

**Suggested Specification**  
**For**  
**Class I Fire Smoke Dampers**

**I. AGENCY APPROVALS and RATINGS**

A: Approving Agencies and Standards: UL 555, UL 555 S, NYC Bldg. Code RS-13, NFPA 90A, and NFPA 92A, or latest standard if not listed here.

B: Proof of Compliance By means of the following:

1. Product label indicating at a minimum; manufacturer's name and model number; date of manufacture; fire endurance rating; airflow and closure pressure rating; mounting position; UL file number and logo; and NYC MEA number

C: All Model numbers from the manufacturer must be listed and approved with the UL for the sizes as specified on the drawing by the engineer and may not exceed the limits shown in the UL Online Certifications Directory for that manufacturer.

D: Leakage Ratings CLASS I.

E: Fire Endurance 1 ½ HOUR.

**II. DAMPER CONSTRUCTION**

A: Design Airfoil blade (double skin #14 gauge equivalent).

B: Galvanized steel.

C: Jambs "Hat channel design" – 5 W x ½ DEEP; # 16 gauge steel.

D: Linkage – parallel blade operation, concealed in jambs.

E: Bushings – flanged design, SS oillite.

F: Side Jamb Seals – compressible SS.

G: Blade Edge Seals – silicone rated to 500° F.

**III. HEAT RESPONSE DEVICE**

A: Electric Heat Sensor, Dual Temperature – primary sensor 212° F minimum or 250° F maximum with secondary sensor 350° F. Or dual temperature Firestat.

B: All damper configurations from manufacturer must comply with UL 555 and UL 555 S and must be so labeled. **All Model numbers from the manufacturer must be listed and approved with the UL for the sizes as specified on the drawing by the engineer and may not exceed the limits shown in the UL Online Certifications Directory for that manufacturer.**

**IV. ACTUATOR**

All actuators shall be capable of operating to a degradation temperature of 350° F.

A: Motive Force to be 24 or 120 volt, or Pneumatic as required.

B: Agency Approvals

1. Electric Actuators – UL 873, UL 555, and UL 555-S, or latest applicable.

2. Pneumatic Actuators – UL 555 and UL 555-S, or latest applicable.

C: Design and Construction

1. Electric Actuators – Belimo (with built-in end switches), or Honeywell.

2. Pneumatic Actuators – bracket mounted, crank arm linkage, spring return, modulating or 2 position, 15-cycle time operation.

**V. SLEEVES, RETAINING ANGLES and INSTALLATION**

A: As illustrated on detail of drawing or one of the permitted profiles illustrated in UL 555, NFPA 90A, and the SMACNA HVAC DUCT CONSTRUCTION STANDARD, or latest standard applicable.

B: Expansion space – the annular space around the sleeve must not be filled with caulking, fill or firepacking materials; this space must be left for thermal expansion.

C: Maximum Opening – the maximum opening that may be protected with a single damper assembly – whether single or multi section – may not exceed the limits shown in the UL Online Certifications Directory for that manufacturer.

**VI. ACCESSORIES**

A: Mercury Switch (Blade Position Auxiliary Indicator)

B: EP Switch (for Pneumatically operated FSD or Smoke Damper only).

**VIII. APPROVED MANUFACTURERS**

Pottorff, Ruskin, or approved equal.