P+S Polyurethan-Elastomere
GmbH & Co. KG

Partner for industrial precision and innovation

Your partner for precise polyurethane solutions

We appreciate your interest in our work and would be pleased to give you an insight into the wide range of services offered by P+S Polyurethan-Elastomere GmbH & Co. KG.

The beginning of our company dates back to 1972, when our activities initially focused on the production of thermoplastic injection molded parts and polyurethane foam elements. Shortly afterwards, pilot productions of dynamic and highly resilient construction elements made of polyurethane elastomers was put into operation - a decisive step that had a groundbreaking impact on the future strategic direction of the company.

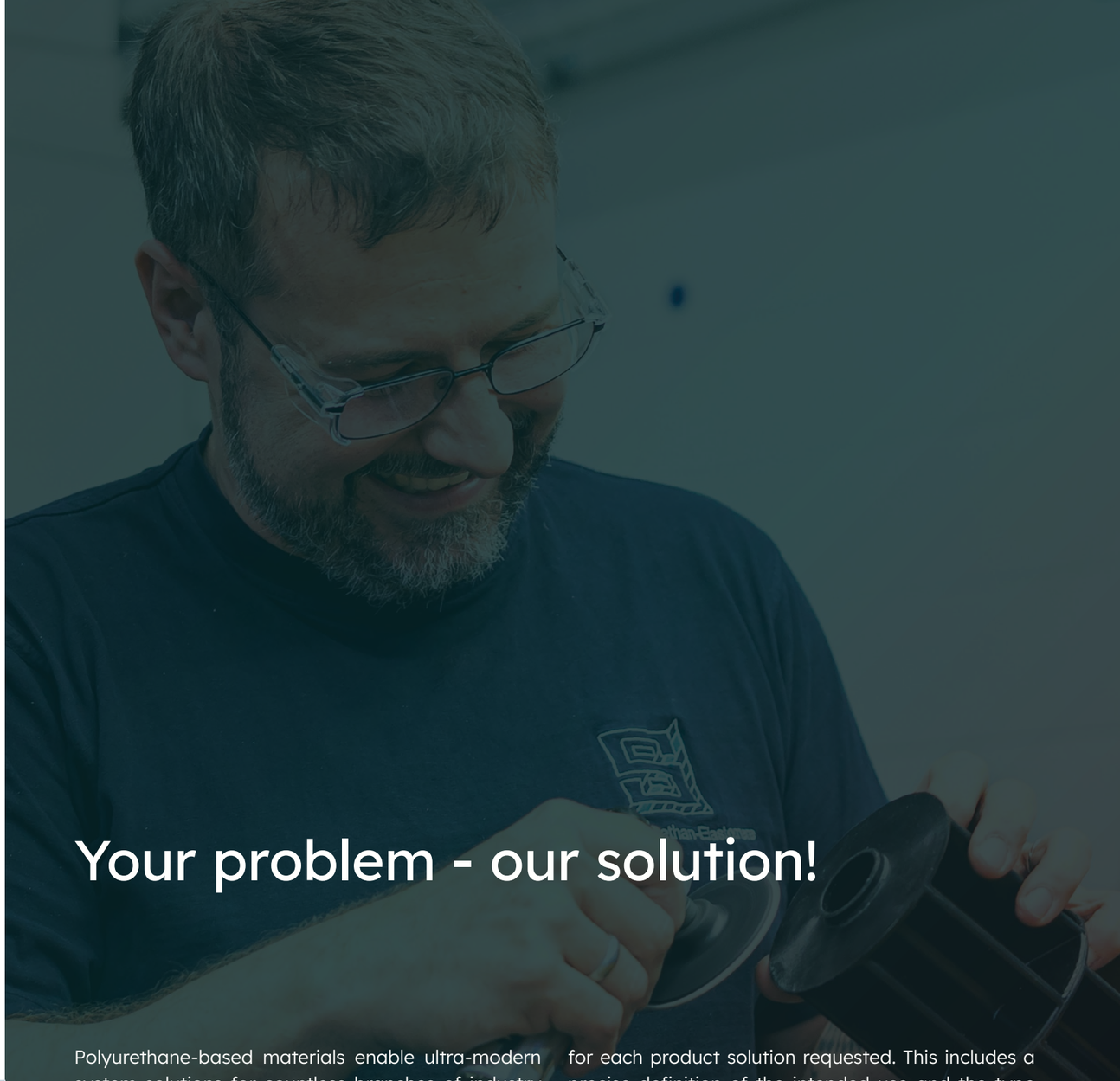
In the following years, we continuously expanded our activities in the PUR processing segment, so that P+S Polyurethan-Elastomere GmbH & Co. KG positioned itself exclusively as a manufacturer of technical parts made of compact and cellular polyurethane elastomers in 1992.

Our products have estabished themselves as reliable problem solvers in a wide spread of applications within the industry. Companies around the world rely on the comprehensive technical advice and the convincing solutions offered by P+S.

All activities along the P+S value chain are characterized by optimum economic efficiency and environmental compatibility. Our products are generally manufactured in batches of up to several 100,000 units. On special request, we also develop and manufacture customized individual items for special applications or with special material properties.

We have long-standing partnerships with many of our business partners, but new companies with new challenges are also constantly joining our customer base. Our work for our clients is characterized by creative problem-solving expertise and in-depth knowledge of the industry, complemented by adherence to deadlines and a consistent focus on service.

These four attributes are the essential components of a corporate culture that is lived by our entire workforce. We are ideally equipped for the future.



Your problem - our solution!

Polyurethane-based materials enable ultra-modern system solutions for countless branches of industry and have become an integral part of global economic life in the 21st century.

Demand for our high-performance, maintenance-free PU components is growing almost daily on all continents, as they have to master great challenges.

Research and development work is therefore also very important in our company. The versatility and exceptional innovative strength of P+S Polyurethan-Elastomere is our guarantee for target-oriented, successful work processes.

In principle, a requirements profile is first drawn up for each product solution requested. This includes a precise definition of the intended use and the type of load, as well as environmental influences such as temperature and humidity and other external factors.

These technical informations are the base for the design and formulation of the future product.

With creativity and many years of expertise, our R&D team is constantly designing practical PUR solutions with optimum property profiles.

Our materials

Customized solutions for the industry

Our products are characterized by their exceptional adaptability and performance in demanding environments. Here are some key applications where our materials can make a decisive contribution to optimizing your processes.

Transporting & moving masses
Facilitates the transportation and movement of masses.

Isolate & decouple vibrations
Optimum damping for a wide range of applications.

Seal sensitive areas
Maximum tightness for industrial areas.

Wipe off materials & media
Easy stripping of materials and media.

Spring masses & store energy
Improved impact elasticity and resilience.

Dampen masses & absorb energy
Advanced damping and energy absorption.

Is your problem not included?
Please contact us so that we can find a solution for you!

The classic for maximum dynamics

Vulkollan®*

The impressive mechanical and dynamic material properties are clear characteristics of this classic in the field of compact polyurethane elastomers - and have been the epitome of maximum performance and outstanding quality for decades. The high-quality base components, a polyester polyol and an equally high-quality di-isocyanate, in combination with special chain extenders, enable precise adjustment of the desired material properties - with a consistently high, reproducible value level.

A wide range of molded parts, high-quality wheels and castors, as well as semi-finished products for mechanical processing are used wherever maximum wear resistance and mechanical and physical resilience are required. Vulkollan® is manufactured in accordance with the high standards of the LFGB, and we have the technical expertise to provide it with a special hydrolysis-resistant property on request to ensure exceptional durability even under extreme moisture conditions.

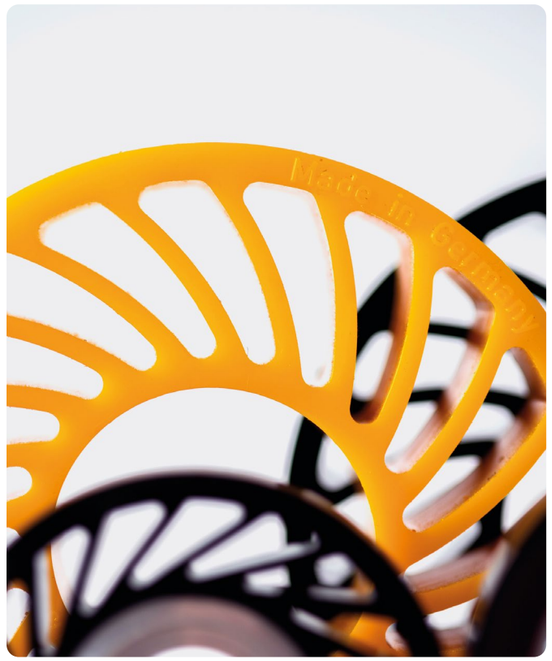
The property profile at a glance

- excellent mechanical wear resistance
- high impact resilience, even with hard settings
- high tear resistance
- low compression set
- hardness range 80 to 97 Shore A or up to 60 Shore D
- good resistance to mineral oils, greases, gasoline and various solvents
- good resistance to ozone and UV radiation
- temperature range from -30 °C to +80 °C (special formulations for lower or higher temperatures available on request)

Products specially developed by P+S:

- wheels, rollers and castors
- cutting strips
- spring elements
- bearing bushes and end stops

*The name Vulkollan® is a registered trademark of COVESTRO DEUTSCHLAND AG.



Convincing solution expertise for extreme loads

Diepothan®

Diepothan® is characterized by its similarity to Vulkollan® and is primarily used where tailor-made solutions for complex challenges are required. Thanks to its base of high-quality polyester and/or polyether polyols, it meets even the most extreme requirements for technical resilience in challenging environments such as shipbuilding or pipeline laying. Diepothan® offers a variety of different material qualities that enable resistance to microbes and hydrolysis. In addition, our Diepothan® grades can also be used in accordance with the requirements of the German food and feed code (LFBG).

The property profile at a glance

- excellent mechanical wear resistance
- high impact resilience even with hard settings
- high tear resistance
- low compression set
- hardness range 50 Shore A to 98 Shore A or up to 64 Shore D
- good resistance to mineral oils, greases, gasoline and various solvents
- good resistance to ozone and UV radiation
- temperature range from -30 °C to +80 °C

Products specially developed by P+S:

- high-quality wheels and castors
- semi-finished products for mechanical processing
- spring elements and elastomer springs
- bearing bushes and end stops

The convenient addition when it comes to vibration technology

Vulkocell®

Vulkocell® is a polyurethane elastomer that offers higher deformation and lower compression hardness than compact elastomers. Ideal for applications with high dynamic load capacity and low permanent deformation, it is suitable for mechanical engineering and vehicle construction. The microcellular structure enables exceptional volume compressibility with minimal lateral expansion, ideal for compact designs and vibration-sensitive applications. Vulkocell® is often used in auxiliary springs, shock absorbers and seals, providing safety and suspension comfort. Hydrolysis-stabilized Vulkocell is available for humid applications and is particularly resistant.

The property profile at a glance

- high force absorption
- uniform compression set behavior
- high volume compressibility with low transverse expansion
- densities from 300 kg/m3 to 800 kg/m3
- good resistance to mineral oils and greases
- good resistance to ozone and UV radiation
- temperature range from -30 °C to +80 °C (special formulations for lower or higher temperatures available on request)
- hydrolysis-resistant settings also available on request
- LFGB approved special qualities

Products specially developed by P+S:

- auxiliary springs and elastomer springs
- pressure strips
- sealing elements
- semi-finished products for further processing

The ideal solution for optimum damping results

Diepocell®

The Diepocell® materials BM and MH form a family of materials that are particularly valued for their damping properties. The formulations, based on high-quality polyester and polyether polyols, meet stringent technical requirements and are particularly well proven in safety components in elevators and emergency buffers in crane systems. Their high formability and low transverse elongation make them ideal for use in extreme environments, including tropical climates.

The property profile at a glance

- excellent damping properties
- maximum energy absorption
- uniform compression set behavior
- high volume compressibility with low transverse expansion
- densities from 300 kg/m3 to 800 kg/m3
- good resistance to mineral oils and greases
- good resistance to ozone and UV radiation
- temperature range from -30 °C to +70 °C (special formulations for lower or higher temperatures available on request)
- hydrolysis-resistant settings on request
- special qualities approved according to LFGB

Products specially developed by P+S:

- end stops
- mouldings
- semi-finished products for further processing
- lift buffer in the elevator industry

Vibration-insulating against sound and shock

Diepolast®

Diepolast® offers a wide range of solutions for vibration isolation and sound damping in demanding environments. Available in mixed-cell and closed-cell standard grades for high loads, Diepolast offers customized application possibilities in engine mounts, as machine feet, elastic intermediate layers, as well as sound insulation in floors and ceilings. Its unique cell structure prevents the absorption of liquid, even under water, which makes it particularly suitable for use in difficult conditions.

The property profile at a glance

- 20 different types in mixed or closed-cell design from a density of 165 kg/m3
- large load ranges
- good vibration damping and insulation
- applicable to pressure and thrust
- good hydrolysis resistance
- temperature range from -30 °C to +70 °C
- low settlement
- good decoupling properties
- can be used to isolate the source or receiver
- good resistance to many chemicals and oils

Products specially developed by P+S:

- motor bearings, machine feet, elastic interlayers
- soundproofing in floors and ceilings
- buffers and decoupling elements

Our areas of application

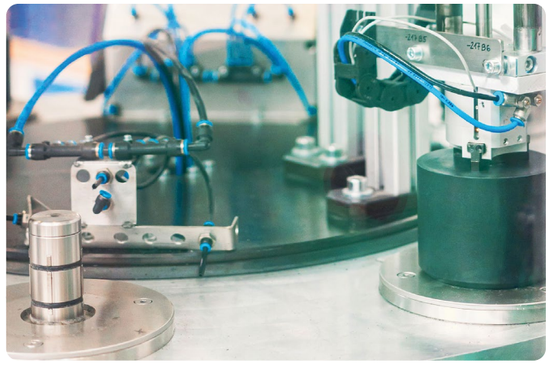
Versatile solutions for industrial applications

With our many years of expertise in polyurethane technology we offer advanced solutions for a wide range of applications.

Elevator construction

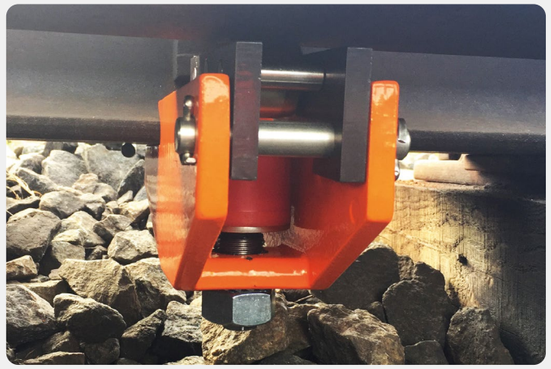
Whether transporting passengers or loads, the heavy-duty P+S materials ensure optimum driving results at all times: Safety components as well as sliding and guide components impress with exceptional wear protection and excellent damping properties. We produce safety buffers with type approval even for the smallest installation spaces and the highest loads.

Precise material tests enable the development of lift buffers - also in hydrolysis-resistant versions, for example for use in wet areas. We also supply guide shoes, inserts, rail oilers, oil collection containers, rollers, roller guides, rope springs, rope pulleys, underlays and damping plates.



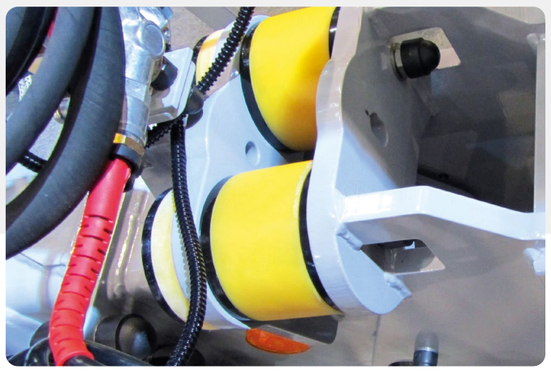
Rail transport

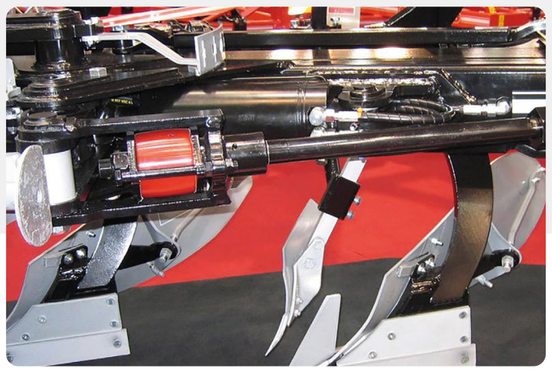
All over the world, materials from our company make an indispensable contribution to driving safety and increased ride comfort. Elastic mounts and damping systems provide effective protection against unpleasant vibration effects. We manufacture high-performance spring systems, emergency springs, anti-roll bars and bearing bushes for chassis and wagon mountings. Our Diepolast materials are the preferred choice for effective vibration isolation in the wagon interior.



Agricultural sector

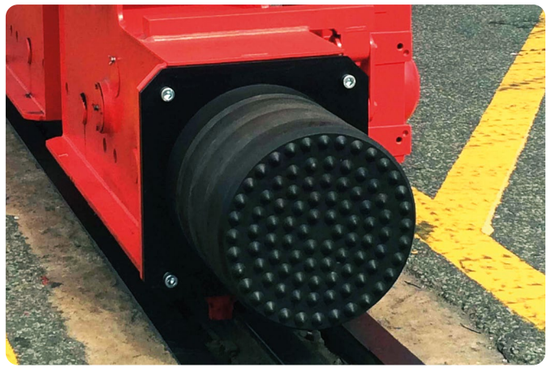
In the agricultural industry, machinery components have to meet the highest demands on a daily basis. Using carefully selected raw materials, our product development team achieves impressive mechanical properties - also in microbe-protected versions - and lays the foundation for long, maintenance-free operating cycles with outstanding results. We supply wear-resistant axle and drawbar springs, bearing seals, return springs, guide elements, roller coatings, grippers, drivers, hoppers and cleaning elements.

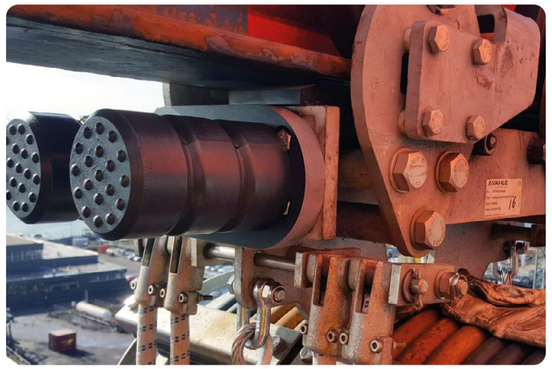




Port technology

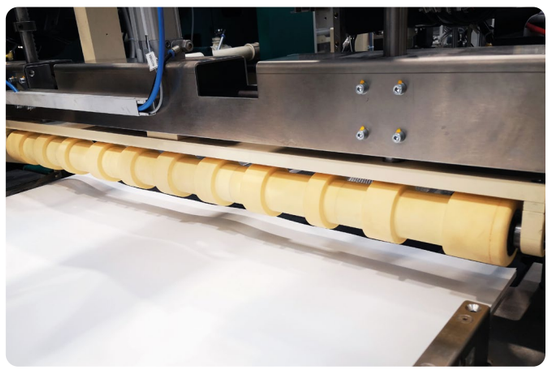
Crane construction, conveyor technology, mechanical engineering: bump stops made of Diepocell can be found in many areas and can cope with even the toughest requirements, even in tropical climates. A high load capacity with large deflection enables low end forces and low deceleration values. When used in cable trolleys, rollers and buffers with P+S materials ensure low rolling resistance, high wear resistance and optimum damping.

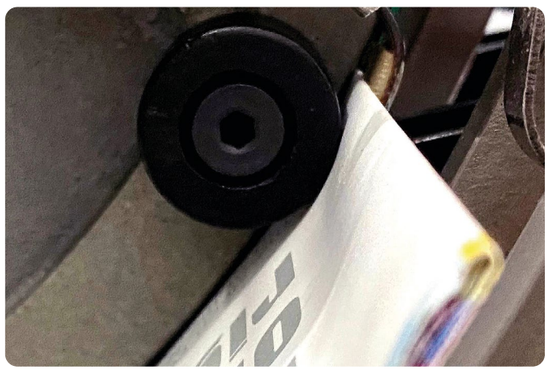




Paper and cardboard

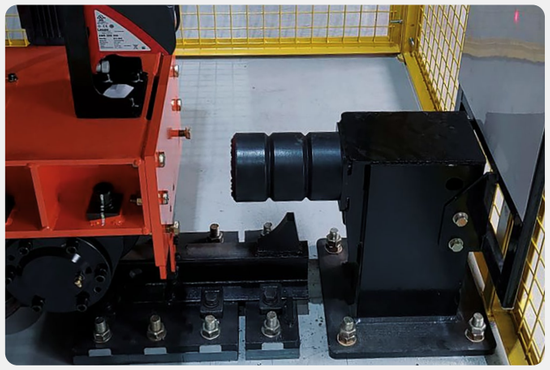
Performance-optimized polyurethanes made by P+S are reliable guarantors for the development and production of rods beds & blade systems. P+S materials are also widely used in the paper processing industry - for example as wear-resistant coating material for feed and transport rollers, suction rollers and label rollers as well as for no-crush-rollers in cardboard production. We also manufacture cutting bars with a long service life, tension and pressure rollers in a cut-resistant design as well as pressure bars and chamber seals, combination bars and tensioning elements for printing machines.





Intralogistics

Intralogistics is essential for modern production and logistics chains. P+S supports this area with specialized polyurethane moulded parts that increase efficiency and safety in conveyor and handling systems. From axle bearings to roller systems and stops, we offer standardized and customized solutions. Stops, sliding elements, guide rails, slatted wheels and dampers are particularly in demand to safely transport and protect even sensitive products such as glass.

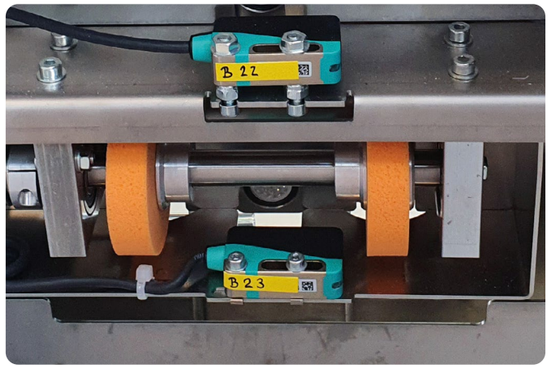


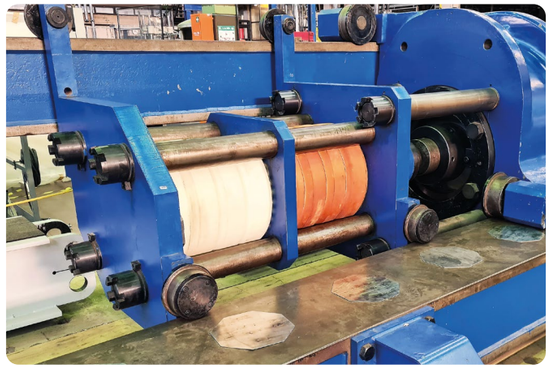
Pipeline service

Particularly wear-resistant components based on our materials have been well established in pipeline service for decades: We supply pigging washers, guide elements and wear protection systems for use on all continents. Our portfolio also includes guide rollers, wipers and sensor mounts. For special applications, we can also supply antistatic systems on request. The particular flexibility of P+S materials and their cost-effective manufacturing processes individual product solutions and a long component service life.

Mechanical engineering

Polyurethane materials from P+S offer a wide range of solutions within various industries. Elastomer springs, stop buffers, guide and pressure rollers, as well as seals, spring elements and elastic bearings are convincing in many applications. With our own formulation development and modern engineering, we supply high-performance and adaptable solutions, from vibration damping to precision control. Whether standard or customized - P+S accompanies you from the idea to implementation.





P+S product range for a wide variety of applications

The 5 outstanding material groups (material families) enable us to develop tailor-made components for your application. Thanks to our many years of experience, we are able to respond to individual problems in various applications. To support this, we have developed a range of standard products that serve as reliable components in a wide range of applications:

Bump stop
Damping masses & absorbing energy.

Elastomer springs compact
Shock-elastic - highly resilient.

Round bars, tubes, blocks and plates
For individual further processing.

Seals
Seal & wipe off.

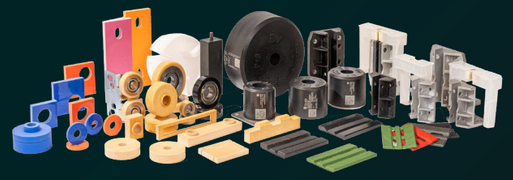
Elastomer springs cell
Springy for more comfort. Volume-compressible.

Vibration technology
Reduction of wear and noise.

Wheels, rollers and rollers
Easier transportation of masses.

Dampers and end stops
Increased damping for a longer service life.

Strips and wearing parts
Guide rails in mechanical engineering.
Folding or wear strips.



Bumpers, sliding guides and springs
Increased safety and comfort.

Polyurethane molded parts
Application-specific selection of the material.
Development tailored to the application.

Sustainability for the future

P+S made polyurethane elastomers combine sustainability and quality through resource-conserving production, durable materials and the highest standards.

At P+S Polyurethan-Elastomere, sustainability is a central component of our corporate philosophy. We continuously optimize our production processes with regard to resource conservation and energy efficiency. A visible sign of this commitment are the solar panels on our company premises, which underline our contribution to a greener future.

Our polyurethane elastomers are characterized by their durability and quality and are therefore an important component of our environmentally friendly solutions. From the careful initial sampling of new products to the precise final inspection, we guarantee the highest quality standards through seamless monitoring and modern testing procedures. This is confirmed by our assessments by independent certifiers such as TÜV Rheinland, EcoVadis and IntegrityNext.

Our products are valued in various industries worldwide. This recognition motivates us to carry out every step of our work with the utmost care and in accordance with the strictest quality standards. Even when selecting our raw materials, we place the highest value on quality to ensure that our components fulfill the desired properties and thus contribute to the sustainability of your projects.

Find out more about our commitment to sustainability and how our certified polyurethane elastomers can help your next project. Contact us for more information and personalized advice.

Our quality promise

Care, precision and responsibility

P+S products enjoy an excellent reputation in numerous industries - both at home and abroad. This appreciation for the entire team is also our incentive for the future to carry out every work process according to quality specifications with the greatest possible care.

Strict quality requirements are applied right from the selection of the raw materials used. This is the only way we can reliably ensure that the components produced later also achieve all the required properties.

The entire production process for our PU elastomers is monitored and documented seamlessly. State-of-the-art IT equipment and precise testing equipment ensure smooth production processes from incoming goods to final inspection.

We can provide our customers with the relevant documentation and certificates on request.

Before newly developed PUR solutions go into series production, initial sampling is usually carried out first. This allows us to work with the customer to verify the performance of the component in question at an early stage.

ISO 45001 (occupational health and safety management), ISO 50001 (energy management), ISO 9001 (quality management) and ISO 14001 (environmental management) are an integral part of our management system - they confirm sustainable action and continuous improvement processes in all areas of the company. These are aspects of our work that we will continue to pursue consistently in the future.

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