

Vibration and Shock Control Solutions for Industry



Fabreeka<sup>®</sup> brings nearly a century of experience providing vibration and shock isolation solutions for customers worldwide. Our company provides vibration isolation and shock control solutions for a diverse range of industries from iron and steel, oil and gas, automotive and aircraft manufacturing, to mining and military.

#### Fabreeka® Pad

Fabreeka® pad is the original fabric reinforced, elastomeric pad which is exceptionally suited for the reduction of impact shock and used for mounting heavy machinery where absorption of impact shock and isolation of transmitted vibration is desired. Fabreeka pad has a relatively high damping rate of 14% of critical, and twice the value of damping for natural rubber and unreinforced elastomers. It has a natural frequency as low as 12 Hz, is impervious to most oils and solvents and is resistant to the effects of steam, water, mildew and brine.

## Fabcel<sup>®</sup> Pad

Fabcel<sup>®</sup> vibration isolation pad is manufactured using the same nitrile compound that was developed in 1962. Designed to provide low frequency vibration isolation and reduction of impact shock, it can have a vertical natural frequency as low as 5.0 Hz and a horizontal natural frequency as low as 3.0 Hz. Fabcel pad has been used for mounting machinery and sensitive equipment where absorption of impact shock or isolation of transmitted vibration is desired. It can withstand loads up to 300 psi, has a high energy storage rate per unit volume which makes it ideal for certain shock isolation applications.

## DIMFAB 280

DIMFAB pads are a proven solution where structure-borne noise, vibration and shock isolation is required on surface ships and in submarines. DIMFAB exhibits good drift resistance and can withstand hostile environments. It is easy to install, cut with scissors or a sharp knife, and is easily stacked for greater thicknesses. Typical isolated equipment on vessels includes propulsion systems, communications equipment, electrical and hydraulic equipment and reciprocating machinery.

## **Isolation Washers and Bushings**

Fabreeka<sup>®</sup> isolation washers and bushings are used to eliminate metal-to-metal contact and break the vibration or shock transmission path. Washers & bushings are typically used in conjunction with Fabreeka pads or Fabcel pads where the reduction of impact shock or isolation of transmitted vibration is required. Bushings are manufactured with the same properties as Fabreeka pad, and therefore offer years of service under the most severe operating conditions.

## **Thermal Break / Insulation Material**

Thermal break or thermal insulation material (TIM) is manufactured from a fiberglass-reinforced laminate composite. The properties of this material provide a thermally efficient, energy-saving product that prevents thermal bridging in structural connections. TIM is a load bearing "thermal break" used between flanged steel connections. The primary benefit is that it reduces heat loss while maintaining structural integrity.





#### Fabsorb™

Fabsorb<sup>™</sup> material absorbs machine-induced energy, limits the transmission of higher frequency disturbances and provides isolation from steady-state and induced shock and vibration. The natural frequency of Fabsorb is dependent on load and type of material, and ranges from 12 Hz to 50 Hz. Fabsorb material is specifically designed for vibration isolation applications of support foundations for machine tools, shock testing equipment, grinders and similar equipment. Fabsorb is impervious to most chemicals and performs consistently over a wide range of temperatures.

#### SA-47<sup>®</sup> Pad

SA-47<sup>®</sup> bearing pad provides compensation for surface irregularities and nonparallel load bearing surfaces in precast concrete, building and construction applications. The reinforced elastomeric bearing pads can also be provided with a Teflon<sup>®</sup> surface for use in expansion bearings and pipe slides. SA-47 pads can withstand compressive loads up to 7,000 psi and are impervious to most oils and resistant to the effects of steam, water, mildew and brine.

#### **FAB-EPM**

FAB-EPM material is a polyurethane elastomer specifically designed to provide low frequency vibration isolation for foundation isolation applications. The natural frequency of FAB-EPM is dependent on load and type of material and ranges from 6 Hz to 40 Hz. FAB-EPM material is manufactured in a wide range of densities, which allows for optimal loading to achieve increased isolator performance.

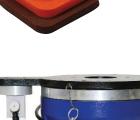
## Precision-Aire<sup>™</sup> Leveling Isolators (PAL)

PAL pneumatic isolators provide superior low frequency vibration isolation. These isolators are ideally suited for conditions where height control and low frequency vibration control must co-exist. Fabreeka PAL isolators meet the critical needs of metrology instruments, electron microscopes, inspection stations and precision manufacturing equipment. PAL isolators react quickly to changes in the supported load and to center of gravity shifts by automatically re-leveling to a preset position.

## Precision-Aire<sup>™</sup> Pneumatic leveling Isolators (PLM)

The Fabreeka® PLM series pneumatic isolation mounts are low frequency vibration and shock isolators which provide both attenuation of disturbing vibration and equipment leveling. For vibration control applications, the pneumatic portion of these mounts provide significant reduction of vibration occurring at frequencies above 5.0 Hz. For shock or impact applications, the outer elastomeric wall construction provides a high deflection shock mount.













The Tech Products division of Fabreeka International manufactures elastomeric vibration and shock isolation products for industries including power generation, off-highway/construction, military, transportation, hybrid/electric vehicles, medical, electronics, HVAC and many more.

## **Vibration Isolators and Shock Mounts**

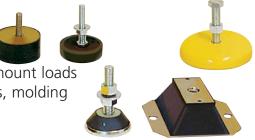
Tech Products manufactures a complete line of isolation products for the most rugged environments. Applications include portable gensets, military vehicles, off-highway and construction equipment, truck/bus engine mounts, hybrid/electric vehicles and many other engine driven applications. In addition to the standard line of products, Tech Products offers custom molded solutions and specialty elastomers.

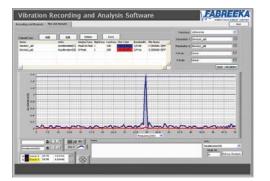
## **Light Load Isolation Products**

Tech Products also produces compact isolators for protection of lightweight equipment. Typical applications include small pumps and compressors, electronics, radiators, avionics, computers, medical equipment and other sensitive applications.

## **Mounting Feet and Leveling Mounts**

Tech Products manufactures mounting feet and leveling mounts for all sizes of equipment. The product line covers mount loads of 6 lbs to 13,000 lbs. Common applications include presses, molding machines, conveyors and other industrial equipment.





## **Engineering and Design**

Tech Products offer engineering assistance for all vibration and shock applications. Engineering services include a six degree-of-freedom computer analysis, product testing and field vibration testing. Tech Products also have design capability for custom molded isolation products.



Providing solutions for unwanted vibration and shock can sometimes involve more than providing the correct isolator. Our customers ask for solutions for many applications which require additional design effort to provide a complete isolation result.

## Services - Total and Complete Anti Vibration Solutions

In addition to having product knowledge, engineers at Fabreeka<sup>®</sup> are well versed in the additional aspects of vibration isolation. We regularly use the experience we have gained on previous applications and projects to provide our customers with the proper vibration isolation recommendations for a total vibration control solution.

## **Vibration Site Survey and Analysis Services**

Low frequency vibrations and large shock inputs can affect the accuracy, repeatability and throughput of precision machines and equipment. Most precision machine tool and measuring machine manufacturers have established allowable vibration specifications for their machines. Fabreeka utilizes highly accurate instrumentation to quantify the amplitude and frequency of vibration to make proper vibration control recommendations.





# Fabreeka<sup>®</sup> Finite Element (FEA) Analysis Services

Examining mode shapes in a vibrating structure is a valuable step in adjusting vibration amplitudes by varying the stiffness, mass or damping. A finite element analysis will define and model the mode shapes and response frequencies of a structure, as well as the response of the isolation system to machine-induced inputs and/or environmental inputs.

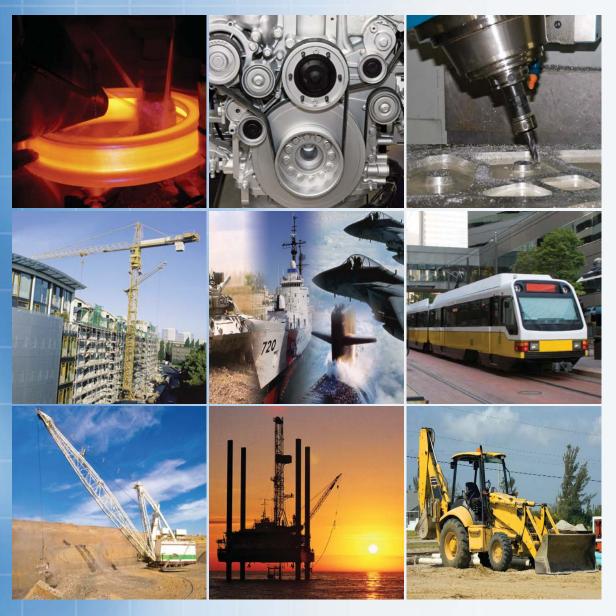
## Fabreeka® Consulting and Project Management Services

Fabreeka<sup>®</sup> has an organized program structure to maximize the responsiveness and communication among all parties. Relationships we have developed on similar projects in the past will help to maintain the quality and schedule of your program. Our Engineers can supervise critical phases of construction and prototype testing and provide responsibility for the design, installation and testing of your isolation system. Design review meetings are held with customers as part of overall project management.



Fabreeka<sup>®</sup> has been committed to providing the utmost in quality and service to our customers since our incorporation in 1917. The experience of our technical staff in addressing vibration isolation concerns will prove invaluable on your project.





Please visit our website www.fabreeka.com or www.novibes.com for further information on our products, services and applications, or to download our literature. Alternatively, please feel free to contact any of our offices.

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