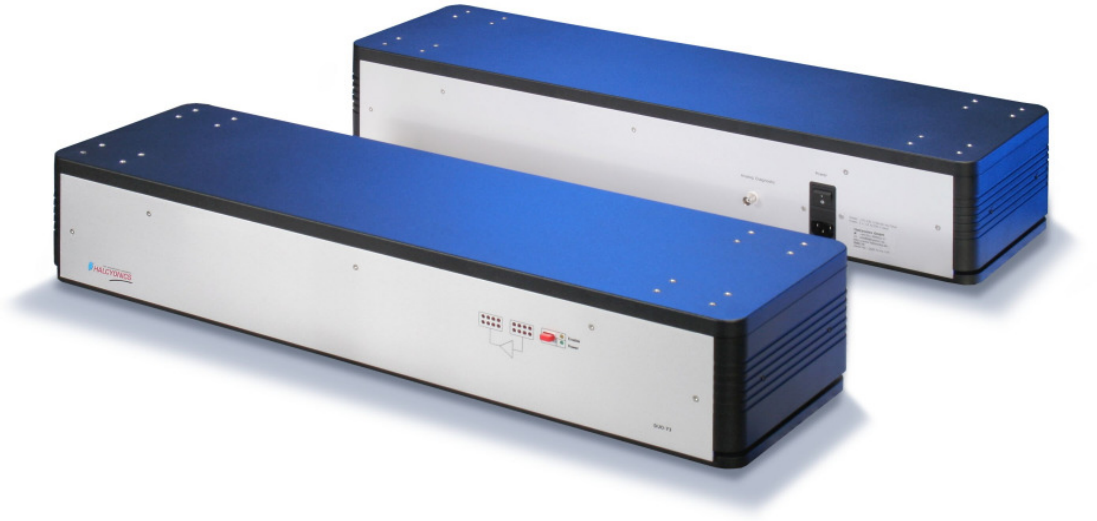
Duo

Active Vibration Isolation Elements



Active Vibration Isolation Elements for vibration sensitive production and measurement equipment. Suitable for most Scanning Electron Microscopes (SEM), Transmission Electron Microscopes (TEM) and Scanning Tunneling Microscopes (STM).

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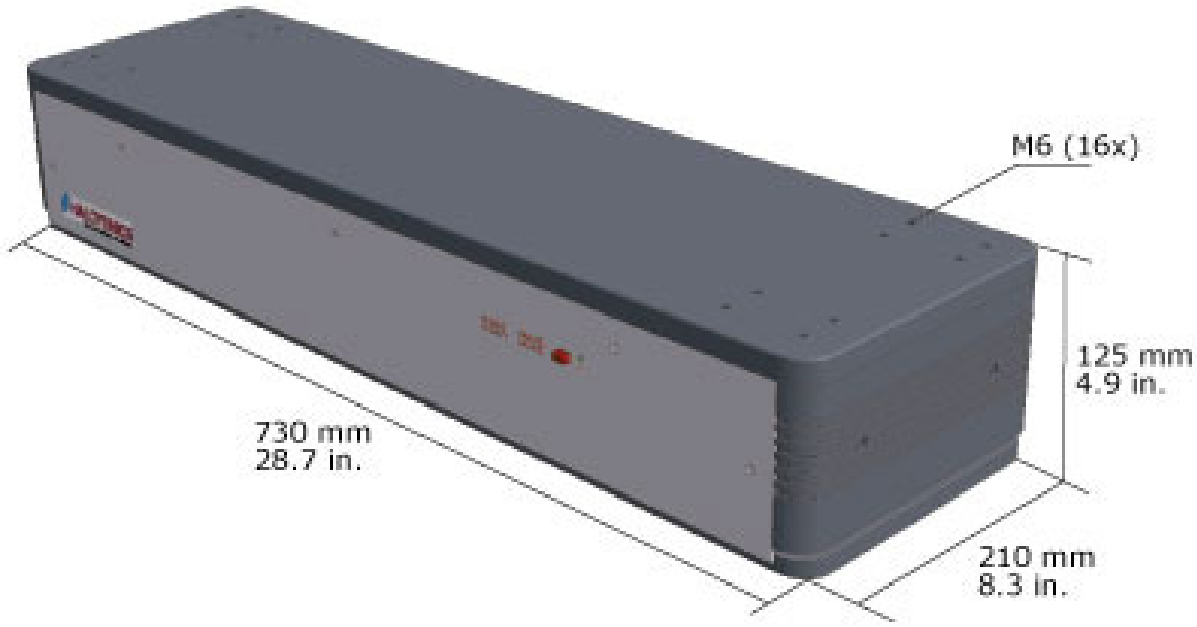
Available Standard Versions		
Duo73	Duo100	
Performance Specifications		
Isolation Technology	Absolute velocity feedback control (Sky-Hook control) based on piezoelectric accelerometers, fast signal processing and electro-dynamic voice coil actuators.	
Controlled Degrees of Freedom	6 degrees of freedom (3x translational, 3x rotational)	
Isolation Performance	>5Hz = -25dB (94.4%), >10Hz = -35dB (98.2%) see figure last page	
Active Bandwidth	1.5Hz – 200Hz *	
Settling Time	300ms	
Max. Correction Forces	2 element configuration	vertical ±16N; horizontal ±8N
	3 element configuration	vertical ±24N; horizontal ±12N
	4 element configuration	vertical ±32N; horizontal ±16N
Load Capacity	2 element configuration	0-800 kg (0-1,760 lbs)
	3 element configuration	0-1200 kg (0-2,640 lbs)
	4 element configuration	0-1600 kg (0-3,520 lbs)
Other Specifications		
Dimensions	see figures next pages	
Weight	26 kg (57,3 lbs) per isolation element	
Maximum Compensation Level	250µm/s @ 9Hz and 300 kg (660 lbs) payload for 2 element configuration **	
Interface	BNC analog diagnostic output – 50 Ohms	
Environmental and Operational Requirements		
Electrical Voltage	100 – 250 V / 47 – 63 Hz	
Power Consumption	10 – max. 50 W per isolation element	
Operating Temperature	10 – 40 °C (50 – 104 F)	
Relative Humidity	0 – 60%	
Operating Altitude	<2500 m (8100 ft)	
Certification		
Electrical Safety	CE certificated according to directive 89/336/EC	
EMC	CE certificated according to directive 73/23/EEC	

*floating table top is supported by steel springs; low-pass characteristics of spring-mass system dominates the dynamic behavior above 200Hz

**The maximum compensation level depends on several conditions, such as payload, frequency, load distribution, position of center of gravity. For this reason this value should be considered as an estimation.

Dimensions Duo73



Typical Transmissibility Chart