MODEL FA2
Leakage Class II • 1 1/2 Hour • Airfoil Blade • 250°F or 350°F • Galvanized Steel Airfoil Blade Fire/Smoke Damper

STANDARD MATERIALS AND CONSTRUCTION

FRAME: 5/8" 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 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 SEALs: Stainless steel
SLEEVE: Minimum 20-GA galvanized steel by 18" long (sizes greater than 84" wide or 94" high require minimum 18-GA)
CAULKING: Hardcast Inorganic 601 or UL-listed equivalent
FINISH: Mill galvanized steel
ACTUATOR: Electric with heat response device (EHRD) or pneumatic

OPTIONS

Exact Size (No Undercut)
Sleeve - Transitions
Actuators - 120V, 24V, 230V or Pneumatic
Right Hand and/or Internal Actuator Mounting Locations (Restrictions Apply)
Dual Position Indicator (DPI) Switches
Sensotherm Re-Openable Heat Response Device (ESOT) for Electric Actuator
Sensotherm 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 Axle
Security Bars
Copper Tubing (for Pneumatic Actuators)
Sleeves Of Various Depth And Gauge Thickness (restriction apply)
No Sleeve (restrictions apply)
Round or Oval Transitions
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. 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.

<table>
<thead>
<tr>
<th>Damper Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
</tr>
<tr>
<td>Panel</td>
</tr>
<tr>
<td>Rectangular</td>
</tr>
<tr>
<td>Round</td>
</tr>
<tr>
<td>Oval</td>
</tr>
</tbody>
</table>

* Dampers smaller than minimum frame size require a transition. Reference SD-TRFS.
** See Addendum for additional ratings

UNDERWRITERS LABORATORIES INC.®
CLASSIFIED DYNAMIC FIRE AND SMOKE DAMPER
FIRE RESISTANCE RATING 1 1/2 HR
LEAKAGE RESISTANCE CLASS II

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 3rd dimension will increase if sleeve length is increased.

[Diagram of Damper Profile]
MODEL FA2
Leakage Class II • 1½ Hour • Airfoil Blade • 250°F or 350°F • Galvanized Steel Airfoil Blade Fire/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.

FA Pressure Drop

Air Balance certifies that the model FA2 damper shown here is licensed to bear the AMA Seal. The ratings shown are based on tests and procedures performed in accordance with AMAPublication 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) 746-1886 • Fax: (570) 746-9286
## ADDENDUM SD-FA2-13-08
### 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 (floor mount) Max Panel</th>
<th>Max Ass'y</th>
<th>Vertical (wall mount) Max Panel</th>
<th>Max Ass'y</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Transition</strong></td>
<td>250° or 350°</td>
<td>2000 fpm, 4” w.g.</td>
<td>8” x 6” frame</td>
<td>32” x 48” frame</td>
<td>96” x 96” frame</td>
<td>32” x 48” frame</td>
<td>128” x 96” frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4” w.g.</td>
<td></td>
<td>24” x 36” frame</td>
<td>96” x 72” frame</td>
<td>32” 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</td>
<td>96” x 36” frame</td>
<td>32” x 24” frame</td>
<td>96” x 36” frame</td>
</tr>
<tr>
<td></td>
<td>250°</td>
<td>4000 fpm, 6” w.g.</td>
<td></td>
<td>24” x 24” frame</td>
<td>96” x 24” frame</td>
<td>24” x 24” frame</td>
<td>96” x 24” frame</td>
</tr>
<tr>
<td></td>
<td>350°</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>
<td>16” x 24” frame</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>C-Round - or - C-Square</strong></td>
<td>250° or 350°</td>
<td>2000 fpm, 4” w.g.</td>
<td>4” dia. duct</td>
<td>30” dia. duct</td>
<td>81” dia. duct</td>
<td>30” dia. duct</td>
<td>81” dia. duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4” w.g.</td>
<td>4” x 4” duct</td>
<td>22” dia. duct</td>
<td>70” dia. duct</td>
<td>22” dia. duct</td>
<td>70” dia. duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 fpm, 4” w.g.</td>
<td></td>
<td>22” dia. duct</td>
<td>34” dia. duct</td>
<td>22” dia. duct</td>
<td>34” dia. duct</td>
</tr>
<tr>
<td></td>
<td>250°</td>
<td>4000 fpm, 6” w.g.</td>
<td></td>
<td>22” dia. duct</td>
<td>34” x 34” duct</td>
<td>22” dia. duct</td>
<td>34” x 34” duct</td>
</tr>
<tr>
<td></td>
<td>350°</td>
<td>4000 fpm, 6” w.g. (external act only for 350°)</td>
<td></td>
<td>14” dia. duct</td>
<td>n/a</td>
<td>14” dia. duct</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>C-Oval - or - C-Rectangle</strong></td>
<td>250° or 350°</td>
<td>2000 fpm, 4” w.g.</td>
<td>4” x 4” duct</td>
<td>30” x 46” duct</td>
<td>70” x 94” duct</td>
<td>30” x 46” duct</td>
<td>70” x 94” duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 fpm, 4” w.g.</td>
<td></td>
<td>22” x 34” duct</td>
<td>94” x 70” duct</td>
<td>22” x 34” 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</td>
<td>94” x 34” duct</td>
<td>22” x 34” duct</td>
<td>94” x 34” duct</td>
</tr>
<tr>
<td></td>
<td>250°</td>
<td>4000 fpm, 6” w.g. (external act only for 350°)</td>
<td></td>
<td>22” x 22” duct</td>
<td>94” x 22” duct</td>
<td>22” x 22” duct</td>
<td>94” x 22” duct</td>
</tr>
<tr>
<td></td>
<td>350°</td>
<td>4000 fpm, 6” w.g. (external act only for 350°)</td>
<td></td>
<td>14” x 22” duct</td>
<td>n/a</td>
<td>14” x 22” 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”

---

Air Balance
450 Riverside Drive • Wyalusing, PA 18853 • Phone: (570) 746-1888 • Fax: (570) 746-9286