MODEL UA2M
Combination Fire/Smoke Damper • 1½ Hr. Rated • Airfoil Blade • Leakage Class II • 250°F or 350°F Rated • Modulating • Galvanized Steel

Standard Materials and Construction

Frame:  5½” x ¾” x 16 GA. galvanized steel hat channel. A flat head and sill are used for sizes through 13" high.
Blades:  20 GA. galvanized steel double skinned (equal to 14 GA.), parallel action.
Axles:  Plated solid steel stub.
Bearings:  Oil impregnated bronze.
Linkage:  Plated steel angle and crank plates with stainless steel pivots, in-jamb type.
Stop:  18 GA., galvanized steel at head and sill.
Blade Seals:  Silicone.
Jamb Seals:  Stainless steel.
Sleeve:  Minimum 20 GA. galvanized steel by 18" long.
Caulking:  Hardcast Irongrip 601 or UL-listed equivalent.
Finish:  Mill.
Actuator:  24VAC/DC electric with heat response device (EHRD) factory-installed for Power-Open/Spring-Close (fail close) operation. External left hand mounted as viewed from jack shaft side of damper.

Options

Exact size (no undercut)
Sleeve - Transitions
Right hand and/or internal actuator mounting locations (Restrictions apply)
Dual Position Indication (DPI) Switches
Sensotherm Re-openable Heat Response Device (ESOT)
Model SM-501 Flow-rated smoke detector
Model 2DS1 No-flow smoke detector (12" minimum damper height)
Remote test box
Momentary test switch
Transformers
Tab-Lock retaining angles
Stainless steel bearings
Stainless steel axle
Security bars
Short-width (less than 8") and/or short-height (less than 6") transitions.

Notes

1. Damper frames are provided approximately ¼" undersized. The addition of a sleeve will increase the size of the assembly.
2. Damper less than or equal to 12" in height with factory mounted SM-501 smoke detectors require a minimum 19" deep sleeve (10½" on the actuator side). Detectors will be mounted on the side of damper opposite actuator.
3. Damper less than 12" in height with factory mounted SM-501 smoke detectors require a minimum 20" deep sleeve (11½" on the actuator side). Detectors will be mounted on the bottom or top of damper.
4. Smoke detectors can be ordered for field mounting with standard 18" deep sleeve.
5. Dampers for horizontal installation can only be mounted in a fire constructed of masonry/concrete materials.
6. Actuator control signal is 2 - 10 VDC or with addition of 500 ohm resistor (by others) is 4 - 20 mA.

Dampers Sizes

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</thead>
<tbody>
<tr>
<td>No Transition</td>
<td></td>
<td></td>
<td>8&quot; x 6&quot; frame</td>
<td>24&quot; x 24&quot; frame</td>
<td>96&quot; x 48&quot; frame</td>
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<tr>
<td>C - Round or C-Square</td>
<td>250°F</td>
<td>2000 fpm, 4&quot; in. w.g.</td>
<td>4&quot; dia. duct</td>
<td>22&quot; dia. duct</td>
<td>46&quot; dia. duct</td>
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<td>(8&quot; x 6&quot; frame)</td>
<td>(8&quot; x 6&quot; frame)</td>
<td>(8&quot; x 6&quot; frame)</td>
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<tr>
<td>C - Oval or C - Rectangle</td>
<td></td>
<td></td>
<td>4&quot; dia. duct</td>
<td>22&quot; x 22&quot; duct</td>
<td>94&quot; x 46&quot; duct</td>
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All dimensions are shown as width x height.

For no transition, the size you order will equal the damper’s frame size, which should equal the duct size. Unless otherwise noted, the size you order will equal the size of your duct work.

For transition, the damper size should equal the following:
width + 2” x height + 2”.

*Dampers smaller than minimum frame size require a transition. Reference SD-TRFS.

This combination fire/smoke damper meets the construction and performance requirements of:

- Underwriters Laboratories Inc. Standards 555 and 555S
- National Fire Protection Association Standards 80 and 90A
- ICC’s International Building Code
- New York City MEA Listing #111-99-M
- California State Fire Marshal Listing #3225-1328:118
- Underwriters Laboratories Inc. Approved for dual direction airflow and dynamic conditions.
- Underwriters Laboratories Inc. Classified for use in fire resistive ratings of less than 3 hours.
- Underwriters Laboratories Inc. Classified for use in smoke control systems for Leakage Class II and 250°F or 350°F.
- Actuators must be arranged to operate automatically, must fail closed upon loss of power, and must be controlled by a smoke detection system.

The 3" dimension will increase if sleeve length is increased.
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Operational Ratings
Maximum Differential Pressure: 4 in. w.g.
Maximum Velocity: 2000 fpm

Leakage Ratings
UL Leakage Class II
10 cfm per sq. ft. maximum @ 1 in. wg
20 cfm per sq. ft. maximum @ 4 in. wg

Pressure Drop Ratings
The Pressure drop data shown below is based on laboratory conditions. The test setup does not take into account elbows or other duct fittings that are part of every actual duct system. The configuration of the actual duct system immediately upstream and downstream of the damper often contributes more pressure loss than the damper itself.

![Pressure Drop Chart](chart.png)

This product was tested in accordance with AMCA Standard 500D, Figure 5.3.

Intake air converted to standard air density.