

**Continental**   
The Future in Motion



## **Vibration Control Solutions** for Commercial Vehicles

Vibration Control

**ContiTech**

## Powertrain Mounting Systems

Components and modular systems for optimum safety and maximum riding comfort

ContiTech Vibration Control is a global development partner and original equipment manufacturer for commercial vehicle engine mounts. Our components and systems are used by leading manufacturers and have proven their quality over generations of vehicles in rough industrial environments.



Our wedge style mounts are designed as a modular system. They provide several features to adjust the engine mount to achieve growing customer needs, and to successfully meet conflicting goals during the development.

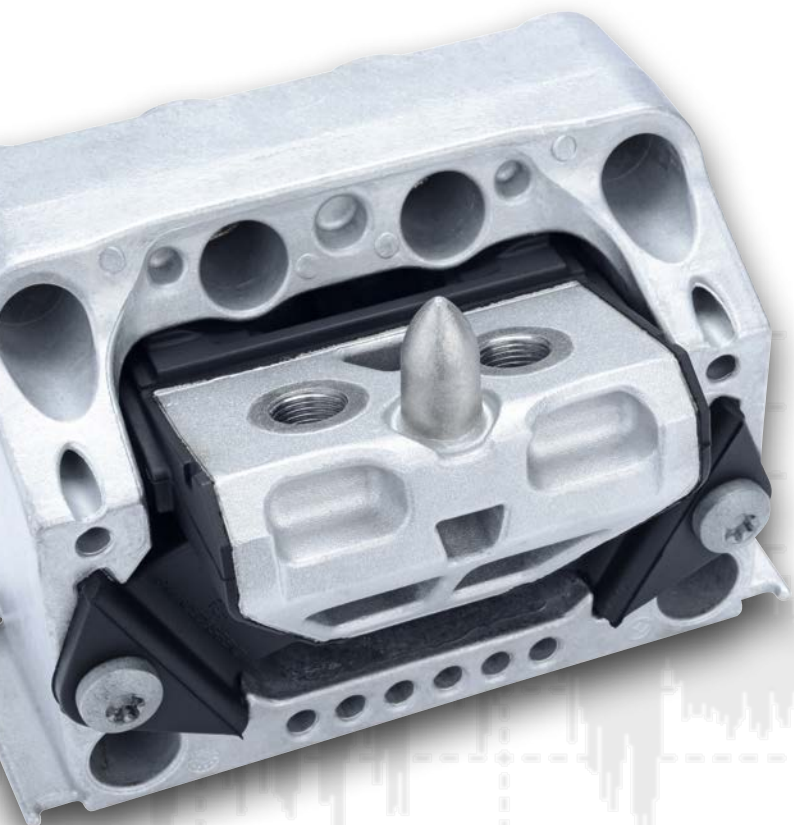
ContiTech's wedge style mounts are characterized by the following features:

- › **Travel stops integrated within the housing**
- › **Linear characteristic, resulting in a good isolation effect**
- › **Compact and light-weight design - high-strength**
- › **Integral "Fail-safe" function**

Mount performance characteristics are universally adjustable through the design and dimensions of the rubber supporting springs, the mounting angle, the number of intermediate metal sheets, and the rubber compounds used. The casing, inside metal and buffer systems can also be varied as required.

Our hydromounts can be used when ride comfort is a special requirement. Excitation generated by the road surface can be compensated for with hydromounts in a particularly effective manner. Engine mounts with frequency-selective damping are used in vans and light commercial vehicles, for instance, to prevent engine shake.

Moreover, we develop and manufacture hydromounts with a broadband damping effect, e. g. for applications in construction vehicles.







## Development Process

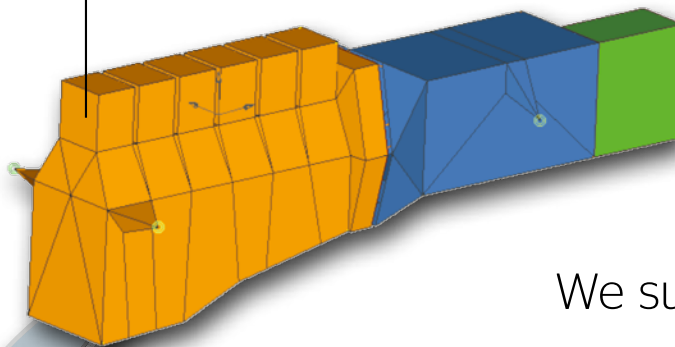
Expertise and latest technology in the development and tuning of engine mounts

The development of an engine mount system is a complex process requiring close cooperation between the vehicle manufacturer and the supplier.

With our know-how, we support our customers during the earliest phases of design and development. With the help of multi-body system simulations, it is possible to determine optimized mount positions as well as the engine mount characteristics such as stiffness and damping, and load development to meet the basic conditions specified by the customer.

After the locations and performance of each mount is determined, the mount components are designed and refined with the help of the latest CAE systems. The system components are created, taking into account the space available and customer requirements for needed clearances and travel limits.

System design



We support our customers throughout the entire

Vehicle testing



Component test





All metal and elastomer mount components are designed and optimized with the support of finite-element calculations, before the first prototypes are produced. In addition, accurate assessments can be made on the functionality and the service life of the components.

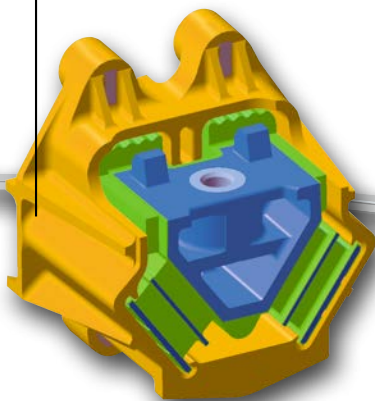
Manufacturing processes are defined parallel to the design. Additional simulation procedures, such as the filling simulation of the vulcanized material, are used.

With these tools the manufacturing process is optimized in both technological and economic terms.

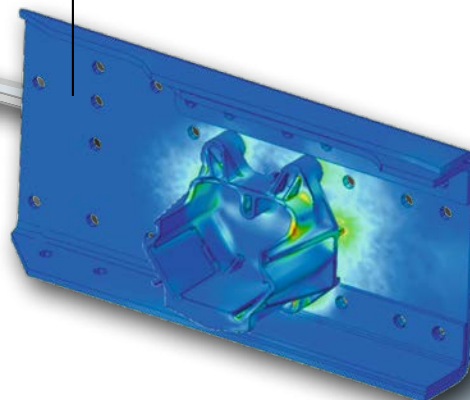
The first prototypes are assembled incorporating the knowledge gained through the virtual design process. To confirm the predicted performance and durability, component tests are conducted on multi-axis servohydraulic test machines using the load cycles actually measured in the vehicle. This method provides consistent testing and helps attain a shorter development process.

For vehicle testing, we have the corporation's own Contidrom test track. The most varied driving maneuvers can be carried out here, providing valuable input for the assessment of comfort in particular.

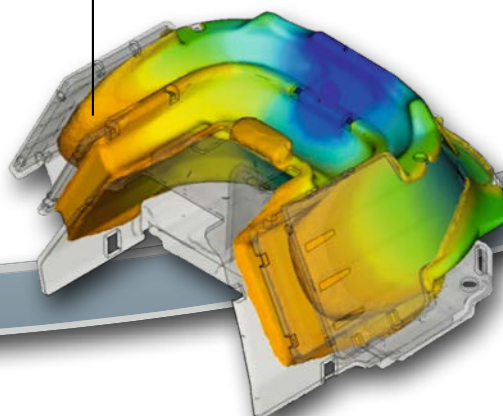
**Component construction**



**Component calculation**



**Process optimization**



re development process

## Propeller Shaft Bearings

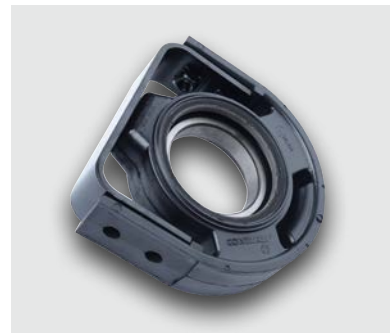
For maximum driving safety and ride comfort

The propeller shaft bearings from ContiTech Vibration Control are characterized by high degree of functionality in connection with an extremely rugged design. They reliably support the propeller shaft while reducing its maximum movements.

A modular product design provides for various loads or stiffness requirements and space allowances.

Our pedestal bearing design combines good isolation in conjunction with long service life. The highly compact design is possible because the ball bearing is directly vulcanized in the elastomer supporting spring. This design has proved itself to be durable over volume production on several generations of vehicles.

When the focus is on light-weight design and optimum ride comfort, we offer mounting concepts that utilize light-weight materials and designs with selective hydraulic damping.



## Vibration Absorbers

For optimizing the vibration control technology and acoustic performance of vehicles



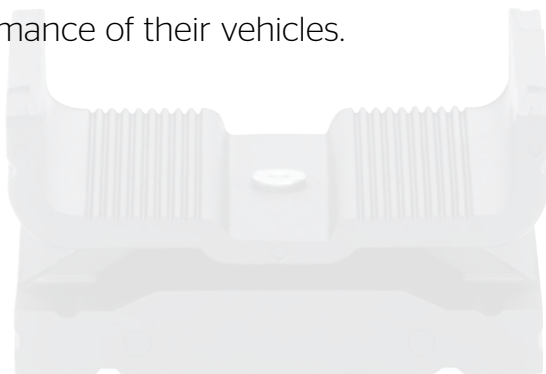
Drawing on our expertise in vibration control technology, we provide the necessary human resources and equipment to effectively support our customers to control the vibration and acoustic performance of their vehicles.

We offer a wide range of vibration absorbers to our customers. From classic tuned absorber designs using simple rubber and mass construction through fluid filled hydraulic absorbers, each is designed to reduce unwanted resonance-related noise and vibration.

For use in lighter commercial vehicles, we have developed leaf spring absorbers to effectively reduce flexural vibrations of leaf springs. The compact rubber-metal designs feature a spring made of natural rubber which is characterized by low stiffness and a long service life.

The damping characteristics of absorbers are generally adjusted via the elastomer spring. The use of an integrated fluid system creates additional possibilities for adjusting the component. Such a system can also be used to optimize key support spring characteristics, independent of damping characteristics.

This system from ContiTech Vibration Control, which can be universally used in vehicles, has integrated breakaway resistance and features an impressively simple design.



# ContiTech



## Vibration Control

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## ContiTech. Engineering Next Level

As a division of the Continental Group, ContiTech is a recognised innovation and technology leader in natural rubber and plastics. As an industry partner with a firm future ahead of us, we engineer solutions both with and for our customers around the world. Our bespoke solutions are specially tailored to meet the needs of the market. With extensive expertise in materials and processes, we are able to develop cutting-edge technologies while ensuring we make responsible use of resources. We are quick to respond to important technological trends, such as function integration, lightweight engineering and the reduction of complexity, and offer a range of relevant products and services. That way, when you need us, you'll find we're already there.