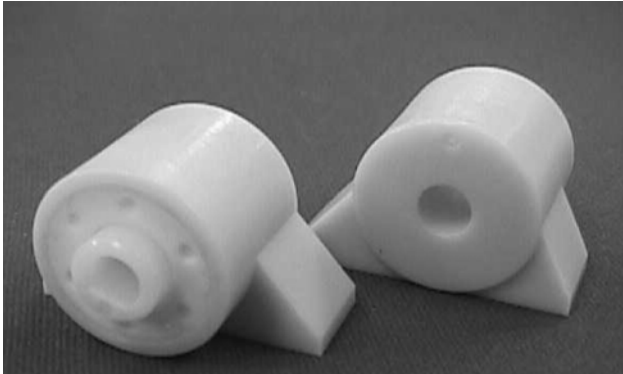


## NEW PRODUCTS

### Compact Hydraulic Damper

<p><b>Market background of the new product</b></p> <p>In recent years, a “soft landing” closing mechanism for doors and lids has been widely adopted in familiar household products with doors or lids to improve safety and prevent accidents in which fingers are caught. A compact hydraulic damper is mainly used in this mechanism. Using a proprietary mechanism, Hitachi Powdered Metals has reduced the size of this part, and realized good response and high durability.</p>	
<p><b>Conventional technology</b></p> <p>In the valve mechanism, excellent response/durability are achieved by a damper employing a proprietary mechanism that generates/attenuates hydraulic pressure utilizing the elastic deformation of rubber. This is adopted in a “toilet seat” soft closing mechanism. However, due to the internal structure, reduction of the outer diameter dimension was difficult.</p>	<p><b>New product</b></p> <p>By adopting a new type of valve structure, it was possible to realize a more compact design in comparison with the conventional product while maintaining excellent response/durability and generating high torque.</p> <ul style="list-style-type: none"> <li>· Damper type: Rotary damper (one-way property)</li> <li>· Outer diameter dimensions: <math>\phi 23 \times 24L</math> (<math>\phi 6</math> shaft hole)</li> <li>· Maximum torque: 0.8Nm (max.) (set depending on use conditions)</li> <li>· Maximum angle for use: <math>100^\circ</math></li> <li>· Range of temperature for use: <math>0^\circ\text{C} \sim 70^\circ\text{C}</math></li> <li>· Durability: 60,000 operations</li> </ul> <div style="text-align: center; margin-top: 10px;">  </div>
<p><b>Features of the new technology</b></p> <p>(1) Internal frictional resistance is reduced by adoption of a floating-type valve plate which enables simple opening/closing of the oil flow channel, thereby realizing good response and long life.</p> <p>(2) Torque reduction in the high temperature region is minimized by optimizing the materials of the component parts, resulting in stable damper performance.</p>	
<p><b>Examples of applicable products</b></p> <ul style="list-style-type: none"> <li>· Rice cookers, storage boxes, other products with doors or lids</li> </ul>	<p><b>Applied products</b></p> <ul style="list-style-type: none"> <li>· Rice cookers</li> </ul>
<p><b>Others</b></p> <p>Hitachi Powdered Metals will customize this product to meet load/service conditions and attached part shape requirements. When studying adoption, please contact us.</p>	