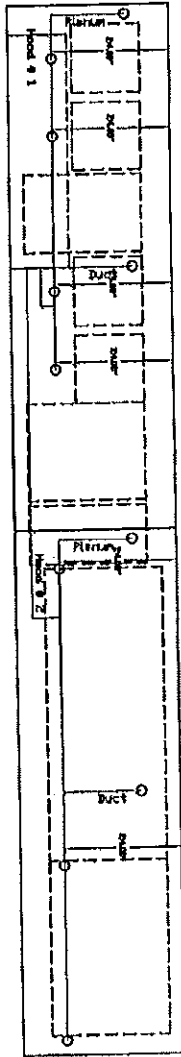
1. Installation certificate indicating installation is complete.
2. Test report signed by authority having jurisdiction.
3. Current Certificate of Insurance on file with Captive-Aire Systems as the certificate holder.
4. Receipt for permits.

Time is of the essence. This contract may be withdrawn by CaptiveAire if not accepted and returned within 24 hours.

For CaptiveAire Phillip Bailey Region 32

For Distributor Tim Hinman Date 3/29/11

Acceptance of contract: The above terms and conditions are satisfactory and hereby accepted.



NOTES

- THE PIPE WORKS AS SHOWN
- THE ONE ELBOWS, TEES, AND NOZZLES SUPPLIED BY GAS
- RELIEF VALVES IF FLOW PATTERN IS BLOCKED BY SHELVS, SALADBARBERS, ETC.
- MAXIMUM 9 ELBOWS IN SUPPLY LINE FROM TANK TO FIRST NOZZLE
- MINIMUM 72 INCHES OF AGENT LINE FROM TANK (ARE SHIPPED LOOSE)
- IF APPLICABLE, PRE-PIPED CHARACTERIZED PIPING ARE SHIPPED LOOSE
- FACTORY PIPING EXTENDS A MAXIMUM OF 8' ABOVE THE TOP OF THE HOOD
- APPLIANCE DIMENSIONS LISTED REPRESENT THE COOKING SURFACE SIZE NOT THE OVERALL APPLIANCE SIZE
- THIS FIRE SYSTEM COMPLEES WITH ALL 300 REQUIREMENTS

Job # 1259625
 Job Name: Five Guys - Portland, NE Gore Street
 Drawn By: [Name]
 System Size: ANSUL-30/30 Total FP required: 20
 Hood # 1: 1' x 17' x 33" Wide x 47" High
 Hood # 2: 1' x 17' x 33" Wide x 47" High
 Hood # 3: 1' x 17' x 33" Wide x 47" High

LEGEND - FIRE CABINET ANSUL SYSTEM

- 1A 15 GALLON TANK
- 1B 3 GALLON TANK
- 2 TEM AUTOMAT RELEASE
- 3 TEM REGULATED RELEASE
- 4 TEM REGULATED ACTUATOR
- 5 ANSUL EX LIQUID AGENT (3 GAL.)
- 6 ANSUL EX LIQUID AGENT (1.5 GAL.)
- 7 CARTRIDGE (010-20)
- 8 CARTRIDGE (010-10)
- 9 CARTRIDGE (010-30)
- 10 CARTRIDGE (010-10)
- 11 DOUBLE TANK CARTRIDGE
- 12 TEST LINK
- 13 HOSE ASSEMBLY
- 14 DIRT NOZZLE (419913)
- 15 NOZZLE ASSEMBLY (419936)
- 16 NOZZLE ASSEMBLY (419937)
- 17 NOZZLE ASSEMBLY (419938)
- 18 NOZZLE ASSEMBLY (419939)
- 19 NOZZLE ASSEMBLY (419940)
- 20 NOZZLE ASSEMBLY (419941)
- 21 NOZZLE ASSEMBLY (419942)
- 22 NOZZLE ASSEMBLY (419943)
- 23 NOZZLE ASSEMBLY (419944)
- 24 NOZZLE ASSEMBLY (419945)
- 25 NOZZLE ASSEMBLY (419946)
- 26 NOZZLE ASSEMBLY (419947)
- 27 NOZZLE ASSEMBLY (419948)
- 28 NOZZLE ASSEMBLY (419949)
- 29 NOZZLE ASSEMBLY (419950)
- 30 NOZZLE ASSEMBLY (419951)
- 31 NOZZLE ASSEMBLY (419952)
- 32 NOZZLE ASSEMBLY (419953)
- 33 NOZZLE ASSEMBLY (419954)
- 34 NOZZLE ASSEMBLY (419955)

Fire System Parts List

Job # 1259625 - Five Guys - Portland, ME (Fore Street)

Location: WESTBROOK, ME

Fire System # 1 **Ansul R102**
 Installed: Top Mount Left Hood #1
 Hoods Covered: Hood # 1 Hood # 2
 Gas Valve(s):

ANSUL-3.0/3.0

Tag:

Qty	Item	CAS #	Vendor #	Description	Price	Dist	CAS	Units	Inst	Loose	Supplied by	Shp
2	1	AT - 3.0	AT - 3.0	TANK(#1B) - 3.0 Gallon SS Tank (for use with Automatic Release, Actuator, or SS Enclosure (UL))		0	2	EACH				
1	3	ANS-OEM	ANS-OEM	REGULATED RELEASE - Ansul Regulated Mechanical Release/Bracket Assembly, OEM, R-102		0	1	EACH				
2	5	LIQ-3.0	79372	AGENT - Ansulox Low PH Wet Chemical Agent, 3 Gallon (UL)	\$395.80	2	0	EACH				
1	9	101-30	101-30	CARTRIDGE - Carbon Dioxide, 101-30, Double Tank Cartridge (R-102)	\$122.41	1	0	EACH				
1	10	TLINK	TLINK	LINK - Test Link Package	\$1.67	1	0	EACH				
1	11	MICRO-SDA	MICRO-SDA	MICROSWITCH - Single Dual Electric Switch, One Standard Switch, One Alarm Duty Switch		0	1	EACH				
1	12	HOSE	79007	HOSE - Rubber Hose		0	1	EACH				
2	13	419337	419337	NOZZLE - 2W Nozzle, Duct		0	2	EACH				
2	16	419335	419335	NOZZLE - 1N Nozzle, Plenum/Appliance		0	2	EACH				
4	21	419339	419339	NOZZLE - 230 Nozzle, Appliance		0	4	EACH				
3	24	419341	419341	NOZZLE - 260 Nozzle, Appliance		0	3	EACH				
1	25	418569	418569	NOZZLE ADAPTOR - Swivel Nozzle Adaptor		0	1	EACH				
11	26	QSA-3/8	QSA-3/8	QUICK SEAL - 3/8" (UL)		0	11	EACH				
5	27	QPSA-1/2	QPSA-1/2	PULLEY SEAL - 1/2" Hood Seal (UL)		0	5	EACH				
6	28	S-DET	S-DET	DETECTOR - Series (Scissor Linkage) NEW#435547/435548 (OLD#417369/434480)		0	6	EACH				
1	29	ANS-360FL	ANS-360FL	FUSIBLE LINK - 360deg F, R-102 and PIRANHA		0	1	EACH				

5	30	ANS-500FL	ANS-500FL	FUSIBLE LINK - 500deg F, R-102 and PIRANHA	0	5	EACH
1	34	RPS-A	RPS-A	REMOTE PULL STATION - Aluminum (without wire rope)	0	1	EACH
6	35	PE-LT	PE-LT	PULLEY ELBOW - Low Temp. Pulley Elbow, Set Screw Type	0	6	EACH
5	36	PE-HT	PE-HT	PULLEY ELBOW - High Temp Pulley Elbow, Compression Type	0	5	EACH

Total List Price for Distributor Parts: \$519.88

Total Distributor Allowance: \$311.93



by Tyco Fire Suppression & Blanking Products

R-102™ RESTAURANT FIRE SUPPRESSION SYSTEMS Data/Specifications

FEATURES

- Low pH Agent
- Proven Design
- Reliable Gas Cartridge Operation
- Aesthetically Appealing
- UL Listed – Meets Requirements of UL 300
- ULC Listed – Meets Requirements of ULC/ORD-C1254.6
- CE Marked

APPLICATION

The ANSUL® R-102™ Restaurant Fire Suppression System is an automatic, pre-engineered, fire suppression system designed to protect areas associated with ventilating equipment including hoods, ducts, plenums, and filters. The system also protects auxiliary grease extraction equipment and cooking equipment such as fryers; griddles and range tops; upright, natural charcoal, or chain-type broilers; electric, lava rock, mesquite, or gas-radiant char-broilers; and woks.

The system is ideally suitable for use in restaurants, hospitals, nursing homes, hotels, schools, airports, and other similar facilities.

Use of the R-102 system is limited to indoor applications or locations that provide weatherproof protection within tested temperature limitations. The regulated release and tank assemblies must be mounted in an area where the air temperature will not fall below 32 °F (0 °C) or exceed 130 °F (54 °C). The system must be designed and installed within the guidelines of the UL/ULC Listed Design, Installation, Recharge, and Maintenance Manual.

SYSTEM DESCRIPTION

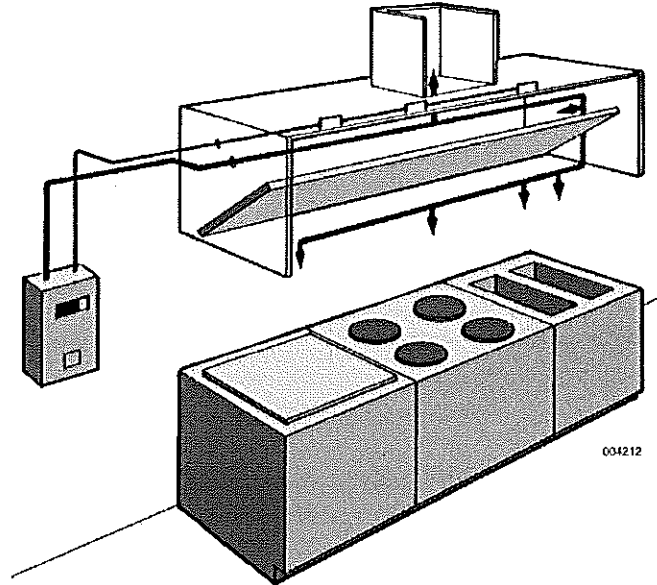
The restaurant fire suppression system is a pre-engineered, wet chemical, cartridge-operated, regulated pressure type with a fixed nozzle agent distribution network. It is listed with Underwriters Laboratories, Inc. (UL/ULC).



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The system is capable of automatic detection and actuation as well as remote manual actuation. Additional equipment is available for building fire alarm panel connections, electrical shutdown and/or interface, and mechanical or electrical gas line shut-off applications.

The detection portion of the fire suppression system allows for automatic detection by means of specific temperature-rated alloy type fusible links, which separate when the temperature exceeds the rating of the link, allowing the regulated release to actuate.



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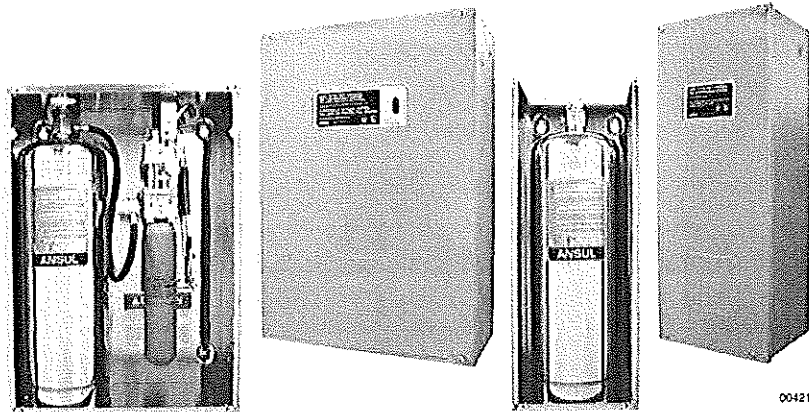
A system owner's guide is available containing basic information pertaining to system operation and maintenance. A detailed technical manual, including system description, design, installation, recharge and resetting instructions, and maintenance procedures, is available to qualified individuals.

The system is installed and serviced by authorized distributors that are trained by the manufacturer.

The basic system consists of an ANSUL AUTOMAN® regulated release assembly which includes a regulated release mechanism and a wet chemical storage tank housed within a single enclosure. Nozzles with blow-off caps, detectors, cartridges, agent, fusible links, and pulley elbows are supplied in separate packages in the quantities needed for fire suppression system arrangements.

Additional equipment includes a remote manual pull station(s), mechanical and electrical gas valves, and electrical switches for automatic equipment and gas line shut-off. Accessories can be added such as alarms, warning lights, etc., to installations where required.

Additional tanks and corresponding equipment can be used in multiple arrangements to allow for larger hazard coverage. Each tank is limited to a listed maximum amount of flow numbers.



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COMPONENT DESCRIPTION

Wet Chemical Agent – The extinguishing agent is a mixture of organic salts designed for rapid flame knockdown and foam securement of grease related fires. It is available in plastic containers with instructions for wet chemical handling and usage.

Agent Tank – The agent tank is installed in a stainless steel enclosure or wall bracket. The tank is constructed of stainless steel.

Tanks are available in two sizes: 1.5 gallon (5.7 L) and 3.0 gallon (11.4 L). The tanks have a working pressure of 110 psi (7.6 bar), a test pressure of 330 psi (22.8 bar), and a minimum burst pressure of 660 psi (45.5 bar).

The tank includes an adaptor/tube assembly. The adaptor assembly includes a chrome-plated steel adaptor with a 1/4 in. NPT female gas inlet, a 3/8 in. NPT female agent outlet, and a stainless steel agent pick-up tube. The adaptor also contains a bursting disc seal which helps to prevent the siphoning of agent up the pipe during extreme temperature variations.

Regulated Release Mechanism – The regulated release mechanism is a spring-loaded, mechanical/pneumatic type capable of providing the expellant gas supply to one, two, or three agent tanks depending on the capacity of the gas cartridge used. It contains a factory installed regulator deadset at 110 psi (7.6 bar) with an external relief of approximately 180 psi (12.4 bar). It has automatic actuation capabilities by a fusible link detection system and remote manual actuation by a mechanical pull station.

The regulated release mechanism contains a release assembly, regulator, expellant gas hose, and agent storage tank housed in a stainless steel enclosure with cover. The enclosure contains knock-outs for 1/2 in. conduit. The cover contains an opening for a visual status indicator.

It is compatible with mechanical gas shut-off devices; or, when equipped with a field or factory-installed switch and manual reset relay, it is compatible with electric gas line or appliance shut-off devices.

Regulated Actuator Assembly – When more than two agent tanks (or three 3.0 gallon (11.4 L) tanks in certain applications) are required, the regulated actuator is available to provide expellant gas for additional tanks. It is connected to the cartridge receiver outlet of the regulated release mechanism providing simultaneous agent discharge. It contains a regulated actuator deadset at 110 psi (7.6 bar) with an external relief of approximately 180 psi (12.4 bar). It has automatic actuation capabilities using pressure from the regulated release mechanism cartridge.

The regulated actuator assembly contains an actuator, regulator, expellant gas hose, and agent tank housed in a stainless steel enclosure with cover. The enclosure contains knockouts to permit installation of the expellant gas line.

Discharge Nozzles – Each discharge nozzle is tested and listed with the R-102 system for a specific application. Nozzle tips are stamped with the flow number designation (1/2, 1, 2, or 3). Each nozzle must have a metal or rubber blow-off cap to keep the nozzle tip orifice free of cooking grease build-up.

Agent Distribution Hose – Kitchen appliances manufactured with or resting on casters (wheels/rollers) may include an agent distribution hose as a component of the suppression system. This allows the appliance to be moved for cleaning purposes without disconnecting the appliance fire suppression protection. The hose assembly includes a restraining cable kit to limit the appliance movement within the range (length) of the flexible hose.

Flexible Conduit – Flexible conduit allows for quicker installations and the convenience of being able to route the cable over, under and around obstacles. Flexible conduit can be used as a substitute for standard EMT conduit or can be used with EMT conduit.

Flexible conduit can be used only with the Molded Remote Manual Pull Station.

Pull Station Assembly – The remote manual pull station is made out of a molded red composite material. The red color makes the pull station more readily identifiable as the manual means for fire suppression system operation.

The pull station is compatible with the ANSUL Flexible Conduit.

APPROVALS

- UL/ULC Listed
- CE Marked
- New York City Department of Buildings
- LPCB
- TFRI
- Marine Equipment Directive (MED)
- DNV
- ABS
- Lloyd's Register
- Meets requirements of NFPA 96 (Standard for the Installation of Equipment for the Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment)
- Meets requirements of NFPA 17A (Standard on Wet Chemical Extinguishing Systems)

ORDERING INFORMATION

Order all system components through your local authorized ANSUL Distributor.

SPECIFICATIONS

An ANSUL R-102 Fire Suppression System shall be furnished. The system shall be capable of protecting all hazard areas associated with cooking equipment.

1.0 GENERAL

1.1 References

- 1.1.1 Underwriters Laboratories, Inc. (UL)
 - 1.1.1.1 UL Standard 1254
 - 1.1.1.2 UL Standard 300
- 1.1.2 Underwriters Laboratories of Canada (ULC)
 - 1.1.2.1 ULC/ORD-C 1254.6
- 1.1.3 National Fire Protection Association (NFPA)
 - 1.1.3.1 NFPA 96
 - 1.1.3.2 NFPA 17A

1.2 Submittals

- 1.2.1 Submit two sets of manufacturer's data sheets
- 1.2.2 Submit two sets of piping design drawings

1.3 System Description

- 1.3.1 The system shall be an automatic fire suppression system using a wet chemical agent for cooking grease related fires.
- 1.3.2 The system shall be capable of suppressing fires in the areas associated with ventilating equipment including hoods, ducts, plenums, and filters as well as auxiliary grease extraction equipment. The system shall also be capable of suppressing fires in areas associated with cooking equipment, such as fryers; griddles and range tops; upright, natural charcoal, or chain-type broilers; electric, lava rock, mesquite or gas-radiant char-broilers; and woks.
- 1.3.3 The system shall be the pre-engineered type having minimum and maximum guidelines established by the manufacturer and listed by Underwriters Laboratories (UL/ULC).
- 1.3.4 The system shall be installed and serviced by personnel trained by the manufacturer.
- 1.3.5 The system shall be capable of protecting cooking appliances by utilizing either dedicated appliance protection and/or overlapping appliance protection.

1.4 Quality Control

- 1.4.1 Manufacturer: The R-102 Restaurant Fire Suppression System shall be manufactured by a company with at least forty years experience in the design and manufacture of pre-engineered fire suppression systems. The manufacturer shall be ISO 9001 registered.
- 1.4.2 Certificates: The wet agent shall be a specially formulated, aqueous solution of organic salts with a pH range between 7.7 – 8.7, designed for flame knock-down and foam securement of grease-related fires.

1.5 Warranty, Disclaimer, and Limitations

- 1.5.1 The pre-engineered restaurant fire suppression system components shall be warranted for five years from date of delivery against defects in workmanship and material.

1.6 Delivery

- 1.6.1 Packaging: All system components shall be securely packaged to provide protection during shipment.

1.7 Environmental Conditions

- 1.7.1 The R-102 system shall be capable of operating within a temperature range of 32 °F to 130 °F (0 °C to 54 °C).

2.0 PRODUCT

2.1 Manufacturer

- 2.1.1 Tyco Fire Suppression & Building Products, One Stanton Street, Marinette, Wisconsin 54143-2542, Telephone (715) 735-7411.

2.2 Components

- 2.2.1 The basic system shall consist of an ANSUL AUTOMAN regulated release assembly which includes a regulated release mechanism and a wet chemical storage tank housed within a single enclosure. Nozzles, blow-off caps, detectors, cartridges, agent, fusible links, and pulley elbows shall be supplied in separate packages in the quantities needed for fire suppression system arrangements. Additional equipment shall include remote manual pull station, mechanical and electrical gas valves, and electrical switches for automatic equipment and gas line shut-off, and building fire alarm control panel interface.
- 2.2.2 Wet Chemical Agent: The extinguishing agent shall be a specially formulated, aqueous solution of organic salts with a pH range between 7.7 – 8.7, designed for flame knockdown and foam securement of grease related fires.
- 2.2.3 Agent Tank: The agent tank shall be installed in a stainless steel enclosure or wall bracket. The tank shall be constructed of stainless steel. Tanks shall be available in two sizes; 1.5 gallon (5.7 L) and 3.0 gallon (11.4 L). The tank shall have a working pressure of 110 psi (7.6 bar), a test pressure of 330 psi (22.8 bar), and a minimum burst pressure of 660 psi (45.5 bar). The tank shall include an adaptor/tube assembly containing a burst disc union.
- 2.2.4 Regulated Release Mechanism: The regulated release mechanism shall be a spring-loaded, mechanical/pneumatic type capable of providing the expellant gas supply to one or two agent tanks depending on the capacity of the gas cartridge used or three 3.0 gallon (11.4 L) agent storage tanks in certain applications. It shall contain a factory installed regulator deadset at 110 psi (7.6 bar) with an external relief of approximately 180 psi (12.4 bar).
It shall have the following actuation capabilities: automatic actuation by a fusible link detection system and remote manual actuation by a mechanical pull station.
The regulated release mechanism shall contain a release assembly, regulator, expellant gas hose, and agent storage tank housed in a stainless steel enclosure with cover. The enclosure shall contain knock-outs for 1/2 in. conduit. The cover shall contain an opening for a visual status indicator.
It shall be compatible with mechanical gas shut-off devices; or, when equipped with a field or factory-installed switch(es), it shall be compatible with electric gas line or appliance shut-off devices, or connections to a building fire alarm control panel.
- 2.2.5 Regulated Actuator Assembly: When more than two agent tanks or three agent tanks in certain applications are required, the regulated actuator shall be available to provide expellant gas for additional tanks. It shall be connected to the cartridge receiver outlet of the regulated release mechanism providing simultaneous agent discharge. The regulator shall be deadset at 110 psi (7.6 bar) with an external relief of approximately 180 psi (12.4 bar). The regulated actuator assembly shall contain an actuator, regulator, expellant gas hose, and agent tank housed in a stainless steel enclosure with cover. The enclosure shall contain knockouts to permit installation of the expellant gas line.
- 2.2.6 Discharge Nozzles: Each discharge nozzle shall be tested and listed with the R-102 system for a specific application. Nozzles tips shall be stamped with the flow number designation (1/2, 1, 2, or 3). Each nozzle shall have a metal or rubber blow-off cap to keep the nozzle tip orifice free of cooking grease build-up.

SPECIFICATIONS

2.0 PRODUCT (Continued)

2.2 Components (Continued)

- 2.2.7 **Distribution Piping:** Distribution piping shall be Schedule 40 black iron, chrome-plated, or stainless steel conforming to ASTM A120, A53, or A106.
- 2.2.8 **Detectors:** The detectors shall be the fusible link style designed to separate at a specific temperature.
- 2.2.9 **Cartridges:** The cartridge shall be a sealed steel pressure vessel containing either carbon dioxide or nitrogen gas. The cartridge seal shall be designed to be punctured by the releasing device supplying the required pressure to expel wet chemical agent from the storage tank.
- 2.2.10 **Agent Distribution Hose:** An optional agent distribution hose shall be available for kitchen appliances manufactured with or resting on casters (wheels/rollers). This shall allow the appliance to be moved for cleaning purposes without disconnecting the appliance fire suppression protection. Hose assembly shall include a restraining cable kit to limit the appliance movement within the range (length) of the flexible hose.
- 2.2.11 **Flexible Conduit:** The manufacturer supplying the Restaurant Fire Suppression System shall offer flexible conduit as an option to rigid EMT conduit for the installation of pull stations and/or mechanical gas valves. The flexible conduit shall be UL Listed and include all approved components for proper installation.
- 2.2.12 **Pull Station Assembly:** The Fire Suppression System shall include a remote pull station for manual system actuation. The pull station shall be designed to include a built-in guard to protect the pull handle. The pull station shall also be designed with a pull handle to allow for three finger operation and shall be red in color for quick visibility.

3.0 IMPLEMENTATION

3.1 Installation

- 3.1.1 The R-102 fire suppression system shall be designed, installed, inspected, maintained, and recharged in accordance with the manufacturer's listed instruction manual.

3.2 Training

- 3.2.1 Training shall be conducted by representatives of the manufacturer.

► Indicates revised information

ANSUL, ANSUL AUTOMAN, and R-102 are trademarks of Tyco Fire Suppression & Building Products or its affiliates.