

## SECTION 10 44 13 - FIRE PROTECTION CABINETS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Portable fire extinguishers, portable, hand-carried fire extinguishers for mounting inside cabinets:
  - a. General use **FE-01**.
  - b. Computer and elevator equipment rooms **FE-02**.
2. Fire protection cabinets:
  - a. Non-rated:
    - 1) Fully recessed non-rated fire extinguisher cabinet **FEC-01**.
    - 2) Semi-recessed non-rated fire extinguisher cabinet **FEC-02**.
    - 3) Surface mounted non-rated fire extinguisher cabinet **FEC-03**.
    - 4) Fully recessed non-rated fire extinguisher and valve cabinet **FVEC-01**.
    - 5) Fully recessed non-rated fire hose cabinet **FHC-01**.
    - 6) Fully recessed non-rated fire valve cabinet **FVC-01**.
  - b. Fire-Rated:
    - 1) Fully recessed fire-rated fire extinguisher cabinet **FEC-01FR**.
    - 2) Semi-recessed fire-rated fire extinguisher cabinet **FEC-02FR**.
    - 3) Fully recessed fire-rated fire extinguisher and valve cabinet **FVEC-01FR**.
    - 4) Fully recessed fire-rated fire valve cabinet **FVC-01FR**.

#### 1.2 ACTION SUBMITTALS

A. Product Data:

1. For each type of fire extinguisher. Include rating and classification, material descriptions, dimensions of individual components and profiles, and finishes for fire extinguisher.
2. For each type of fire protection cabinet. Show door hardware, cabinet type, trim style, and panel style. Include roughing-in dimensions and details showing recessed-, semi-recessed, or surface-mounting method and relationships of box and trim to surrounding construction.

B. Shop Drawings:

1. For fire-protection cabinets. Include plans, elevations, sections, details, and attachments to other work.

C. Samples for Verification: For each type of exposed finish required, prepared on samples 6 by 6 inches (150 by 150 mm) square.

D. Product Schedule:

1. For fire extinguishers: Coordinate final fire-extinguisher schedule with fire-protection cabinet schedule to ensure proper fit and function. Use same designations indicated on Drawings.

2. For fire-protection cabinets. Indicate whether recessed, semi recessed, or surface mounted. Coordinate final fire-protection cabinet schedule with fire-extinguisher schedule to ensure proper fit and function. Use same designations indicated on Drawings.

### **1.3 INFORMATIONAL SUBMITTALS**

- A. Warranty: Sample of special warranty.

### **1.4 CLOSEOUT SUBMITTALS**

- A. Maintenance Data: For fire-protection cabinets and fire extinguishers to include in maintenance manuals.

### **1.5 COORDINATION**

- A. Coordinate size of fire-protection cabinets to ensure that type and capacity of fire extinguishers and fire hoses, hose valves, and hose racks indicated are accommodated.
- B. Coordinate sizes and locations of fire-protection cabinets with wall depths.

### **1.6 WARRANTY**

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.
  1. Failures include, but are not limited to, the following:
    - a. Failure of hydrostatic test according to NFPA 10 when testing interval required by NFPA 10 is within the warranty period.
    - b. Faulty operation of valves or release levers.
  2. Warranty Period: Six years from date of Substantial Completion.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Source Limitations: Obtain fire-protection cabinets, accessories, and fire extinguishers from single source from single manufacturer.
- B. Manufacturers:
  1. Subject to compliance with requirements, provide products by one of the following:
    - a. Ansul Incorporated; Tyco International.
    - b. JL Industries, Inc.; a division of the Activar Construction Products Group.
    - c. Larsens Manufacturing Company.
    - d. Nystrom, Inc.
    - e. Potter Roemer/Fire Pro.

## 2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Fire-Protection Cabinets: Listed and labeled to comply with requirements in ASTM E814 for fire-resistance rating of walls where they are installed.
- B. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."
- C. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

## 2.3 FIRE-PROTECTION CABINET NON-RATED

- A. Fully recessed non-rated fire extinguisher cabinet **FEC-01** suitable for fire extinguisher **FE-01**.
  - 1. Basis of Design: FC-70 Series by Nystrom, Inc.
  - 2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  - 3. Exposed Flat Trim: 3/8 inch flat trim and one-piece perimeter door frame.
  - 4. Cabinet Trim Material: Same material and finish as door.
  - 5. Door Material: Stainless steel sheet.
  - 6. Door Style: Full glass panel no exposed hinges.
  - 7. Door Glazing: fClear transparent acrylic sheet.
  - 8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
    - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
    - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.
  - 9. Accessories:
    - a. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire-protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
    - b. Identification: Apply vinyl lettering as specified in this Section.
- B. Semi-recessed non-rated fire extinguisher cabinet **FEC-02** suitable for fire extinguisher **FE-01**.
  - 1. Basis of Design: FC-70 by Nystrom, Inc.
  - 2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  - 3. Exposed Square Trim:
    - a. One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
    - b. 1-1/2 inch (38 mm) to 2 inches (50mm) square trim.
  - 4. Cabinet Trim Material: Same material and finish as door.
  - 5. Door Material: Stainless steel sheet.
  - 6. Door Style: Full glass panel no exposed hinges.
  - 7. Door Glazing: Clear transparent acrylic sheet.

8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
    - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
    - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.
  9. Accessories:
    - a. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire-protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
    - b. Identification: Apply vinyl lettering as specified in this Section.
- C. Surface mounted non-rated fire extinguisher cabinet **FEC-03** suitable for fire extinguisher **FE-01**.
1. Basis of Design: FC-70 Series by Nystrom, Inc.
  2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  3. Exposed Square Trim:
    - a. One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
    - b. 1-1/2 inch (38 mm) to 2 inches (50mm) square trim.
  4. Cabinet Trim and Body Material: Same material and finish as door.
  5. Door Material: Stainless steel sheet.
  6. Door Style: Full glass panel no exposed hinges.
  7. Door Glazing: Clear transparent acrylic sheet.
  8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
    - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
    - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.
  9. Accessories:
    - a. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire-protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
    - b. Identification: Apply vinyl lettering as specified in this Section.
- D. Fully recessed non-rated fire extinguisher and valve cabinet **FVEC-01** suitable for fire extinguisher **FE-01**:
1. Basis of Design: 1870 Series by Potter Roemer Fire Pro
  2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  3. Exposed Flat Trim: Approximately 3/8 inch flat trim and one-piece perimeter door frame.
  4. Cabinet Trim Material: Same material and finish as door.
  5. Door Material: Stainless steel sheet.
  6. Door Style: Full glass with no exposed hinges.
  7. Door Glazing :Clear transparent acrylic sheet or tempered safety glazing.
  8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
    - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets

- b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.
- E. Fully recessed non-rated fire hose cabinet **FHC-01**.
  - 1. Basis of Design: 1200 Series by Potter Roemer Fire Pro
  - 2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  - 3. Exposed Flat Trim: Approximately 3/8 inch flat trim and one-piece perimeter door frame.
  - 4. Cabinet Trim Material: Same material and finish as door.
  - 5. Door Material: Stainless steel sheet.
  - 6. Door Glazing :Clear transparent acrylic sheet or tempered safety glazing.
  - 7. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
    - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
    - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.
- F. Fully recessed non-rated valve cabinet **FVC-01**:
  - 1. Basis of Design: FRC1810 by Potter Roemer Fire Pro
  - 2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  - 3. Exposed Flat Trim: Approximately 3/8 inch flat trim and one-piece perimeter door frame.
  - 4. Cabinet Trim Material: Same material and finish as door.
  - 5. Door Material: Stainless steel sheet.
  - 6. Door Style: Full glass with no exposed hinges.
  - 7. Door Glazing :Clear transparent acrylic sheet or tempered safety glazing.
  - 8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
    - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
    - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.

## 2.4 FIRE-PROTECTION CABINET FIRE-RATED

- A. Fire Ratings: Refer to Drawings.
- B. Fully recessed fire-rated fire extinguisher cabinet **FEC-01FR** suitable for fire extinguisher **FE-01**.
  - 1. Basis of Design: Cosmopolitan Series 1035 by JL Industries, Inc.; a division of the Activar Construction Products Group.
  - 2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  - 3. Exposed Flat Trim: 3/8 inch flat trim and one-piece perimeter door frame.
  - 4. Cabinet Trim Material: Same material and finish as door.
  - 5. Door Material: Stainless steel sheet.
  - 6. Door Style: Full glass panel no exposed hinges.
  - 7. Door Glazing :Clear transparent acrylic sheet.
  - 8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.

- a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
    - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.
  - 9. Accessories:
    - a. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire-protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
    - b. Identification: Apply vinyl lettering.
- C. Semi-recessed fire-rated fire extinguisher cabinet **FEC-02FR** suitable for fire extinguisher **FE-01**.
- 1. Basis of Design: Cosmopolitan Series 1035 by JL Industries, Inc.; a division of the Activar Construction Products Group.
  - 2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  - 3. Exposed Flat Trim: 3/8 inch flat trim and one-piece perimeter door frame.
  - 4. Cabinet Trim Material: Same material and finish as door.
  - 5. Door Material: Stainless steel sheet.
  - 6. Door Style: Full glass panel no exposed hinges.
  - 7. Door Glazing :Clear transparent acrylic sheet.
  - 8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
    - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
    - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.
  - 9. Accessories:
    - a. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire-protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
    - b. Identification: Apply vinyl lettering.
- D. Fully recessed fire-rated valve and fire extinguisher cabinet **FVEC-01FR** suitable for fire extinguisher **FE-01**:
- 1. Basis of Design: FRC1870 Series by Potter Roemer Fire Pro
  - 2. Cabinet Material:
    - a. Tub: Powder coat, welded corners and ground smooth.
  - 3. Exposed Flat Trim: Approximately 3/8 inch flat trim and one-piece perimeter door frame.
  - 4. Cabinet Trim Material: Same material and finish as door.
  - 5. Door Material: Stainless steel sheet.
  - 6. Door Style: Full glass with no exposed hinges.
  - 7. Door Glazing: Clear transparent acrylic sheet or tempered safety glazing.
  - 8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
    - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
    - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.
- E. Fully recessed fire-rated valve cabinet **FVC-01FR**:
- 1. Basis of Design: FRC1870 Series by Potter Roemer Fire Pro

2. Cabinet Material:
  - a. Tub: Powder coat, welded corners and ground smooth.
3. Exposed Flat Trim: Approximately 3/8 inch flat trim and one-piece perimeter door frame.
4. Cabinet Trim Material: Same material and finish as door.
5. Door Material: Stainless steel sheet.
6. Door Style: Full glass with no exposed hinges.
7. Door Glazing: Clear transparent acrylic sheet or tempered safety glazing.
8. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
  - a. Provide projecting lever handle with cam action latch, keyed alike to other cabinets
  - b. Provide manufacturer's standard continuous hinge, permitting door to open 180 degrees.

## 2.5 PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS

- A. Fire Extinguishers:
  1. Source Limitations: Obtain fire extinguishers, fire-protection cabinets, and accessories, from single source from single manufacturer.
  2. Type, size, and capacity for each for each fire protection cabinet.
  3. Valves: Nickel plated, polished brass body.
  4. Handles and Levers: Stainless steel.
  5. Instruction Labels: Include pictorial marking system complying with NFPA 10, Appendix B, and bar coding for documenting fire extinguisher location, inspections, maintenance, and recharging.
- B. General Use **FE-01**:
  1. Multipurpose Dry-Chemical Type in Steel Container: UL-rated 4-A:60-B:C, 10-lb (4.5-kg) nominal capacity, with monoammonium phosphate-based dry chemical in enameled-steel container.
  2. Products:
    - a. Subject to compliance with requirements, provide one of the following:
      - 1) by Larsen's Manufacturing Company.
      - 2) Cosmic 10E by JL Industries, Inc.; a division of the Activar Construction Products Group.
      - 3) 3010 by Potter Roemer/Fire Pro.
      - 4) EX-3010 by Nystrom.
- C. Computer and Elevator Equipment Rooms: **FE-02**:
  1. Clean-Agent Type in Steel Container UL-rated 1-A:10-B:C, 10-lb (4.5-kg) nominal capacity, with HFC blend agent and inert material in enameled-steel container; with pressure-indicating gage.
  2. Basis of Design: Ansul® Model FE09 Cleanguard by Ansul Incorporated; Tyco International.

## 2.6 IDENTIFICATION

- A. Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location.
- B. Identify fire extinguisher in fire-protection cabinet with the words "FIRE EXTINGUISHER"

1. Location: Applied to cabinet door.
2. Application Process: Pressure-sensitive vinyl letters.
3. Lettering Color: Red.
4. Orientation: Vertical.

C. Identify fire valves in fire protection cabinet with the words "FIRE DEPT. VALVE".

1. Location: Applied to cabinet door.
2. Application Process: Pressure-sensitive vinyl letters.
3. Lettering Color: Red.
4. Orientation: Horizontal.

## 2.7 MATERIALS

A. Cold-Rolled Steel: ASTM A1008/A1008M, Commercial Steel CS, Type B.

1. Finish: Baked enamel, TGIC polyester powder coat, HAA polyester powder coat, epoxy powder coat, or polyester/epoxy hybrid powder coat, complying with AAMA 2603.
2. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
3. Color: White or grey to be later selected by Consultant.

B. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304.

1. Finish: ASTM A480/A480M No. 4 directional satin finish.

C. Tempered Float Glass: ASTM C1048, Kind FT, Condition A, Type I, Quality q3, 3 mm thick, Class 1 (clear).

D. Tempered Break Glass: ASTM C1048, Kind FT, Condition A, Type I, Quality q3, 1.5 mm thick.

E. Transparent Acrylic Sheet: ASTM D4802, Category A-1 (cell-cast sheet), 3 mm thick, with Finish 1 (smooth or polished).

## 2.8 FABRICATION

A. Fire-Protection Cabinets: Provide manufacturer's standard box (tub) with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated.

1. Weld joints and grind smooth.
2. Miter corners and grind smooth.
3. Provide factory-drilled mounting holes.
4. Prepare doors and frames to receive locks.
5. Install door locks at factory.

B. Cabinet Doors: Fabricate doors according to manufacturer's standards, from materials indicated and coordinated with cabinet types and trim styles.

1. Miter and weld perimeter door frames and grind smooth.

C. Cabinet Trim: Fabricate cabinet trim in one piece with corners mitered, welded, and ground smooth.



## **2.9 GENERAL FINISH REQUIREMENTS**

- A. Comply with NAAMM's AMP 500, "Metal Finishes Manual for Architectural and Metal Products," for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces of fire-protection cabinets from damage by applying a strippable, temporary protective covering before shipping.
- C. Finish fire-protection cabinets after assembly.
- D. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine fire extinguishers for proper charging and tagging.
  - 1. Remove and replace damaged, defective, or undercharged fire extinguishers.
- B. Examine roughing-in for hose valves and cabinets to verify actual locations of piping connections before cabinet installation.
- C. Examine walls and partitions for suitable framing depth and blocking where recessed and semi-recessed cabinets will be installed.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.2 PREPARATION**

- A. Prepare recesses for recessed and semi-recessed fire-protection cabinets as required by type and size of cabinet and trim style.

### **3.3 INSTALLATION**

- A. General: Install fire extinguishers in locations indicated and in compliance with requirements of authorities having jurisdiction.
- B. General: Install fire-protection cabinets in locations and at mounting heights indicated or, if not indicated, at height indicated below at heights acceptable to authorities having jurisdiction.
- C. Fire-Protection Cabinets: Fasten cabinets to structure, square and plumb.
  - 1. Unless otherwise indicated, provide recessed fire-protection cabinets. If wall thickness is inadequate for recessed cabinets, provide semi-recessed fire-protection cabinets.
  - 2. Provide inside latch and lock for break-glass panels.
  - 3. Fasten mounting brackets to inside surface of fire-protection cabinets, square and plumb.
- D. Fire-Rated Hose and Valve and Valve Cabinets:
  - a. Install cabinet with not more than 1/16-inch (1.6-mm) tolerance between pipe OD and knockout OD. Center pipe within knockout.

- b. Seal through penetrations with firestopping sealant as specified in Division 07, Section 07 84 13 "Penetration Firestopping."

- E. Identification: Apply vinyl lettering at locations indicated or specified.

### **3.4 ADJUSTING AND CLEANING**

- A. Remove temporary protective coverings and strippable films, if any, as fire-protection cabinets are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. Adjust fire-protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.
- C. On completion of fire-protection cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.
- D. Touch up marred finishes or replace fire-protection cabinets that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by fire-protection cabinet and mounting bracket manufacturers.
- E. Replace fire-protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

### **END OF SECTION**