# Industrial Products for Vibration Isolation and Noise Attenuation







## **Product Overview**

The desire to control heavy equipment noise for enhanced operator comfort and equipment longevity has presented significant challenges for equipment manufacturers. Industry standard mounts often fail to take advantage of improved features and materials to optimize performance. Noise testing based on the 4-Pole Test method demonstrates that significant gains in noise isolation are available without sacrificing size, weight or load capacity.

## **Product Selection**

ITT Enidine Incorporated now offers a line of isolators to provide optimized vibration/noise attenuation for a variety of vehicle and equipment applications.

Designed to accommodate a range of mounting configurations and load conditions, ITT Enidine Elastomer products can be used for engine mounts, operator cabin isolation and other equipment.

# **Typical Applications**

- Operator Cab Isolation
- Dashboard Mounts
- Engine Isolation
- Accessory Equipment Mounts
- Panel and Gauge Isolation
- Electronic Equipment Isolation

## Features and Benefits

- Exceptional Noise Attenuation Performance
- Fail Safe Low-Profile Design
- Interchangeable with Existing Isolators
- Multiple Elastomer Stiffnesses
   Available in the Same Envelope Size
- Expansive Library of Proprietary Elastomer compounds

# **Testing and Manufacturing**

Enidine is your partner for standard and custom elastomeric isolation systems for heavy equipment noise control. Successful isolation systems account for the vibration and noise properties of the equipment systems to which they attach. We have a proven engineering approach for high frequency noise attenuation, and the engineers, materials, and test capabilities that allow us to develop and qualify your system.

As experts in the field of structure borne noise for heavy equipment, Enidine provides the following services:

## Prediction of In-situ Attenuation of Isolator -

Classical mass-spring-damper approach cannot be used to predict high frequency noise attenuation. Enidine uses the four pole method to capture the dynamic performance of the isolator, and the attaching structure.

## Elastomeric material development -

Proprietary compounds are formulated based on the requirement for the isolator. Desired noise attenuation, temperature extremes, loads, and fatigue life are important criteria when selecting and developing compounds for construction and ag equipment.

## Installation Requirements -

Ease of installation is critical in the manufacturing of construction and ag equipment, Enidine considers this as part of the total value of the system. Our isolators have been molded directly to custom brackets to provide cost-effective customer solutions.

#### Fatique life -

Enidine understands the requirements to provide an isolation system with long life. Fatigue life for elastomeric isolators is directly related to frequency and amplitude. Enidine has the expertise to design and test your isolation systems to ensure longevity.

## **Temperature Extremes –**

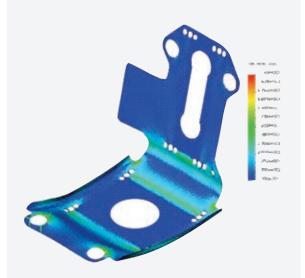
The dynamic performance of the isolator is very dependent on the temperature at which it performs. Enidine designs and tests the isolator for these specific temperatures.

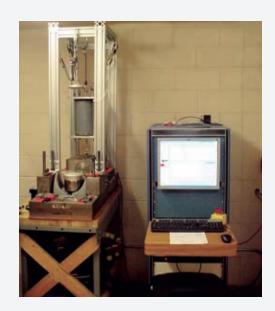
## Static and Ultimate Loads -

Enidine's isolators are designed to provide optimal performance at the specified static loads. The isolators also incorporate a fail safe mechanism to ensure the ability of the isolator to resist ultimate loads.

#### Custom solutions -

ITT Enidine has a dedicated group of engineers, supported by the required analytical, design, manufacturing, and testing resources focused on the design of heavy equipment isolators. We offer traditional metallic isolators, and isolators using plastic materials. As a leader in this field, Enidine can also partner with you on the specification development for these isolators.







# **Applications**



## TRACTOR/AGRICULTURE

- Shock and Vibration Control
- Noise Reduction
- Low Frequency Applications
- Standard Product Solutions
- Failsafe Designs

- Cab Mounting
- Electronic Equipment Isolation
- Piping, Pumps and Motors



# **CONSTRUCTION EQUIPMENT**

- Shock and Vibration Control
- Drop Testing
- Temperature Extremes
- Environmental Conditions
- GPS Receivers/Transmitters
- Commercial Electronics
- Disk Drives
- Computer Consoles
- Flat Panel Displays
- Communications Equipment
- Mobile Business Systems



## **ENGINE ISOLATION**

- Shock and Vibration Control
- Noise Reduction
- Harsh Environments
- Custom Materials for Optimal Performance
- PTO Drives
- Engine Sensing Electronics
- Turbines
- Internal Combustion Engines
- Motor/Generator Sets
- Off-Highway Equipment
- Truck and Bus



# **NOISE ATTENUATION**

- Low and High Frequency
- Custom Elastomers (Noise, Temperature, Smoke and Toxicity)
- Structural Elements
- Alignment Forgiveness

- Industrial Vehicles
- Cab Noise Control
- Equipment Support



## TRANSPORTATION/SHIPPING

- Drop Shock
- Off Road
- Smooth Highway
- Rail Transport

- Shipping Containers
- Engine Transport
- Industrial Equipment
- Computers and Electronics

# **Products**

# **WIRE ROPE ISOLATORS**



- Extreme Temperatures
- Large Displacement
- Systems Analysis and Integration
- Rugged Design and Construction
- Long Life
- Corrosion Resistant

# **HIGH ENERGY ROPE MOUNTS (HERM)**



- Standard Product Selection
- Systems Analysis and Integration
- Multi-Axis Isolation
- Minimum Sway Space
- High Damping
- Tight Tolerances

# STANDARD ELASTOMERIC ISOLATORS



- Standard Elastomer Products
- High Damped Elastomers
- Cup Mounts
- All Attitude Mounts
- Multi-Planes
- Dome Mounts
- Fail Safe Designs

# **CUSTOM ELASTOMERIC ISOLATORS**



- Custom Design Expertise
- Broad Temperature Range
- Reliable Design Construction
- Wire Mesh Expertise
- Value Added Assemblies
- Standard Elastomer Products
- Proprietary Compound Blends

# STRUCTURAL DAMPING TREATMENT



- Reduce Vibration Amplitudes
- Bolt-On Devices
- Custom Tuned

