

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 Performance data (air pressure drop at flow and air leakage in closed position).
 - .2 Construction details.

1.2 CLOSEOUT SUBMITTALS

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

1.3 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.

1.4 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 MULTI-LEAF DAMPERS

- .1 Opposed or Parallel blade type as indicated.
- .2 Structurally formed steel, interlocking blades, complete with PVC seals, spring stainless steel side seals, structurally formed and welded galvanized steel frame.
- .3 Pressure fit self-lubricated synthetic 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 to be less than 1% of rated air flow at 500 Pa differential across damper.
 - .2 Pressure drop: at full open position to be less than 11 Pa differential across damper at 3 m/s.

- .6 Insulated aluminum dampers:
 - .1 Frames: insulated with extruded polystyrene foam with R factor of 2.0.
 - .2 Blades: constructed from aluminum extrusions with internal hollows insulated with polyurethane or polystyrene foam, R factor of 2.3.
 - .3 Dampers shall be designed for service temperature range from minus 40°C to 100°C.

2.2 BACK DRAFT DAMPERS

- .1 Automatic gravity operated, multi leaf, extruded (1.8 mm thick) aluminum construction with synthetic bearings, set in 3.2 mm aluminum frame.

Part 3 Execution

3.1 INSTALLATION

- .1 Install where indicated.
- .2 Install in accordance with recommendations of SMACNA and manufacturer's instructions.
- .3 Seal multiple damper modules with silicon sealant.
- .4 Install access door adjacent to each damper. See Section 23 33 00 HVAC - Duct Accessories.
- .5 Ensure dampers are observable and accessible.
- .6 Dampers on ducts or openings connected directly to outside (o/a intake, exhaust, relief, etc.) shall be insulated aluminum style.

END OF SECTION 23 33 15