

PART 1 - GENERAL

- 1.1 REFERENCES
- .1 ASTM International
 - .1 ASTM A 653/A 653M-11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.
 - .2 Canada Green Building Council (CaGBC)
 - .1 LEED Canada 2009 for Design and Construction, LEED Canada 2009 for Design and Construction Leadership in Energy and Environmental Design Green Building Rating System Reference Guide.
- 1.2 ACTION AND INFORMATIONAL SUBMITTALS
- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for dampers and include product characteristics, performance criteria, physical size, finish and limitations.
 - .3 Sustainable Design Submittals:
 - .1 LEED Canada submittals: in accordance with Section 01 35 21 - LEED Requirements.
 - .2 Construction Waste Management:
 - .1 Submit project Waste Management Plan highlighting recycling and salvage requirements.
 - .2 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 75% of construction wastes were recycled or salvaged.
 - .3 Recycled Content:
 - .1 Submit listing of recycled content products used, including details of required percentages or recycled content materials and products, showing their costs and percentages of post-consumer and post-industrial content, and total cost of materials for project.
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2.2 DISC TYPE .3 Gasket: extruded neoprene, field replaceable,
DAMPERS with 10 year warranty.
(Cont'd)

.4 Bearings: roller self lubricated and sealed.

.5 Operator: compatible with damper, linear
stroke operator, spring loaded actuator,
zinc-aluminum foundry alloy casting cam
follower.

.6 Performance:

.1 Leakage: in closed position less than
0.001% of rated air flow at 0.5 kPa pressure
differential across damper.

.2 Pressure drop: at full open position
less than 25 Pa differential across damper at
10 m/s.

2.3 BACK DRAFT .1 Automatic gravity operated, multi leaf,
DAMPERS aluminum construction with nylon bearings,
centre pivoted and spring assisted
counterweighted.

PART 3 - EXECUTION

3.1 EXAMINATION .1 Verification of Conditions: verify that
conditions of substrate previously installed
under other Sections or Contracts are
acceptable for damper installation in
accordance with manufacturer's written
instructions.
.1 Visually inspect substrate in presence
of Departmental Representative.
.2 Inform Departmental Representative of
unacceptable conditions immediately upon
discovery.
.3 Proceed with installation only after
unacceptable conditions have been remedied and
after receipt of written approval to proceed
from Departmental Representative.

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- 3.2 INSTALLATION
- .1 Install in accordance with recommendations of SMACNA and manufacturer's instructions.
 - .2 Seal multiple damper modules with silicon sealant.
 - .3 Install access door adjacent to each damper. See Section 23 33 00 - Air Duct Accessories.
 - .4 Ensure dampers are observable and accessible.
- 3.3 CLEANING
- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
 - .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.