



*The Authoritative Source for*  
**Customized Fire & Safety Protection**  
*Serving Chicagoland since 1960*



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**Since 1960**

# IFIA

# Kitchen Hood Fire System Training

Presented by: John Rothenberger

November 16, 2012

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EXPERIENCED. KNOWLEDGEABLE. RELIABLE. COMPREHENSIVE. INNOVATIVE.



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# Areas of Service & Protection

## Fire Alarm Systems

- Voice Evacuation
- Elevator Recall
- Area of Rescue Assistance
- High Rise Life Safety

## 24-Hour Monitoring Service For Fire Alarm & Security Systems

- Central Station
- Direct Connect and Radio Networks
- Municipal Keltron Radio Networks

## Fire Extinguishers

- Cabinets
- On-Site Fire Training

## Sprinkler Service

- System Service
- Backflow and Fire Pump Testing

## Restaurant Kitchen Hood Fire Suppression

## Security Systems

- Card Access
- Apartment Access
- Camera Security (CCTV)
- Door Entry.
- Medical Alert
- Central Vacuum

## Engineered Fire Suppression Systems

- FM200
- Sapphire
- CO<sub>2</sub>
- Dry Chemical Suppression
- Fire Door Testing
- Vehicle Fire Suppression

## Emergency & Exit Lighting



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# Response Time



## Rapid response time for all emergency calls

- Every specific Fire Protection Service has an on call service technician specialist to respond to any emergency 24 / 7 / 365.
- The dispatch manager evaluates the emergency and dispatches the proper response.

**EMERGENCY**  
**24**  
Hour  
**SERVICE**



## Providing Service 24 / 7 / 365

Our Fox Valley Fire & Safety employees are on duty to answer the call, 7:00 a.m. Monday through 4:00 p.m. Saturday. During the brief hours between 4:00 p.m. Saturday and 7:00 a.m. Monday, we have a competent Answering Service, who always contacts our On Call personnel to quickly respond. We also have Fox Valley Fire & Safety senior managers on call for emergency calls and dispatch. Fox Valley Fire & Safety and our employees are committed to providing quality service 24 / 7 / 365.



## Response time is tracked

- Each vehicle has a tracker, depending on the vehicle's location it is dispatched accordingly.
- Our vehicle tracker system allows us to know where every vehicle is at any given time.

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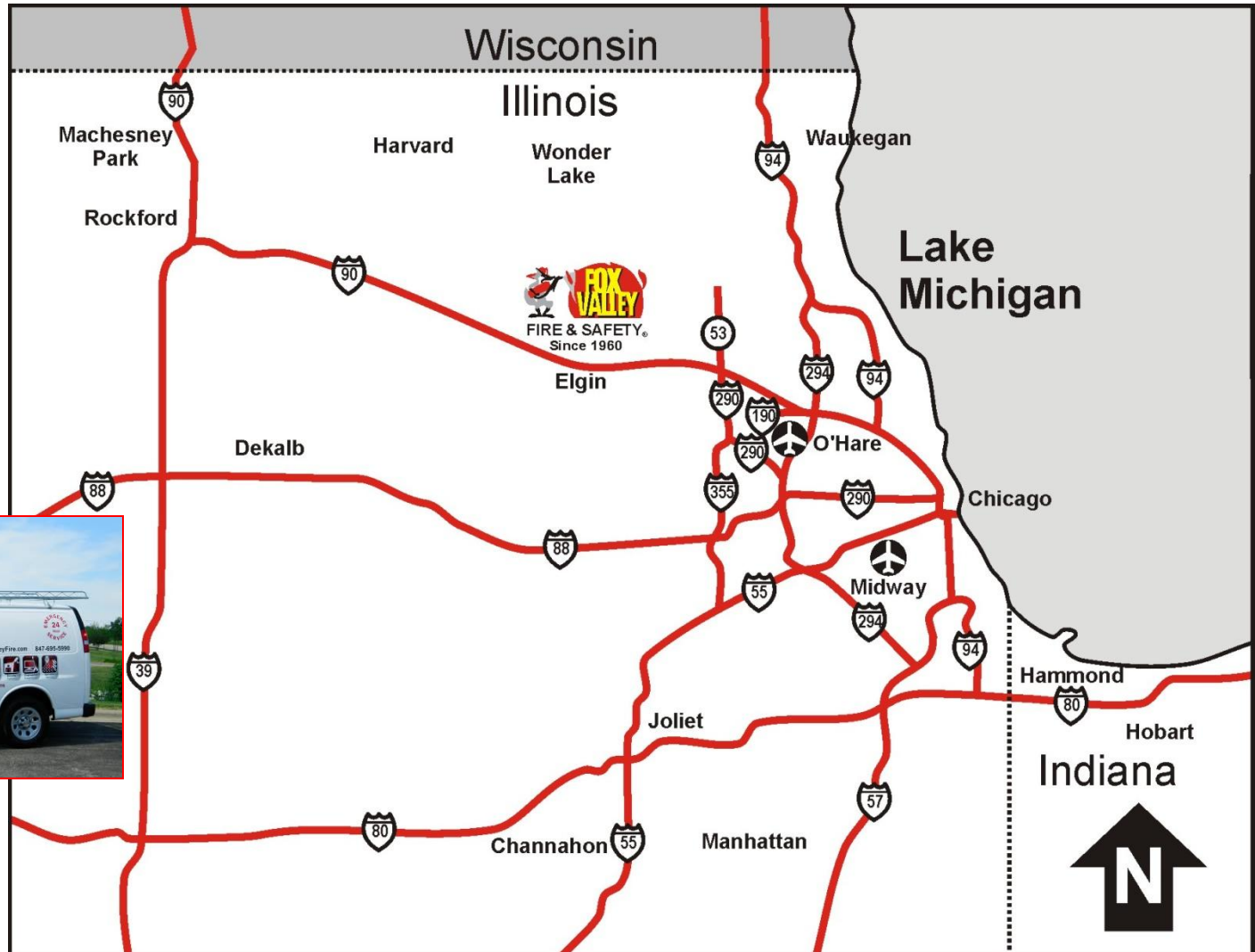
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# Service Area



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# Overview

Fox Valley Fire & Safety is the one company that does it all. We meet all of the fire and safety needs of our customers from on-site surveys, design, engineering, installation, monitoring, service, inspection and repairs, to the testing required to assure compliance with local codes. Our technicians are well-trained, uniformed, licensed professionals.

Our goal is to simply deliver the best fire and life safety products and services in the market. As a leader in the life and property protection industry, Fox Valley Fire & Safety has the resources to provide the fast response and the quality customer service our customers deserve. We are the one company that does it all.

**Recently  
Celebrated  
Our 50<sup>th</sup> Year  
Anniversary**

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# Administration

## Joint Committee on Administrative Rules

## ADMINISTRATIVE CODE

### TITLE 41: FIRE PROTECTION

#### CHAPTER I: OFFICE OF THE STATE FIRE MARSHAL

#### PART 251 FIRE EQUIPMENT DISTRIBUTOR AND EMPLOYEE STANDARDS

#### SECTION 251.120 EXISTING DRY CHEMICAL AND WET CHEMICAL FIRE EXTINGUISHING SYSTEMS

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#### Section 251.120 Existing Dry Chemical and Wet Chemical Fire Extinguishing Systems

- a) All existing dry chemical and wet chemical fire extinguishing systems installed for the protection of commercial cooking operations that produce grease-laden vapors shall comply with the UL 300 "Standard for Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment", identified in NFPA 17, 17A, and 96.
- b) All existing extinguishing systems shall comply by January 1, 2010, except as otherwise permitted in subsection (c).
- c) All existing extinguishing systems installed in occupancies that are owned or operated by a governmental entity shall comply by January 1, 2011.

(Source: Added at 32 Ill. Reg. 16860, effective October 1, 2008)

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# Administration

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1960-2010

2730 PINNACLE DRIVE, ELGIN, IL 60124  
PHONE 847-555-5950 / FAX 847-555-3099

NO: 50530452

Date: 5/16/11  
ServTech: 48  
FDB: 141

**Commercial Cooking System Service And Inspection Report**

Customer ID: 44755 Site #: 11  
MARION STREET CHEESE MARKET  
102 S MARION ST  
DAK PARK, IL 60302

Manufacturer Of System To Be Serviced: Ansul  
Model No. Of System: R102 3 gallon  
Service Date: 1/6/11

SYSTEM MEETS UL 300 ☒ YES ☐ NO  
☒ SEMI-ANNUAL ☐ ANNUAL

Gas Shut Off <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If Yes: <input checked="" type="checkbox"/> Mechanical Valve <input type="checkbox"/> Solenoid Valve	
Electric Shut Off <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	System Tied to Building Fire Alarm <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Number of Pienum Nozzles <u>3</u>	Number of Duct Nozzles <u>1</u>	Number of Links <u>4</u>
Number of Surface Nozzles <u>3</u>	Wet Chemical Fire Extinguisher <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

1. Check general system design against hazard  
2. Check pressure gauge 41 PSI  
3. All lead and wire seals are intact  
4. There are no visible signs that system(s) has fired or been tampered with. If so, check & report  
5. Remove and weigh cartridge 41 oz. Date 08  
6. Check dischemical and system components  
7. Check all piping and conduit, must be immobilized with proper hangers and brackets  
8. Check positioning of all nozzles  
9. Check action on self-closing caps  
10. Confirm all nozzles have protective covers  
11. System operated manually  
12. System operated automatically by cutting terminal link  
13. Test proper operation of gas valve(s)  
14. Test proper operation of micro switch  
15. Check operation of multiple systems  
16. Replace and seal all safety pins in manual & remote releases  
17. Fuel shut-off is on ON POSITION  
18. Check exhaust fan for operating order  
19. Clean system cylinder & component parts  
20. Fan warning sign on hood  
21. Distributor emergency phone number on system  
22. Inspection & service tag are on system  
23. Personnel has been instructed on manual operation of system(s)  
24. Proper hand portable extinguishers properly serviced

Date: 1-6-11 Serviceman's Signature: BL 48

Discrepancies

<input type="checkbox"/> 1. Mechanical gas valve is not working	<input type="checkbox"/> 9. Insufficient or improper location of detectors
<input type="checkbox"/> 2. Solenoid Gas Valve is not working	<input type="checkbox"/> 10. Detection line not working
<input type="checkbox"/> 3. Electric Shutdown is not working	<input type="checkbox"/> 11. Upright broiler line disconnected
<input type="checkbox"/> 4. Fire Alarm Tie in is not working	<input type="checkbox"/> 12. Extreme grease build-up
<input checked="" type="checkbox"/> 5. Appliance(s) has been moved	<input type="checkbox"/> 13. Found nozzle misdirected over cooking appliance(s)
<input type="checkbox"/> 6. No surface protection	<input type="checkbox"/> 14. System on manual operation only
<input type="checkbox"/> 7. Hand pull(s) not accessible	<input type="checkbox"/> 15. System Tank/Cartridges due for Hydro test
<input type="checkbox"/> 8. Inadequate surface protection	<input type="checkbox"/> 16. Others

Comments: Fryer needs to be moved All the way to left and Grill under Cheese melter to be correct OR Re piping needed. Employees will tell chef when he gets in at noon today

Customer Signature: [Signature]

PURCHASER HEREBY AUTHORIZES SELLER TO PROVIDE AND AGREE TO THE FOLLOWING: ALL WORK AND MATERIALS FOR SERVICES RENDERED BY ACCORDANCE WITH SUPPLIER'S CUSTOMARY PRACTICES AND CHARGES AND PURCHASER ACKNOWLEDGES THAT PURCHASER HAS READ, FULLY UNDERSTANDS, AND AGREES TO THE CONTENT OF THIS AGREEMENT, INCLUDING THE TERMS AND CONDITIONS CONTAINED ON THE REVERSE SIDE HEREON, AS THOUGH THE SAME WERE FULLY SET FORTH IN WRITING.

FIRE DEPT.



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# UL 300

The three major changes in fire testing included:

- a. The use of commercially available appliances that met specific heat up and cool down rates.
- b. The use of vegetable shortening with more severe burning characteristics (auto-ignition temperatures of 685°F or higher).
- c. Continued operation of the fuel / heat source during a two-minute pre-burn time instead of turning the appliance off prior to a one-minute pre-burn.



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# UL 300

UL 300 test protocol changes made to improve  
*(example) fryer protection?*

- A. Test appliance requirement was changed from a fabricated pan *(to simulate a fryer)* to a commercial gas fryer with specified heating and cooling rates.
- B. One minute pre-burn after auto-ignition was changed to two minute pre-burn.
- C. Appliance fuel-off condition during pre-burn was changed to appliance fuel-on condition.
- D. Minimum grease auto-ignition temp of 685°F was added.



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# Ansul R-102



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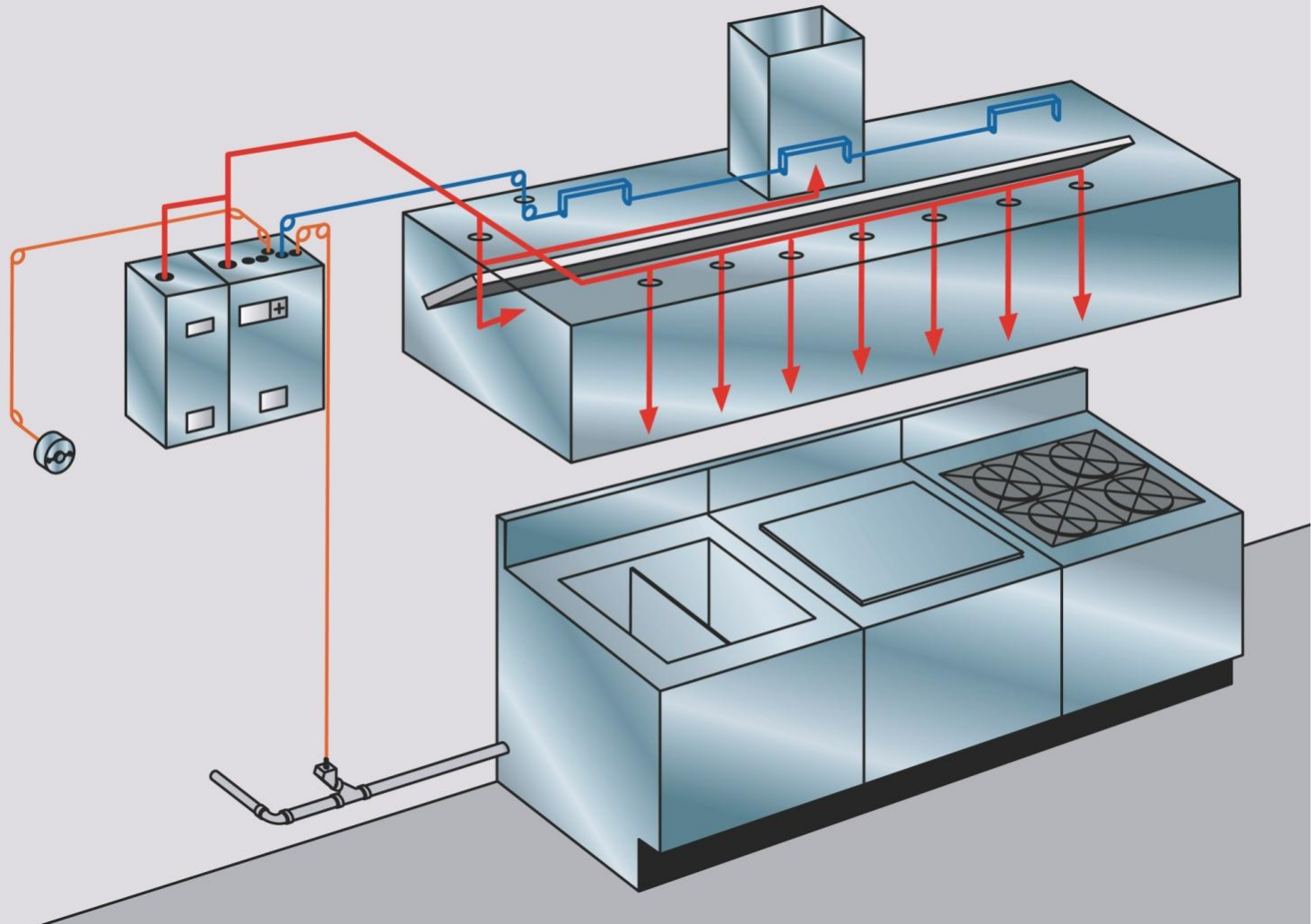






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# Ansul R-102



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# System Activation



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# System Activation



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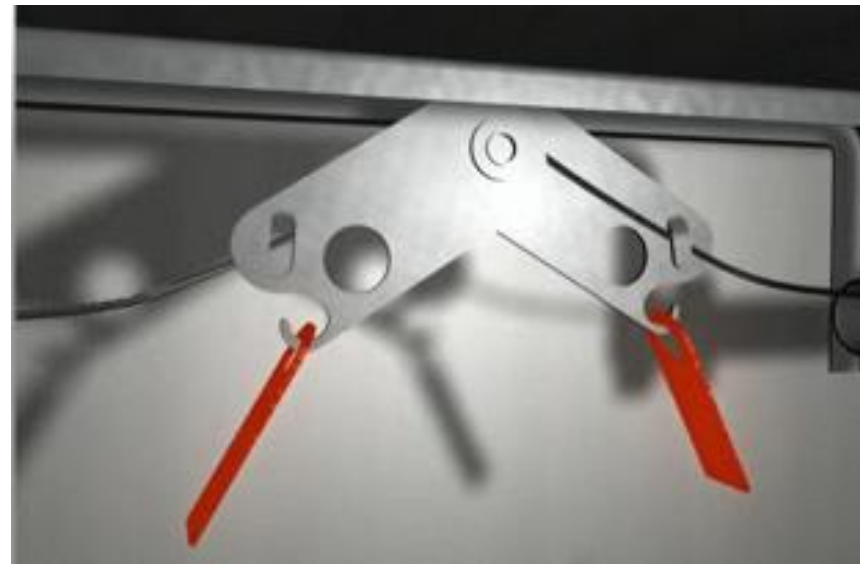
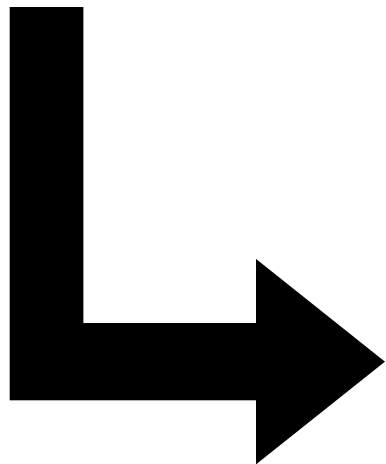
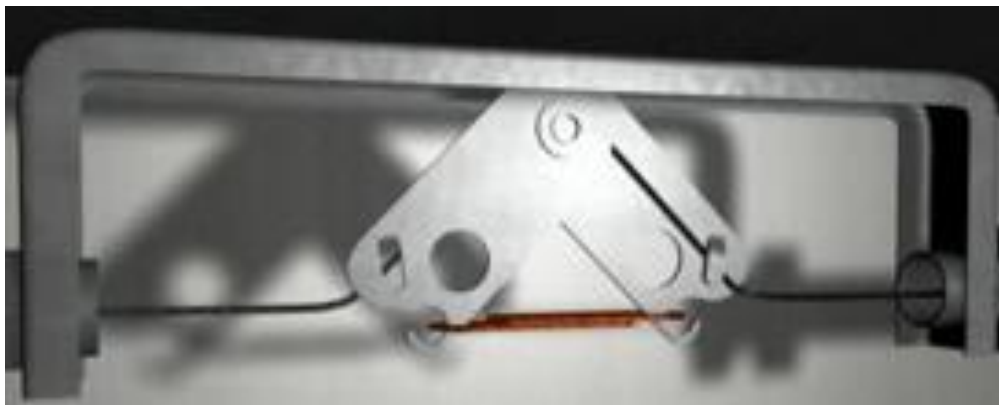
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# Ansul R-102 Link



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# NFPA 17A: Code Requirements

7.3.4 – Fixed temperature-sensing elements of the fusible metal alloy type shall be replaced at least semiannually from the date of installation, or more frequently if necessary. They shall be destroyed when removed.

7.3.4.1 – The year of manufacture and the date of installation of the fixed temperature-sensing element shall be marked on the system inspection tag. The tag shall be signed or initialed by the installer.

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# Ansul R-102 Pull Station



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# Appropriate System Tagging

**4.4.2.1** Manual actuators shall not require a force of more than 40 lbs (178 N).

**4.4.2.2** Manual actuators shall not require a movement of more than 14 in. (356 mm) to secure operation.

**4.4.2.3** All manual actuators shall be provided with operating instructions.

**4.4.2.4** These instructions shall be permitted to include the use of pictographs and shall have lettering at least 1/4 in. (6.35 mm) in height.

**4.4.2.5** All remote manual operating devices shall be identified as to the hazard they protect.



# Ansul R-102 System Activation



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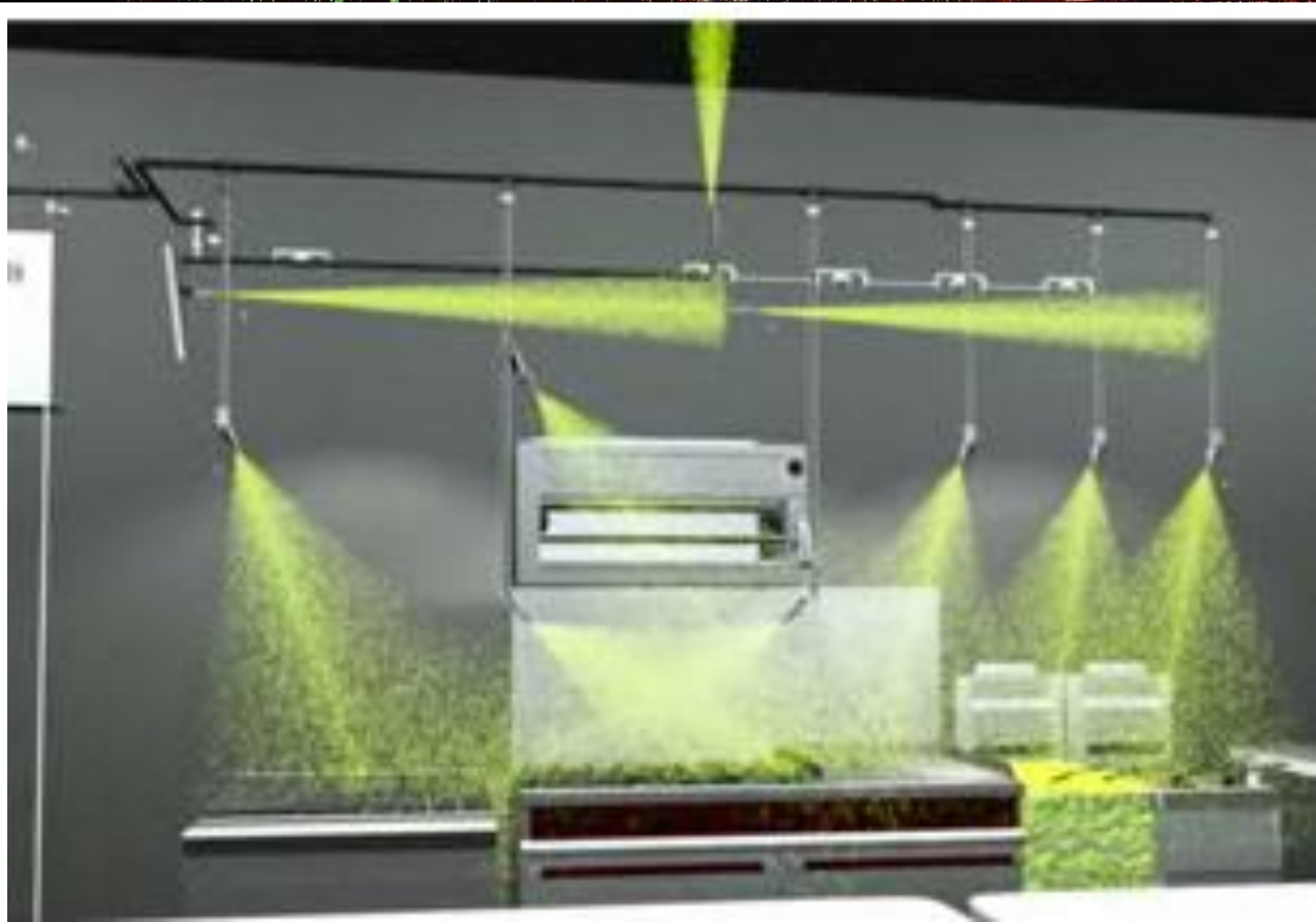
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# Ansul R-102 System Activation



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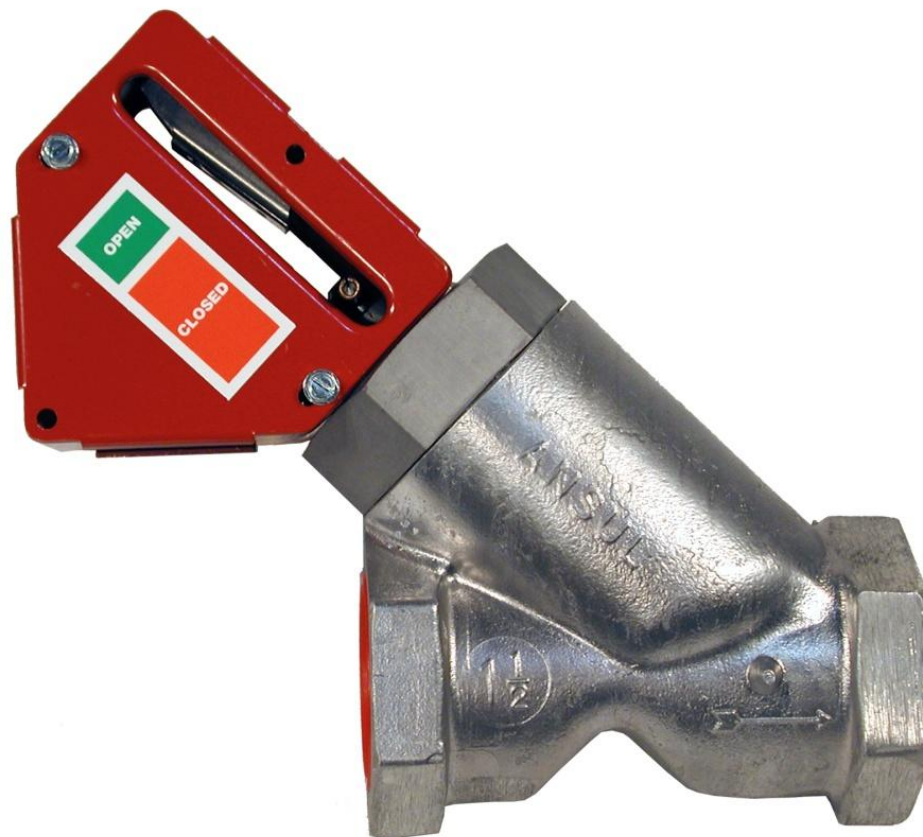
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# Ansul R-102 1½-Inch Mechanical Gas Valve



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# Ansul R-102 Microswitch



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# NFPA 17A



**National Fire Protection Association**  
The authority on fire, electrical, and building safety

## 2009 NFPA 17A: Standard for Wet Chemical Extinguishing Systems

# NFPA 17A: Code Requirements

7.3.2 – A service technician who has the applicable manufacturer's listed installation and maintenance manual and service bulletins shall service the wet chemical fire extinguishing system at intervals no more than 6 months apart as outlined in 7.3.3.

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# NFPA 17A: Code Requirements

7.3.3 –At least semiannually, maintenance shall be conducted in accordance with the manufacturer's listed installation and maintenance manual.



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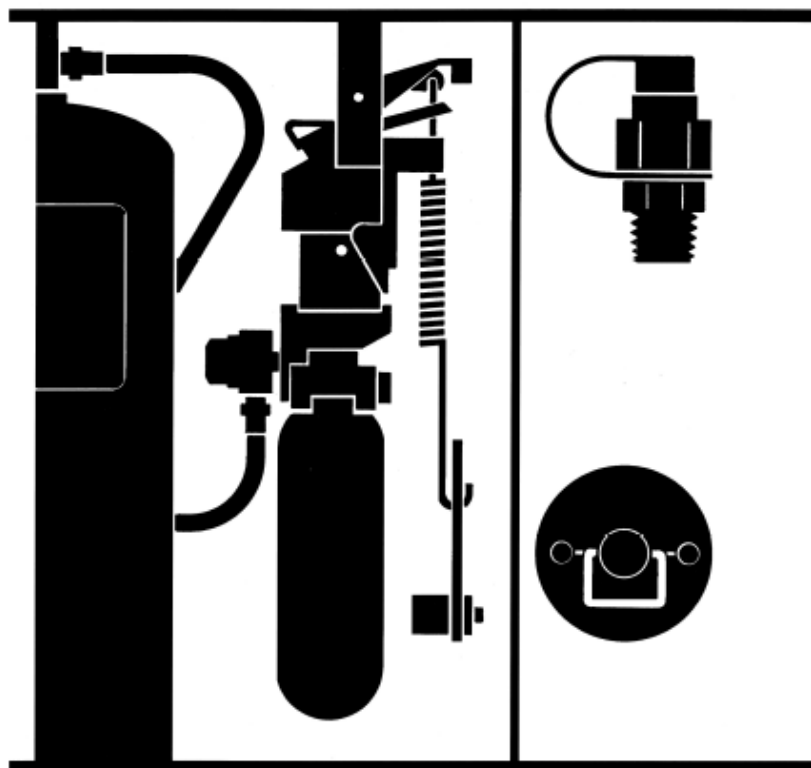
# Ansul R-102 Installation Manual



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## **R-102 RESTAURANT FIRE SUPPRESSION SYSTEM**

Design, Installation, Recharge and Maintenance Manual

**ANSUL**



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# Ansul R-102 Installation Manual

Ansul Installation Manual States – The maintenance information listed in this section deals with the limitations and parameters of this pre-engineered system. Those individuals responsible for the maintenance of the R-102 system must be trained and hold a current Ansul certificate in an R-102 training program.



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# NFPA 17A: Code Requirements

**7.3.1\*** A service technician who performs maintenance on an extinguishing system shall be trained and shall have passed a written or online test that is acceptable to the authority having jurisdiction.

**7.3.1.1** The service technician shall possess a certification document confirming the requirements in 7.3.1 and issued by the manufacturer or testing organization that is acceptable to the authority having jurisdiction.

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# NFPA 17A: Code Requirements

## 7.3.3.1 – Maintenance shall include the following:

- A Check to see that the hazard has not changed.
- An examination of all detectors, the expellant gas container(s), releasing devices, piping, hose assemblies, nozzles, signals, all auxiliary equipment, and the liquid level of all non-pressurized wet chemical containers.

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# NFPA 17A: Code Requirements

**7.2.1** On a monthly basis, inspection shall be conducted in accordance with the manufacturer's listed installation and maintenance manual or the owner's manual.

**7.2.2** At a minimum, this "quick check" or inspection shall include verification of the following:

- (1) The extinguishing system is in its proper location.
- (2) The manual actuators are unobstructed.
- (3) The tamper indicators and seals are intact.
- (4) The maintenance tag or certificate is in place.
- (5) No obvious physical damage or condition exists that might prevent operation.
- (6) The pressure gauge(s), if provided, shall be inspected physically or electronically to ensure it is in the operable range.
- (7) The nozzle blowoff caps, where provided, are intact and undamaged.
- (8) Neither the protected equipment nor the hazard has not been replaced, modified, or relocated.

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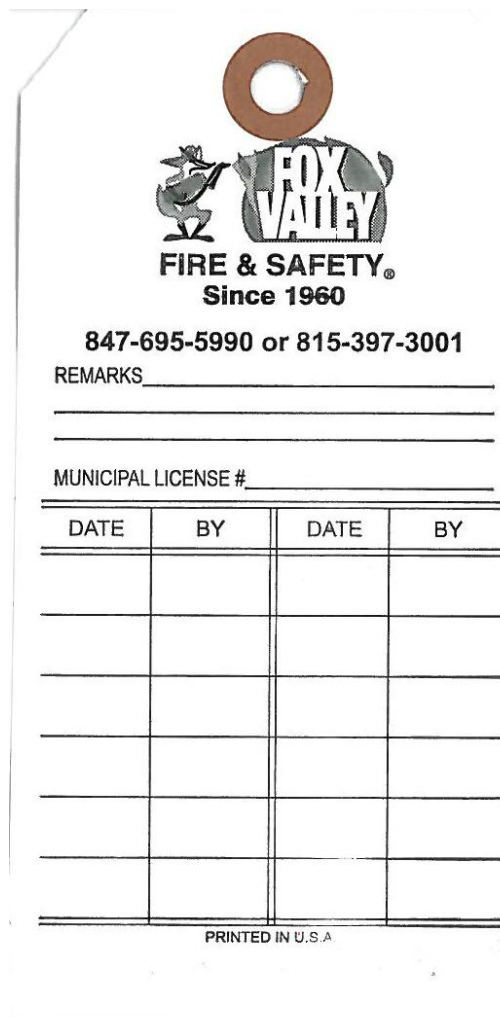
# Appropriate System Tagging



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847-695-5990 or 815-397-3001

REMARKS \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

MUNICIPAL LICENSE # \_\_\_\_\_

DATE	BY	DATE	BY

PRINTED IN U.S.A.



D.O.T. APPROVAL NO. **A348**

DO NOT REMOVE  
BY ORDER  
OF THE STATE  
FIRE MARSHAL

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SERVED BY: \_\_\_\_\_  
LICENSE #: \_\_\_\_\_

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• CARBON DIOXIDE	DRY CHEM SYS
• FIRE HOSE	CLASS K
• PK / STD DRY CHEM	WET CHEM SYS
• HALON / HALOTRON	FE-36

**2012**  
CERTIFICATION TAG

VOID 1 YR. FROM MO. PUNCHED; SYSTEMS 6 MOS.

MAINTENANCE	NEW	RECHARGED
DEC	NOV	OCT
SEPT	AUG	JULY
JUNE	MAY	APR
MAR	FEB	JAN



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# Rubber Blow-Off Caps



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- Manufacturer Notice – Rubber blow-off caps that have been installed in the system for one year or more must be replaced.



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# Question & Answers



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