STANDARD MATERIALS AND CONSTRUCTION

FRAME: 5⅛" x ¾" 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; In-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 longrip 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 Axles
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 ½" 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>Horizontal &amp; Vertical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min. Panel</td>
</tr>
<tr>
<td>Rectangular</td>
<td>4&quot;W x 4&quot;H (8&quot;W x 6&quot;H frame)</td>
</tr>
<tr>
<td>Round</td>
<td>4&quot; dia. (8&quot;W x 6&quot;H frame)</td>
</tr>
<tr>
<td>Oval</td>
<td>4&quot;W x 4&quot;H (8&quot;W x 6&quot;H frame)</td>
</tr>
</tbody>
</table>

*Dampers smaller than minimum frame size require a transition. Reference SD-TRFS.
**See Addendum on page 3 for additional ratings.
MODEL SA1
Leakage Class I • Airfoil Blade • 250°F or 350°F • Galvanized Steel • 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 I
4 cfm per sq. ft. maximum @ 1 in. wg
8 cfm per sq. ft. maximum @ 4 in. wg
9.6 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

AMCA CERTIFIED RATINGS
AIR PERFORMANCE
Air Balance certifies that the model SA1 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) 746-1888 • Fax: (570) 746-9286

AMCA FIGURE 5.3
# ADDENDUM SD-SA1-13-08

## 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 Assy</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Transition</td>
<td>250° - or - 350°</td>
<td>2000 fpm, 4” w.g.</td>
<td>8” x 6” frame</td>
<td>36” x 48” frame</td>
<td>144” x 96” frame - or - 288” x 48” frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4” w.g.</td>
<td></td>
<td>24” x 36” frame - or - 36” x 24” frame</td>
<td>96” x 72” frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 4” w.g.</td>
<td></td>
<td>24” x 36” frame - or - 36” x 24” frame</td>
<td>96” x 36” frame - or - 108” x 24” frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 6” w.g. (external act only for 350°)</td>
<td></td>
<td>16” x 24” frame</td>
<td>n/a</td>
</tr>
<tr>
<td>C-Round - or - C-Square</td>
<td>250° - or - 350°</td>
<td>2000 fpm, 4” w.g.</td>
<td>4” dia. duct - or - 4” x 4” duct (8” x 6” frame)</td>
<td>34” dia. duct - or - 34” x 34” duct</td>
<td>81” dia. duct - or - 81” x 81” duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4” w.g.</td>
<td></td>
<td>22” dia. duct - or - 22” x 22” duct</td>
<td>70” dia. duct - or - 70” x 70” duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 4” w.g.</td>
<td></td>
<td>22” dia. duct - or - 22” x 22” duct</td>
<td>34” dia. duct - or - 34” x 34” duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 6” w.g. (external act only for 350°)</td>
<td>14” dia. duct - or - 14” x 14” duct</td>
<td></td>
<td>n/a</td>
</tr>
<tr>
<td>C-Oval - or - C-Rectangle</td>
<td>250° - or - 350°</td>
<td>2000 fpm, 4” w.g.</td>
<td>4” x 4” duct (8” x 6” frame)</td>
<td>34” x 46” duct</td>
<td>70” x 94” duct - or - 94” x 70” duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4” w.g.</td>
<td></td>
<td>22” x 34” duct - or - 34” x 22” duct</td>
<td>94” x 70” duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 4” w.g.</td>
<td></td>
<td>22” x 34” duct - or - 34” x 22” duct</td>
<td>94” x 94” duct - or - 106” x 22” duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 6” w.g. (external act only for 350°)</td>
<td>14” x 22” duct</td>
<td></td>
<td>n/a</td>
</tr>
</tbody>
</table>

_all dimensions are shown as width x height_

_for NO TRANSITION, order size = frame size = duct size_
_unless otherwise noted, duct size = order size_

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