



METAL BELLOWS DAMPERS

BY TAYLOR DEVICES

The Ultimate in Fluid Damper Design

Unique hermetically sealed dampers were originally developed by Taylor Devices during the 1980's for use on platforms based in outer space where fluid leakage could cause catastrophic failure to critical space missions. Conventional sliding surfaces that were sealed acceptably on earth proved unacceptable for spacecraft use. The reason was simply that even the tiniest amount of fluid leakage past conventional seals turns into a dense fog in a vacuum, contaminating optics and electronic systems.

Now, these same dampers have been successfully adapted for use in structures for protection against wind and seismic events. Additionally, metal bellows dampers are ideal for applications requiring damping at very low displacements, including human-induced vibration for bridges and buildings.

- Infinite life – The only damper design in the world that is designed for infinite life. Parts are stressed below the material fatigue endurance limit ensuring the dampers will survive for billions of cycles
- Virtually zero friction – There is no source of friction typical of standard elastomeric seals
- Effective damping at extremely small amplitudes
- Extremely high-fidelity response to shock and vibration over a frequency band of 0-500 Hz and amplitudes as low as +/- 0.001 inches (+/- 0.00254mm) or less
- High series stiffness for high damping effectiveness
- Various damping functions are achieved based on customer requirements
- Taylor Metal Bellows Dampers are designed and tested in output force ratings up to 450 KIP or more and strokes up to +/-20 inches or more
- No maintenance over the life of the structure or dynamic system
- Absolute zero leakage due to hermetically sealed construction

