

The new Vario 45 and Vario 60 with automatic load adjustment and USB interface

The brand-new Halcyonics VARIO 45 system is a compact active vibration isolation system featuring two isolation elements and an external control unit.

The new external controller, VarioControl, is the core of the active vibration isolation system. Halcyonics's active vibration isolation systems only need to be load-adjusted before beginning operation. VarioControl units ensure automatic precision load adjustment of the isolation elements. The system features the convenience of "plug and operate" – once it is connected to power, all further set-up steps can be done by using the controller's easy-to-navigate menu. VarioControl units offer two digital displays; one for menu navigation and a second to obtain additional information on current vibration levels. Vibration signals of sensors and actuators can be chosen and visualized as graphical bars. The user therefore always obtains summarized information on the current vibration condition of his or her application.

In addition, VarioControl units come with a USB interface port and the corresponding evaluation software as standard equipment. When VarioControl is connected to a PC that runs under Windows®, the evaluation software enables the user to run a technical test of the entire system and activate and deactivate vibration isolation by remote control. In addition, the software allows comparative measurements of the vibration present at various work areas in a laboratory to be performed. Therefore, the software enables users to find the best place in which to set up the system to avoid mechanical vibration.

The vibration isolation of Halcyonics Vario systems begins at 1 Hz and achieves at least 40 dB beyond 10 Hz, offering excellent vibration isolation for vibration-sensitive applications. Compared to passive systems, Vario systems do not show any low frequency resonance, which guarantees their excellent performance even at very low frequencies such as 2-3 Hz.

VARIO systems are ideal for vibration isolation of optical tops, UHV systems, for OEM applications and many others. Customized systems are available on request.

Fig. 1: Vario 45 with VarioControl



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Key features:

- Isolation begins at 1 Hz, increasing rapidly to at least 40 dB beyond 10 Hz, offering excellent isolation for typical laboratory applications.
- Excellent isolation even at frequencies as low as 2-3 Hz, where many buildings show large horizontal amplitudes due to oscillation about the vertical axis.
- Active isolation against all six degrees of freedom.
- Virtually no low frequency resonance, a resonance that plagues all passive isolation systems.
- Simple and comfortable set-up through automatic load adjustment.
- USB interface with evaluation software



Technical Specifications

| Vibration Isolation System | |
|-----------------------------------|---|
| Frequency Range: | 1 Hz - ∞ |
| Isolation Performance: | > 5 Hz = 25 dB > 10 Hz = 40 dB |
| Correction Forces: | vertical max. ± 8 N horizontal max. ± 4 N |
| Sensors: | 8 piezo-electric accelerometers |
| Actuators: | 8 electro-dynamic transducers |
| System Noise: | Less than 50 ng per root Hz from 0.1 to 200 Hz in any direction |
| Control Electronics: | Compact external Vario control unit with menu navigation and additional vibration level display |
| Maximum Load: | 300 kg |
| Vario Dimensions | |
| Vario 45 | Length of Isolation Elements: Ground plate 481 mm Top plate 466 mm |
| Vario 60 | Length of Isolation Elements: Ground plate 600 mm Top plate 585 mm |
| VarioControl unit | Over all: 342 x 235 x 130 mm (l x w x h) |
| Cable Length | Standard: 2 m On request: 3,5 m |
| Maximum Table Top Size | |
| Vario 45 | 900 x 600 mm |
| Vario 60 | 1200 x 900 mm |
| Electrical Properties | |
| Power Requirements: | 90-260 V AC, 98-338 V DC 10 W typically, max. 50 W |
| Interface: | USB 1.1 Standard |

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