Press Release
07/2008

Vibration Isolation Platform

The Vibration Isolation Platforms offered by Klughammer Bio GmbH, Markt Indersdorf, Germany are assembled from two main parts, the platform itself and the VIBs (Vibration Isolation Bearings).

Rectangular Microscope Platforms - VIP 320

The VIP's isolation technology is superior to air technology. These vibration isolation platforms are passive, mechanical and maintenance free. There are no air hoses or supporting hardware required. The bearings isolate effectively for the horizontal and vertical vibration components. The superior performance of the bearings in all six degrees of freedom makes the isolation platform from Klughammer Bio GmbH, the best choice for eliminating unwanted vibrations. Virtually any type of scientific instrument may be positioned on the Series 320 Vibration Isolation Platform. Units such as microscopes, hardness testers, measuring devices, digital imaging systems, are all applications for a bench top or tabletop platform. Standard sizes are 12”x 18”, 18”x 24” and 24”x 30” for general use. Custom shapes, sizes and colours are available on request.

Individual Microscope Platforms - VIP 3200

There exist over 50 different custom Vibration Isolation Platforms for the microscopy marketplace. Individual Platforms for microscopes from Leica, Nikon, Olympus and Carl Zeiss are available. The platforms were developed so that they fit the footprint of the microscope base. These Platforms deliver

the same high level of performance as do the Series 320 Platforms since they use the same Series 320 Vibration Isolation Bearings. Consequently, these platforms take up less space on a tabletop than any other vibration isolation platform available today.

Vibration Isolation Bearings - VIBs

The VIBs filter the transmission of micro-vibrations in six degrees of freedom. VIBs cut off the transmission of vibrations at low frequencies (0,5 Hz horizontal, 3 Hz vertical). These bearings provide superior performance without the inconvenience, bulk and expenses of air isolation or piezo electric systems. VIBs are passive and mechanical and do not require air hoses, maintenance or supporting hardware. They are scaleable and easily adapted to a wide range of applications. VIBs utilize a proprietary combination of two non-linear springs - a horizontal spring filter and a vertical spring filter.

*Horizontal Spring Filte*r: Steel balls sandwiched between precision raceways form the plane of isolation. Micro-vibrations cause the balls to displace between the two raceways and cut off the transmission of vibrations. The balls that displace between the raceways are restored to the neutral position by a non-linear spring. Since the spring force (i.e., the restoring force) is non-linear, it is constant and independent of the frequency and amplitude of the input vibrations. As a result, the oscillating motion of the balls has no “natural” frequency. Rather, the motion has an infinite number of frequencies, one for each increment of displacement. Consequently, resonance between the two halves of the plane of isolation is physically impossible. Therefore, the horizontal spring filter whites out, or filters out a broad band of input frequencies and insures a constant level of vibration transmission reduction.

*Vertical Spring Filte*r: The isolated instrument is effectively levitated by a quasi-rigid body - a proprietary, non-linear spring mechanism with near zero tangential stiffness for micro-vibrations. The natural frequency of the spring

remains relatively low and constant across a large range of spring compression for which the compression force is matched by the restoring force. In this range, the percentage of vibrations that are transferred through the spring filter is very low.

The Vibration Isolation Bearings can also be incorporated into the design of a metrology or microscopy tool, and for this reason are also available individually.

Klughammer Bio GmbH produces the platforms in Germany in cooperation with Vistek Inc (manufacturer of the bearings).

This Press Release may be published immediately

contact:

Anneliese Schmaus
Product Manager

Klughammer Bio GmbH
Strassbach 9
85229 Markt Indersdorf
Germany
Tel. +49 8136 6011
Fax +49 8136 7098
info@klughammer.de
www.klughammer.de