STANDARD MATERIALS AND CONSTRUCTION

FRAME: 5½” x ¾” x 16 GA. galvanized steel hat channel. Flat head and sill for maximum free area on dampers less than or equal to 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 angles at head and sill

BLADE SEALS: Silicone.

JAMB SEALS: Stainless steel.

SLEEVE: Minimum 20 GA. galvanized steel by 18” long.

CAKING: Hardcast Iron Grip 601 or UL-listed equivalent.

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.

FINISH: Mill or galvanized steel.

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
Sensotherm Re-Openable Heat Response Device (ESOT) for electric actuators
Sensotherm Re-Openable Heat Response Device (PSOT) for pneumatic actuators
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 (less than 8”) and/or short-height (less than 6”) transitions

NOTES

1. Nominal deductions will be made to the opening size given.
2. Dampers greater 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 the damper opposite the actuator.
3. Dampers 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. Underwriters Laboratories Inc. Approved for dual direction airflow and dynamic conditions.

DAMPER SIZES

<table>
<thead>
<tr>
<th>Orientation</th>
<th>** 2000 fpm, 4 in. w.g.</th>
<th>4000 fpm, 6 in. w.g.</th>
</tr>
</thead>
<tbody>
<tr>
<td>**</td>
<td>** Min Panel</td>
<td></td>
</tr>
<tr>
<td>Panels</td>
<td>4”W x 4”H</td>
<td>Max Panel 250°F / 350°F</td>
</tr>
<tr>
<td>Rectangular</td>
<td>4”W x 6”H frame</td>
<td>32”W x 48”H</td>
</tr>
<tr>
<td>Round</td>
<td>4” dia.</td>
<td>30” dia.</td>
</tr>
<tr>
<td>Oval</td>
<td>4”W x 4”H</td>
<td>30”W x 46”H</td>
</tr>
</tbody>
</table>

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

** See sizing chart on page 3 for additional ratings.

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. Approved for use in fire resistive ratings of less than 3 hours.
- Underwriters Laboratories Inc. Approved for use in smoke control systems for Leakage Class II and 250°F or 350°F.

Air Balance is a member of AMCA and in the interest of product development, Air Balance reserves the right to make changes without notice.

For handwritten orders, use the schedule block on page 2.
MODEL FA2

Combination Fire/Smoke Damper ▲ 1½ Hr. Rated ▲ Airfoil Blades ▲ Leakage Class II ▲ 250°F or 350°F Rated ▲ Galvanized Steel

OPERATIONAL RATING

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

LEAKAGE RATING

UL Leakage Class I
- 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

PRESSURE DROP

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 FA2 damper shown here is licensed to bear the AMA Seal. The ratings shown are based on tests and procedures performed in accordance with AMA 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.

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

Intake air converted to standard air density.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Qty</th>
<th>Damper Size</th>
<th>Horizontal</th>
<th>Vertical</th>
<th>165°F</th>
<th>212°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch. / Eng.:</td>
<td>EDR:</td>
<td>ECN:</td>
<td>Job:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contractor:</td>
<td>Date:</td>
<td>DWN:</td>
<td>DWG:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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AB-21-01-12
**SIZING CHART**

<table>
<thead>
<tr>
<th>Damper Style</th>
<th>Temp. Rating (°F)</th>
<th>Velocity and Pressure</th>
<th>Minum Panel (Horz &amp; Vert)</th>
<th>Horizontal (Floor Mount)</th>
<th>Vertical (Wall Mount)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Max Panel</td>
<td>Max Assy</td>
</tr>
<tr>
<td>No Transition</td>
<td>250° or 350°</td>
<td>2000 FPM, 4in. w.g.</td>
<td>8”W x 6”H frame</td>
<td>32”W x 48”H frame</td>
<td>96”W x 96”H frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 FPM, 4in. w.g.</td>
<td></td>
<td>24”W x 36”H frame</td>
<td>96”W x 36”H frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 FPM, 4in. w.g.</td>
<td></td>
<td>24”W x 24”H frame</td>
<td>96”W x 24”H frame</td>
</tr>
<tr>
<td></td>
<td>250°</td>
<td>4000 FPM, 6in. w.g.</td>
<td></td>
<td>16”W x 24”H frame</td>
<td>32”W x 24”H frame</td>
</tr>
<tr>
<td></td>
<td>350°</td>
<td>4000 FPM, 6in. w.g.</td>
<td></td>
<td>16”W x 24”H frame</td>
<td>32”W x 24”H frame</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(external actuator)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C-round</td>
<td>250° or 350°</td>
<td>2000 FPM, 4in. w.g.</td>
<td>4” dia. duct or 4”W x 4”H duct</td>
<td>30” dia. duct or 30”W x 30”H duct</td>
<td>81” dia. duct or 81”W x 81”H duct</td>
</tr>
<tr>
<td>C-square</td>
<td></td>
<td>3000 FPM, 4in. w.g.</td>
<td>(8”W x 6”H frame)</td>
<td>70” dia. duct or 70”W x 70”H duct</td>
<td>34” dia. duct or 34”W x 34”H duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 FPM, 4in. w.g.</td>
<td></td>
<td>22” dia. duct or 22”W x 22”H duct</td>
<td></td>
</tr>
<tr>
<td></td>
<td>250°</td>
<td>4000 FPM, 6in. w.g.</td>
<td></td>
<td>14” dia. duct or 14”W x 14”H duct</td>
<td></td>
</tr>
<tr>
<td></td>
<td>350°</td>
<td>4000 FPM, 6in. w.g.</td>
<td>(external actuator)</td>
<td>22” dia. duct or 22”W x 22”H duct</td>
<td></td>
</tr>
<tr>
<td>C-oval</td>
<td>250° or 350°</td>
<td>2000 FPM, 4in. w.g.</td>
<td>4”W x 4”H duct (8”W x 6”H frame)</td>
<td>30”W x 46”H duct</td>
<td>70”W x 94”H duct</td>
</tr>
<tr>
<td>C-rectangle</td>
<td></td>
<td>3000 FPM, 4in. w.g.</td>
<td></td>
<td>94”W x 70”H duct</td>
<td>30”W x 46”H duct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 FPM, 4in. w.g.</td>
<td></td>
<td>22”W x 34”H duct</td>
<td>94”W x 70”H duct</td>
</tr>
<tr>
<td></td>
<td>250°</td>
<td>4000 FPM, 6in. w.g.</td>
<td></td>
<td>22”W x 22”H duct</td>
<td>94”W x 22”H duct</td>
</tr>
<tr>
<td></td>
<td>350°</td>
<td>4000 FPM, 6in. w.g.</td>
<td>(external actuator)</td>
<td>14”W x 22”H duct</td>
<td>30”W x 22”H duct</td>
</tr>
</tbody>
</table>

**NOTES**

1. For dampers with no transition, the size to order will be frame size, which is equal to the size of the ductwork unless otherwise noted.

2. For dampers with transition, the size to order will be as follows: width + 2” by height + 2”

3. When the damper is 6” high, width is limited to 16”. If the damper is ordered as 6” high and its width is less than 16”, an 8” high damper with a 2” short-height transition will be supplied.