



ITT

Engineered for life

Rotary Hinge Dampers Provide Cost Effective Solution for Stowage Bin Actuation

Enidine Rate Control Application

By William Wilk

Product Overview

Traditionally, stowage bins have employed linear actuators to provide a controlled opening of the stowage bin door. They were part of a multi-piece system, consisting of an actuator, its cover, mounting hardware, attachment hinges, and various other components. In an effort to increase the usable bin space while lowering overall system costs, the two major commercial aircraft manufacturers approached Enidine for an alternative solution. The air framers were confident in Enidine's capabilities, as we have supplied the aviation industry with motion control and vibration isolation products for over 30 years.

Product Solution

Enidine's recommendation was its rotary hinge damper. The molded, high-strength plastic hinge design met all requirements of the customers. The hinges met or exceeded all performance specifications of the older linear actuators, while doing so in a smaller envelope package. Additionally, the single piece hinge reduced installation time as well as proved cost efficient; decreasing the manhours spent purchasing, inventorying and maintaining the multiple components found in the old-style actuation system. Enidine's rotary hinge damper complies with all FAA flammability requirements, provides over 200,000 rotary actuation cycles, meets stow bin load requirements and has consistent opening-time performance. The hinge's smaller size increases useable bin space and may help passengers stow additional luggage, while presenting a more aesthetically pleasing profile in the bin than earlier actuators.



Features and Benefits of Rotary Hinge Dampers

- Standard models provide up to 90 degrees rotation
 - Supply up to 20 in-lbs of torque per hinge
 - Multiple hinges offered with varying opening speeds, angles of rotation, hinge plate geometries
 - Custom designs available upon request
-

Application Opportunity

Enidine's Rotary Hinge Dampers have been flying on numerous commercial aircraft models for many years. To date, the airframe manufacturers, stowage bin OEMs and airline passengers have all been extremely pleased with the performance of the rotary hinges. Due to the initial success, Enidine is designing additional hinges for several newer aircraft interiors soon to be in service. Enidine hinges are available for new interiors as well as for use in refurbishment programs. Additionally, the rotary hinge dampers may be used on non-aerospace applications, such as cabinet doors and lids, where rotary actuation is required.

Phone: 716-662-1900 | Fax: 716-667-1385 | www.enidine-aviation.com | www.itt.com

ENIDINE