

VIBRATION ISOLATION BENCHES

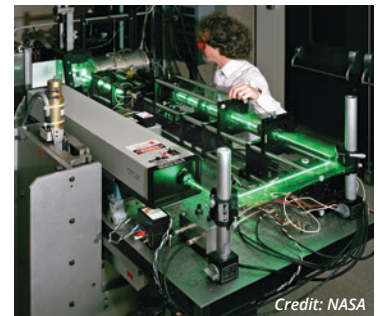
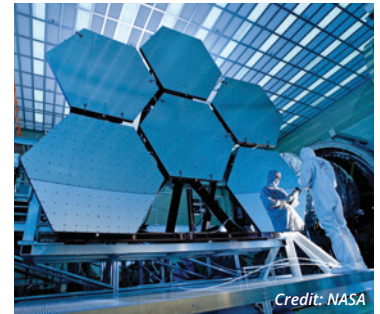


Ultra-precise metrology systems and test facilities for large space optics require extremely stable, quiet environments. Moog's vibration isolation benches mechanically decouple the bench from facility disturbance sources including pumps, machinery, or nearby vehicle traffic. Pneumatic air bags beneath the bench create a soft isolation system with suspension modes typically in the range of 1-2 Hz while the bench structure is stiffness-

optimized for high frequency structural modes. With the isolated optical bench approximating a rigid body, there are negligible dynamic deflections that impact optical alignments. Cleanroom or vacuum compatibility enables high fidelity representation of the space environment for critical ground testing applications.

KEY FEATURES

- 1-2 Hz suspension modes
- Handles payloads of 60 tons or more
- Active or passive levelling options
- Vacuum or cleanroom compatible
- Multiple material and surface coating options



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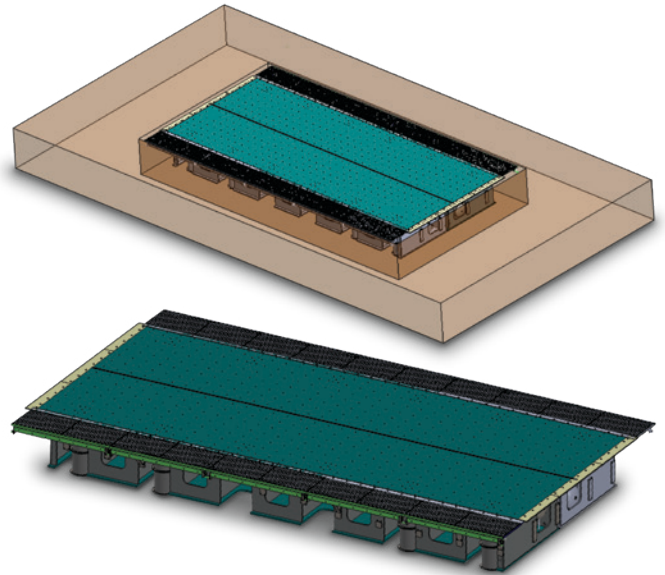
When large aerospace companies need to develop a new test facility, they turn to Moog to provide vibration isolation. Large, flat optical benches supported by soft isolation systems allow for unparalleled testing and significantly less facility modifications than seismic block approaches. An active leveling system can accommodate moving payloads, and egress bridges provide access for payload loading. Moog works closely with customers to develop vibration isolation benches that fit their needs.

APPLICATIONS

- Test facilities for large space optical systems
- Precision metrology systems including coordinate measurement machines (CMMs) and laser interferometers

PERFORMANCE

Features	Specifications
Model	VIB-500
Bench mass	5-260 tons
Payload mass	5-60 tons, typical
Bench working area (L x W)	Customizable, past designs up to 30ft x 84ft
Isolation frequency	1-2 Hz, typical
Leveling	Active or passive
Self-leveling accuracy	±5 arcsec
Bench material	A36 HR carbon steel or 304 stainless steel
Surface coatings	Multiple options based on environment
Environments	Cleanroom and vacuum options



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