

**Part 1 General****1.1 RELATED SECTIONS**

- .1 Section 01 00 10 – General Instructions.
- .2 Section 01 35 29.06 – Health and Safety Requirements.
- .3 Section 21 05 01 – Common Work Results for Mechanical.

**1.2 REFERENCES**

- .1 American Society for Testing and Materials International (ASTM)
  - .1 ASTM A653/A653M-09a, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).

**1.3 SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 00 10 – General Instructions. Include product characteristics, performance criteria, and limitations.
  - .2 Indicate the following:
    - .1 Performance data.
- .2 Quality assurance submittals: submit following in accordance with Section 01 00 10 – General Instructions.
  - .1 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
  - .2 Instructions: submit manufacturer's installation instructions.
- .3 Closeout Submittals
  - .1 Provide maintenance data for incorporation into manual specified in Section 01 00 10 – General Instructions.

**1.4 QUALITY ASSURANCE**

- .1 Health and Safety Requirements: do construction occupational health and safety in accordance with Section 01 35 29.06 – Health and Safety Requirements.
- .2 Certificates:
  - .1 Catalogue or published ratings those obtained from tests carried out by manufacturer or those ordered by manufacturer from independent testing agency.

**1.5 DELIVERY, STORAGE, AND HANDLING**

- .1 Packing, shipping, handling and unloading:
  - .1 Deliver, store and handle in accordance with Section 01 00 10 – General Instructions.
  - .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Waste Management and Disposal:
  - .1 Construction/Demolition Waste Management and Disposal: separate waste materials for reuse and recycling in accordance with Section 01 00 10 – General Instructions.

**Part 2 Products****2.1 MULTI-LEAF DAMPERS**

- .1 Opposed blade type as indicated.
- .2 Extruded aluminum, interlocking blades, complete with extruded vinyl seals, spring stainless steel side seals, extruded aluminum frame.
- .3 Pressure fit self-lubricated bronze bearings.
- .4 Linkage: plated steel tie rods, brass pivots and plated steel brackets, complete with plated steel control rod.
- .5 Performance:
  - .1 Leakage: in closed position less than 2% of rated air flow at 1000 Pa differential across damper.
  - .2 Pressure drop: at full open position less than 5.0 Pa differential across damper at 5 m/s.
- .6 Insulated aluminum dampers:
  - .1 Frames: insulated with extruded polystyrene foam with RSI 0.88.
  - .2 Blades: constructed from aluminum extrusions with internal hollows insulated with polyurethane or polystyrene foam, RSI 0.88.

**Part 3 Execution****3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

**3.2           INSTALLATION**

- .1       Install where indicated.
- .2       Install in accordance with manufacturer's recommendations..
- .3       Seal multiple damper modules with silicon sealant.
- .4       Ensure dampers are observable and accessible.

**END OF SECTION**