

SECTION 15703

DAMPERS AND LOUVERS

1.0 GENERAL

1.1 DESCRIPTION

1. General Provisions and other mechanical systems are specified in other sections of Division 15.
2. This section specifies the requirements for dampers and louvers.

1.2 QUALITY ASSURANCE

1. Fire dampers shall conform to the requirements of NFPA Standard 90A.
2. Fire damper shall bear label of the Underwriters Laboratories, Inc. for 1-1/2 hour rating, except where otherwise indicated.

2.0 PRODUCTS

2.1 FIRE DAMPERS

1. Factory-built curtain type, spring-operated with stainless steel constant tension springs, conforming to requirements of NFPA 90A, UL labeled.
2. Rating: 1-1/2 hour.
3. Provide factory-built sleeves of design and length to permit mounting within the opening.
4. Dampers in round or flat oval ductwork shall be Type C. For ductwork with a static pressure rating of 2" or less, dampers 18" high and smaller shall be Type B, and 19" and higher shall be Type A. For ductwork with a static pressure rating greater than 2", dampers shall be Type C. Dampers in return air openings or behind grilles or registers shall be Type A.
5. Fusible link shall have a temporary rating approximately 50°F above the maximum temperature that would normally be encountered with the system in operation or shutdown, but not less than 165°F.
6. Fusible links shall break at 135°F. maximum in return and exhaust ducts, and shall melt at 160°F. maximum in supply ducts.
7. Fire damper shall be the type in which the stack of open blades is entirely contained within an enclosure above the duct, out of the air stream, unless otherwise indicated on the drawings.
8. Manufacturer: Louvers and Dampers 150, Nailor-Hart Series 0100, National Controlled Air A/B/C, Phillips-Aire S1/S2 UL, Prefco 5500, Ruskin IBD, or Safe-Air 150.

2.2 DAMPERS

1. Single blade (up to 8" high), multiblade (over 8" high), control damper.
2. Blades: minimum 16 gauge galvanized steel, or extruded aluminum airfoil shape.
3. Pivot rods: steel, minimum 1/2" diameter or hex, 6" long. One rod extended to permit operation of damper from outside duct.
4. Maximum length 42"; maximum width 8".
5. At points of contact, except for manual balancing application: interlocking or overlapping edges, and compressible neoprene or extruded interlocking or overlapping edges, and compressible neoprene or extruded vinyl blade seals, designed for temperature of -40°F to 180°F at leakage rate specified herein. In addition, hot and cold deck dampers, and dampers opening to the outside shall have compressible metal side seals.
6. Except for manual balancing application, leakage when closed: guaranteed less than 10 cfm per square foot at both 1" and 4" wg static pressure.
7. Opposed blade type for balancing and modulating applications, parallel blade type for 2-position applications.

8. Frames: galvanized steel bar minimum 2" wide x 12 gauge for dampers 10" high or less, and 3-1/2 x 7/8", 16 ga. galvanized roll-formed channel with double thickness edges or 5" x 1" x 0.125" extruded aluminum channel for 11" high and larger.
9. Corner bracing.
10. Full size of duct or opening in which installed.
11. Bearings: bronze sleeve, steel ball type, or cycology 800.
12. Vertically mounted: thrust bearings.
13. Maximum spacing 42".
14. Manually operated dampers shall be provided with cadmium-plated steel quadrant with device for locking damper in position and marked frame indicating damper position.
15. Manufacturer: Arrow Q-38, Duro-Dyne KL-7R, or Ventlok 560.
16. Finish on all steel parts: galvanized.
17. Operating linkage: factory assembled, concealed in frame out of airstream, steel construction.

3.0 EXECUTION

3.1 INSTALLATION

1. Fire damper shall be mounted as detailed on the drawings. Should the drawing details conflict with the printed installation instructions of the manufacturer of the damper to be installed, the more stringent requirements shall be installed.
2. Fire damper thickness for fire damper-grille assembly shall not exceed dimension indicated on the drawing detail.

END OF SECTION