

Rotary Linear Gimbaled Feedthrough

The University of Wisconsin-Madison Physical Sciences Laboratory has developed a rotary linear gimbaled feedthrough as a general-purpose tool for making precision adjustments in UHV. Many are in use on monochromators around the world allowing grating holder adjustments as fine as 0.25 microradian (0.05 arc sec) on PSL grating holders.

Axial motion with spring compensation for differential pressure combined with tilt on two axes permit engagement of adjusting screw heads over an area of about 28 cm² (4.4 inch²), depending on customer specified length. Direct-drive unlimited rotation of the tip in either direction allows sensitive adjustment of in-vacuum mechanisms. Standard tips are hex-ball drivers, in a variety of hex sizes and reaches.

Standard features:

- 304 SS flange & internals
- 6061-T6 black hardcoat anodized exterior
- Biaxial tilt range of 26 degrees
- Atmosphere to 10⁻¹¹ mbar (Torr)
- Bakeable to 150°C
- Knife-edge flange mount of 70mm (2³/₄" OD)
- Linear travel of 19 mm (3/4")
- Unlimited handle rotation (bi-directional)
- Position locking rings (Bit perpendicular to flange)
- Welded bellows seal (347 SS)
- Atmospheric pressure countered for best sensitivity
- Knurled handle for no-slip grip

Available customizations:

- 316LN SS flange & internals
- Polarized non-square position locking rings (Bit held off perpendicular to flange)
- Bit size & length (within commercially available stock)
- Bit extenders
- Custom tips to your drawings
- Your favorite color
- Other customizations evaluated on request. If you don't see it, ask!



For more information call 1-608-877-2200, fax 1-608-877-2201, email SRI@psl.wisc.edu. Or view the PSL web page at <http://www.psl.wisc.edu>.



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