



Linear Shift Mechanisms

Production Ballscrew LSM

Ballscrew Linear Shift Mechanisms are specifically designed to provide outstanding reliability, even in the most demanding of applications.

All Ballscrew LSMs benefit from:

- » Ultra-stiff construction for minimal deflection
- » Very high speed - in excess of 100mm/s possible
- » High cantilevered load capacity
- » Ball screw drive mechanism with recirculating linear slides
- » Bellows with option for greater than 1 million cycles guaranteed

Application specific design

With the world's largest range of LSMs at our disposal, UHV Design's in-house design team can customise any of the standard designs to specifically match production requirements.

Customised designs can accommodate the required flange size, stroke, bore size, duty cycle and space envelope. In addition, any required sensors, motors and encoders can be incorporated and pre-wired for plug and play operation.

Manufactured and assembled for use in ultra clean applications

UHV Design's in-house manufacturing facility enables us to cost-effectively and rapidly produce highly tolerated, high quality components.

Components are cleaned prior to assembly in an ISO 7 Class 10,000 clean room.



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SPECIFICATION	VALUE		
Flange Sizes	CF38	CF64	CF100
Stroke range (mm) - 50mm increments inclusive	50-300		50-350
Bellows cycles	50,000 standard 316L, up to 1 million AM350 (option)		
Ballscrew pitch (mm)	6, 10 typical		
Actuation options (in line only)	Stepper, SMART or No motor		
Gearbox	Planetary 5:1, 10:1 typical		
Motor brake (option)	Stepper and SMART motors only		
Linear speed stepper option (mm/sec)	>50		
Linear speed SMART option (mm/sec)	>100		
Linear Resolution (microns per 1/2 step) stepper option only	5		
Travelling flange tilt due to vacuum load (mrad)	<1		
Total skewing (mrad)	<0.5		
Maximum additional load on travelling flange (N)	250		
Mechanism	Precision ballscrew with integral guide rail		
Switches	Pre-wired limit and home switches		
Linear encoder option	Renishaw LM10 encoder with 10 micron resolution		
Bakeout	80°C (or 250°C for bellows only)		

For more information:

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