



Air Spring Systems for Commercial Vehicles

A new definition of robustness and comfort

Global Expertise

Innovative, customer-oriented and made-to-measure

Our decades of expertise in the research and development of advanced axle air spring systems have enabled us to establish a position as one of the leading specialists in the global commercial vehicle market. We know and understand the specific requirements of manufacturers of commercial vehicles and work in cooperation with them to develop individually customised solutions that boast a maximum level of quality, functionality and reliability.

Be it in the support vehicles used in the Dakar Rally or on the roads of Scandinavia and the USA, ContiTech air spring systems for trucks offer optimal comfort, even under difficult load and temperature conditions. Our heat-resistant air spring systems prove their worth in terms of performance and efficiency in buses in both Europe and the desert landscape of Abu Dhabi, while our trailer solutions set new benchmarks when it comes to robustness and cost-effectiveness.

ContiTech Air Spring Systems is a business unit of the ContiTech division and is therefore part of the Continental Corporation. We quickly put innovations on the road in line with our commitment to ContiTech's guiding principle.

ContiTech. Engineering Next Level



A Comprehensive Range of Products

Diverse, high-performance and functional

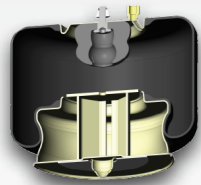
Bus

Truck

Trailer

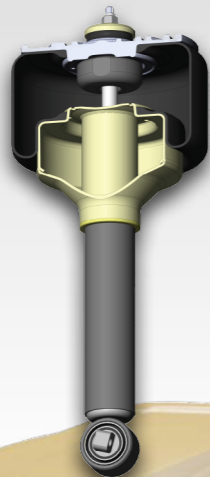
Air spring for use in buses

Air spring with cone interface
Contoured steel piston with fully utilisable volume for maximum comfort



Air spring/damper module for the front axles of trucks and buses

Air spring and oil damper in a unit that is ready for assembly for optimum comfort and roll stability



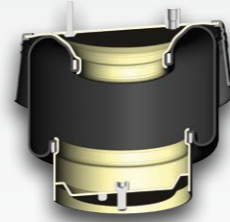
Air spring for maximum weight savings and comfort

Air spring with bead plate
Polyamide piston with fully utilisable volume



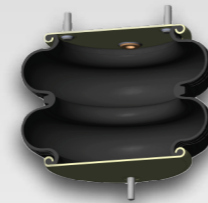
Air spring with double lobe sleeve for a maximum spring range and sophisticated kinematics

Elastomer heat shield
Air spring with clamping ring
Steel piston with fully utilisable volume



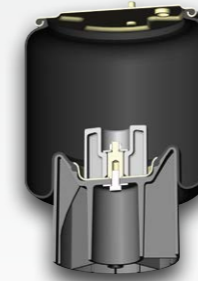
Convolute air spring for lifting axles

Compact design for heavy loads



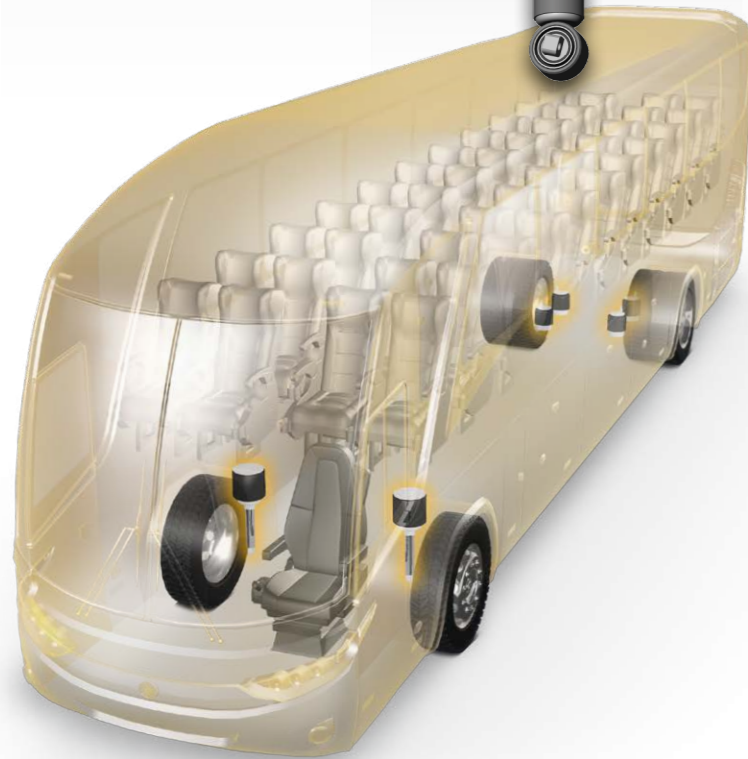
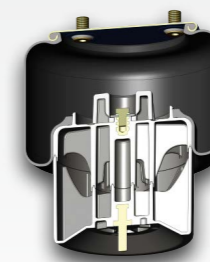
Air spring for trailer axles

Air spring with bead plate
Polyamide buffer
Polyamide piston without utilisable volume



Air spring with integrated air damping

Replacement of the hydraulic axle damper possible
Polyamide piston with buffer support and fully utilisable volume



Superior Quality

Durable, secure and effective

By choosing to use ContiTech air spring systems in your commercial vehicles, you decide to make the most of their outstanding load capacity, reliability, functionality, durability and cost-effectiveness.

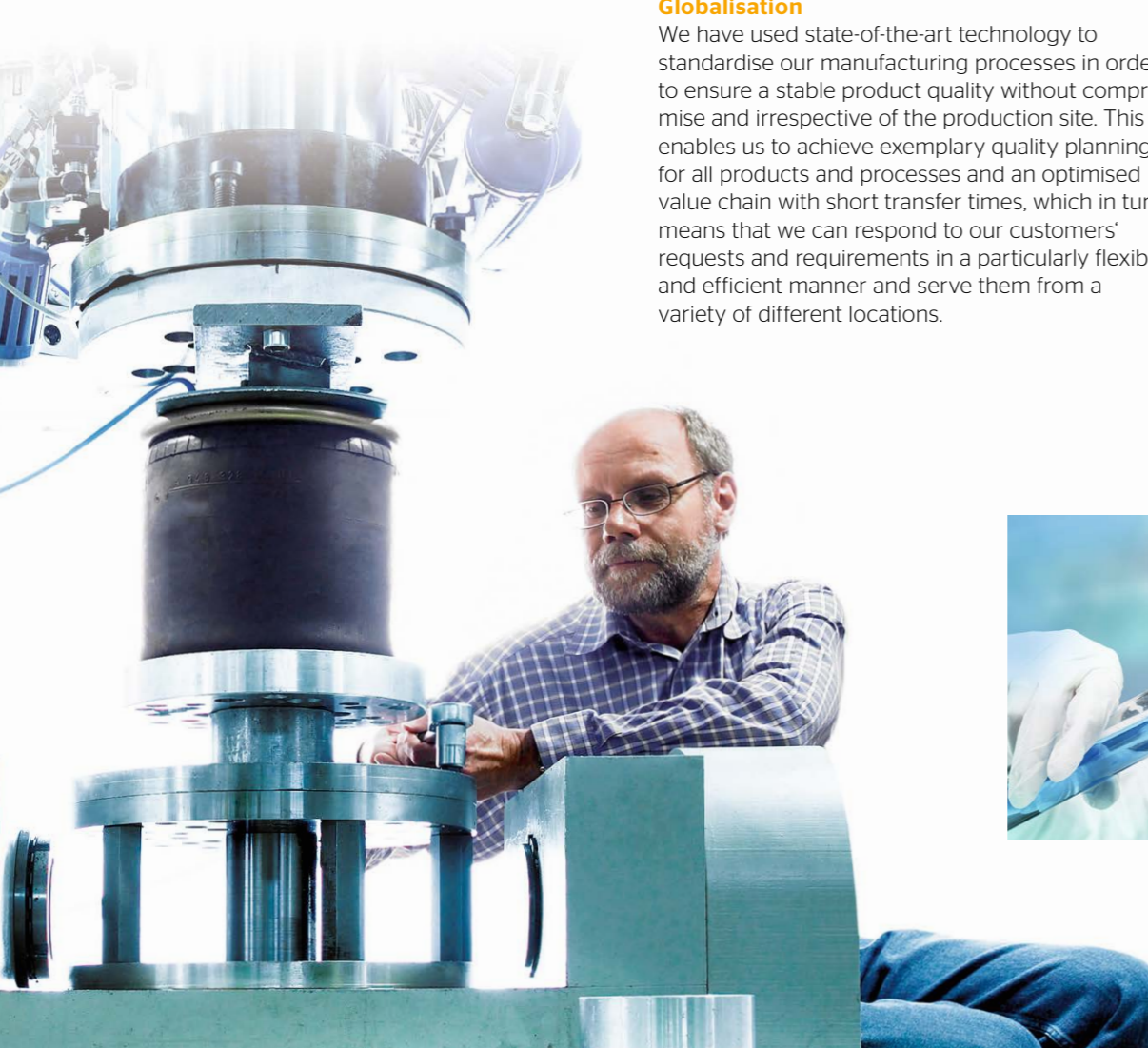
The high-performance elastomers and fabrics that we carefully select for use in our products guarantee superior performance in terms of burst pressure and spring characteristic. The systematic further development of natural and chloroprene rubber materials enables our systems to function just as perfectly at a temperature of minus 60°C as they do under extreme heat of 80°C and above.

Safety through Individuality

Be it in terms of load capacity, spring travel, damping properties, climate zones or installation space, no two profiles of requirements are the same. Instead of offering off-the-shelf products, we provide customers with solutions that meet vehicle-specific needs and requirements. Our entire systems, which consist of an air spring, piston, plate and add-on parts, are designed and produced with a high degree of precision and in line with the required parameters and performance data.

Safety through Standardisation and Globalisation

We have used state-of-the-art technology to standardise our manufacturing processes in order to ensure a stable product quality without compromise and irrespective of the production site. This enables us to achieve exemplary quality planning for all products and processes and an optimised value chain with short transfer times, which in turn means that we can respond to our customers' requests and requirements in a particularly flexible and efficient manner and serve them from a variety of different locations.



Certified Research and Development

Trend-setting, creative and outstanding

By permanently improving our products and consistently developing future-oriented solutions, we secure a significant technological advantage for our customers. The core of the ContiTech R&D concept is our test centre in the German city of Hanover, which is equipped with state-of-the-art technology.

High Technology for High Performance

The facilities at our high-tech test centre enable us to make reliable predictions concerning the performance of our air springs in the chassis environment at a very early stage of project development. We use these facilities to realistically simulate the use of our springs under an extremely wide range of different conditions. By doing so, we are able to secure our product design and material composition at an early stage and long before the start of series production, thus resulting in considerably shorter development times.



We also use multi-axial servohydraulic test rigs with climate chambers for realistic endurance tests. The 3D geometry of our air springs under different axle positions and pressures can be precisely measured with the aid of a special four-axis kinematic test rig with laser measurement technology.



Every single one of our product developments has successfully passed these and other authentic endurance and practical tests long before the first prototype is even installed in a vehicle.

In 2012, our test centre was additionally one of only a few in Europe to be accredited for the execution of accelerated corrosion tests.



The quality of our products and all of our processes is audited by our OEM customers and certified by independent organisations on a regular basis. On top of this, certifications according to the ISO 9001, ISO TS 16949 and ISO 14001 standards confirm that our process capability meets the high standards expected of an automotive supplier.

A Well-Grounded Innovative Edge

Complete, cost-effective and future-proof

The Advantages of Lightweight Design

- › The use of reinforced polymer materials for air spring components
- › State-of-the-art technology in material and simulation for maximum comfort and reduced fuel consumption
- › A weight saving of up to 12 kg per driven axle
- › Optimal corrosion protection



The Advantages of the Air Spring Levelling System

- › Vehicle height regulation thanks to the intelligent integration of air valve and sensor technology in the air spring
- › Precise and robust height sensing with ultrasound technology
- › Precise load monitoring
- › Integration of a compact valve function for weight reduction and optimal use of installation space
- › Transponder technology for the wireless exchange of information concerning any life-cycle data



The Advantages of Coating

- › Environmentally friendly chromium VI-free coatings
- › Powder coating for maximum corrosion protection and the highest standards
- › Other galvanised coatings with an attractive price-performance ratio



The diversity of our research and development activities documents the huge potential of ContiTech air spring systems.

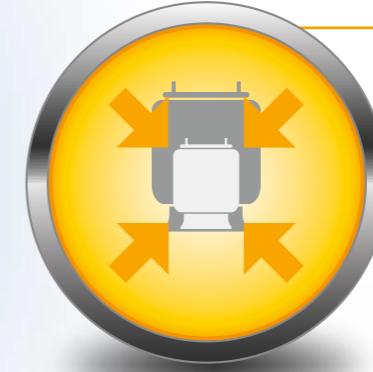
The Advantages of Heat/Cold Resistance

- › Different air spring models for extreme climatic operating conditions
- › A high degree of robustness and long lifespan in difficult temperature environments



The Advantages of Compact Design

- › Solutions for small installation spaces and challenging axle kinematics
- › A double-convoluted rolling lobe air spring for a maximum spring range at a minimal installation height



The Advantages of Air Damping

- › Optimal trailer axle damping with air springs without hydraulic shock absorbers
- › Environmentally friendly damping without hydraulic oils
- › Cost-effective damping with mass-produced zero maintenance air spring damping pistons



An Ecological Partnership

Sustainable, efficient and responsible

Legal requirements on environmental protection such as the new Euro 6 emission standard and stricter CO₂ emission guidelines are causing manufacturers of commercial vehicles and supplier companies worldwide to face complex challenges. Intensive research into new technologies and concepts is therefore being conducted so that these companies can adhere to the limits stipulated. We help our partners by providing them with innovative developments that help them to, for example, reduce weight, consumption and emissions.



Lightweight Construction and Compactness

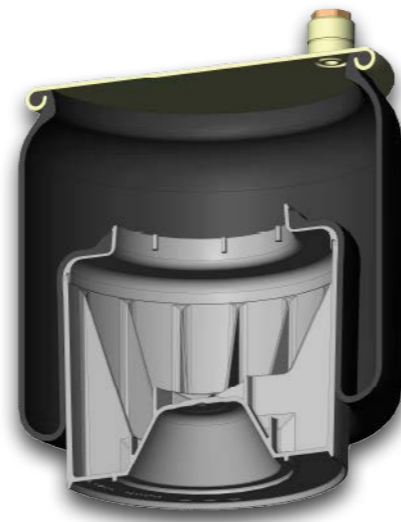
Unlike air springs with steel pistons, ContiTech lightweight construction systems use polyamide components. These help us to achieve a weight saving of up to twelve kilograms on each driven axle of a truck. The lower fuel consumption achieved as a result of this weight saving in turn helps to reduce CO₂ emissions by around 200 kilograms in the case of a mileage of 400,000 kilometres. When compared with steel leaf springs, air springs with polyamide components offer a multitude of additional benefits.

In order to meet the new emission standards, manufacturers also need to modify their actual exhaust systems, which in turn results in smaller installation spaces and a higher degree of radiant and/or ambient heat caused by the exhaust pipe and engine, which have an impact on damping and suspension. Our compact and heat-resistant air springs also enable us to offer a significant design and functional advantage where this issue is concerned.

On top of this, our weather and ageing-resistant polyamide components also, of course, offer corrosion protection.



Air spring systems with polyamide pistons with a fully utilised interior volume



Economic Added Value

Comfortable, cost-conscious and profitable

ContiTech air springs are the ideal choice for customers all over the world. Their design process is in line with the achievement of significant advantages in terms of comfort, safety and costeffectiveness right from the start.

More Comfort and Safety

The innovative design of our air springs with a fully utilisable interior piston volume, which are individually adapted to suit the required spring travel, help to provide optimum damping and driving comfort. They reduce the impact that uneven roads have on a vehicle and in turn improve its running smoothness. This is not only beneficial to the health of the vehicle's driver, but also to all of its components, as well as providing impressive advantages when it comes to the transportation of shock-sensitive goods. Our air springs also provide a positive side effect by simultaneously lowering the vehicle's unsprung mass and thus preserving the road surface.

More Flexibility and Adaptability

Pneumatic and sensor components on or in the air spring facilitate the manual and/or self-regulating adjustment of the vehicle height. This enables drivers to optimally adapt their vehicles to suit different loading conditions. It also allows them to precisely align their trucks and trailers with any ramp when loading and unloading goods, as well as enabling them to attach and remove semi-trailers in a matter of seconds. Further the kneeling function makes it easier for passengers to enter the bus and speeds up the transfer time required to get into and out of the bus, especially in urban agglomerations.

Increased Cost Reductions and Profitability

ContiTech lightweight air springs help to reduce the overall weight of commercial vehicles. Freight forwarders can use this to their economic advantage in one of two different ways, namely either by directly saving fuel or by using the reduced weight of their vehicle to increase its load capacity and in turn improve their turnover per vehicle and journey.



Production Facilities Close to Our Customers

Quick, individual and flexible

Our eight production sites in Germany, Turkey, Hungary, China, Korea, India, Mexico and Brazil, the last of which will be opening soon, provide our customers with a number of different benefits.



Our international presence helps to secure cost advantages for our customers as a result of short transport distances and the elimination of import duties and customs charges. Wherever possible, we make specific use of local supply chains and work hard to meet official requirements such as those concerning local content so as to benefit our customers.

Our decentralised air spring production facilities additionally enable us to quickly respond to regional fluctuations in demand by providing support from international sites, thus ensuring that our customers can always rely on our security of supply, even in the case of extreme peak times. They therefore never have to worry about fluctuations in quality. Our process and quality standards are globally standardised and certified. If our customers are based in or relocate to one of our production countries, they are able to purchase our air springs in the usual local currency and can therefore rest assured that they will not be affected by unsteady currency parities.



ContiTech Air Spring Systems

Global, competent and personal

ContiTech Air Spring Systems is a business unit of ContiTech AG, a division of the automotive supplier company Continental, which employs more than 186,000 members of staff.

The Companies and Production Locations of the Business Unit

Germany

ContiTech Luftfedersysteme GmbH
Philipsbornstraße 1, 30165 Hannover
ContiTech Luftfedersysteme GmbH
Hannoversche Str. 88, 21079 Hamburg

Turkey

ContiTech Lastik Sanayi ve Ticaret A.S.
Nilüfer Organize Sanayi Bölgesi, N. 114 Sokak No. 10, 16140 Nilüfer-Bursa

Mexico

ContiTech Mexicana S.A. de C.V. - AS
Av. Industrias 3515, Zona Industrial, 78395 San Luis Potosi

China

ContiTech China Rubber & Plastics Technology Ltd. (AS)
No. 18 Jiulong Road, CSDEZ , 215500 Changshu
ContiTech Shanghai Rubber & Plastics Technology Co., Ltd. (AS)
20F Building A, 518 Kunming Road, 200082 Shanghai

South Korea

ContiTech DaeWon Airspring Systems Limited.
Cheonan 5th General Industrial Complex 10B-2L, 187-1 Daehwa-ri, Seongnam-myeon Dongnam-gu, Cheonan-si Chungcheongnam-do, 330-892

Hungary

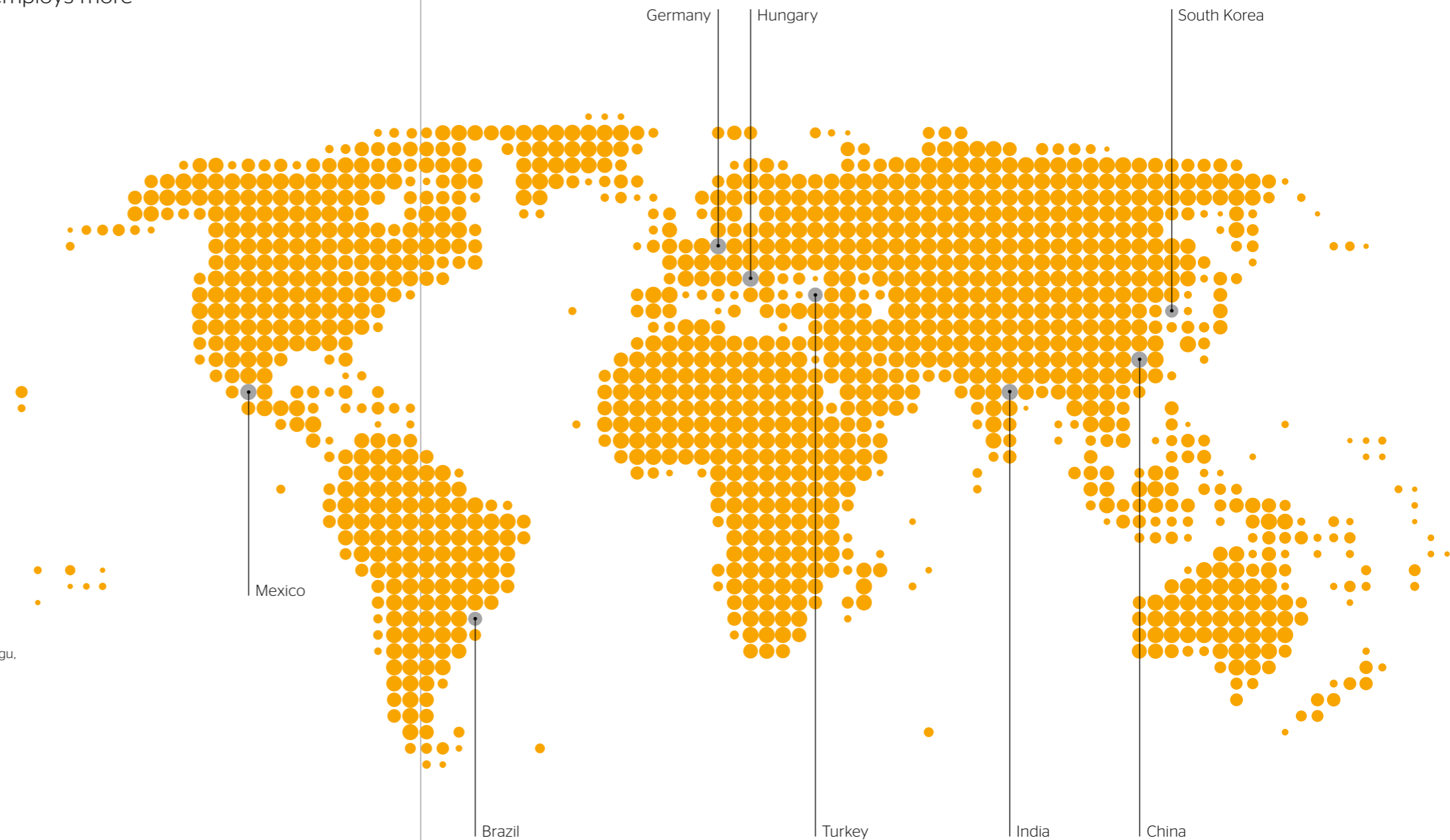
ContiTech Magyarország Kft.
Derkovits u. 137, Nyiregyhaza

Brazil

Continental do Brasil Produtos Automotivos Ltda. (AS)
Rua Carneiro da Cunha 167, rooms 82, 83 and 85, 04144000 Saude São Paulo - SP

India

ContiTech India (Private) Ltd. (AS)
Village Badkhalsa, District Sonapat, 131029 Haryana



ContiTech

Air Spring Systems

Contact

ContiTech Luftfedersysteme GmbH
Philipsbornstraße 1
30165 Hannover, Germany
Phone +49 (0)511 938-5572
Fax +49 (0)511 938-5274
E-mail mailservice@contitech.de
www.contitech.de

Your local contact

www.contitech.de/contactlocator



Learn more about
the contents of this
brochure.

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.