INTERIOR ISOLATORS

SIDEWALL PANEL, FLOOR PANEL, CLOSE-OUT PANEL, ROD ENDS, GROMMETS

A COMPLETE 360 DEGREE SOLUTION TO AN AIRCRAFT'S INTERIOR NOISE AND VIBRATION CHALLENGES

LORD approaches each project with the same process: strive to offer a 360 degree solution and try to isolate all the surfaces in the passenger cabin. Highlighted here are mounts that are particularly good for aircraft interior applications including sidewall panels, floor panels, close-out panels, rod ends and grommets. The performance of these parts will focus on attenuating the noise paths to the passenger by isolating discrete attach points in panels, bulkheads, windows, etc.

Also available to customers in the earlier stages of designing an aircraft is the LORD engineering staff that can work with an aircraft OEM to achieve better cabin acoustics. Through years of isolation experience, LORD has come up with guidelines to achieve a quieter cabin. Please contact LORD at +1 877 ASK LORD (275 5673) for more information.

Some of the benefits of LORD interior mounts are their compact geometry, lightweight materials, failsafe designs and the quick installing snap-in and thread locking features. Also included with some of the parts is LORD proprietary silicone elastomer providing incredible cold temperature performance while meeting flame, smoke and toxicity requirements.
INTERIOR ISOLATORS

SIDEWALL PANEL ISOLATORS

- Maximum rated load per mount:
  4 to 8 lb (1.8 to 3.6 kg)

- Weight:
  J-23644-3 – 0.39 oz (11 g)
  J-23676-1 – 0.21 oz (6 g)
  J-23676-2 – 0.42 oz (11.9 g)

- Materials:
  Inner member – 304 stainless steel, passivated
  Outer member – 6061-T6 or 6061-T6511 aluminum alloy, chromate conversion coated per MIL-C-5541, Class 1A
  Elastomer – Silicone

**Figure 1 – J-23644-3 Part Dimensions**

**Figure 2 – J-23676-1 Part Dimensions**

**Figure 3 – J-23676-2 Part Dimensions**

**Table 1 – Performance Characteristics**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Load Rating</th>
<th>Dynamic Axial Spring Rate*</th>
<th>Natural Frequency (Hz)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb</td>
<td>kg</td>
<td>B/mm</td>
</tr>
<tr>
<td>J-23644-3</td>
<td>7.5</td>
<td>3.4</td>
<td>700</td>
</tr>
<tr>
<td>J-23676-1</td>
<td>4</td>
<td>1.8</td>
<td>500</td>
</tr>
<tr>
<td>J-23676-2</td>
<td>8</td>
<td>3.6</td>
<td>1000</td>
</tr>
</tbody>
</table>

*At 0.002 in (0.05 mm) D.A. input and rated load.
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FLOOR PANEL - J-23436 SERIES

- **Maximum rated load per mount:**
  1 lb (0.45 kg)

- **Weight:**
  - J-23436-7 – 0.31 oz (8.7 g)
  - J-23436-8 – 0.27 oz (7.65 g)

- **Materials:**
  - Inner Member – 6061 aluminum alloy, anodized
  - Housing – J-23436-7 – 6061-T6 aluminum alloy, anodized;
    J-23436-8 – high strength thermoplastic, glass reinforced
  - Retaining Cap (J-23436-8 only) – high strength thermoplastic, glass reinforced
  - Elastomer – NR

### TABLE 1 – PERFORMANCE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Dynamic Axial Spring Rate</th>
<th>Dynamic Radial Spring Rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb/in</td>
<td>N/mm</td>
</tr>
<tr>
<td>J-23436-7</td>
<td>489</td>
<td>86</td>
</tr>
<tr>
<td>J-23436-8</td>
<td>489</td>
<td>86</td>
</tr>
</tbody>
</table>

*At 120 Hz with ±0.01 in (0.025 mm) input.

Snap-in design accommodating variable panel thickness. No tool required.

These isolators work ideally with aerospace potting epoxy LORD-309GB which is available in bulk, or in various pre-mix commercial packages.

### FIGURE 1 – J-23436-7

**PART DIMENSIONS**

- Mechanical stake in 0.40 panel thickness, tool required.
- Metric values in parenthesis.

### FIGURE 2 – J-23436-8

**PART DIMENSIONS**

- Metric values in parenthesis.
CLOSE-OUT PANEL - J-7444 SERIES

- Maximum rated load per mount: 2 lb (0.91 kg)
- Weight: 0.20 oz (5.7 g)
- Material:
  - Base plate – 2024-T3 aluminum alloy, chromate treated per MIL-C-5541, Class 1A
  - Lock plate – 17-7PH stainless steel, passivated
  - Elastomer – Silicone

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**FIGURE 1 – PART DIMENSIONS**

**TABLE 1 – PERFORMANCE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Dynamic Axial Spring Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb/in</td>
</tr>
<tr>
<td>J-7444-50</td>
<td>309</td>
</tr>
</tbody>
</table>

The term close-out panel refers to the interior sections which are last to go in and first to come out. Because they are frequently removed, they require a quick installation fastener and these LORD isolators incorporate a convenient quarter-turn fastener.

Metric values in parenthesis.
INTERIOR ISOLATORS

ROD ENDS FOR TURNBUCKLES AND LUGGAGE BINS

- Maximum rated load per mount: 60 to 80 lb (27 to 36 kg)
- Weight: 0.26 to 0.50 oz (7.3 to 14.1 g)
- Materials:
  - Inner member – 7075-T651 aluminum alloy
  - Rod end – 7075-T6 aluminum alloy
  - Finish – chromate treated per MIL-DTL-5541, Class 1A
  - Elastomer – NR

Elastomeric Rod ends are a very effective means to isolate turnbuckles and strut applications in the aircraft interiors. Luggage (stow) bins are the most common use, but monuments also benefit from their use.

**TABLE 1 – PERFORMANCE CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Rated Load</th>
<th>Thread Dir</th>
<th>Static Spring Rate</th>
<th>Dynamic Spring Rate</th>
<th>Ultimate Load</th>
<th>Nat. Freq</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lbs</td>
<td>in/lin</td>
<td>N/mm</td>
<td>in/lin</td>
<td>lbs</td>
<td>Hz</td>
<td>oz</td>
</tr>
<tr>
<td>RA-75-3-1</td>
<td>60</td>
<td>RH</td>
<td>7000</td>
<td>1226</td>
<td>8560</td>
<td>1500</td>
<td>2500</td>
</tr>
<tr>
<td>RA-75-3-2</td>
<td>60</td>
<td>LH</td>
<td>7000</td>
<td>1226</td>
<td>8560</td>
<td>1500</td>
<td>2500</td>
</tr>
<tr>
<td>RA-80-9-1</td>
<td>70</td>
<td>RH</td>
<td>7000</td>
<td>1226</td>
<td>8560</td>
<td>1500</td>
<td>2800</td>
</tr>
<tr>
<td>RA-80-9-2</td>
<td>70</td>
<td>LH</td>
<td>7000</td>
<td>1226</td>
<td>8560</td>
<td>1500</td>
<td>2800</td>
</tr>
<tr>
<td>RA-90-10-1</td>
<td>80</td>
<td>RH</td>
<td>7000</td>
<td>1226</td>
<td>8560</td>
<td>1500</td>
<td>3600</td>
</tr>
<tr>
<td>RA-90-10-2</td>
<td>80</td>
<td>LH</td>
<td>7000</td>
<td>1226</td>
<td>8560</td>
<td>1500</td>
<td>3600</td>
</tr>
</tbody>
</table>

**FIGURE 1 – RA-75-3-X PART DIMENSIONS**

**FIGURE 2 – RA-90-9-X PART DIMENSIONS**

**FIGURE 3 – RA-90-10-X PART DIMENSIONS**

Metric values in parenthesis.
GROMMETS - FOR LIGHT STRUCTURE AND WINDOW REVEALS

- Maximum rated load per mount: .25 to 3.5 lb (.11 to 1.6 kg)
- Weight: .08 to .19 oz (2.27 to 5.39 g)
- Materials:
  - Elastomer – Silicone
  - Spacer (CB-1077-52) – Alloy steel, cadmium plated

Elastomeric Grommets are an effective means to decoupling light weight panels and to avoiding a “short-circuit” in acoustic treatments. Wind reveals, door trim and bulkhead fascia are common uses.

FIGURE 1 – J-28132-1 INSTALLATION DRAWING

FIGURE 2 – J-28132-1 PART DIMENSIONS

FIGURE 3 – CB-1077-52 INSTALLATION DRAWING

FIGURE 4 – CB-1077-52 PART DIMENSIONS

Metric values in parenthesis.