MODEL FA1
Leakage Class I • Airfoil Blade • 1 1/2 Hour • 250°F or 350°F • Fire/Smoke Damper

STANDARD MATERIALS AND CONSTRUCTION

FRAME: 5 1/2' x 1/2' 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 hub
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 SEAL: Stainless steel
SLEEVE: Minimum 20-GA galvanized steel by 18" long
CAULKING: Hardcast Irongrip 601 or UL-listed equivalent
FINISH: Mill on galvanized steel
ACTUATOR: Electric with heat response device (EHRD) or pneumatic with heat response device (PHRD); 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)
Actuators - 120V, 24V, 230V or Pneumatic
Right Hand and/or Internal Actuator Mounting Locations (Restrictions Apply)
Dual Position Indication (DPI) Switches
Sensitherm Re-Openable Heat Response Device (ESOT) for Electric Actuator
Sensitherm Re-Openable Heat Response Device (PSOT) for Pneumatic Actuator
Model SM-501 Flow-Rated Smoke Detector
Model 2151 No-Flow Smoke Detector (12" Minimum Damper Height)
Momentary Test Switch
Remote Test Box
Transformers
Tab-Lock Retaining Angles
Stainless Steel Bearings
Stainless Steel Axles
Security Bars
Copper Tubing (for Pneumatic Actuators)
Sleeves of Various Depths and Gauge Thicknesses (restriction apply)
No Sleeves (restriction apply)
Round or Oval Transitions
Short-Width (<6") 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. Damper >= 12" in height with factory mounted SM-501 smoke detectors require a minimum 19" deep sleeve (10.5" on the actuator side); detectors will be mounted on the side of the damper opposite actuator.
3. Damper < 12" in height with factory mounted SM-501 smoke detectors require a minimum 20" deep sleeve (11.5" 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 barrier constructed of masonry/concrete materials.

DAMPER SIZES

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Horz. &amp; Vert.</th>
<th>Horizontal (floor)</th>
<th>Vertical (wall)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rectangular</td>
<td>4&quot; W x 4&quot;H</td>
<td>32&quot;W x 48&quot;H</td>
<td>96&quot;W x 96&quot;H</td>
</tr>
<tr>
<td></td>
<td>(8&quot;W x 6&quot;H frame)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Round</td>
<td>4&quot; dia.</td>
<td>30&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></td>
</tr>
<tr>
<td>Oval</td>
<td>4&quot; W x 4&quot;H</td>
<td>30&quot;W x 46&quot;H</td>
<td>70&quot;W x 94&quot;H or 94&quot;W x 70&quot;H</td>
</tr>
<tr>
<td></td>
<td>(8&quot;W x 6&quot;H frame)</td>
<td></td>
<td></td>
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</tbody>
</table>

* DAMPERS SMALLER THAN MINIMUM FRAME SIZE REQUIRE A TRANSITION. REFERENCE SD-TRFS.
** SEE ADDENDUM FOR ADDITIONAL RATINGS.

450 Riverside Drive • Wyalusing, Pa 18853 • Phone: (570) 746-1888 • Fax: (570) 746-9286
MODEL FA1
Leakage Class I • Airfoil Blade • 1½ Hour • 250°F or 350°F • Fire/Smoke Damper

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

Leakage Ratings:
UL Class I
4 cfm per sq. ft. maximum @ 1 in. wg
8 cfm per sq. ft. maximum @ 4 in. wg
9.8 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.

Air Balance certifies that the model FA1 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 the 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
## ADDENDUM SD-FA1-13-08

### Extended Pressure & Velocity Ratings

#### FA1 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 (floor mount) Max Panel</th>
<th>Max Assy</th>
<th>Vertical (wall mount) Max Panel</th>
<th>Max Assy</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Transition</td>
<td>250° - 350°</td>
<td>2000 fpm, 4&quot; w.g.</td>
<td>8&quot; x 6&quot; frame</td>
<td>32&quot; x 48&quot; frame</td>
<td>96&quot; x 96&quot; frame</td>
<td>32&quot; x 48&quot; frame</td>
<td>126&quot; x 96&quot; frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4&quot; w.g.</td>
<td></td>
<td>24&quot; x 36&quot; frame</td>
<td>96&quot; x 72&quot; frame</td>
<td>24&quot; x 36&quot; frame</td>
<td>96&quot; x 72&quot; frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 4&quot; w.g.</td>
<td></td>
<td>24&quot; x 36&quot; frame</td>
<td>96&quot; x 36&quot; frame</td>
<td>24&quot; x 36&quot; frame</td>
<td>96&quot; x 36&quot; frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 6&quot; w.g.</td>
<td>(external act only for 350&quot;)</td>
<td>16&quot; x 24&quot; frame</td>
<td>n/a</td>
<td>16&quot; x 24&quot; frame</td>
<td>n/a</td>
</tr>
<tr>
<td>C-Round - or - C-Square</td>
<td>250° - 350°</td>
<td>2000 fpm, 4&quot; w.g.</td>
<td>4&quot; dia. duct - or - 4&quot; x 4&quot; duct</td>
<td>30&quot; dia. duct - or - 30&quot; x 30&quot; duct</td>
<td>81&quot; dia. duct - or - 81&quot; x 81&quot; duct</td>
<td>30&quot; dia. duct - or - 30&quot; x 30&quot; duct</td>
<td>81&quot; dia. duct - or - 81&quot; x 81&quot; duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4&quot; w.g.</td>
<td>4&quot; dia. duct - or - 4&quot; x 4&quot; duct</td>
<td>22&quot; dia. duct - or - 22&quot; x 22&quot; duct</td>
<td>70&quot; dia. duct - or - 70&quot; x 70&quot; duct</td>
<td>22&quot; dia. duct - or - 22&quot; x 22&quot; duct</td>
<td>70&quot; dia. duct - or - 70&quot; x 70&quot; duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 4&quot; w.g.</td>
<td>(8&quot; x 6&quot; frame)</td>
<td>22&quot; dia. duct - or - 22&quot; x 22&quot; duct</td>
<td>34&quot; dia. duct - or - 34&quot; x 34&quot; duct</td>
<td>22&quot; dia. duct - or - 22&quot; x 22&quot; duct</td>
<td>34&quot; dia. duct - or - 34&quot; x 34&quot; duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 6&quot; w.g.</td>
<td>(external act only for 350&quot;)</td>
<td>14&quot; dia. duct - or - 14&quot; x 14&quot; duct</td>
<td>n/a</td>
<td>14&quot; dia. duct - or - 14&quot; x 14&quot; duct</td>
<td>n/a</td>
</tr>
<tr>
<td>C-Oval - or - C-Rectangle</td>
<td>250° - 350°</td>
<td>2000 fpm, 4&quot; w.g.</td>
<td>4&quot; x 4&quot; duct (8&quot; x 6&quot; frame)</td>
<td>30&quot; x 46&quot; duct</td>
<td>70&quot; x 94&quot; duct - or - 94&quot; x 70&quot; duct</td>
<td>30&quot; x 46&quot; duct</td>
<td>70&quot; x 94&quot; duct - or - 94&quot; x 70&quot; duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4&quot; w.g.</td>
<td>4&quot; x 4&quot; duct (8&quot; x 6&quot; frame)</td>
<td>22&quot; x 34&quot; duct - or - 22&quot; x 22&quot; duct</td>
<td>94&quot; x 70&quot; duct</td>
<td>22&quot; x 34&quot; duct - or - 22&quot; x 22&quot; duct</td>
<td>94&quot; x 70&quot; duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 4&quot; w.g.</td>
<td>4&quot; x 4&quot; duct (8&quot; x 6&quot; frame)</td>
<td>22&quot; x 34&quot; duct - or - 22&quot; x 22&quot; duct</td>
<td>94&quot; x 34&quot; duct</td>
<td>22&quot; x 34&quot; duct - or - 22&quot; x 22&quot; duct</td>
<td>94&quot; x 34&quot; duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 6&quot; w.g.</td>
<td>(external act only for 350&quot;)</td>
<td>14&quot; x 22&quot; duct</td>
<td>n/a</td>
<td>14&quot; x 22&quot; duct</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"