## **Features**

- Inorganic fiberglass media
- Flexible elastomeric coating
- · Constant natural frequency in wide load range
- · Permanent and predictable resiliency
- Predictable dynamic response
- · High-energy dissipation
- · Controlled viscous damping
- · Load capacities 1 PSI to 500 PSI

(0.07 to 35 kg per sq. cm)

## Description

Model KIP fiberglass noise, shock, and vibration isolators are superior to all pad-type isolation media developed to date. Uniquely permanent and dynamically predictable, due to precise manufacturing methods using inorganic materials, this isolation media provides freedom of design and use unprecedented by any other material.

Model KIP isolators are a high-density matrix of compressed molded fiberglass; individually coated with a flexible, moisture-impervious elastomeric membrane, and designed to allow controlled air movement in the fiber media. The pumping action of air between fibers provides viscous damping, reducing motion caused by transient shock and vibration.

A range of densities and spring rates are available to provide load-bearing capacities from 1 to 500 PSI (0.07 to 35 kg per sq. cm). The annealed fiberglass of the isolation media is produced by a multiple flame attenuation process which generates fibers having a modulus of elasticity of 10.5 million PSI (738,223 kg/sq. cm) and nominal fiber diameters of less than .00027 inches (6.8 microns). The matrix of glass leaf springs is bonded at all fiber intersections with a water-resistant binder during molding under controlled heat and pressure. The material is then stabilized by ten (10) precompression cycles to three (3) times the maximum published load capacity for the media.

Model KIP fiberglass isolators uniquely allow a wide range of loading on a given isolator while maintaining a constant natural frequency. Natural frequency of Model KIP fiberglass media is controlled by isolator thickness rather than static deflection as with linear steel springs. To determine the natural frequency for other than 1" (25 mm) isolator thickness, the 1" (25 mm) thick isolator natural frequency is divided by the square root of the actual thickness to be used, i.e. the natural frequency of a 4" (102 mm) thick isolator is one-half the natural frequency of a 1" (25 mm) isolator at the same load for the same density material.

Model KIP fiberglass is unique as a structural support in that applied loads are substantially below precompression loads thus providing 300% or more overload safety factor. The result is permanent resiliency with constant natural frequency.



Model KIP fiberglass is non-corrosive, non-combustible, non-absorbent, and resists rust, ozone, mildew and fungus. It is vermin, insect and rodent proof, will not shrink, swell, or decompose. Isolation characteristics of the media are constant over a temperature range of -40°F to 250°F (40°C to 121°C).

## **Application**

Kinetics Model KIP fiberglass isolators can be applied in a wide range of noise, shock, and vibration isolation uses, and are recommended whenever predictable dynamic response and permanent load support characteristics are important.

Typical noise isolation applications include the use of Model KIP fiberglass isolators integrated into Model RIM and Model FC to create high STC and IIC floating floors.

Typical shock isolation applications include the use of Model KIP fiberglass isolators as support mounts for punch presses, metal shears, and similar industrial process machinery.

Typical vibration isolation applications include the use of Model KIP fiberglass isolators as support mounts for high speed fans, pumps, and chillers, on grade, having operating speeds of 1750 RPM and higher.

Model KIP fiberglass isolators are available in a wide range of standard and special mount configurations for various load ranges, natural frequencies, and other support characteristics.

## KINETICS<sup>™</sup> Fiberglass Isolators Model KIP





for 1/4" (6 mm) pads, multiply 1" (25mm) natural frequency by 2.00

for 1/2" (13 mm) pads, multiply 1" (25mm) natural frequency by 1.41

for 1½" (38 mm) pads, multiply 1" (25mm) natural frequency by 0.82 for 2" (51 mm) pads, multiply 1" (25mm) natural frequency by 0.71 for 3" (76 mm) pads, multiply 1" (25mm) natural frequency by 0.58

for 4" (102 mm) pads, multiply 1" (25mm) natural frequency by 0.50

**Note:** Enlarged portion of curves indicates load range of each type or density. This is for steady loads. For impact or shock loads, reduce this loading 50%.



United States 6300 Irelan Place P.O. Box 655 Dublin, Ohio 43017 Phone: 614-889-0480 Fax: 614-889-0540 Canada 1720 Meyerside Drive Mississauga, Ontario L5T 1A3 Phone: 905-670-4922 Fax: 905-670-1698

www.kineticsnoise.com sales@kineticsnoise.com

Kinetics Noise Control, Inc. is continually upgrading the quality of our products. We reserve the right to make changes to this and all products without notice.