

AViTECH

Anti-Vibration Technology

IRIS
Certification



EN

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ABOUT US

Since 2014, we develop and produce innovative, high quality and technically sophisticated products from rubber & metal components as well as molded rubber parts for noise reduction and vibration damping.

AVITECH currently has two locations where rubber-metal components are developed, manufactured and tested.

We are 100% a Turkish company with a strong background from Germany.

Our production site is located in Turkey / Istanbul and the core development team in Germany supports our employees in Turkey at the design and implementation stage.

We always work together to carry out our tasks and to ensure it functions smoothly and efficiently.

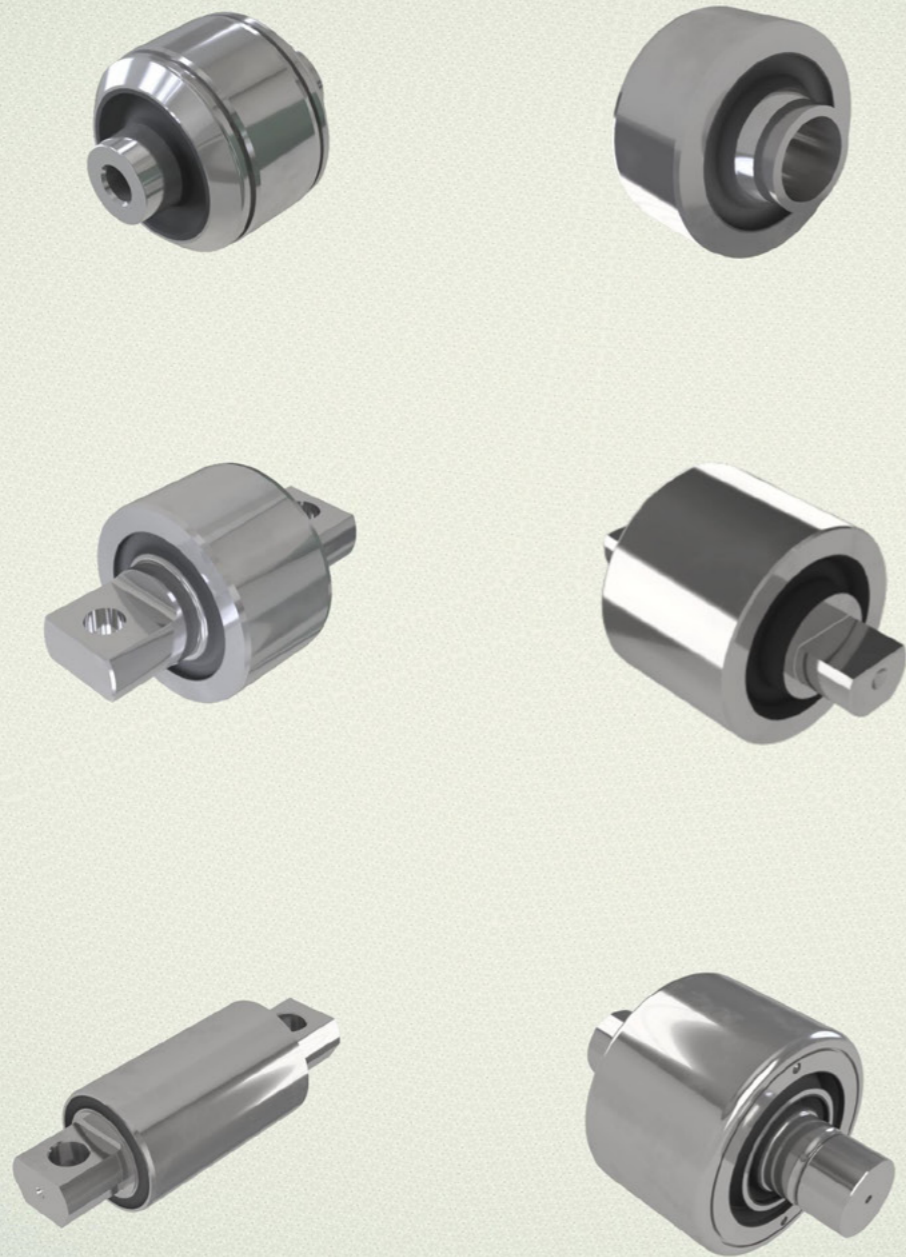
Our goal is to ensure the best performance with the longest service life, especially for rail vehicles, construction and agricultural machinery as well as for the mechanical engineering and marine industries.

Our Benefits:

- Technical Know & How (from design to production)
- Qwn rubber compound recipes
- FE-Analysis, Strength and Damage Calculations
- Static and dynamic test capabilities
- Trustful cooperation with our customers & suppliers
- Cost-effective solutions
- On-time delivery
- Quality & Safety approved by ISO 9001 und IRIS certificates
- Individual solutions

Spherical Bearings are designed to allow displacement around a center axis, usually they support a rotating shaft that is required to move rotationally and in various angles.

This kind of joints are widely used in engineering applications as mechanical joints on road and rail vehicle suspensions, engine / gearbox mountings and captive cab mountings.



Tie Rods consist of a metal rod and pressed into the rod eyes two sockets. These parts are generally used between the bogie and car body in order to transmit the longitudinal forces such as shocks, driving and braking forces, and to dampen the structure-borne noise.

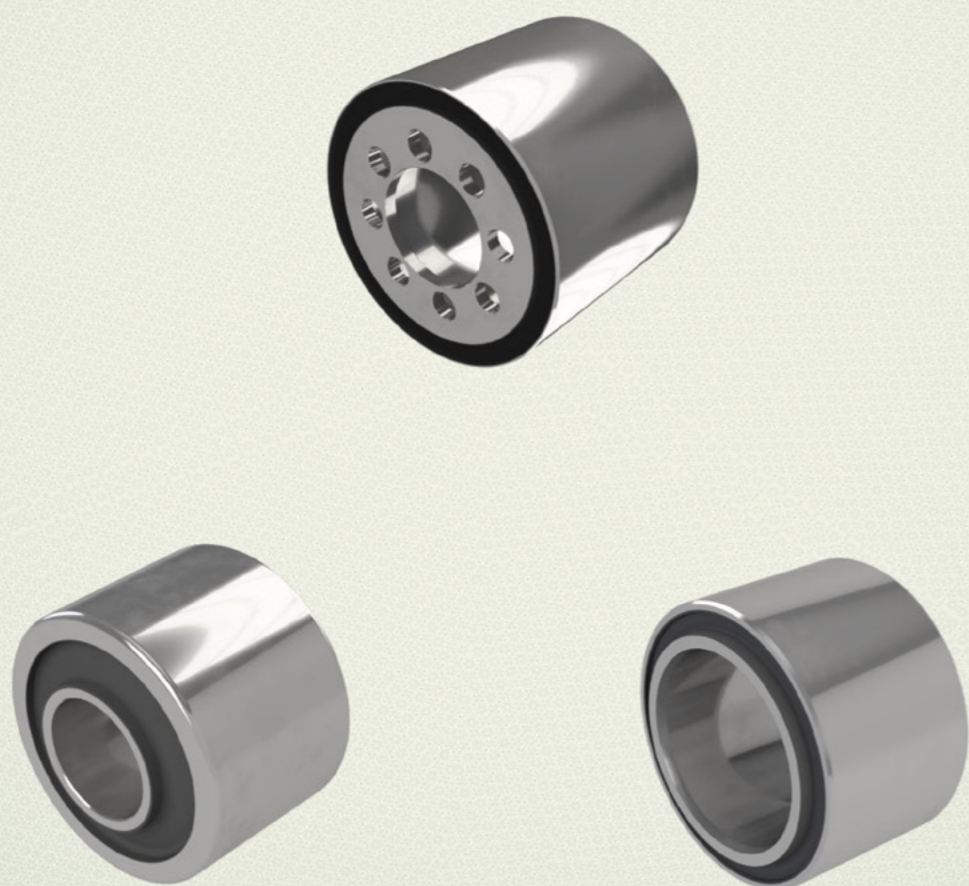
Depending on requirements, the material of the handlebar can be selected from cast iron, or nodular cast iron, forged or tempered steel.

Typical applications: Light rail, express trains



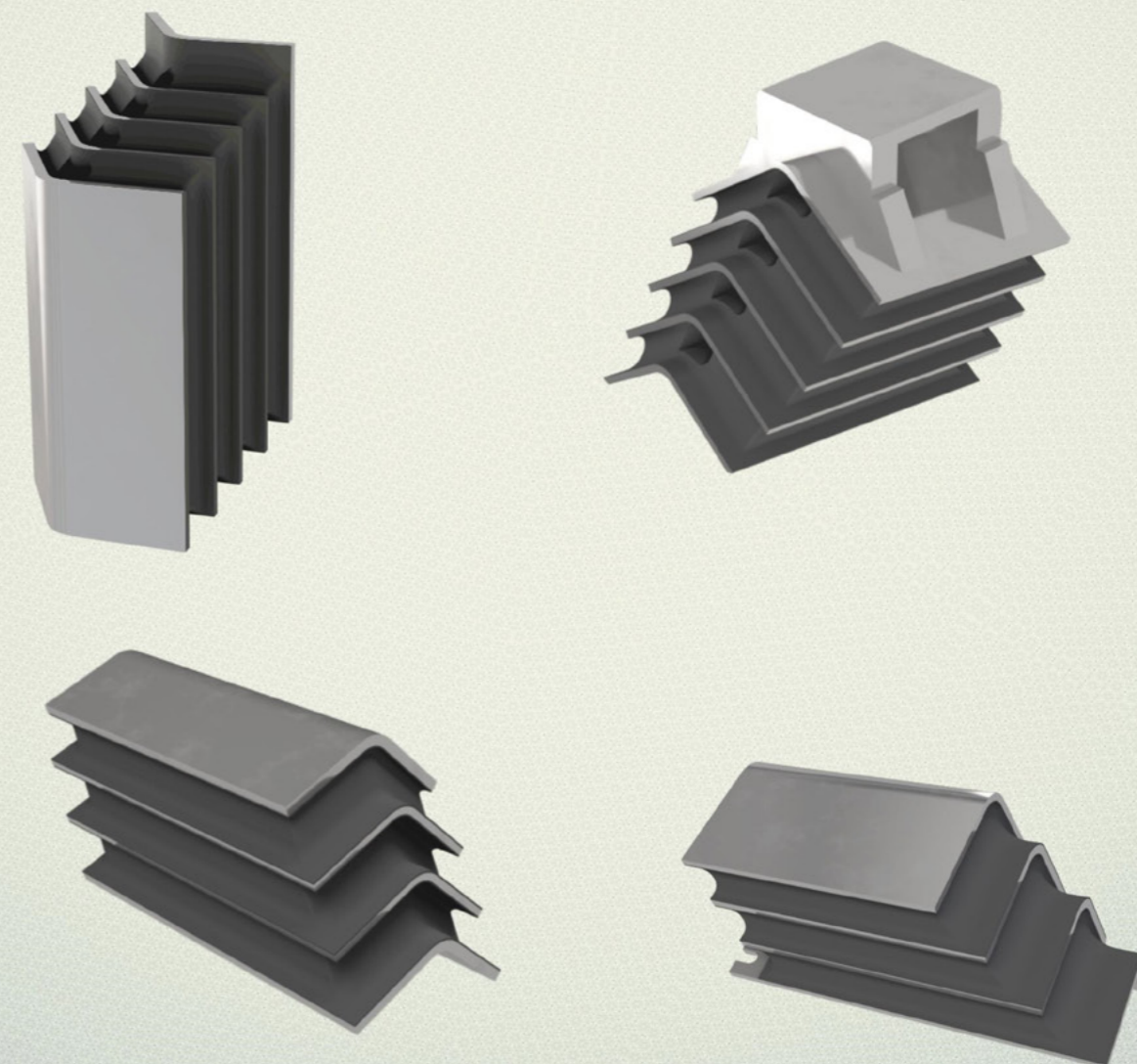
The Rubber bush is a type of anti vibration part that generally consist of cylindrical inner and outer metals, fully bonded with rubber in between. The rubber bush for the suspension can be pressed into a housing, which will provide compliance between the inner and outer metals in the radial, axial , torsional and conical directions.

A wide range of rubber bush designs can be offered; with hollow inner metals, solid inner metals (with lugs), segmented outer metals, and profiled inner/outer metals. If you need rubber bushes for a specific application, our experienced engineers can offer an individual solution.



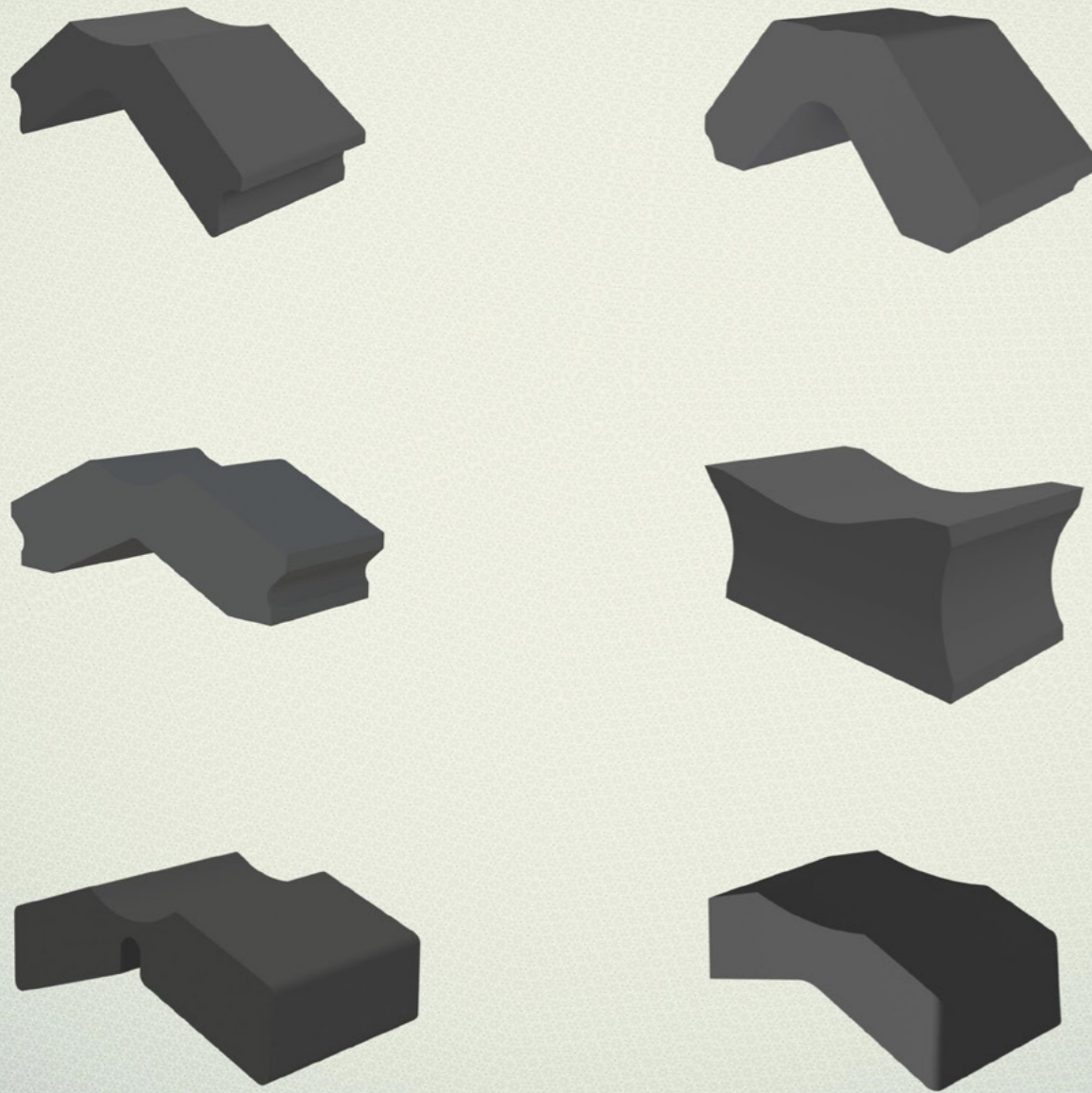
Axle springs (also known as Chevron springs) are multipurpose vibration reducing elements. They are both simple to install and easy to maintain. Thanks to their durability, they offer a long service life meaning they are ideal for use in all types of rail vehicle application. By selecting the angle of the steel sections and the number of intermediate steel interleaves, in conjunction with the relative installation angle of the chevron spring pair, three different spring stiffness' can be achieved. Furthermore, the degree of stiffnesses can also be varied by altering the geometric dimensions of the individual layers, and also by changing the rubber hardness.

Please contact Avitech today if you have specific requirement with regard to chevron axle springs. If we can't provide you with a suitable spring from our existing range, our experienced engineering team can design a solution for you.



Wheel pads are damping elements that are used between wheel tires and wheel discs. They allow strong reduction of structure-borne noise, shock absorption, wear reduction on wheels and rails. Split body shape allows the assembly and disassembly of the wheel tire with the simplest means, under appropriate installation situation even under the vehicle.

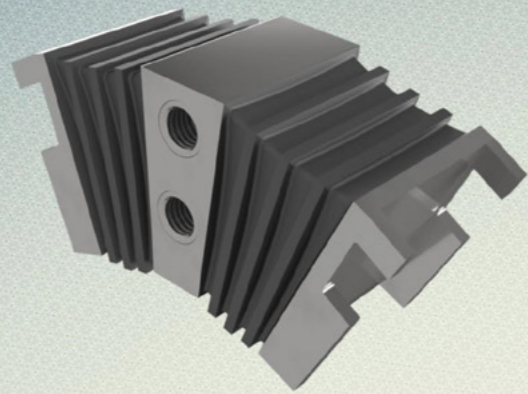
Typical applications: Metros and Trams



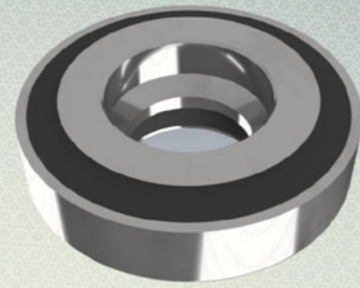
Each in layer springs are manufactured using high strength steel and heavy-duty plates to give superior impact and wear characteristics, resist negative loading, and provide safe anchor points. There is also a built in fail-safe device to prevent total mount failure in the case of severe overload - also manufactured from the highest-grade steel to provide high tensile strength without compromising embrittlement.

Avitech suspension springs are designed to provide a maintenance free flexible load bearing component, allowing angular and shear movement whilst supporting high axial loads.

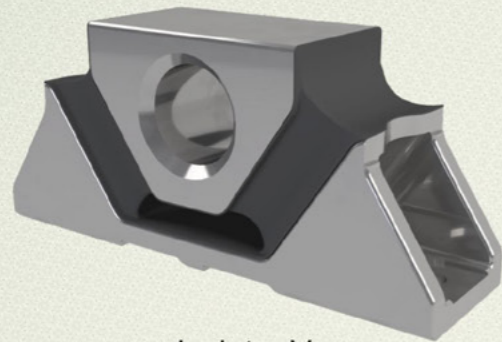




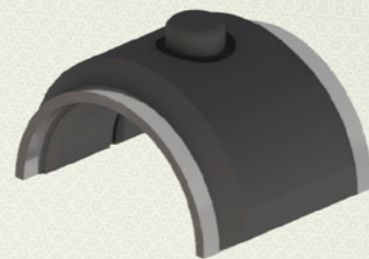
Key Packet Coupling



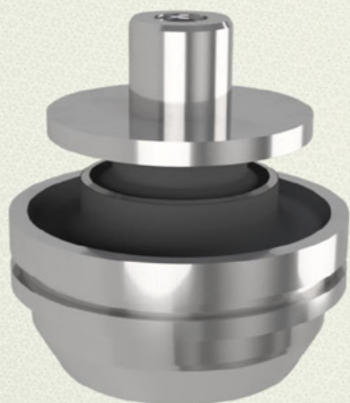
Support Bearing



Isolator Vee



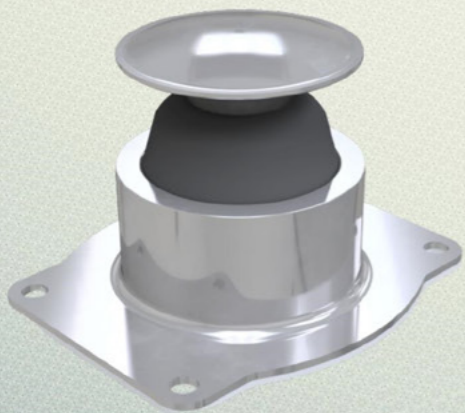
Elastic Bush



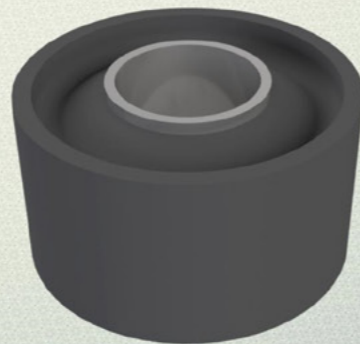
Conical Spring



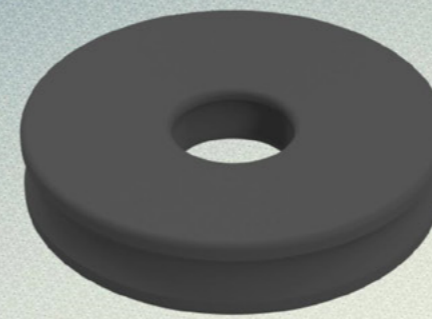
Guide Spring



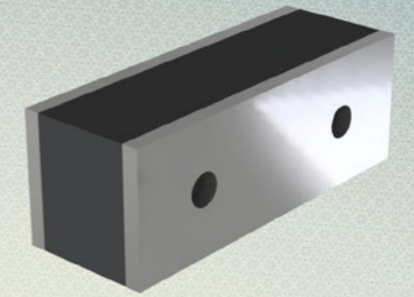
Shock Absorber



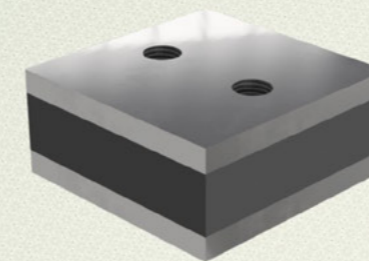
Rubber Drive Coupling



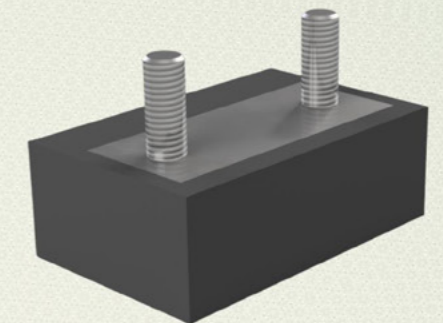
Rubber Ring



Lateral Buffer



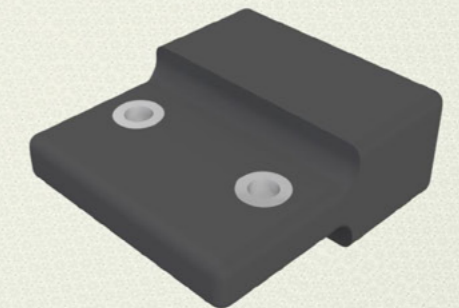
Rectangular Buffer



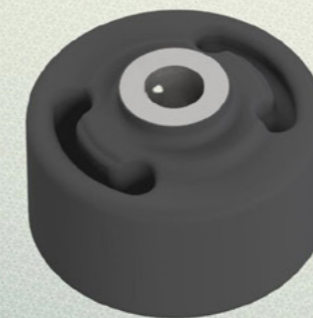
Buffer Stop



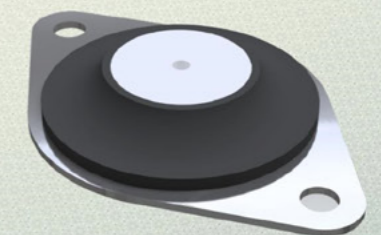
Rubber Ring



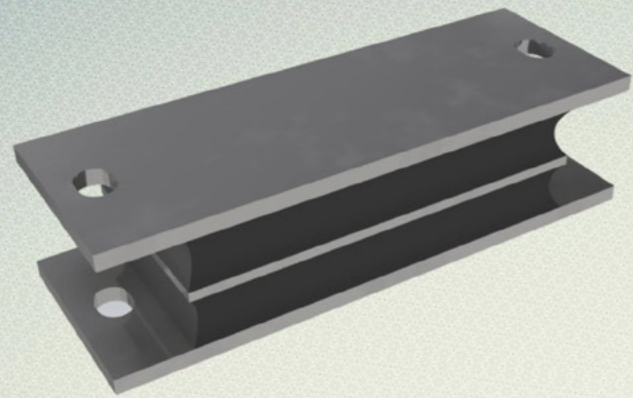
Lateral Bump



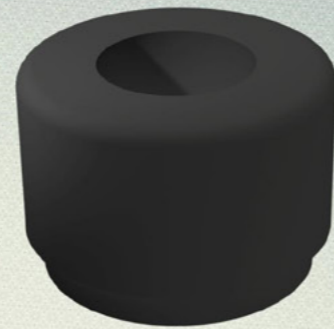
Rubber Bearing Bush



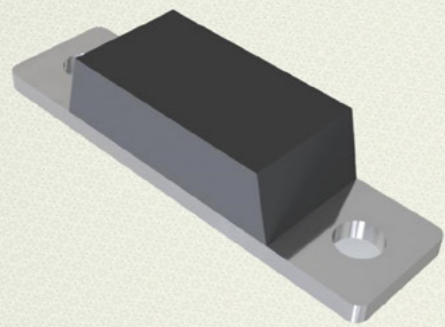
Side Stop



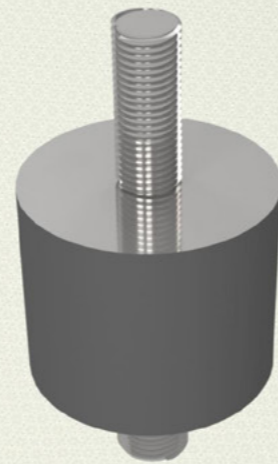
Sandwich Mount



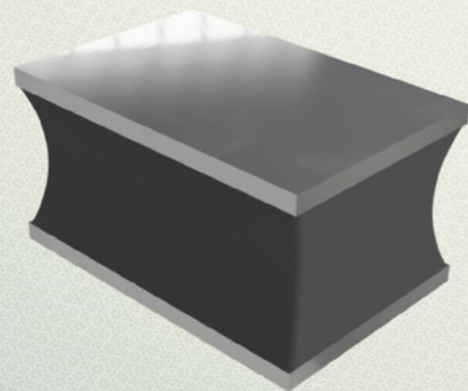
Bump Stop



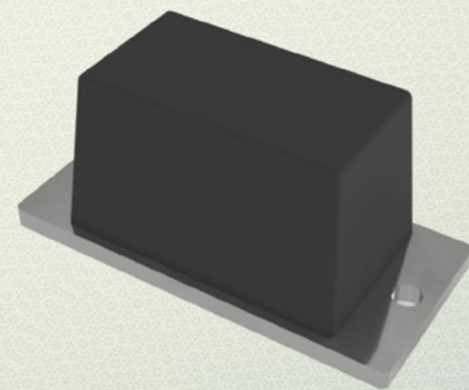
Rubber Damper



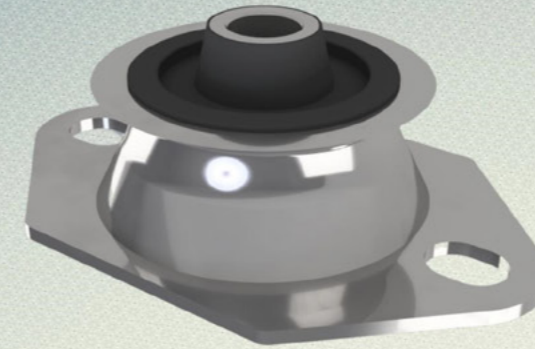
Rubber Compressor Feet



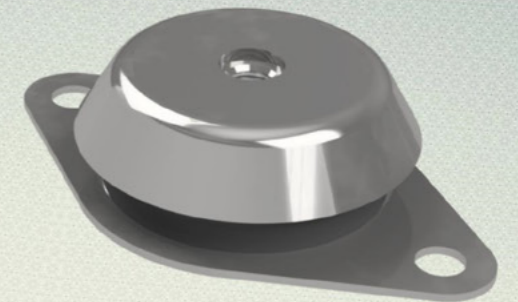
Rubber Shock Absorber



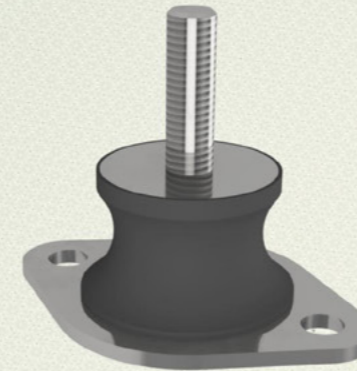
Rubber Dampers



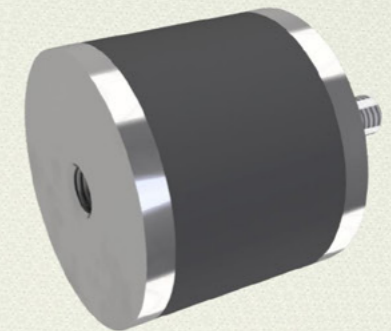
Cone Mount



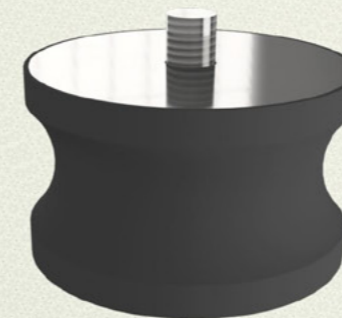
Machine Feet



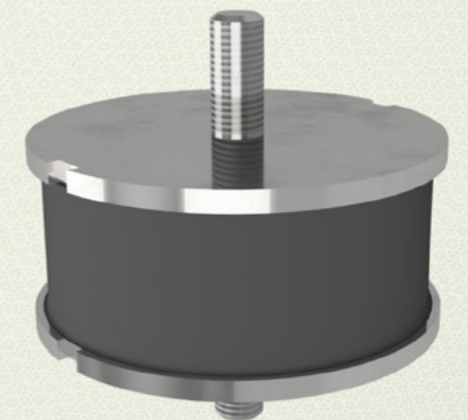
Construction Buffer



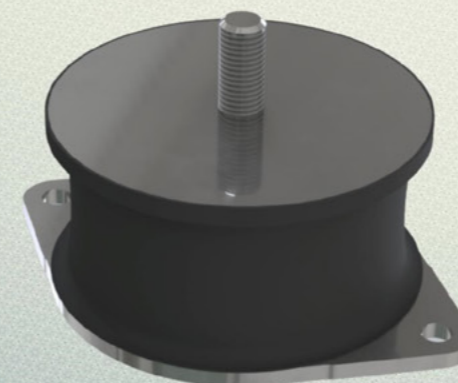
Rubber Buffer



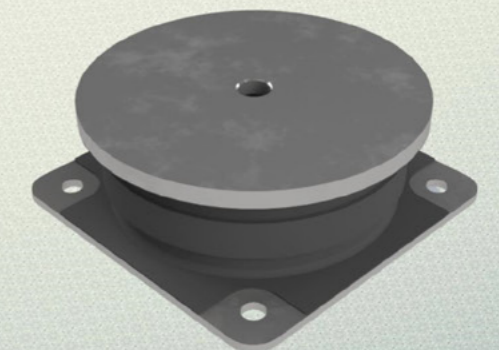
Rubber Buffer



Rubber Buffer



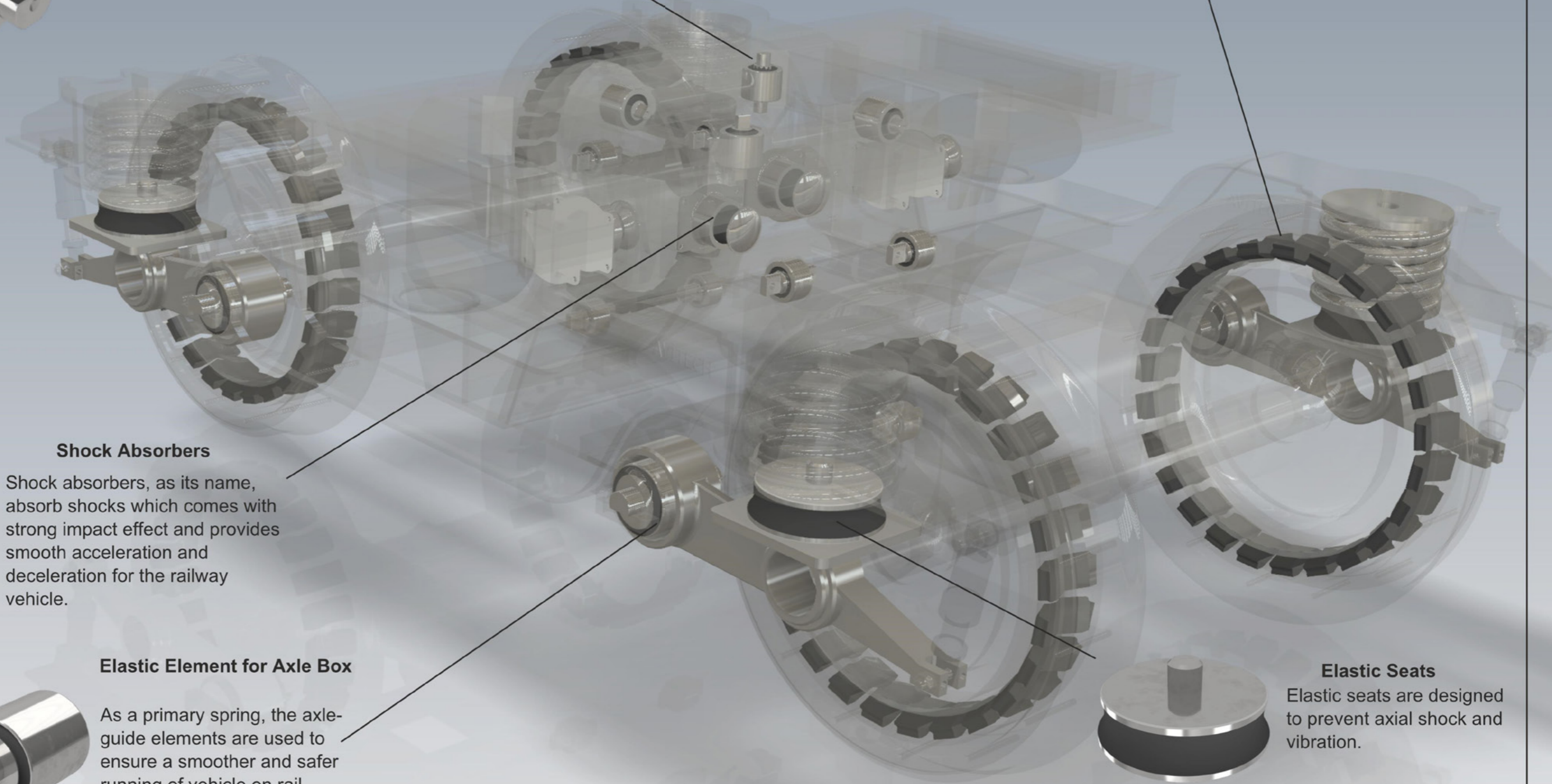
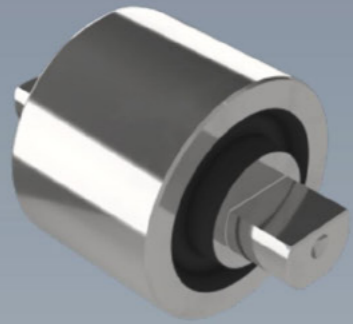
Rubber Buffer



Spare Parts Shock Absorber

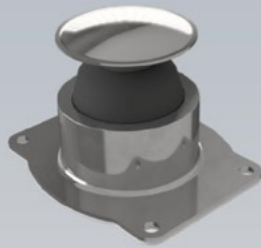
Spherical Joints

Guide elements play a key role in guiding the wheelset. As system components they can also be used to transmit loads in the traction link and anti roll system as well as in the driveline suspensions.



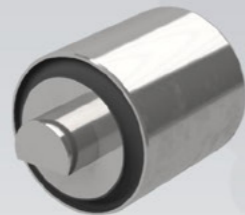
Shock Absorbers

Shock absorbers, as its name, absorb shocks which comes with strong impact effect and provides smooth acceleration and deceleration for the railway vehicle.



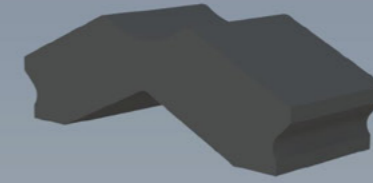
Elastic Element for Axle Box

As a primary spring, the axle-guide elements are used to ensure a smoother and safer running of vehicle on rail.



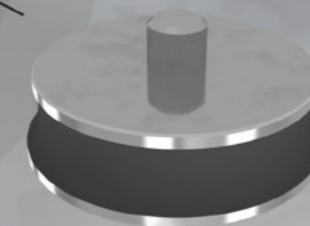
Wheel Pads

Wheel pads are damping elements that are used between wheel tires and wheel discs. They provide strong shock reduction on wheels and rails.



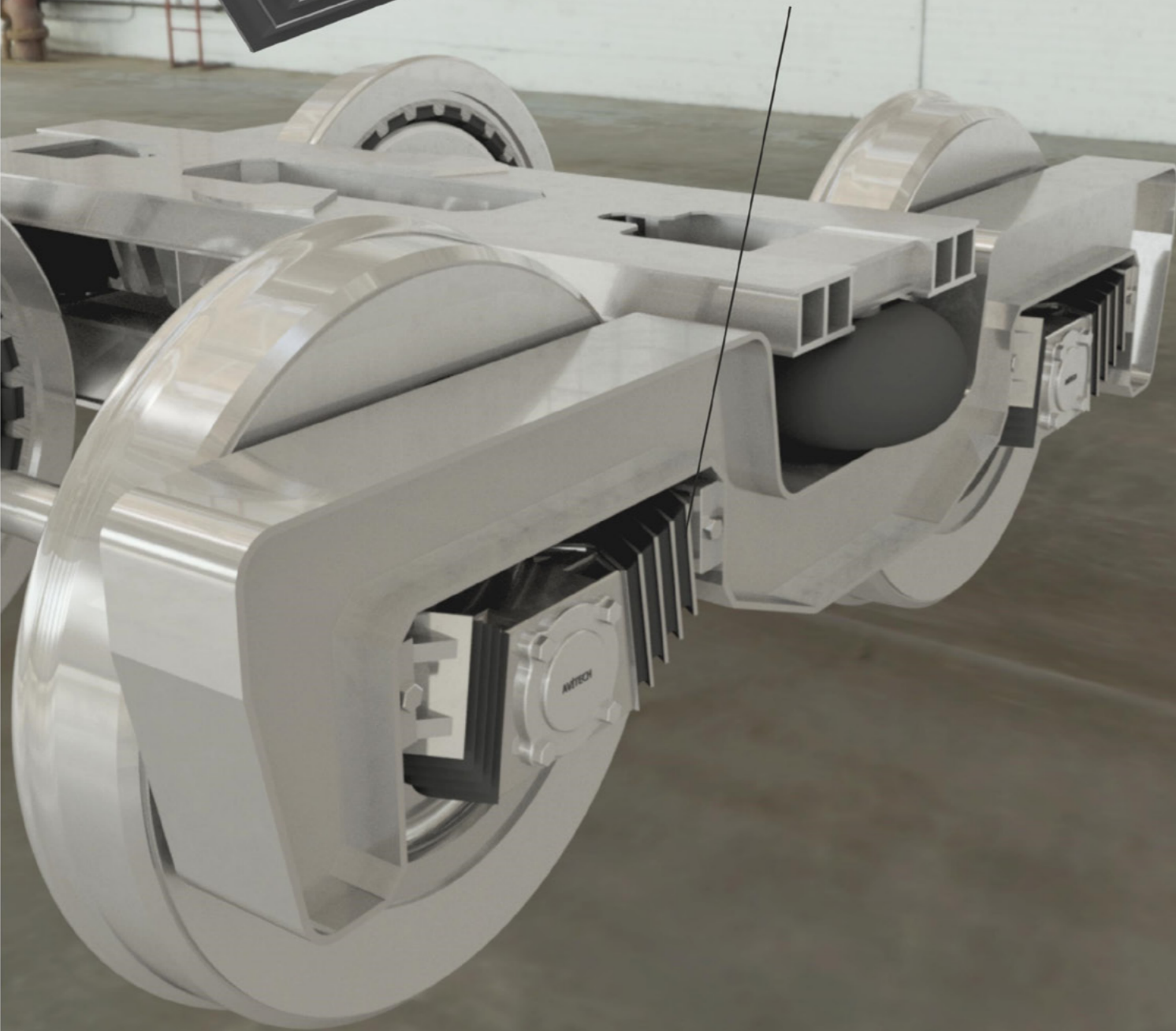
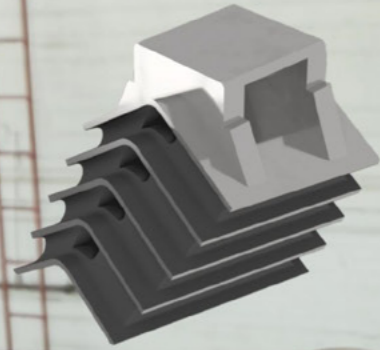
Elastic Seats

Elastic seats are designed to prevent axial shock and vibration.

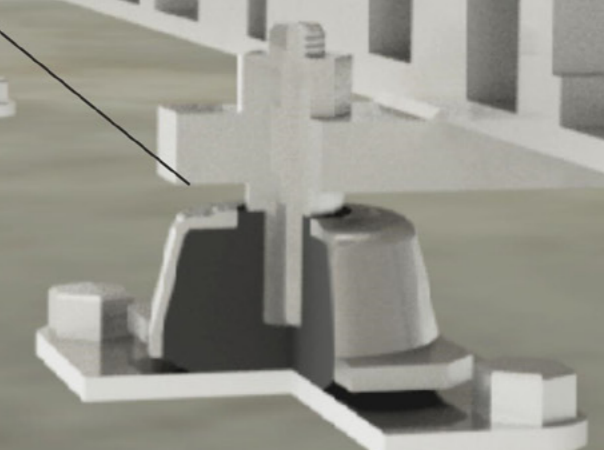
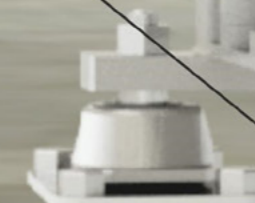
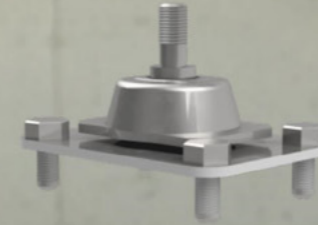


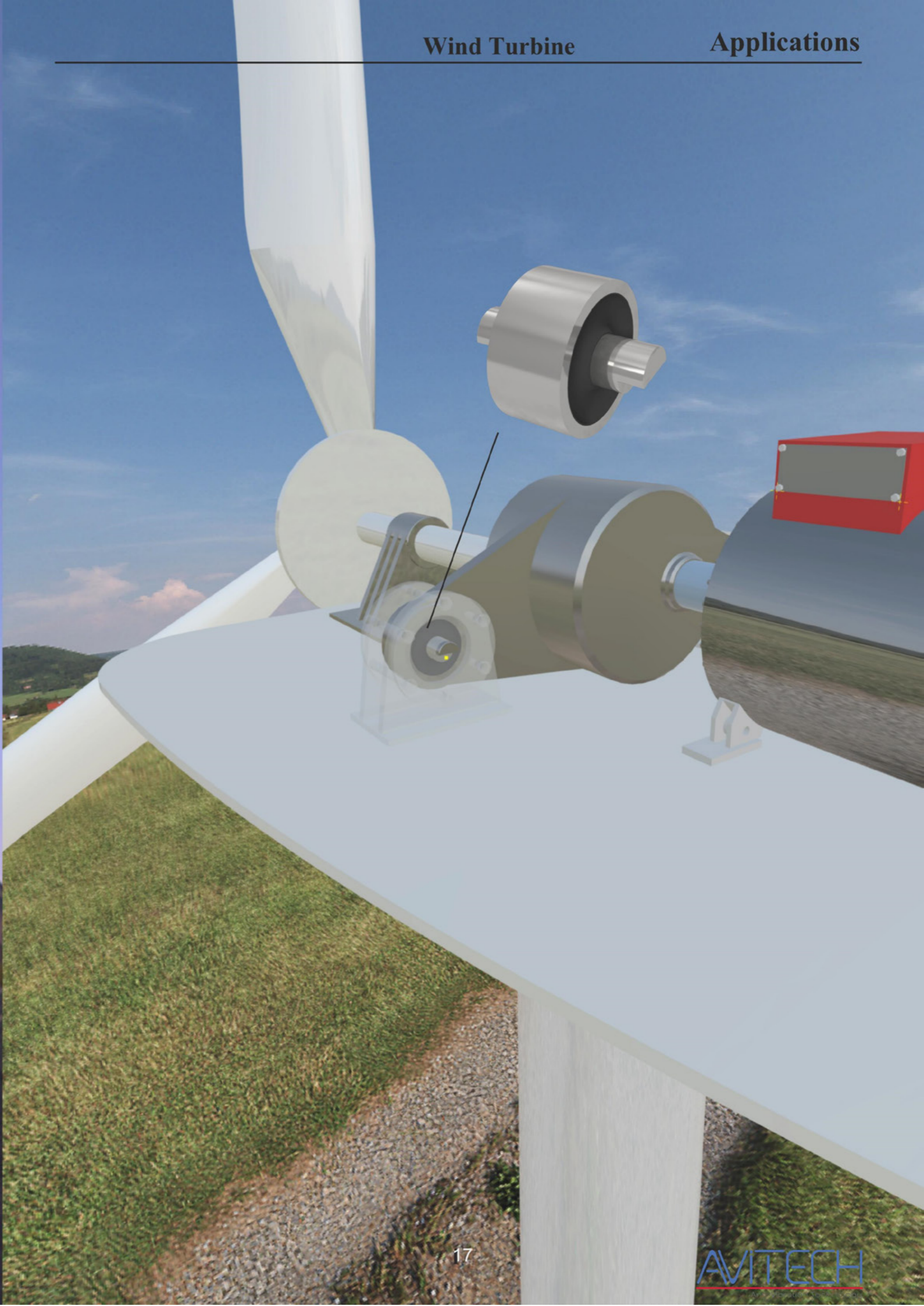
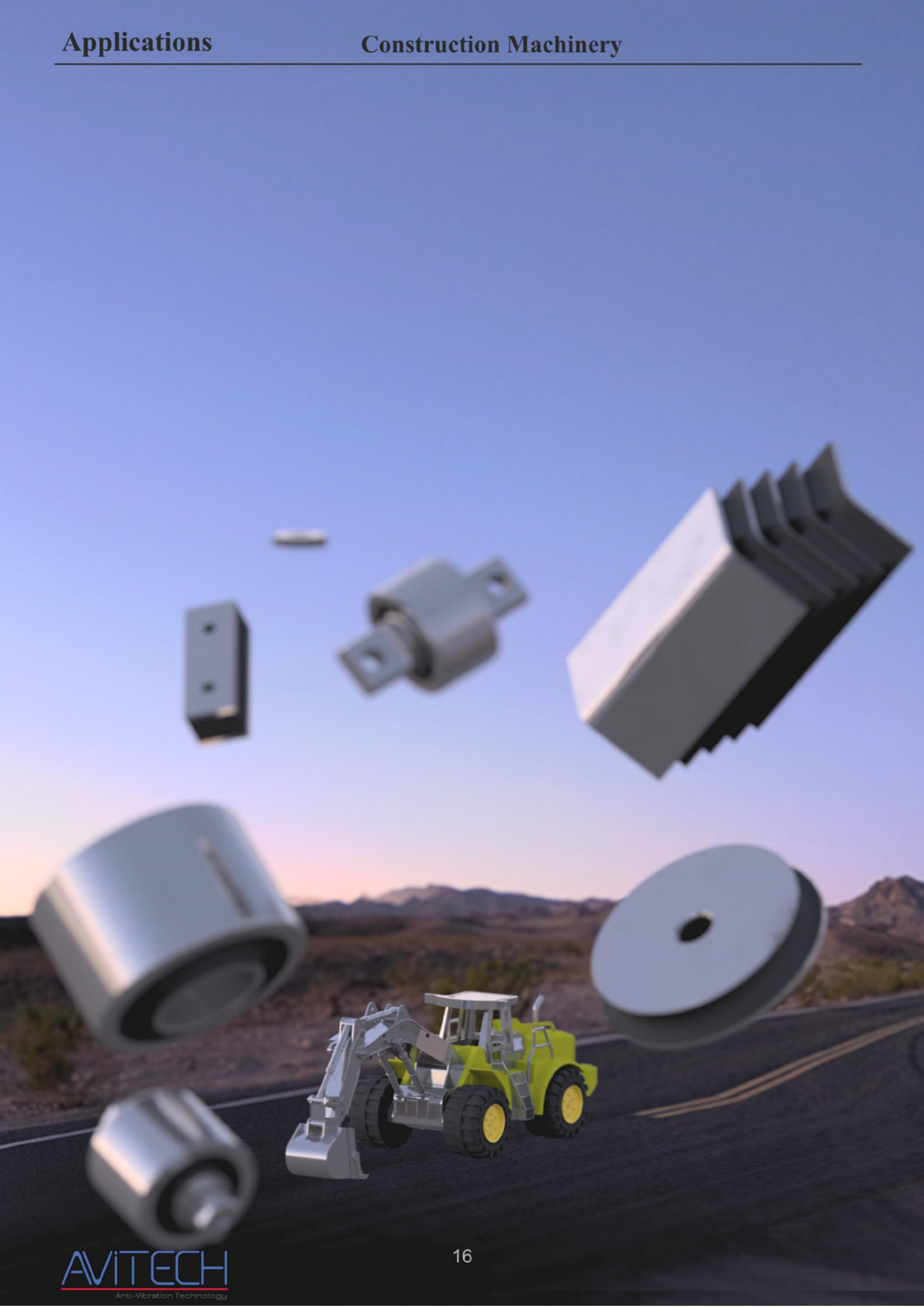
Axle Springs

Chevron axle multi-purpose springs have been designed to reduce vibrations. These components are ideal for all kinds of rail vehicles due to their long service life and being easy-to-install.



Avitech Kauçuk's specialist anti-vibration technology has improved operating performance for manufacturing facilities around the world. As well as improving business performance, we make operators' lives more comfortable through improvements to machine tools and noise reduction in operating machinery.





FE-Analysis, Mold-Design and Calculations

FE-Analysis:

Before producing a rubber or rubber-metal bonded product, it is very important to use a correct mold design and a suitable rubber compound.

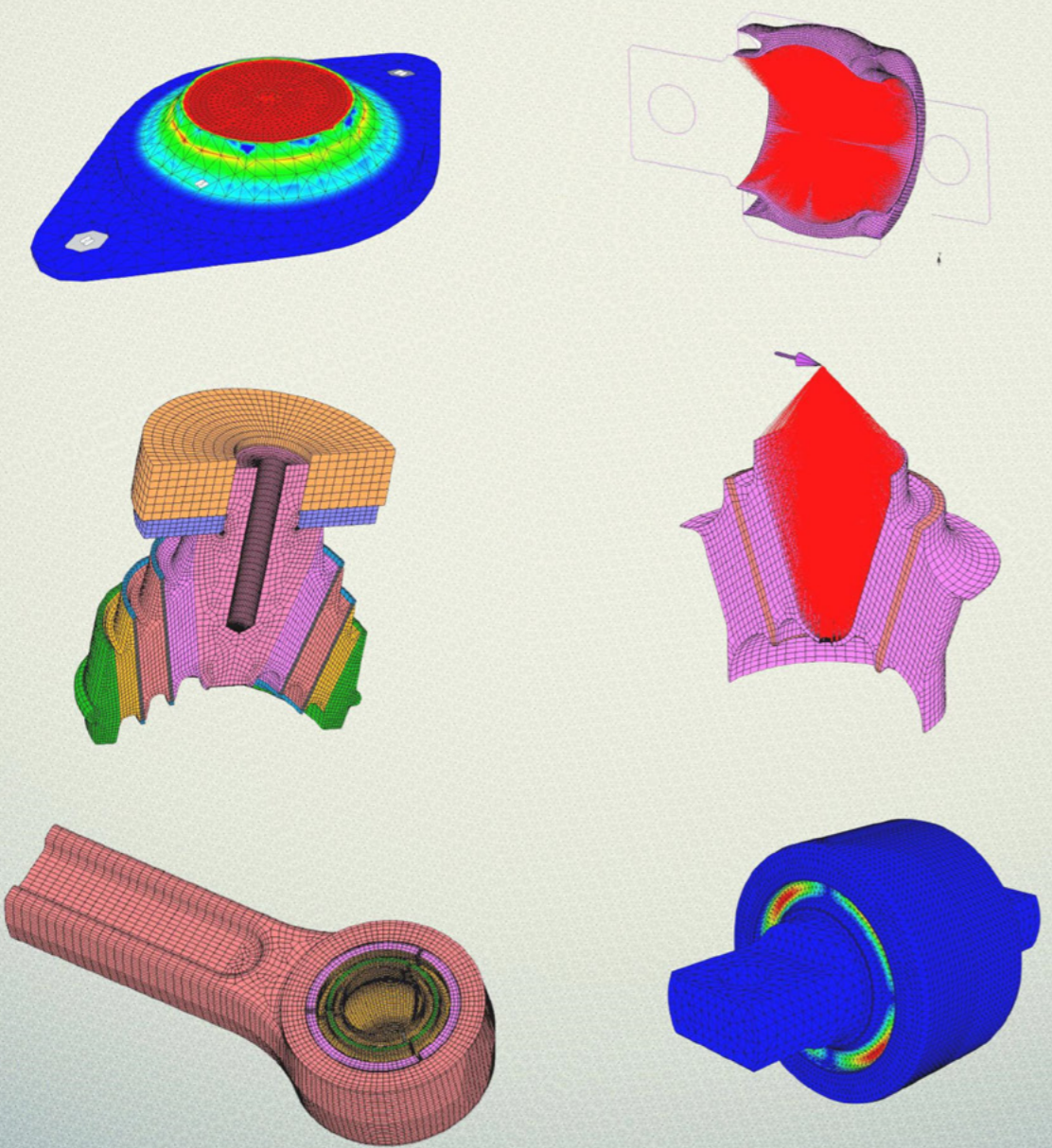
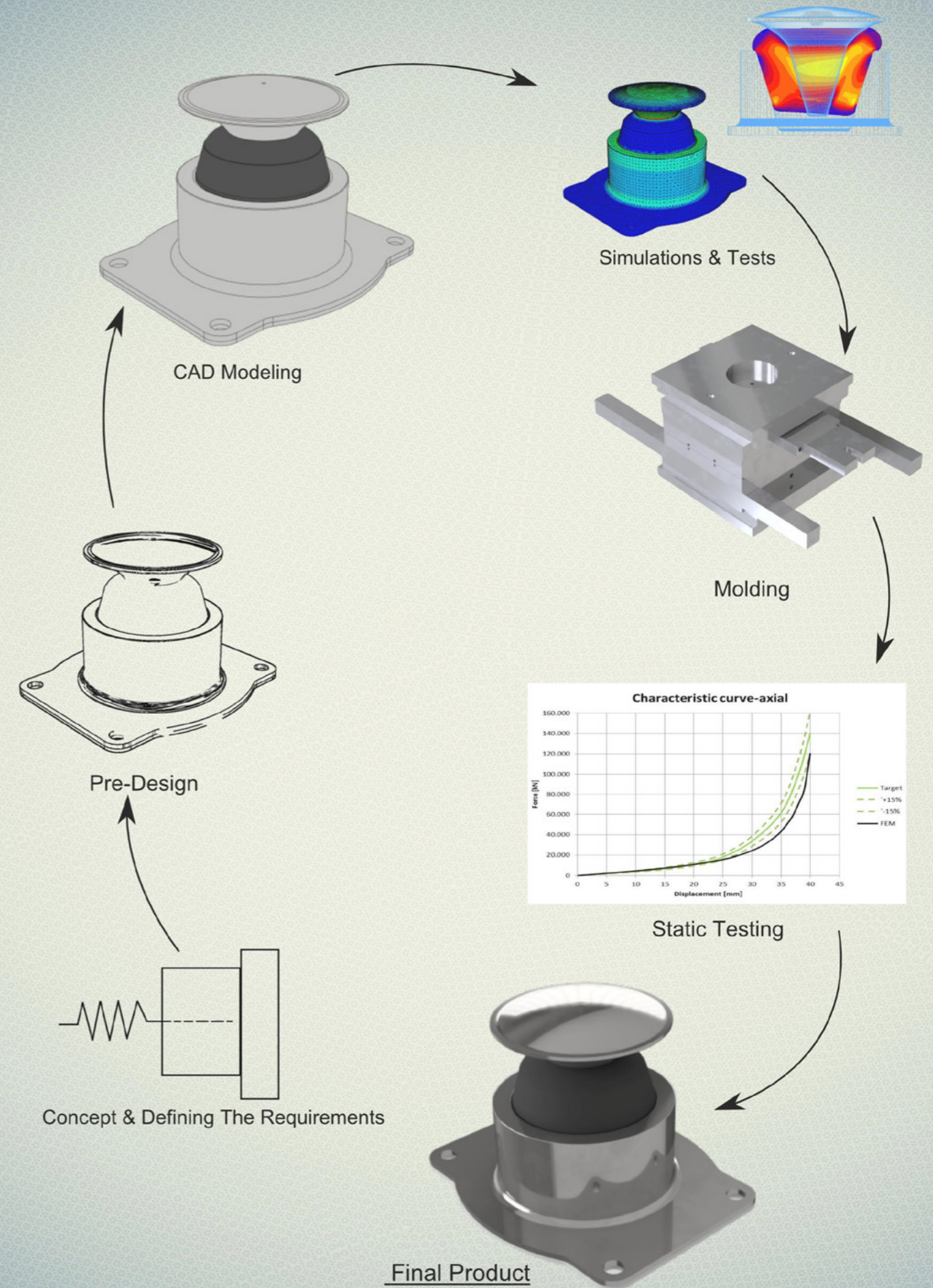
Thanks to our many years of experience and facilities, we are able to carry out the design and production process in the shortest time and most accurate way by using the software that is effective in the field of rubber calculations for FEA Analysis and the calculation program we have self-developed.

Mold design:

With our expert engineers, we have the ability to design the most accurate mold as quickly as possible.

With our effective and systematic working principle, our primary goal is to deliver high quality anti-vibration products to our customers on time.

Typical Development Process





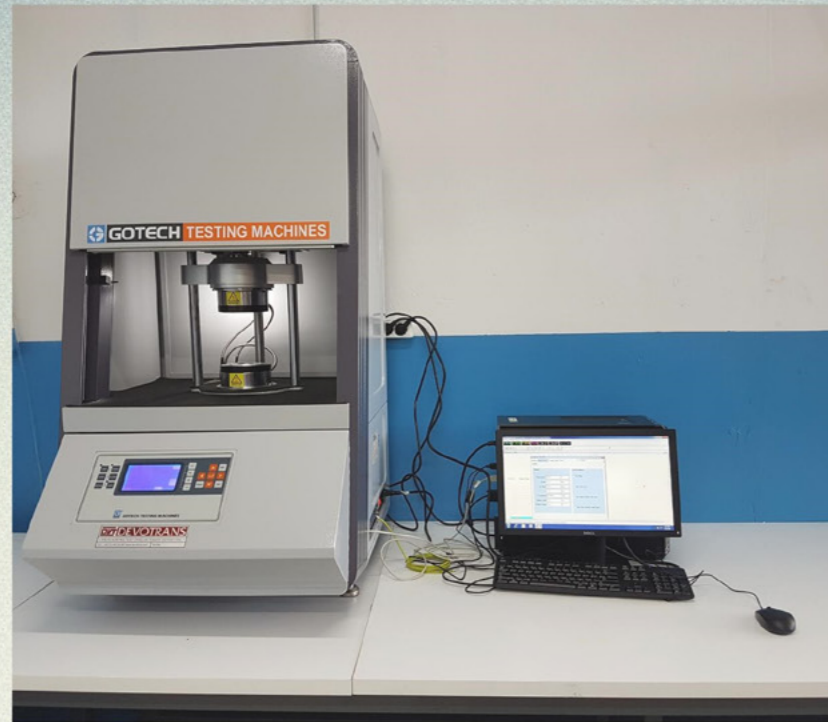
Static Testing

With our test machine, we can measure the static stiffnesses in axial and radial directions for moulded rubber or rubber-metal products. Avitech also has the ability to perform static torsion and cardanic tests. The test machine has a load capacity from 2,5 to 250 kN and the finished products up to 400x400mm can be tested.



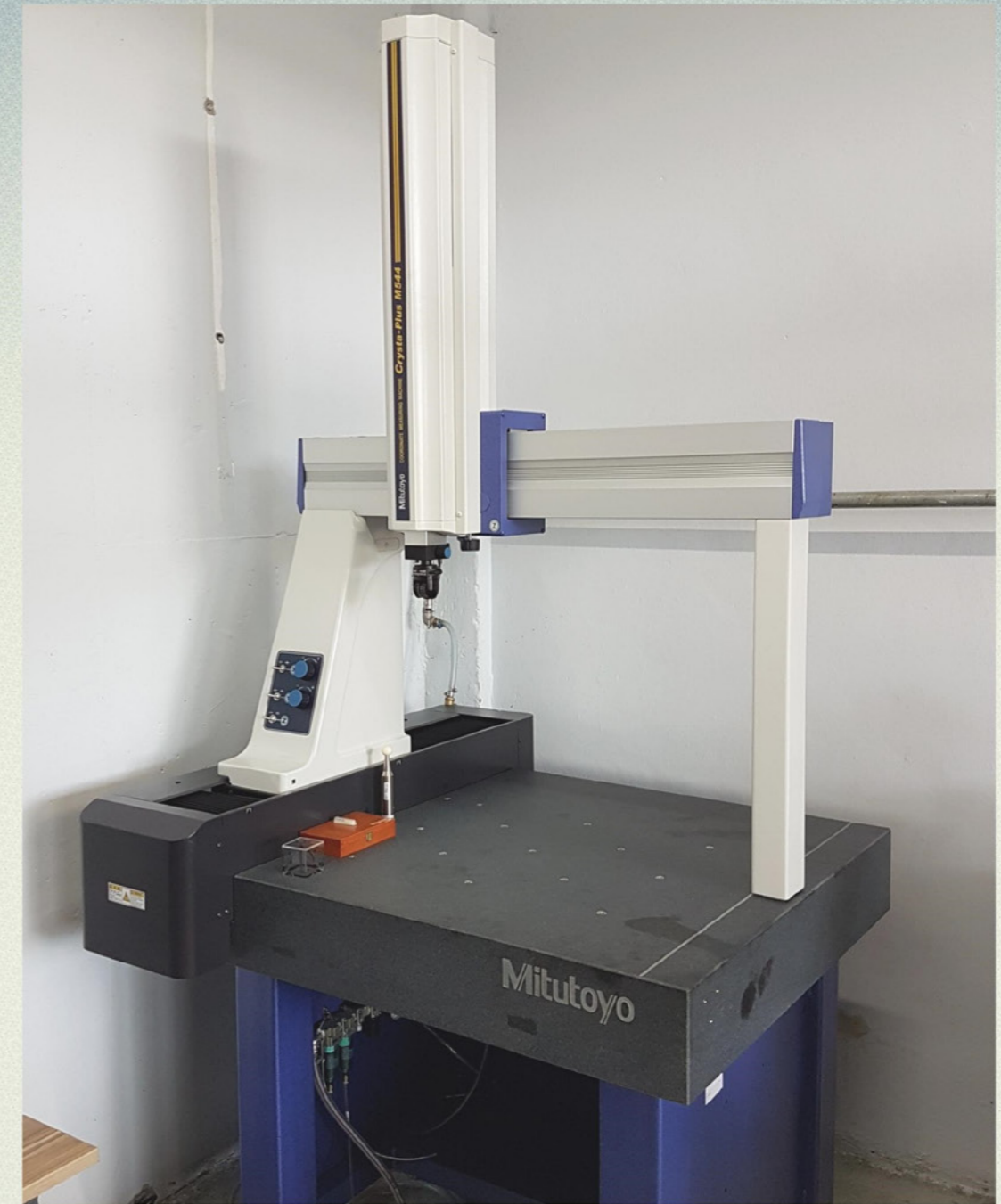
Dynamic Testing

Avitech has the ability to check the behavior of designed rubber-metal parts under dynamic loads. We can perform the fatigue tests either based on test parameters determined by us (Loads, Number of Cycles and Test frequency) or test specifications provided by the customer. The working performance of the parts are evaluated according to the test results.



Testing of Rubber Materials

The rubber materials produced from our own recipes are always checked and 100% tested before starting injection or compression molding. This ensures traceability through to the finished product and also suitability of the rubber qualities to meet the customers requirements.



3D-Test Machine

All parts are inspected according to detailed specifications. With the CMM, the parts are precisely measured and checked in accordance with technical specifications or standards.

IRIS Certification
CERTIFICATE
 awarded to
Avitech Kaucuk Metal ve End. Ürünler San. Tic. Ltd.Şti
 Akçaburgaz Mah.1592.Sok Alkop San. Sit. A5 Blok No:11-12 Esenyurt
 34510, İstanbul
 Turkey

BUREAU VERITAS CERTIFICATION
 confirms, as an IRIS Certification™ approved certification body, that the Management System of the above organization has been assessed and found to be in accordance with the

IRIS Certification™ rules:2017 and based on ISO/TS 22163:2017
 for the activities of Design and Development and Manufacturing for the scopes of certification: 03 (Guidance), 19 (Single railway components) of Primary & Secondary Suspension Parts (Rolling Rubber Springs, Conical Suspension Springs, Chevron Springs, Additional Spring, Lateral Buffers) (3) & Single Railway Components (Tie Rod, Bushes and Spherical Bearings, Stop Buffers, Rubber Wedge) (19).

Certificate valid from: 03/03/2019 Certificate valid until: 02/03/2022*

Current date: 19/09/2018
 Certificate-Register-No: TUR-IR - 000 1165

ISO 9001:2015
 Scope of certification
DESIGN, DEVELOPMENT AND MANUFACTURING OF PRIMARY & SECONDARY SUSPENSION PARTS (ROLLING RUBBER SPRINGS, CONICAL SUSPENSION SPRINGS, CHEVRON SPRINGS, ADDITIONAL SPRING, LATERAL BUFFERS) & SINGLE RAILWAY COMPONENTS (TIE ROD, BUSHES AND SPHERICAL BEARINGS, STOP BUFFERS, RUBBER WEDGE)

Original cycle start date: 02 May 2017
 Expiry date of previous cycle: 14 September 2018
 Certification / Recertification Audit date: 06 July 2018
 Certification / Recertification cycle start date: 28 December 2018
 Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: 27 December 2021
 Certificate No: TR007544 Version No: 1 Revision date: 28 December 2018

UKAS
 0008
 Certification body address: 8th floor, 66 Prescot Street, London, E1 8HG, United Kingdom
 Local office: Etiler Mahallesi Ortaköy Altıyaprak Mah. Çamaş. No: 27. Kat: 3.34143 Maltepe, İstanbul, Turkey
 Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization.
 To check this certificate validity please call +90 518 513 40 50.
 av_5_37_jan_2010
 UKAS Certificate Template single site rev3.3 1 / 1 January 30, 2017

We are the first company in Turkey, which is certified in the area of rubber-metal components with IRIS.

Turkey

TMS, **TCDD**, **TUVASAS**, **SIEMENS**, **METRO İSTANBUL**, **SAMULAŞ**, **KAYSERİ ULAŞIM**, **ANTALYA ULAŞIM**, **bozankaya**, **ANKARAY**, **İZMİR**, **EGO Genel Müdürlüğü**, **ONAN Makina San.ve Tic.Ltd.Şti**, **ZORLU MAKİNA SAN. ve TİC. LTD. ŞTİ.**, **SİF JCB**, **KARYER TATMAK**

Germany

ETS Ersatz-Teile-Schienenfahrzeuge GmbH, **KSM KOMPONENTEN-SERVICE-MÖCKEL**, **GEREP Shock absorbers made in Germany.**, **Göhmann Eisenbahnbedarf**, **TradeWorldOne your parts for success**

England

AV INDUSTRIAL PRODUCTS

Spain

Epidor Seals and Rubber Technology, **I2M Soluciones Técnicas SL**

AVITECH

Anti-Vibration Technology

AVITECH KAUCUK METAL END. ÜRÜNLER SAN. VE TİC. LTD. ŞTİ

**Akçaburgaz Mah. 1592. Sokak Alkop San Sit. A-5 Bl. No:2G/11
34538, Esenyurt/İstanbul, Türkiye**

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