Smoke Damper

Class I • 250°F or 350°F • Galvanized Steel • Single Thickness Blade • UL Classified Damper

STANDARD CONSTRUCTION

FRAME: 20-GA galvanized steel flat by 18' long integral sleeve
BLADES: 16-GA galvanized steel single thickness; Parallel action
AXLES: Plated solid steel stub
BEARINGS: Oil impregnated bronze
LINKAGE: Galvanized steel angle interconnect, with plated steel brackets and pivots located on blade
STOPS: 18-GA galvanized steel at head and sill
BLADE SEALS: Silicone
JAMB SEALS: Stainless steel
SLEEVE: Integral 20-GA galvanized steel by 18' long
RETAINING ANGLES: 7/8" x 1 1/2" x 16-GA adjustable perimeter mounting angle for dampers > 10"W x 10"H; dampers ≤ 10"W x 10"H retaining angles shipped loose
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

Right hand actuator mounting location
Integral Dual Position Indication (IDPI) switches
Model SM-501 Flow-rated smoke detector (10" minimum damper height) ship loose only
Model 2151 No-flow smoke detector (12" minimum damper height) ship loose only
Tab-Lock retaining angles
Stainless steel bearings
Copper tubing (for pneumatic actuators)
Sleeves of various depths
Round or oval transitions
Short-width (<6") and/or short-height (<6") transitions

NOTES

1. "A" width and "B" height are opening dimensions. Damper frames are provided approximately 1/4" undersized.
2. Dampers are available in 1" increments only.

LOUVER SIZE

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Horizontal &amp; Vertical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panels</td>
<td>Minimum Panel</td>
</tr>
<tr>
<td>Rectangular</td>
<td>4&quot;W x 4&quot;H (16&quot;W x 6&quot;H frame)</td>
</tr>
<tr>
<td>Round</td>
<td>4&quot; dia. (16&quot;W x 6&quot;H frame)</td>
</tr>
<tr>
<td>Oval</td>
<td>4&quot;W x 4&quot;H (16&quot;W x 6&quot;H frame)</td>
</tr>
</tbody>
</table>

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

Maximum Differential Pressure: 4 in. wg
Maximum Velocity: 2000 fpm

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**Leakage Ratings:**

UL Class II
8 cfm per sq. ft. maximum @ 4 in. wg

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**Sound Ratings:**

The Noise Criterion data below was tested in accordance with ASTM E477.99 in the center octave band.

<table>
<thead>
<tr>
<th>Damper Size</th>
<th>Noise Criterion (NC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Velocity fpm (m/s)</td>
</tr>
<tr>
<td></td>
<td>1000 (5.08)</td>
</tr>
<tr>
<td>12&quot;W x 12&quot;H (305mm x 305mm)</td>
<td>22dB</td>
</tr>
<tr>
<td>24&quot;W x 24&quot;H (610mm x 610mm)</td>
<td>30dB</td>
</tr>
</tbody>
</table>

---

**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.

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**AMCA Figure 5.3**

Louvers & Dampers certifies that the model KR1 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.

Louvers & Dampers P.O. Box 606 • 7435 Industrial Rd • Florence, KY 41042 • Phone (859) 647-2299 • Fax (859) 647-7810

December 2008
Smoke Damper
Class II • 250°F or 350°F • Galvanized Steel • Single Thickness Blade • UL Classified Damper

STANDARD CONSTRUCTION

FRAME: 20-GA galvanized steel flat by 18' long integral sleeve
BLADES: 16-GA galvanized steel single thickness; Parallel action
SLEEVES: Integral 20-GA galvanized steel by 18" long
BEARINGS: Oil impregnated bronze
LINKAGE: Galvanized steel angle interconnect, with plated steel brackets and pivots located on blade
STOPS: 18-GA galvanized steel at head and sill
BLADE SEALS: Silicone
JAMB SEALS: Stainless steel
RETAINING ANGLES: 7/16" x 1 1/2" x 16-GA adjustable perimeter mounting angle for dampers > 10"W x 10"H; dampers ≤ 10"W x 10"H retaining angles shipped loose
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

Right hand actuator mounting location
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Model SM-501 Flow-rated smoke detector (10" minimum damper height) ship loose only
Model 2151 No-flow smoke detector (12" minimum damper height) ship loose only
Tab-Lock retaining angles
Stainless steel bearings
Copper tubing (for pneumatic actuators)
Sleeves of various depths
Round or oval transitions
Short-width (<6") and/or short-height (<6") transitions

NOTES

1. "A" width and "B" height are opening dimensions. Damper frames are provided approximately 1/4" undersized.
2. Dampers are available in 1" increments only.

LOUVER SIZE

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Horizontal &amp; Vertical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panels</td>
<td>Minimum Panel</td>
</tr>
<tr>
<td>Rectangular</td>
<td>4&quot;W x 4&quot;H (6&quot;W x 6&quot;H frame)</td>
</tr>
<tr>
<td>Round</td>
<td>4&quot; dia. (6&quot;W x 6&quot;H frame)</td>
</tr>
<tr>
<td>Oval</td>
<td>4&quot;W x 4&quot;H (6&quot;W x 6&quot;H frame)</td>
</tr>
</tbody>
</table>

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

Louvers LD Dampers

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December 2008
Smoke Damper

Class II • 250°F or 350°F • Galvanized Steel • Single Thickness Blade • UL Classified Damper

**Operations Ratings:**

Maximum Differential Pressure: 4 in. wg
Maximum Velocity: 2000 fpm

**Leakage Ratings:**

UL Class II
20 cfm per sq. ft. maximum @ 4 in. wg

**Sound Ratings:**

The Noise Criterion data below was tested in accordance with ASTM E477.99 in the center octave band.

<table>
<thead>
<tr>
<th>Damper Size (in mm)</th>
<th>1200 (5.08)</th>
<th>2000 (10.16)</th>
<th>3000 (15.24)</th>
<th>4000 (20.32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot;W x 12&quot;H (305mm x 305mm)</td>
<td>22dB</td>
<td>44dB</td>
<td>55dB</td>
<td>62dB</td>
</tr>
<tr>
<td>24&quot;W x 24&quot;H (610mm x 610mm)</td>
<td>30dB</td>
<td>50dB</td>
<td>62dB</td>
<td>not available</td>
</tr>
</tbody>
</table>

**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.

Louvers & Dampers certifies that the model KR2 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, Louvers & Dampers reserves the right to make changes without notice.

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December 2008