

## **SECTION 23 33 13**

### **DAMPERS**

#### **PART ONE – GENERAL:**

- 1.01 Mechanical Contractor shall furnish and install all dampers as indicated on drawings or called for under Specifications.
- 1.02 Dampers shall be as manufactured by Air Balance, Inc., Phillips-Aire, Ruskin Manufacturing Co. or Louvers and Dampers, Inc.

#### **PART TWO – PRODUCTS:**

##### **2.01 MANUAL & AUTOMATIC DAMPERS:**

- A. Manual and automatic dampers shall be of the multi-louver opposed blade type equipped with an external operating shaft. Locking device shall be provided for manual dampers.

##### **2.02 FIRE DAMPERS:**

- A. Fire dampers for low pressure and exhaust ductwork shall be parallel blade positive closure mounted in a galvanized steel channel frame. Dampers shall be curtain type meeting all UL 555 and NFPA requirements. Dampers shall be high free area style with blade package mounted out of air stream. Dampers in stainless steel ductwork shall be constructed of type 304 stainless steel. Fuse line shall be 160 degrees. Fire dampers shall have a UL label with a 1 ½ hour rating for use in partitions with ratings of up to two (2) hours. Fire dampers shall have a UL label with a three (3) hour rating for use in partitions with ratings of up to four (4) hours.

- B. Fire dampers shall be provided as follows:

- 1. In all duct passages through fire rated assemblies.
- 2. In all duct passages through floor.
- 3. In fire rated openings used for return air passages.
- 4. See Architectural floor plans for locations and ratings of all fire rated assemblies.

- C. Ceiling radiation dampers shall be installed at air device penetrations of a fire rated ceiling. Dampers shall be UL listed with 165 degrees F. fusible link. Phillips-Aire Series 8 (rectangular) or 9 (round) dampers or approved equal.

##### **2.03 SMOKE DAMPERS:**

- A. Smoke dampers shall be classified by Underwriters Laboratories as Leakage Rated Dampers for Use in Smoke Control Systems under the latest version of UL Standard 555S and shall bear a UL label. Smoke dampers and their operators shall be

qualified under UL 555S to a minimum elevated temperature of 250 degrees F. Dampers shall be qualified at UL 555S Leakage Class II. Combination dampers shall comply with both UL 555 and UL 555S.

- B. Electric operators shall be installed by the damper manufacturer at time of damper fabrication. Installation of damper with operator and smoke detectors shall be coordinated with Controls Contractor to provide a complete and operational smoke damper in accordance with NFPA 90A.
- C. Provide smoke dampers and smoke detectors at each duct penetration of a smoke wall. Refer to Architectural plan for locations of all smoke walls. Refer to control sections of Specifications for smoke detector hardware requirements. Detectors shall meet requirements of NFPA 72.

#### PART THREE – EXECUTION:

- 3.01 Fire and smoke dampers shall be provided with access doors to operate and reset. Provide identification markers with lettering a minimum of ½" high on each access door stating "fire damper" or "smoke damper" as applicable per requirements of I.B.C. 715.4 and I.M.C. 607.4. Areas around dampers shall be fire stopped with fire resistant materials consistent with UL tested assembly requirements.
- 3.02 Where fire and smoke dampers are located above a hard or security ceiling, Contractor shall provide access doors in ceiling to reach dampers. Coordinate door and frame style with Architectural Finish Schedule. Submit to Architect for approval.

**END OF SECTION**