MODEL SA2
Leakage Class II • Airfoil Blade • 250°F or 350°F • Smoke Damper

STANDARD MATERIALS AND CONSTRUCTION

FRAME: 51/2" x 3/4" x 16-GA galvanized steel hat channel; A flat head and sill are used for sizes thru 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; H-jamb type
STOPS: 18-GA galvanized steel at head and sill
BLADE SEALS: Silicone
JAMB SEALS: Stainless steel
SLEEVE: Minimum 20-GA galvanized steel by 18" long (sizes greater than 84" wide or 84" high require minimum 18-GA)
CAULKING: Hardcast iron grip 601 or UL-listed equivalent
FINISH: Mill on galvanized steel
ACTUATOR: Electric or pneumatic; Factory-installed for Power-Open/ Spring-Close (fail close) operation; External left hand mounted as viewed from jackshaft side of damper

OPTIONS

Exact Size (no undercut)
Flange - Front, Rear or Both
Actuators - 120V, 24V, 230V, Pneumatic
Right Hand and/or Internal Actuator Mounting Locations (Restrictions Apply)
Dual Position Indication (DPI) Switches
Model SM-501 Flow-Rated Smoke Detector
Model 2151 No-Flow Smoke Detector (12" Minimum Damper Height)
Remote Test Box
Momentary Test Switch
Transformers
Tab-Lock Retaining Angles - 1 or 2 sets
Stainless Steel Bearings
Stainless Steel Axes
Copper Tubing (pneumatic actuator)
Sleeves of Various Depths and Gauge Thicknesses (restrictions apply)
No Sleeve or Sideplate (restrictions apply)
Round or Oval Transitions
Security Bars
Short-Width (<8") and/or Short-Height (<6") Transitions

NOTES

1. Damper frames are provided approximately 1/4" undersized. The addition of a sleeve will increase the size of the assembly.
2. Dampers >= 12" in height with factory mounted SM-501 smoke detectors require a minimum 19" deep sleeve (10.5" on actuator side); detectors will be mounted on side of damper opposite actuator.
3. Damper <12" in height with factory mounted SM-501 smoke detectors require a minimum 20" deep sleeve (11.5" on actuator side) and detectors will be mounted on bottom (or top) of damper.
4. Smoke detectors can be ordered for field mounting with standard 18" deep sleeves.

DAMPER SIZES

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Hor &amp; Vert</th>
<th>2000 fpm, 4 in.wg</th>
<th>4000 fpm, 6 in.wg, 250°F Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel</td>
<td>Min Panel</td>
<td>Max Panel</td>
<td>Max Assy</td>
</tr>
<tr>
<td>Rectangular</td>
<td>4&quot;W x 4&quot;H</td>
<td>36&quot;W x 48&quot;H</td>
<td>144&quot;W x 96&quot;H, 288&quot;W x 48&quot;H</td>
</tr>
<tr>
<td></td>
<td>(8&quot;W x 6&quot;H frame)</td>
<td></td>
<td>24&quot;W x 24&quot;H, 96&quot;W x 24&quot;H</td>
</tr>
<tr>
<td>Round</td>
<td>4&quot; dia.</td>
<td>34&quot; dia.</td>
<td>81&quot; dia.</td>
</tr>
<tr>
<td></td>
<td>(8&quot;W x 6&quot;H frame)</td>
<td></td>
<td>22&quot; dia.</td>
</tr>
<tr>
<td>Oval</td>
<td>4&quot;W x 4&quot;H</td>
<td>34&quot;W x 46&quot;H</td>
<td>70&quot; x 94&quot;, 94&quot; x 70&quot;</td>
</tr>
<tr>
<td></td>
<td>(8&quot;W x 6&quot;H frame)</td>
<td></td>
<td>22&quot;W x 22&quot;H, 94&quot;W x 22&quot;H</td>
</tr>
</tbody>
</table>

*Dampers smaller than minimum frame size require a transition. Reference SD-TRFS.
** See Addendum for additional ratings.
MODEL SA2
Leakage Class II • Airfoil Blade • 250°F or 350°F • Smoke Damper

Operations Ratings:
Maximum Differential Pressure: 4 in. wg (6 in. wg for selected size/actuator combinations)
Maximum Velocity: 2000 fpm (4000 fpm for selected size/actuator combinations)

Leakage Ratings:
UL Class II
- 10 cfm per sq. ft. maximum @ 1 in. wg
- 20 cfm per sq. ft. maximum @ 4 in. wg
- 24.5 cfm per sq. ft. maximum @ 6 in. wg

Sound Ratings:
None Available

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.

SA Pressure Drop

Art Balance certifies that the model SA2 damper shown here is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Performance Ratings only.

In the interest of product development, Air Balance reserves the right to make changes without notice.
450 Riverside Drive • Wyalusing, PA 18853 • Phone: (570) 746-1886 • Fax: (570) 746-9286
## ADDENDUM SD-SA2-13-08
### Extended Pressure & Velocity Ratings

<table>
<thead>
<tr>
<th>Damper Style</th>
<th>Temp Rating (°F)</th>
<th>Velocity &amp; Pressure</th>
<th>Horizontal &amp; Vertical Min Panel</th>
<th>Horizontal &amp; Vertical Max Panel</th>
<th>Max Ass'y</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Transition</td>
<td>250° - or - 350°</td>
<td>2000 fpm, 4&quot; w.g.</td>
<td>36&quot; x 48&quot; frame</td>
<td>144&quot; x 96&quot; frame - or - 288&quot; x 48&quot; frame</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>3000 fpm, 4&quot; w.g.</td>
<td>24&quot; x 36&quot; frame - or - 36&quot; x 24&quot; frame</td>
<td>96&quot; x 72&quot; frame</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 4&quot; w.g.</td>
<td>24&quot; x 36&quot; frame - or - 36&quot; x 24&quot; frame</td>
<td>96&quot; x 36&quot; frame - or - 108&quot; x 24&quot; frame</td>
<td></td>
</tr>
<tr>
<td></td>
<td>250°</td>
<td>4000 fpm, 6&quot; w.g.</td>
<td>24&quot; x 24&quot; frame</td>
<td>96&quot; x 24&quot; frame</td>
<td></td>
</tr>
<tr>
<td></td>
<td>350°</td>
<td>4000 fpm, 6&quot; w.g.</td>
<td>(external act only for 350°)</td>
<td>16&quot; x 24&quot; frame</td>
<td>n/a</td>
</tr>
</tbody>
</table>

|              | 250° - or - 350° | 2000 fpm, 4" w.g.  | 34" dia. duct - or - 34" x 34" duct | 81" dia. duct - or - 81" x 81" duct |
|              |                  | 3000 fpm, 4" w.g.  | 22" dia. duct - or - 22" x 22" duct | 70" dia. duct - or - 70" x 70" duct |
|              |                  | 4000 fpm, 4" w.g.  | 22" dia. duct - or - 22" x 22" duct | 34" dia. duct - or - 34" x 34" duct |
|              | 250°             | 4000 fpm, 6" w.g.  | 22" dia. duct - or - 22" x 22" duct | n/a |
|              | 350°             | 4000 fpm, 6" w.g.  | (external act only for 350°)   | 14" dia. duct - or - 14" x 14" duct |

|              | 250° - or - 350° | 2000 fpm, 4" w.g.  | 34" x 46" duct - or - 94" x 70" duct |
|              |                  | 3000 fpm, 4" w.g.  | 22" x 34" duct - or - 34" x 22" duct | 94" x 70" duct |
|              |                  | 4000 fpm, 4" w.g.  | 22" x 34" duct - or - 34" x 22" duct | 94" x 34" duct - or - 106" x 22" duct |
|              | 250°             | 4000 fpm, 6" w.g.  | 22" x 22" duct                | 94" x 22" duct |
|              | 350°             | 4000 fpm, 6" w.g.  | (external act only for 350°)   | 14" x 22" duct | n/a       |

All dimensions are shown as width x height.

For **NO TRANSITION**, order sizes = frame size = duct size

Unless otherwise noted, duct size = order size

**WITH TRANSITIONS**, damper frame size = order width + 2" x order height + 2"