Standard Construction and Materials

**FRAME:** 5⅛ x ⅞ x 16 GA. galvanized steel hat channel. Flat 16 GA. galvanized steel head and sill for maximum free area on dampers less than or equal to 13” high.

**BLADES:** 16 GA. 304 stainless steel, single thickness, parallel action.

**AXLES:** Plated solid steel stub.

**BEARINGS:** 304 stainless steel.

**LINKAGE:** 304 stainless steel angle and crank plates with stainless steel pivots, in-jamb type.

**STOPS:** 18 GA. 304 stainless steel at head and sill.

**BLADE SEALS:** Silicone.

**JAMB SEALS:** Stainless steel.

**SLEEVE:** Minimum 20 GA. stainless steel by 18” long (sizes greater than 84” wide or 84” high require minimum 18 GA.).

**CAULKING:** Hardcast iron grip 601 or UL-listed equivalent.

**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.

**FINISH:** Mill on stainless steel.

Options

Type 316 Stainless Steel (where available)
External right hand actuator mounting location
Integral Dual Position Indication (IDPI) switches
Model SM-501 Flow-rated smoke detector (10” minimum damper height)
Tab-Lock retaining angles
Copper tubing (for pneumatic actuators)
Sleeves of various depths and gauge thicknesses
Round or oval transitions
Short-width (less than 16”) and/or short-height (less than 8”) transitions
Power-close/spring-open actuation (restrictions apply)

Notes

1. Damper frames are provided approximately ¼” undersized. The addition of a sleeve will increase the size of the assembly.

2. Damper with smoke detector must have a minimum sleeve of 19” (10½” on the actuator side and 3” on the non-actuator side).

Damper Sizes

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Horizontal &amp; Vertical</th>
<th>Vertical</th>
<th>2000 fpm, 4 in. w.g.</th>
<th>3000 fpm, 4 in. w.g.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panels</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rectangular</td>
<td>Min. Panel Size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4”W x 4”H</td>
<td>36”W x 36”H</td>
<td>108”W x 36”H</td>
<td>108”W x 36”H</td>
</tr>
<tr>
<td></td>
<td>(16”W x 8”H frame)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Round</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4” dia.</td>
<td>34” dia.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>(16”W x 8”H frame)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oval</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>4”W x 4”H</td>
<td>34”W x 34”H</td>
<td>106”W x 34”H</td>
<td>106”W x 34”H</td>
</tr>
<tr>
<td></td>
<td>(16”W x 8”H frame)</td>
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</tbody>
</table>

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

This smoke damper meets the construction and performance requirements of:

- Underwriters Laboratories Inc. Standard 555S
- National Fire Protection Association Standards 80 and 90A
- ICC’s International Building Code
- California State Fire Marshal Listing #3230-1328:106
- New York City MEA Listing 112-99-M
- Underwriters Laboratories Inc. Approved for dual direction airflow and dynamic conditions.
- Underwriters Laboratories Inc. Classified for use in smoke control systems for Leakage Class I and 250°F or 350°F.
- Actuators must be controlled by a smoke detection system.

The 3” dimension will increase if sleeve length is increased.
 operational rating
 maximum differential pressure: 4 in. w.g.
 maximum face velocity: 2000 fpm (3000 fpm for selected size/actuator combinations)

 leakage rating
 ul class i
 4 cfm per sq.ft. maximum @ 1 in. w.g.
 8 cfm per sq.ft. maximum @ 4 in. w.g.

 sound rating
 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>1000</th>
<th>2000</th>
<th>3000</th>
<th>4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>12&quot;w x 12&quot;h</td>
<td>31</td>
<td>53</td>
<td>64</td>
<td>71</td>
</tr>
<tr>
<td>24&quot;w x 24&quot;h</td>
<td>33</td>
<td>54</td>
<td>65</td>
<td>n/a</td>
</tr>
</tbody>
</table>

 pressure drop rating
 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.

 static pressure drop

 tested in accordance with amca standard 500d, figure 5.3
 intake air converted to standard air density.

 cesco products certifies that the sg1(ss) 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.