Application and Design
The Model S-AF-I is a UL/ULC listed and labeled Class I leakage rated Smoke Damper. Blades are of the airfoil shaped design for lower pressure loss. The damper is approved for airflow in either direction and provides a maximum leakage of 8 cfm/sq. ft at 4” wg. s.p. It has been designed to be installed in a vertical or horizontal mounting position in the ductwork or a separate sleeve within 24” of the smoke partition. These dampers are approved for use in engineered smoke control systems and are controlled via smoke detection system. Electric (24v, 120v, 230v) or pneumatic actuators are used to operate the smoke dampers.

Standard Construction
Frame: Roll formed Frame - Galvanized Steel hat-section
W/ staked corners & integral bracing
Blades: Airfoil-shaped, double skin galvanized Steel of roll-formed construction.
  Min. width: 5” (127mm)
  Max. width: 7” (179mm)
Axles: Square plated steel
Seals: Pressure Sensitive 450° silicone blade edge seals and flexible metal jamb seals.
Linkage: Concealed in frame. Linkage bars are 1/8” (3.2mm)
Bearings: Bronze Oilite press-fit into frame
Maximum Velocity: 2000 fpm (10.2 m/s) on all sizes
Maximum Pressure: 4” wg (1kPa)
Consult Factory For Velocities up to 4000 FPM and 6.0” w.g.

Designed and tested in accordance to standards: UL 555S, ULC S112.1. Labeled and listed by UL/ULC under File # R25410. They meet all the NFPA-90A, IBC Code, and other major code requirements for Smoke Dampers.

Standard Sizes

<table>
<thead>
<tr>
<th>Min. V or H</th>
<th>Max. Single Section</th>
<th>Max. Multiple Assembly</th>
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<tbody>
<tr>
<td>8” X 8”</td>
<td>36” W X 48”H</td>
<td>144” W X 96”H</td>
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<tr>
<td>203mm X 203mm</td>
<td>914mm X 1219mm</td>
<td>3657mm X 2438mm</td>
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Options:
- Factory Sleeve: ________ Ga, (20 Ga min.)
- Sleeve Length: ________ inches, 16” min.
- Electric Actuator, ________ VAC
- Pneumatic Actuator, 25 psi

Suggested Specification
Low Leakage Smoke Control Dampers shall be Model:S-AF-I by United Enertech. Double blade edge and jamb seals shall be of the pressure sensitive type for low leakage. Dampers shall be rated for leakage as to U.L. 555S / U.L.C. S112.1 rating and shall be Class I with leakage not to exceed 8 cfm per sq. ft. at 4.0 inches static pressure. Linkage shall be of the concealed type for the maximum free area.

Manufacturer’s Recommendations
All moving parts of the damper must be inspected and cycled at intervals not greater than every 12 months or in accordance with the latest edition of NFPA 90A, 92A, local codes and the actuator manufacturer. In addition, the damper shall be inspected for corrosion. Dry lubricants are recommended.

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PERFORMANCE DATA

Pressure drop testing was done by an independent laboratory to AMCA Standard 500-D, Fig. 5.3 ductwork upstream & downstream.

DAMPER SIZE 36 x 36

VELOCITY THROUGH FACE AREA

PRESSURE DROP - INCHES OF WATER (In. W.C.)

DAMPER SIZE 24 x 24

VELOCITY THROUGH FACE AREA

PRESSURE DROP - INCHES OF WATER (In. W.C.)

DAMPER SIZE 12 x 12

VELOCITY THROUGH FACE AREA

PRESSURE DROP - INCHES OF WATER (In. W.C.)