LIVA-EP
利瓦环保

WAP Active shock absorber system

Specifications	
Vertical Resonant Frequency*	< 1.7 Hz
Horizontal Resonant Frequency*	7.0 Hz
Vertical Transmissibility at 10 Hz*	-27 dB (95.66%)
Horizontal Transmissibility at 10 Hz*	-4.5 dB
Maximum Load Capacity (Set of Four)	462 lb (210 kg)

Feature:

- Active vibration isolation system excellent vibration isolation effect: vertical direction at 10Hz when -27dB
- The non-contact leveling mechanism can improve the vibration isolation effect
- The control box has three proportional valves
- PID loop for precision leveling control
- Oil-free design to ensure no leakage
- Stand-alone table program
- Very low resonant frequency: less than 1.7Hz
- Fast settling time, usually 1 to 5 seconds
- Active vibration isolation system can be used to improve the rigidity of the table
- WAP active vibration isolation system with portable, lightweight, low profile characteristics, can be used as sensitive desktop equipment and experimental vibration control program. The system consists of four pneumatic isolators, which must be connected to a constant air supply, which can be a compressor or bottled air, and it also contains an

electronic control box with a keyboard. Other vibration isolators can be customized according to customer needs.

As shown in the following figure, the control box contains three proportional valves, each of which controls a main vibration isolator. The fourth (additional) isolator is controlled by one of the three main vibration feet. These proportional valve controls are implemented via a PID control loop, which provides a feedback signal for the leveling system. This electronic sensing system does not require a mechanical linkage between the valve and the breadboard in the conventional system, resulting in a better vibration isolation effect. Through the control box on the keyboard,

You can adjust the height manually. When the parameters are set, the vibration isolator will maintain the platform level, after any disturbance will be its automatic correction. These miniature electronic isolation bases are only 110 mm (4.33 in.) In height and only 71 mm (2.8 in.), Making them extremely suitable for use with breadboards and small optical platforms

- The vibration isolation system is designed for use on desktops, platform surfaces or other similar working surfaces. The isolator can be used independently to provide a temporary or movable vibration isolation scheme. In addition, they can be bolted to an inch of an inch or metric thread for longer-term applications. These isolators can also be used to upgrade a rigid stand with an active vibration isolation effect.

These supports contain an isolated system that effectively isolates the vertical and horizontal vibrations of the working surface so that it effectively eliminates vibrations in the vicinity of the frequency range of 3 to 50 Hz, which is the vibration of most common large amplitude vibrating sources Frequency Range. Air-driven pneumatic vibration isolation system can effectively isolate the vibration of the breadboard. This unique design does not require the use of oil-based damping system, which will not leak, after prolonged use will not reduce the effect. These supports are controlled by a control box that controls the height of the breadboard by controlling the air pressure in the pneumatic system. If the breadboard is displaced in the vertical direction, the control box can change the air pressure of each vibration isolator as needed to allow the breadboard to return to its original height

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Applications:

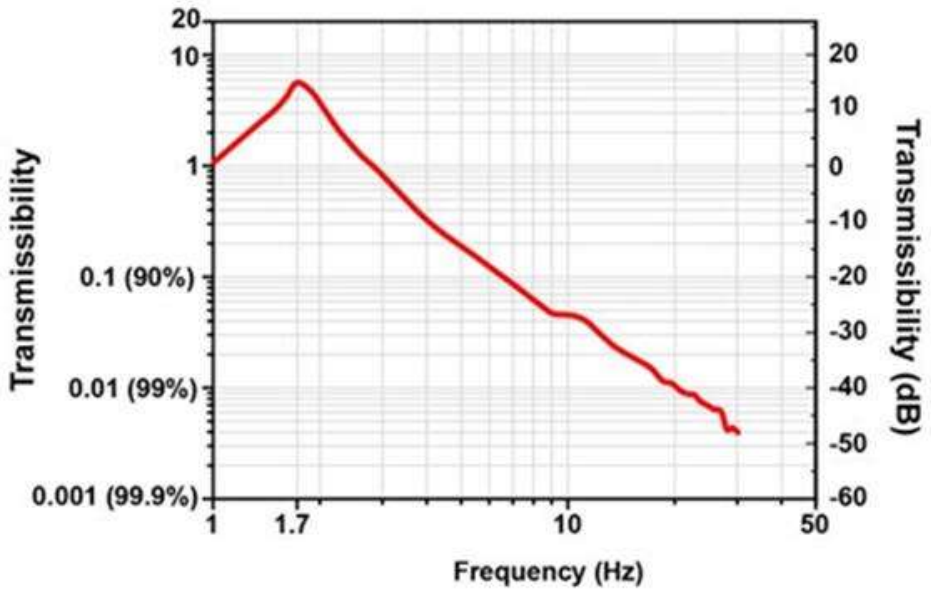
★Single crystal silicon crystal furnace, semiconductor inspection equipment, optical laboratory equipment, nano-level measurement and testing equipment, and other precision equipment

★ Optics, precision metering, precision measurement, biology, medicine, microelectronics, semiconductors and other fields

Specification	Value
Vertical Resonant Frequency[a]	< 1.7 Hz
Horizontal Resonant Frequency[a]	< 7.0 Hz
Vertical Transmissibility at Resonance[a]	14.22 dB
Horizontal Transmissibility at Resonance[a]	16.27 dB
Vertical Transmissibility at 10 Hz[a]	-27 dB
Horizontal Transmissibility at 10 Hz[a]	-4.5 dB
Load Capacity[b]	30 kg (66 lbs) Min 210 kg (462 lbs) Max
Height	73.50 - 76.0 mm (2.9" - 3.0 ")
Self-Leveling Repeatability	±0.2 mm (0.008")
Adjustable Leveling Repeatability	±0.2 mm to ±1.0 mm (±0.008" to ± 0.04")
Average Settle Time for ±0.2 mm Repeatability[c,d,e]	5.0 s
Average Settle Time for ±0.3 mm Repeatability[c,d,f]	< 1.0 s
Settling Time for Large Disturbances[c,d,g]	< 60 s
Legs Height Adjustment Range	±2.5 mm (0.1")
Air Pressure Required	552kPa (80 psi) Max 138 kPa (20 psi) Min
Finish	Black Paint

A:Under full load
B. Weight less than 66 lb (30 kg) can also be used, but the stability time, repeatability and isolation effect may be affected.
C. The settling time is defined as the time (when within the error range) when the valve is open to all LEDs. The system will shut down after 2 seconds.
D. The settling time varies depending on the weight, pressure, size, center quality, and error window.
E. The above data is the average load distribution provided for smaller "percussion" disturbances over the entire load range [66-462 lb (30-210 kg)].
F. Measured in 36 kg load, 600 mm x 600 mm package and 20 psi.
G. For large disturbances, such as when a large weight load (20 kg or more) is moved, an overload may occur, which may cause leakage of the isolation feet. In this case the settling time is less than 1 minute.
In order to prevent the system from vibrating or stabilizing for too long, the mounting surface must be flattened within the range of 4.0 mm.

Vertical transfer rate curve



Typical weight / pressure setting

Weight	Pressure (psi)	Min. Isolator Separation
< 47 kg (103.4 lbs)	20	400 mm
>47 kg (103.4 lbs) to < 98 kg (215.6 lbs)	40	400 mm
>98 kg (215.6 lbs) to < 152 kg (334.4 lbs)	60	600 mm
>152 kg (334.4 lbs) to < 210 kg (462 lbs)	80	900 mm