



The MOD-Sandwich Platforms for Active Vibration Isolation of Electron Microscopes

Halcyonics' MOD-SW systems featuring compact dimensions and excellent isolation performance set the standards on the isolation platform market for mid-range to heavy-duty applications. The standard platform is exceptionally compact (1000 mm x 800 mm) and only 130 mm high, yet it can carry up to 1,500 kg, depending on the particular version. For smaller applications, Halcyonics also offers a standard version with dimensions of 800 x 800 mm.

MOD-SW platforms are the ideal solution for vibration isolation of scanning electron microscopes. Many Halcyonics platforms are already in use worldwide with the most diverse SEMs of manufacturers such as Hitachi, LEO and JEOL. As a result, Halcyonics has many years of experience in consultation, installation and commissioning of sophisticated active vibration isolation systems.

A major advantage of active MOD-SW platforms is that they do not have any low natural frequency that causes problems in passive systems in the low frequency range below 5 Hz. The isolation effect of the MOD-SW platforms begins at 1 Hz and attains more than 35 dB above 10 Hz.

Installation of the MOD-SW platforms is also easy. In most cases, the MOD-SW platform is installed directly below the application equipment so that it is virtually "invisible." The platform does not have any external isolation legs or feet to block access to the application equipment. As a result, this equipment remains freely accessible from the side. MOD-SW vibration isolation platforms need only a power supply source, but no compressed air, and are maintenance-free. Before the platform is started up, it is simply adjusted to the actual load required. Further settings or adjustments are not necessary.

To select the platform that is ideal for your application, we need to know the actual weight of the application equipment, load distribution and additional parameters. Just contact us to give us the details concerning your special application. We will be happy to advise you in choosing the product that is optimal for your needs.

For complex applications, Halcyonics offers vibration measurement as an on-site service and will then use the measurement results to manufacture a platform customized to meet your specific requirements. We also offer the option of exactly adapting the external dimensions of our standard platforms to fit the needs of your application, or of building systems that can handle even heavier loads.

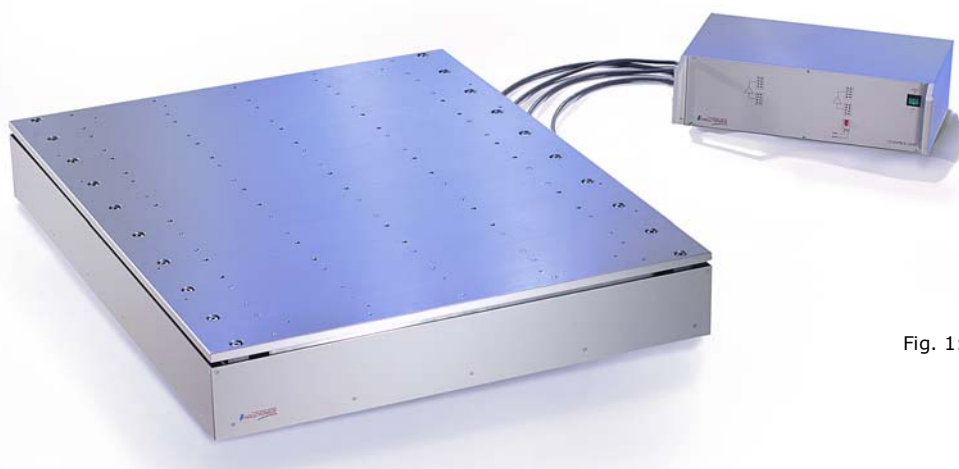


Fig. 1: MOD-Sandwich 1000-4.0

The key features of MOD-SW platforms are:

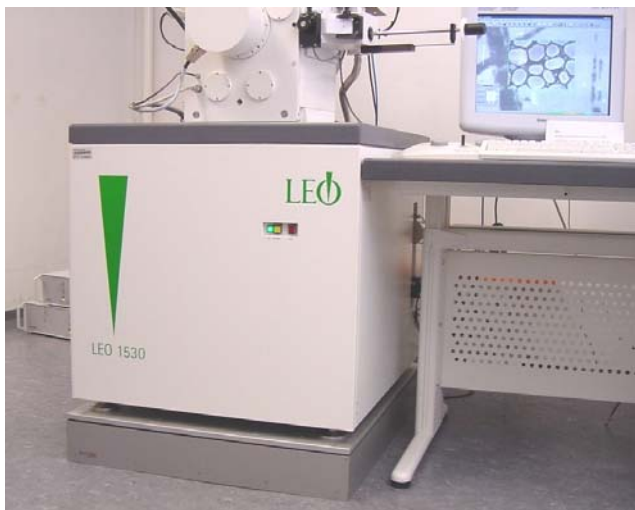
- Excellent vibration isolation even at very low frequencies such as 2-3 Hz
- No low frequency resonance
- Very compact design - only 130 mm height.
- Ideal for re-fitting an active vibration isolation for existing Scanning Electron Microscopes

... unshakeable



Technical Specifications

Vibration Isolation System	
Frequency Range:	1 Hz – ∞
Isolation Performance:	> 5 Hz = 25 dB, > 10 Hz = 35 dB
Sensors:	Piezo-electric accelerometers sense horizontal and vertical vibrations
Actuators:	8 electro-dynamic transducers
Overload Indication:	16 LEDs indicating overload conditions in input and output stages
System Noise:	Less than 50 ng per root Hz from 0.1 to 200 Hz in any direction
Static Compliance:	Load-dependent: 8 µm/N in any direction at full load, 25 µm/N in any direction at small loads
Control Electronics:	Compact external control unit with isolation on/off switch
Standard Versions and Dimensions – Customised systems available on request	
MOD-Sandwich 800-4.0	Maximum load: 600 kg Dimensions: 800 x 800 x 130 mm ³ Correction Forces: vertical max.: ± 16 N, horizontal max.: ± 8 N
MOD-Sandwich 1000-4.0	Maximum load: 600 kg Dimensions: 1000 x 800 x 130 mm ³ Correction Forces: vertical max.: ± 16 N, horizontal max.: ± 8 N
MOD-Sandwich 1000-4.4	Maximum load: 750 kg Dimensions: 1000 x 800 x 130 mm ³ Correction Forces: vertical max.: ± 16 N, horizontal max.: ± 8 N
MOD-Sandwich 1000-6.0	Maximum load: 900 kg Dimensions: 1000 x 800 x 130 mm ³ Correction Forces: vertical max.: ± 24 N, horizontal max.: ± 12 N
MOD-Sandwich 1000-6.4	Maximum load: 1050 kg Dimensions: 1000 x 800 x 130 mm ³ Correction Forces: vertical max.: ± 24 N, horizontal max.: ± 12 N
MOD-Sandwich 1000-8.0	Maximum load: 1200 kg Dimensions: 1000 x 800 x 130 mm ³ Correction Forces: vertical max.: ± 32 N, horizontal max.: ± 16 N
Electrical Properties	
Power Requirements:	90-260 V AC, 98-338 V DC; 12 W typically, max. 50 W
Interfaces:	Analog diagnostic output



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