

**Part 1 General**

**1.1 PRODUCT DATA**

- .1 Submit product data in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Indicate the following:
  - .1 Fire dampers.
  - .2 Fire stop flaps.
  - .3 Fusible links.
  - .4 Design details of break-away joints.

**1.2 CLOSEOUT SUBMITTALS**

- .1 Provide maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

**1.3 EXTRA MATERIALS**

- .1 Provide maintenance materials in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Provide following:
  - .1 5 fusible links of each type.

**1.4 CERTIFICATION OF RATINGS**

- .1 Catalogue or published ratings shall be those obtained from tests carried out by manufacturer or those ordered by him from independent testing agency signifying adherence to codes and standards.

**1.5 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal, and with the Waste Reduction Workplan.

**Part 2 Products**

**2.1 FIRE DAMPERS**

- .1 Fire dampers: arrangement Type A, B or C, listed and bear label of ULC/UL, meet requirements of Fire Commissioner of Canada (FCC) and ANSI/NFPA 90A. Fire damper assemblies to be fire tested in accordance with CAN4-S112.

- .2 Mild steel, factory fabricated for fire rating requirement to maintain integrity of fire wall and/or fire separation.
- .3 Top hinged: multi-blade hinged sized to maintain full duct cross section.
- .4 Fusible link actuated, weighted to close and lock in closed position when released or having negator-spring-closing operator for multi-leaf type or roll door type in horizontal position with vertical air flow.
- .5 Retaining angle iron frame as per damper assembly listing, on full perimeter of fire damper, on both sides of fire separation being pierced.
- .6 For ducts up to and including 300mm in height use Type B with blades completely out of air stream when in open position. Revise if noted on drawings.
- .7 For ducts over 300mm in height use Type A with blades in air stream when in open position. Revise if noted on drawing.
- .8 For round and oval ducts use Type C fire dampers.
- .9 Acceptable material: Controlled Air, Ruskin, Price, Nailor.

## **2.2 FIRE STOP FLAPS**

- .1 To be ULC listed and labelled and fire tested in accordance with CAN4-S112.2.
- .2 Construct of minimum 1.5 mm thick sheet steel with 1.6 mm thick non-asbestos ULC listed insulation and corrosion-resistant pins and hinges.
- .3 Flaps to be held open with fusible link conforming to ULC-S505.

## **Part 3 Execution**

### **3.1 INSTALLATION**

- .1 Install in accordance with ANSI/NFPA 90A and in accordance with conditions of ULC listing.
- .2 Maintain integrity of fire separation.
- .3 After completion and prior to concealment obtain approvals of complete installation from authority having jurisdiction.
- .4 Install access door adjacent to each damper. See Section 23 33 00 - Duct Accessories.
- .5 Coordinate with installer of firestopping.

- .6 Fire Damper
- .1 Installation of all fire dampers shall be performed according to Manufacturers listed installation instructions. Installation instructions to be submitted to Departmental Representative with approval drawings.
  - .2 All fire damper installations shall adhere to all requirements including but not limited to:
    - Sleeve including proper gauge thickness
    - Retention angles and securement
    - Damper to sleeve securement
    - Duct to sleeve breakaway connection
    - Clearance between opening and sleeve
    - Duct access door
  - .3 After installation is completed, remove fusible link, operate curtain, replace fusible link after curtain is returned to open position. Curtain shall operate freely to closed position without assistance or other intervention.
  - .4 Installer shall certify each installation on completion of installation and curtain operation test. Certification shall be recorded in format of form appended to this section. Certification shall be turned over to Departmental Representative prior to inspection of installation.
- .7 Install break-away joints of approved design on each side of fire separation.
- .8 Coordinate with work of Section 23 05 93. Repair or replace installations where required for completion of TAB contract.

**END OF SECTION 23 33 16**