

## SECTION 23 91 10 - FIRE DAMPERS

### PART 1 - GENERAL

#### 1.1 DESCRIPTION

- A. Provide labor, materials, equipment and services as required for the complete installation as shown on the Contract Documents.

#### 1.2 SUBMITTALS

- A. Types, schedule of sizes, locations, and installation arrangements of all dampers.
- B. Manufacturers UL listed installation details for each mounting arrangement.

#### 1.3 QUALIFICATIONS

- A. Provide Work in accordance with latest requirements of the New York State Building Code, NFPA 90A, NFPA 101 and UL 555 (Sixth Edition), UL 555S (Fourth Edition). Fire dampers shall be Underwriter's Laboratories classified.
- B. All Dampers shall be rated for protection at 350 degrees F. and shall be Leakage Class I.
- C. Smoke dampers and operator assemblies shall be Underwriter's Laboratories classified as an assembly.

### PART 2 - PRODUCTS

#### 2.1 FIRE DAMPERS

- A. Curtain type damper of galvanized steel (stainless steel for corrosive fume exhaust) construction with fusible link, roll formed frame and stainless-steel spring negator. UL listed and labeled.
  - 1. 80% free area for velocities up to 2000 fpm; 100% free area with welded head for velocities above 2000 fpm.
  - 2. Square, rectangular, round or oval duct connection as required by duct connections.
  - 3. 1-1/2 hour rated dampers for two-hour rated walls. Three-hour rated dampers for three and 4 hour walls.
  - 4. Equipped with sleeve and slip joint connection or field installed sleeve and slip joint connection. See detail sheet on Contract Drawings.
  - 5. Fusible link temperature rating of 212°F.
- B. Design Equipment: Ruskin Model IBD2 Style A or B.
- C. Make: Air Balance, Greenheck, National Controlled Air, Prefco, Ruskin, Safe Air, Inc., Venco.

## 2.2 FIRE DOORS

- A. Fire doors shall be designed specifically for application in ducts or in fire wall openings for air handling systems and shall bear an Underwriters' Laboratories fire door label for a three-hour rating (Class A opening).
- B. Design Equipment: Air Balance "Fire/Seal Type 319."
- C. Make: Air Balance, Duro, Prefco, Cesco.

## PART 3 - EXECUTION

### 3.1 LOCATIONS

- A. Provide fire dampers in floor openings, openings in two hour fire partitions and penetrations of one-hour rated walls which are used for air transfer only, and not ducted. Provide smoke dampers as called for in penetrations of smoke barriers.

### 3.2 INSTALLATION

- A. Provide sleeves, angles, and access doors for installation in accordance requirements of NFPA, UL and damper manufacturer. Provide sheet metal access doors in ductwork for dampers and accessories. Provide ceiling or wall access doors for dampers and accessories. Division 16 "Electric" will provide signal wiring and power wiring for smoke dampers. Refer to "Control System" Section for additional requirements. Smoke detectors shall be furnished by Division 16 "Electric". Install detectors located in ductwork. Increase duct size at smoke detectors, where required for proper installation, per smoke detector manufacturer's recommendations. Coordinate minimum duct size and length required with Division 16 "Electric". Provide insulation end seal fittings for double wall ductwork where same connects to damper assembly. Fire doors in fire wall openings and shall be installed on both sides of a fire wall. Install in accordance with UL and the manufacturer's instructions. Provide thermal blanket in accordance to NFPA requirements at diffusers, register and grille penetrations of fire rated ceilings where fire dampers are required.

### 3.3 CERTIFICATION

- A. Contractor shall certify that dampers are accessible for servicing, are installed properly, and are operational. Submit three copies of signed certification to the Owner's Representative for review.

### 3.4 IDENTIFICATION

- A. Provide damper tags and chart.
  - 1. Fasten tag to ductwork adjacent to the dampers.
  - 2. Number each damper and make chart listing.
    - a) Number
    - b) Location

- c) Air system in which they are installed.
3. Submit three copies of chart to the Owner's Representative for review.

**END OF SECTION**

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