HERZAN

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Acoustic, Vibration, and EMI Isolation Specialists

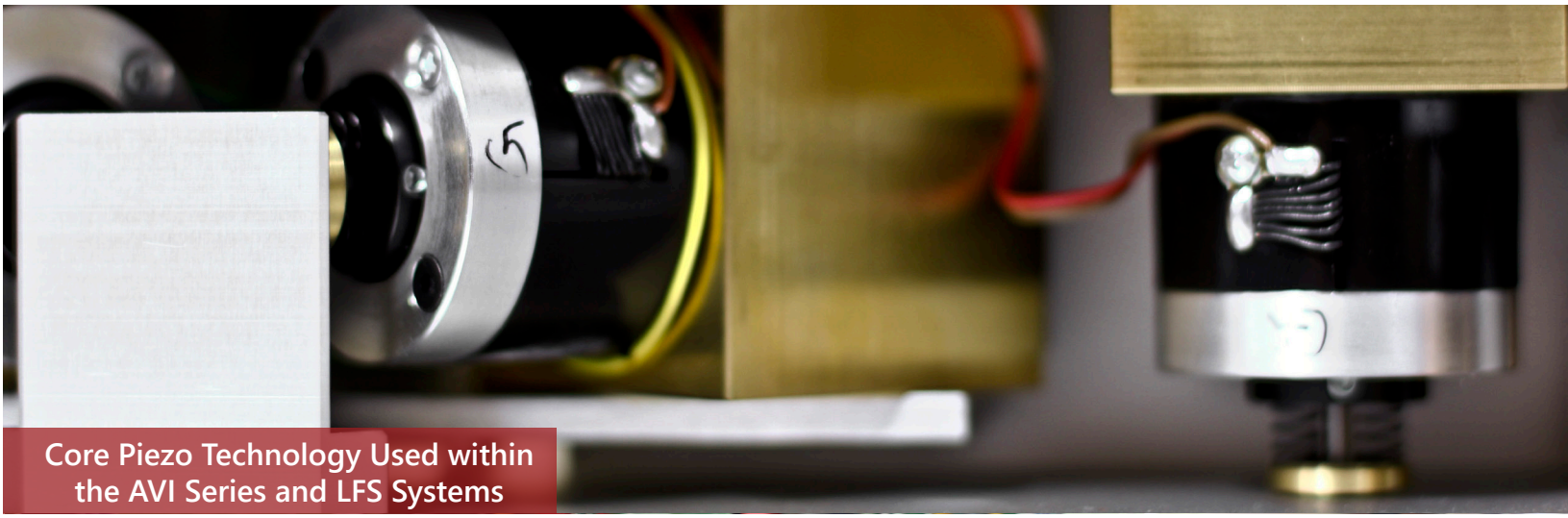
LFS System

Overview

The LFS System is Herzan's leading performance upgrade for the AVI Series; vastly improving the low-frequency vibration isolation capabilities of a platform currently supporting hundreds of researchers worldwide.

The LFS System enables AVI Series platforms to isolate vibrations (X, Y, and Z) below 0.5 Hz, making it the perfect solution for AFM, SEM, and TEM users who require the lowest noise-floor possible when performing sensitive measurements.

LFS-3 System Sensor

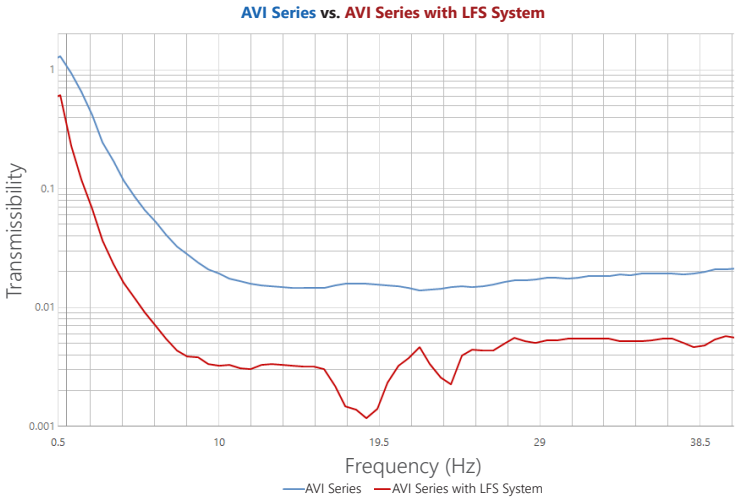


Core Piezo Technology Used within the AVI Series and LFS Systems

Product Highlights

- Large, highly sensitive feed forward sensor
- Enables sub-hertz vibration isolation performance for the AVI Series (starting at 0.5 Hz)
- Temperature stabilized for maximum isolation
- Easy to install with no additional maintenance
- Retrofittable for existing AVI platforms
- Upgradeable for new AVI platforms
- Compatible with: AVI-200, 400, and 600 Systems

TRANSMISSIBILITY

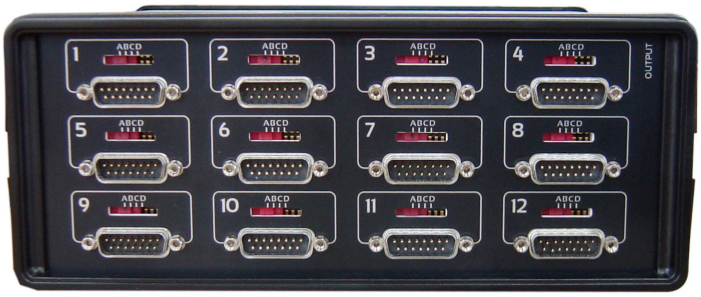


Performance

The LFS System enhances the low-frequency vibration isolation performance of the AVI Series, enabling the line of platforms to begin isolating at 0.5 Hz. To the left is a performance comparison graph depicting the standard performance of the AVI Series platforms and the AVI Series platforms paired with the LFS System.

Performance Highlights

- Enhances vibration isolation from 0.5 - 100 Hz
- 90% vibration attenuation at 2 Hz
- 99% vibration attenuation at 5 Hz and beyond
- Up to 50 dB of vibration reduction



LFS System Connection Panel

LFS System Power Supply

Technology

The LFS System utilizes a complementary feed forward sensor arrangement, specifically focusing on isolating low frequency vibrations (0 - 50 Hz). The technology behind the LFS System is an advance configuration of high sensitivity sensors measuring low frequency vibrations along the X, Y, and Z axes. The environmental information gathered by the sensors feed into an AVI platform controller, sending signals to the piezoelectric actuators to cancel out low frequency vibrations.

In addition to achieving sub-hertz vibration isolation, the LFS System maintains a high level of stability and consistency through its internal temperature regulation system. Including this feature is imperative for long-term reliability as temperature fluctuations introduce reliability concerns for precision sensors as the sensor can subtly expand/contract when the temperature increases or decreases.

LFS SYSTEM SPECIFICATIONS

Item	Width		Depth		Height		Weight	
	inches	mm	inches	mm	inches	mm	Lbs	Kg
LFS System Sensor	9.6	245	10	255	4.2	107	11.9	5.4
LFS System Power Supply	10.4	265	6.1	155	2.9	73	3.5	1.6

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