

## SECTION 10005

## MISCELLANEOUS SPECIALTIES

1 PART 1 GENERAL

## 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract including General and Supplementary Conditions and Division 1 specification sections apply to Work of this section.

## 1.2 SECTION INCLUDES

- A. Fire extinguishers.
- B. Fire extinguisher cabinets.
- C. Automatic Range Top Fire Extinguishing System.
- D. Postal specialties
- E. Closet Shelving

## 1.3 SUBMITTALS

- A. Product Data: Provide data on Product, and accessories.
- B. Operating and Maintenance Instructions: Include relevant instructions. Include maintenance information.

## 1.4 QUALITY ASSURANCE

- A. Fire Extinguishers: Conform to NFPA 10.
- B. Postal Specialties: Comply with USPS requirements.

2 PART 2 PRODUCTS

## 2.1 FIRE EXTINGUISHERS

- A. Manufacturers:
  - 1. Allenco.
  - 2. Amerex.
  - 3. Ansul Fire Protection
  - 4. Bobrick Washroom Equipment.
  - 5. JL Industries.
  - 6. Larsen's Manufacturing Co.
  - 7. Potter-Roemer/Div. Smith Industries Inc.
  - 8. Walter Kidde/Div. Kidde Inc.

- B. Multi-Purpose Dry Chemical Type: Enameled steel tank, with pressure gage, 2A:10BC rating..
- C. Cabinets: Semi-recessed type, steel cabinet, full glass door with baked enamel finish.
- D. Brackets: Manufacturer's standard surface mounted bracket for extinguishers not indicated to have a cabinet.

2.2 AUTOMATIC RANGE TOP FIRE EXTINGUISHING SYSTEM

- A. Manufacturers:
  - 1. SmartX Inc. (<http://www.smartx.net>, Tel: 905-894-2499)
- B. Dry Chemical Type: Acu-Lite
- C. Model: SmartX System COMPLETE AX-300 or approved equal.
- D. Electric Shut Off Module: Provide plug-in shut off module to disconnect electrical connection to range in the event of fire detection. Coordinate with electrical contractor.
- E. Installation: Install as directed in kitchen range hood.
- F. Brackets: Manufacturer's standard surface mounted bracket for extinguishers not indicated to have a cabinet.
- G. Provide system that meets the following specification:

1.0 SCOPE

1.1 Scope: This specification covers the requirement for an automatic stove-top fire extinguishing device which is capable of detecting, suppressing and preventing reignition of kitchen stove-top fires, while terminating the basic heat source and sounding an alarm.

2.0 DESCRIPTION: The stove-top automatic fire extinguishing device (referred to as the "system") described herein provides the capability of detecting, extinguishing and suppressing the reignition of a cooking fire on a stove-top while performing the ancillary function of terminating the basic heat source (electric or gas) and sounding an audible alarm. The system shall be UL listed and provide documentation that it complies with the USAF protocol 90 second response test. The system shall be designed to operate in the automatic mode.

The system shall consist of the following major components:

<u>ITEM NAME</u>	<u>REQUIREMENTS</u>
Detection Unit	2.2
Extinguishing Unit	2.4
Ancillary Function Mode	2.6
Associated Plumbing	2.7

The system shall be capable to being recharged, reset and returned to service after activation and clean up. This task of returning the system to service shall be

accomplished by one (1) semi-skilled laborer in (1) hour or less. In some cases, the extinguishing unit may be considered disposable after activation.

- 2.1 Agent requirement: The agent shall be low PH type, (non-corrosive and non-toxic) having a PH of less than 12.5. If the agent has a PH in excess of 12.5 it must be so listed on the cylinder with instructions in conformance with the (EPA) Environmental Protection Agency hazardous materials sections. According to the EPA all materials having a PH in excess of 12.5 are hazardous materials.
- 2.2 Detection Unit: The detection unit shall be designed to activate the extinguishing unit on detection of a flame other than the normal stove-top gas flame or detection of a heat level above that is generated by normal cooking activities. The detector itself will normally be a thermal, or fusible link, glass bulb, or a precious metal sensor. However, other activation methods may be incorporated. If electronic detection is used it must be wired into a 110 volt power supply. Power must be transformed to low voltage and must have battery back up. Electronic detectors with batteries alone will not be allowed. Although the simplicity of the system is preferred by having (1) one detector, other methods will be allowed.
- 2.3 Mounting: The detection unit shall be mounted within the range hood. Mounting locations will be determined by the manufacturer. However, previous testing has shown that mounting the detection unit directly above and centered between the burners best allows the unit to meet the requirements of 2.2. This area above the stove in the hood is known as the OPTIMUM BTU TRANSFER ZONE.
- 2.4 Extinguishing Unit: The extinguishing unit shall be designed to evenly blanket the range top with an extinguishing agent to suppress the fire and prevent reignition with the heat source off. The unit shall consist of one or more agent containers and one or more nozzles with associated plumbing. The unit shall be designed for installation in the range hood area. A system with simple installation is desired, however, the complexity of the system shall not require more than one hour of installation time by one semi-skilled craftsman. Agent types and amounts will be determined by the manufacturer. Agents must satisfy the requirements of 2.1 and favorable consideration will be given to agent which can be effectively employed in smaller quantities and which do not lead to time consuming and tedious post-activation clean up.
- 2.5 Compatibility: The extinguishing unit and components hardware shall be compatible with the agent. The unit shall not generate flying debris and the nozzles shall be such that they provide uniform agent dispersal without imparting a velocity to the agent which causes it to splatter the burning oil and extend the fire beyond the cooking range surface.
- 2.6 Ancillary Function Module: This module shall be designed to provide: (a) a gas/electric shut-off to the range surface (b) an audible alarm (c) plug-in parts for central station, automatic dialer, auxiliary alarms and strobe alarms. The purpose is to comply with the (ADA) American Disabilities Act (d) gas range shut-off must be accompanied by additional module to terminate the electric accessory items present on the back of the stove such as clock, timer, temperature, and 110 volt plug. The module shall be self contained, providing all of these functions from a single location. It is preferred that all gas and electric shut-offs be mechanical in function requiring "0" zero electric energy. Other shut-offs will be considered providing they do not hum or buzz and are simultaneous with disposing the fire extinguishing agent. Shut-offs that take more than (1) one second to shut down will not be considered simultaneous. The system shall cause interruption of the fuel or electric supply to the range, with or without normal electric power. When

an electric operated valve is used, the configuration shall be such that the gas supply will not be interrupted in the event of a brown-out or power failure. Power for electric and gas valves shall be taken from the closest power source. Gas valves that are powered by batteries alone will not be allowed.

- 2.7 Associated plumbing: All plumbing and valves used to connect the system shall be compatible with the agent and shall be of sufficient size and type so as to not restrict the flow of the agent or cause an excessive pressure drop through the system. If a pressure gas/electric valve is used there must be a filter between the agent container and the operating valve so as to not contaminate the shut-off valve. Additionally, all plumbing and valves (except the system pressure relief valve, if provided) shall have a minimum safe working pressure corresponding to the pressure vessel containing the agent.
- 2.8 Electrical requirements: The system shall be capable of operating at variable power and cycle settings re: 120 volts 15 amps, 240 volts 50 amps, 50 or 60 cycles.
- 2.9 Documentation: The system shall be supplied with an operation and maintenance procedures manual, which give clear and concise instructions to those personnel using the system on the proper installation, operation and maintenance of the system to satisfy its intended use. The manual shall include sufficient drawings to permit semi-skilled personnel to install the system and to perform all maintenance and repair.
- 3.0 System leakage: The system shall not leak agent.
- 3.1 Warranty: The manufacturer/supplier will provide a minimum 12 year warranty on the extinguishing agent and all system components. The system cylinder must be exempt from internal inspection at the end of 6 years of usage. If a UL listing can not be given to support compliance the system cylinder must be internally inspected in accordance to the covenants of NFPA chapter 10. The manufacturer/supplier who are not exempt can agree in separate letter form that they will provide the inspection service and certification every 6 years at no cost to the Government.
- 3.2 Fire replacement of cylinder and fuse link: When a system is actuated during a fire there should be no replacement parts necessary for 12 years, providing the MFH officer or the Fire Chief submit a written report indicating the circumstances of the fire stating who, what, when, where and why within 30 days of the incident to the manufacturer/supplier. The manufacturer/supplier will agree to have a surplus of extra agent, cylinder and fusible links, in the amount of 4% more than the total amount of the contract. The extra surplus will be on hand at base supply for use as replacement to draw against at no charge to the Government. When 12 reports are received and 12 used cylinders and fusible links are received by the manufacturer/supplier, they will replace them within 30 days at no cost to the Government FOB place of manufacturer.

## 2.3 POSTAL SPECIALITES

### A. Manufacturers:

1. American Device Mfg. Co.
2. Auth-Florence Manufacturing Co.
3. Bommer Industries Inc.
4. Cutler Manufacturing Corp.

B. Mailboxes: Horizontal style, front loading, key locking, for exterior application, in configuration indicated.

1. Quantity: 32 compartments plus letter drop and 2 parcel boxes.
2. Finish: satin anodized aluminum.

## 2.4 CLOSET SHELVING

A. Manufacturers

1. Clairson International/ClosetMaid
2. Schulte Corp.

B. Shelving: Steel wire shelving with manufacturer's standard PVC or epoxy coating and standard installation hardware.

## 3 PART 3 EXECUTION

### 3.1 EXAMINATION AND PREPARATION

A. Verify that surfaces and internal wall blocking are ready to receive work and opening dimensions are as instructed by the manufacturer.

### 3.2 INSTALLATION - FIRE EXTINGUISHERS

- A. Install extinguishers in accordance with manufacturer's instructions.
- B. Mount units to conform to ADA requirements, with top less than 48" above floor.
- C. Install units level and plumb in wall openings.

### 3.3 INSTALLATION – POSTAL SPECIALTIES

- A. Install postal specialties in accordance with USPS requirements and manufacturer's instructions.
- B. Install units level and plumb in wall openings.

### 3.4 INSTALLATION – CLOSET SHELVING

- A. Install shelving in accordance with manufacturer's instructions.
- B. Install units level and plumb.

...END OF SECTION