BellowsTech, LLC
A SERVOMETER® Company

Actuators

Overview

Bellows are used in actuator assemblies to transfer pressure or temperature into a linear motion. Edge welded bellows allow a long stroke, excellent media compatibility, and high temperature and pressure capabilities. Edge welded bellows also provide extreme flexibility in the design to fit size, weight, and movement requirements and allow the movement to be driven by internal or external forces.

Bellows actuators can be used in valve applications, where pressure is internal or external to the bellows. Custom flanges, end pieces and hardware can be integrated into the assembly. With the extreme flexibility of edge welded bellows technology, axial movement and lateral offset are possible solutions. With sizes less than half an inch in diameter, bellows actuators can reduce the size of traditional actuators in hydraulic and pneumatic systems.

Typical Industries	Benefits
Hydraulic Systems	Stroke Ratio
UHV Equipment	Repeatability
Aerospace Controls	Customization

Specifications

Material	Stainless Steels, Alloys, & Titanium avail. Consult Factory
Thickness	From 0.002" and up every 0.001"
Standard Leak Rate	From $<1x10^{-9}$ std CC He/sec (check material)
Size Ranges	
Outside Diameter	0.358" (9.0932mm) to 22.205" (564mm)*
Inside Diameter	0.198" (5.029mm) to 19.921" (505.99mm)*
Shapes	Round; Non-Round avail. Contact Factory
Length	Up to 96" (244 cm)
***For other sizes, contact factory.**	

Why Choose Edge Welded Bellows?

Of the three major metal bellows technologies, edge welded metal bellows have the highest stroke length, reaching 90% of its free length. This flexibility allows for increased expansion and contraction of the bellows. Edge welded bellows can be exposed to extreme temperatures and media with a wide selection of materials. Both the inside and outside of the bellows can be exposed liquids and gases. Edge welded metal bellows also have a high cycle life to produce repeatable results and round or square shapes.

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