Semiconductor Bellows

Overview

MW Components has supported the semiconductor and high vacuum market since its inception. In semiconductor manufacturing, edge welded bellows are used as flexible penetrations into process chambers. The bellows becomes part of the pressure wall of the chamber, holding ultrahigh vacuum or moderate positive pressures while also providing motion inside the chamber. This allows manipulation of stages, probes, sample holders, wafer lifters, valves, actuators and other mechanical motion needs inside the pressure vessel.
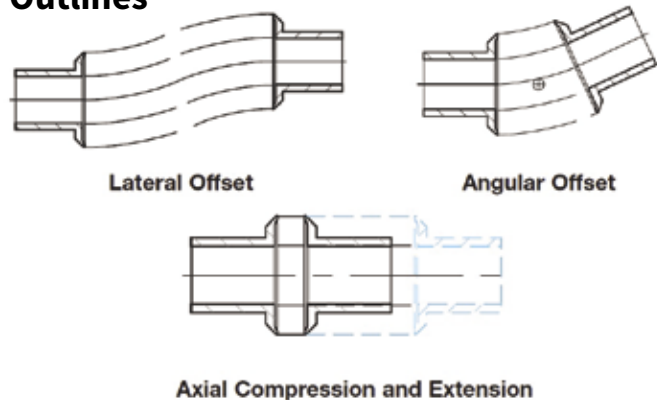
BellowsTech metal bellows are able to withstand high vacuum applications with low leak rates to ensure a hermetic seal. Lifter bellows can be customized to the size and shape required of new design or retrofit applications. BellowsTech can hold tight tolerances with the reliability to keep semiconductor equipment operational and reliable.

Specifications

Material	Stainless Steels, Alloys, & Titanium available. 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	0.396" (10.058mm) to 26" (660mm)
Inside Diameter	0.2" (5.08mm) to 25.5" (648mm)
Shapes	Round; Non-Round available. Contact Factory
Length	Up to 96" (244 cm)

Why Choose MW Components?	Popular Products
Work with the best engineers in the industry to develop a custom bellows	Lifter Bellows
ISO 9001	Stainless Steel Bellows
Superior Performance	Volume Compensators
Excellent Response Time	Actuators
Competitive Pricing	

Outlines

Lateral Offset

Angular Offset

Axial Compression and Extension

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.

MW Components

To learn more visit MWComponents.com or contact us at 704.280.8875 I sales@mwcomponents.com