**APPLICATION**

- Low Leakage when shut-off
- Block smoke in the ducts in case of fire

**FEATURES OF DYSMD**

- Low Pressure Resistant Blade Shape
  Diamond shaped blade reduces the pressure drop and sound level across the damper.

- Soft and Contact-easy Blade Seal
  Soft and contact-easy blade seal gives good contact with adjacent blade seal and this reduces leakage rates.

- Round Shaped Stainless Steel Jamb Seal
  Stainless steel material jamb seal is shaped round and has good elasticity. This gives smooth sliding and good contact between the blades and jamb seal.

- Good Persistence
  Constructed with SGHC(Gafv steel) and stainless materials. Special painting and coating are also available on option.

- Air Performance and Leakage Rate AMCA Licensed
  Ratings of leakage and pressure drop shown results from the tests based on AMCA Publication 511.

**STANDARD CONSTRUCTION**

- Frame  Channel shaped steel, Gafv steel or stainless steel 304
- Blade  Double skinned diamond shape, Gafv steel or stainless steel 304
- Link  Stainless steel 304
- Shaft  Stainless steel 304
- Bearing  Sleeve bearing
- Jamb seal  Stainless steel spring plate
- Blade seal  Stainless steel spring plate


- 40mm or different frame height for flange is available as a standard.

### Standard Manufacturing Size

<table>
<thead>
<tr>
<th>Description</th>
<th>Standard Dimensions</th>
<th>Max. Size</th>
<th>Min. Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height (H)</td>
<td>100mm ~ 1,000mm</td>
<td>1,000mm</td>
<td>100mm</td>
</tr>
<tr>
<td>Width (W)</td>
<td>100mm ~ 500mm</td>
<td>500mm</td>
<td>100mm</td>
</tr>
</tbody>
</table>

- The largest face area of this damper is 0.3m² per set.
- Two or more dampers are assembled on the job site for dampers larger than the standard size.
  For larger dampers than upper standard size, please contact us.

### Standard Height per Number of Blades (H mm)

<table>
<thead>
<tr>
<th>No. of Blade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height (H)</td>
<td>180</td>
<td>330</td>
<td>480</td>
<td>630</td>
<td>780</td>
<td>930</td>
<td>1,000</td>
</tr>
</tbody>
</table>

- For non-standard height, we use one or two eccentric blade(s) to avoid big air blockage.

### For Installation of Actuator

- Installation method and accessories for actuator vary with type and model of actuator.
  Please contact us for installation of actuator.
- We also supply dampers with installation work of actuators.

### Shaft for Driving

- Shaft size: #12
- Protruded length: Length of shaft varies with the type and model of actuator.
  Please contact us for installation of actuator.
PRESSURE DROP OF DYSMD

- Articles Related to the Test
  - Test Standard: AMCA Standard 500
  - Test Set-up: Figure 5.3
  - Air Flow Measurement: Figure 6.5
  - Temperature when Testing: 0°C ~ 49°C
  - Tested Damper Size: 305 x 305
  - Air Flow Test Mode: Intake, Exhaust

The Trend of Pressure Drop Across the Damper
- Dampers with higher face velocity have bigger pressure drop.
- Dampers with larger face area at a certain velocity have smaller pressure drop.
- Bigger difference between width and height makes bigger pressure drop in the dampers with same face velocity and area.
**LEAKAGE PERFORMANCE OF DYSMD**

- **Articles Related to the Test**
  - **Test Standard** AMCA Standard 500
  - **Test Setup** Figure 5.5
  - **Air Flow Measurement** Figure 6.5
  - **T喜爱** Data are based on a torque of
    - **Applied to Dampers** 82.85Nm/m (88.43in-lb/ft) applied to close and
      - **Temp. when Testing** 0°C ~ 49°C
      - **Tested Damper Size** 300x1,000, 500x914 (2 sets)
    - **Ratings Selected** Maximum value of two times
      - **Leakage Tests in Each Direction** of air flow and back pressure

- **Leakage Class** *(The AMCA Certified Ratings Seal applies only to the following leakage class for the volume control dampers.)*

<table>
<thead>
<tr>
<th>Leakage Class</th>
<th>1 in. wg</th>
<th>4 in. wg</th>
<th>6 in. wg</th>
<th>8 in. wg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Leakage Rate** *(The AMCA Certified Ratings Seal does not apply to the following leakage chart.)*

- **The Trend of Leakage Rate Across the Damper**
  - Higher pressure difference across the damper gives more air leakage.
  - Smaller damper at certain pressure difference across the damper has more air leakage per unit area.