Model MS2(SS)

**STANDARD CONSTRUCTION**

**FRAME:** 5½” x ¼” x 16 GA. 304 stainless steel hat channel. A flat head and sill are used for dampers less than or equal to 13° high.

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

**AXLES:** 304 stainless steel stub.

**BEARINGS:** Stainless steel.

**LINKAGE:** P304 stainless steel angle and crank plates with stainless steel pivots, in-jamb type.

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

**BLADE SEALS:** Silicone.

**JAMB SEALS:** Stainless steel.

**SLEEVE:** Minimum 20 GA. 304 stainless steel by 18” long.

**CAULKING:** Hardcast irongrip 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 on 304 stainless steel.

**OPTIONS**

Type 316 Stainless Steel (where available)

External right hand actuator mounting location

Integral Dual Position Indication (IDPI) 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 (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 8”) and/or short-height (less than 6”) transitions

**NOTES**

1. Damper frames are provided approximately ¼” undercut. 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).

3. Dampers for horizontal installation can only be mounted in a fire barrier constructed of masonry/concrete materials.

4. On dampers with all internal actuators, minimum height for factory mounted smoke detectors to be 14”.

**DAMPER SIZES**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Damper Size</th>
<th>Qty</th>
<th>Damper Size</th>
<th>Qty</th>
<th>Damper Size</th>
<th>Qty</th>
<th>Damper Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel</strong></td>
<td><strong>Horizontal</strong></td>
<td><strong>Vertical</strong></td>
<td><strong>Horizontal</strong></td>
<td><strong>Vertical</strong></td>
<td><strong>Horizontal</strong></td>
<td><strong>Vertical</strong></td>
<td></td>
</tr>
<tr>
<td>Rectangular</td>
<td>4&quot; W x 4&quot; H</td>
<td>Max Panel</td>
<td>Max Panel</td>
<td>Max Assembly</td>
<td>Max. Panel</td>
<td>Max Panel</td>
<td>Max Assembly</td>
</tr>
<tr>
<td>Round</td>
<td>4&quot; dia.</td>
<td>22&quot; dia.</td>
<td>30&quot; dia.</td>
<td>N/A</td>
<td>22&quot; dia.</td>
<td>30&quot; dia.</td>
<td>N/A</td>
</tr>
<tr>
<td>Oval</td>
<td>4&quot; W x 4&quot; H</td>
<td>22&quot; W x 22&quot; H</td>
<td>34&quot; W x 30&quot; H</td>
<td>106&quot; W x 30&quot; H</td>
<td>22&quot; W x 22&quot; H</td>
<td>34&quot; W x 30&quot; H</td>
<td>106&quot; W x 30&quot; H</td>
</tr>
</tbody>
</table>

* Dampers smaller than the minimum frame size require a transition. Reference SD-TRFS for details.
Model MS2(SS)

OPERATIONAL RATING

Maximum Differential Pressure: 4 in. w.g.
Maximum Face Velocity: 2000 FPM (3000 FPM for selected size/actuator combinations)

LEAKAGE RATING

UL Leakage Class II
10 CFM per sq.ft. maximum @ 1 in. w.g.
20 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>Velocity (fpm)</th>
<th>1000</th>
<th>2000</th>
<th>3000</th>
<th>4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>12”W x 12”H</td>
<td>1000</td>
<td>31</td>
<td>53</td>
<td>64</td>
<td>71</td>
</tr>
<tr>
<td>24”W x 24”H</td>
<td></td>
<td>33</td>
<td>54</td>
<td>65</td>
<td>-</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.