

# SUSPENSION SYSTEMS

**making everyday smoother**



**DISCOVER THE POSSIBILITIES OF VB-AIRSUSPENSION**

**BETTER SAFETY AND COMFORT ON THE ROAD.**

**Product information**

*Discover our product groups*

Our products fall into one of four product groups. These product groups contain a variety of systems for many different makes and models, meaning that there is always a suitable solution for you.



**FULL AIR SUSPENSION**



**SEMI AIR SUSPENSION**



**HELPER AND REINFORCED SPRINGS**



**SPECIAL COMPONENTS**



## WHY OPT FOR AIR SUSPENSION?

A good suspension system must provide both spring force and damping, so that the vehicle feels both stable and comfortable to drive. In order to achieve this, each vehicle is fitted with coil spring suspension, leaf suspension or torsion bar suspension and shock absorbers. The suspension under the vehicle ensures that passengers and/or the cargo do not feel every bump in the road surface. The shock absorbers dampen the movement of the suspension; without shock absorbers, the vehicle would continue to pitch and roll.

Air suspension is used when more comfort, stability or height is required and the vehicle's standard suspension is not sufficient. Air suspension is the general term used to describe suspension systems that (partially) run on air. Our innovative air suspension systems and suspension applications help to ensure optimum ride comfort, increased stability and greater safety, so that you can enjoy a safe and worry-free journey.

ONE MOMENT YOU'RE DRIVING  
SMOOTHLY OVER AN UNEVEN ROAD  
SURFACE AND THE NEXT YOU'RE  
EFFORTLESSLY SWERVING TO AVOID  
AN OBSTACLE.



## THE BEST SOLUTION FOR SUSPENSION PROBLEMS.

### **VB-FullAir: full air suspension with advanced control options**

VB-FullAir is an automatic, adjustable solution for suspension problems. The existing leaf- or coil spring suspension is fully replaced by a full air suspension system that filters out unevenness in the road surface, thereby increasing ride comfort. The driveability and stability of the vehicle are improved, which in turn increases safety. VB-FullAir is supplied with a sophisticated remote control that can be used to easily operate all functions of the suspension system. Depending on the make and model of vehicle, full air suspension is available for both the front and rear axle.

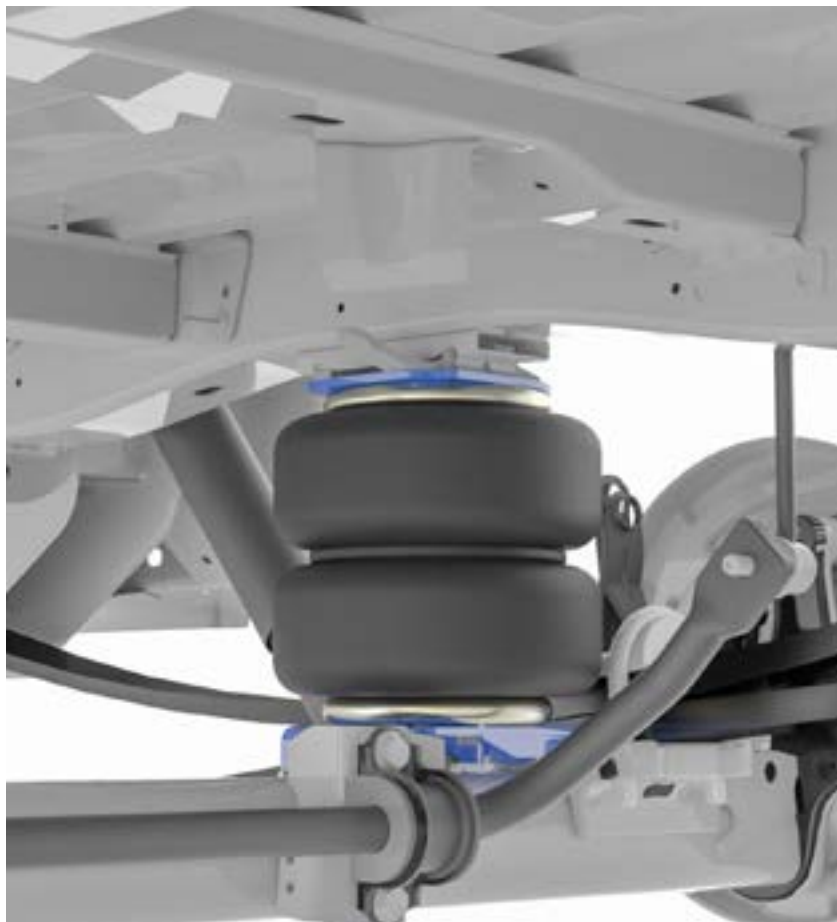
### **VB-ActiveAir: full air suspension with active shock absorbers**

VB-ActiveAir is a combination of a full air suspension system (VB-FullAir 4C) and adaptive shock absorbers (VB-DynActive). This intelligent suspension and shock absorber system adapts in real time to the condition of the road surface, driving characteristics and the load. The system ensures better ride comfort and a safer trip.

	Increasing the ride height	Minimising sagging	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics	Increasing safety	Improving stability	Control options
<b>VB-FULLAIR</b> Full air suspension	++	+++	++	++	++	+	+	++
<b>VB-ACTIVEAIR*</b> Full air suspension and active shock absorbers	++	++	+++	+++	+++	++	++	+++

\* At present, VB-ActiveAir is only available for motorhomes with an Iveco Daily 60C-70C chassis, as an upgrade kit and as a new kit. The system is in development for a number of vehicle makes and models.

THE SEMI AIR SUSPENSION CAN BE FITTED QUICKLY THANKS TO OUR "PLUG-AND-PLAY" SYSTEM. IT ALSO ENSURES A HIGHER RIDE HEIGHT AND VARIABLE SPRING FORCE.



## CREATE MORE SPRING TRAVEL WITH SEMI AIR SUSPENSION.

### **VB-SemiAir: semi air suspension**

Semi air suspension, also known as VB-SemiAir, supports the vehicle's existing suspension and is often used in vehicles that frequently carry heavy loads. An air spring is fitted between the chassis and the rear axle, which raises the ride height of the vehicle and generates greater spring travel. The VB-SemiAir therefore helps to increase the level of comfort and stability when travelling in your vehicle.

The system enables the suspension to be adjusted (manually) within specific limits. VB-SemiAir is supplied as a two-chamber system. This means that the air springs are not connected to each other. The use of a two-chamber system allows left and right to be adjusted separately, enabling the vehicle to be levelled even when it is loaded unevenly.

### **VB-LevelAir: semi air suspension system with automatic level control**

VB-LevelAir is a VB-SemiAir basic system with automatic level control. The system provides for greater ease of use: there is no need for the driver to worry about operating the system while out making deliveries. This prevents incorrect or improper use. VB-LevelAir ensures the vehicle is always at the correct ride height and that the system is at the right pressure. The rear of the vehicle leans less when loaded, which improves stability and driveability, so it contributes to enhanced safety whenever you are driving.

	Increasing ride height	Minimising sagging	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics	Automatic adjustment
<b>VB-SEMIAIR</b> Semi air suspension	++	++	+	+	+	
<b>VB-LEVELAIR</b> Semi air suspension (automatic level control)	++	++	+	+	+	+

OUR SUSPENSION APPLICATIONS  
ALLOW FOR STABLE DRIVING AT THE  
ORIGINAL RIDE HEIGHT.



## IMPROVED DRIVING CHARACTERISTICS THANKS TO SUSPENSION APPLICATIONS.

### VB-CoilSpring: helper or reinforced springs

In addition to full air suspension and semi air suspension, we also supply helper and reinforced springs for a number of vehicles that support or reinforce the existing suspension in the vehicle. The helper and reinforced springs, also known as VB-CoilSpring, are either fitted to the existing leaf suspension/coil spring suspension or replace the original coil spring suspension. The VB-CoilSpring returns the vehicle to the original (or a higher) ride height, increasing stability and, to a certain extent, the level of comfort. The VB-CoilSpring is a good option for vehicles that are always heavily laden. This is because the reinforcement to the spring force is permanent and cannot be adjusted. The two systems are available for both the front and rear axle.

	Increasing ride height	Minimising sagging	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics
<b>VB-COILSPRING</b> Helper and reinforced springs	++	+	++	+	+

OUR AIR SUSPENSION SYSTEMS OR SUSPENSION APPLICATIONS HELP TO ENSURE A RELIABLE AND PLEASANT JOURNEY IN YOUR VEHICLE.



## THE RIGHT SUPPORT FOR EVERY SITUATION.

### Reinforced shock absorbers

The installation of reinforced shock absorbers helps to absorb vehicle movements in relation to the road surface more effectively. The vehicle returns to the correct ride height after each movement. Vehicles with softer suspension are usually considered to be more comfortable, but often have unstable road contact. The installation of reinforced shock absorbers improves the stability and therefore is good for the vehicle too.

### Composite leaf springs (GFRP)

Composite leaf springs (GFRP) are an innovative upgrade compared with traditional steel leaf springs. They are manufactured from glass fibre reinforced composite materials, making them significantly lighter, corrosion-resistant, and able to retain their spring characteristics – even after prolonged and intensive use. Depending on the type of leaf spring being replaced, this results in a weight reduction of 17 to 32 kg. Thanks to these properties, GFRP leaf springs provide increased ground clearance and a more comfortable ride without compromising stability or safety, making them ideal for applications such as motorhomes, trucks and trailers.

	Increasing ride height	Minimising sagging	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics
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#### REINFORCED SHOCK ABSORBERS

VB-SpecialParts

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#### COMPOSITE LEAF SPRINGS (GFRP)

VB-SpecialParts

+	+		+	
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**STABILITY AND COMFORT – A STANDARD SHOCK ABSORBER WILL ONLY EXHIBIT ONE OF THESE CHARACTERISTICS. THE VB-FSD SHOCK ABSORBER OFFERS BOTH THESE CHARACTERISTICS, THUS ENABLING A SAFER RIDE.**

## STABILITY AND COMFORT.

### VB-FSDshockabsorber

FSD stands for 'frequency selective damping'. The addition of a special valve allows the shock absorber with FSD technology to vary its own damping force. This directly results in more comfortable driving characteristics, improved stability, greater safety and less vibration and background noise, since unevenness in the road surface is not felt as distinctly in the vehicle. Our VB-FSD shock absorber is a shock absorber for both the front and the rear axle that has been specifically developed to improve vehicle behaviour.

### VB-FSDstrut

The VB-FSD strut is a suspension strut specifically developed for motorhomes with an X250/X290 chassis (Peugeot Boxer, Fiat Ducato, Citroën Jumper). The suspension strut consists of an VB-FSDshockabsorber and a special coil spring of ours (VB-CoilSpring). The VB-FSD strut makes the vehicle stand higher at the front, prevents it sagging as much and creates more spring travel so that unevenness in the road surface is better absorbed. Combining these two FSD technologies gives you the 'VB Suspension Upgrade Kit'. This kit offers the best in comfort and stability in this class on both the front and rear axle.

	Increasing ride height	Minimising sagging	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics
<b>VB-FSDSHOCKABSORBER*</b> VB-FSD technology			++	++	++
<b>VB-FSDSTRUT**</b> VB-FSD technology	++	+	++	++	++
<b>VB SUSPENSION UPGRADE KIT***</b> VB-FSD technology	++	+	+++	+++	+++

\* The VB-FSD shock absorber is a shock absorber for both the front and rear axle.

\*\* The VB-FSD strut is a combination of a VB-FSD shock absorber and VB-CoilSpring for the front axle. It is only available for a PFC X250/X290 chassis.

\*\*\* The VB Suspension Upgrade Kit is a combination of a VB-FSD strut on the front axle and a VB-FSD shock absorber on the rear axle. It has been specifically developed for motorhomes with a PFC X250/X290 chassis.



## VB-AIRSUSPENSION IS ACTIVE WORLDWIDE.

Thanks to our enthusiastic and motivated team, we are happy to work on these solutions every day - worldwide. Our Innovation & Technology Centre is where we develop, test and sell our products. Our Logistics Centre is the central location for our production and logistics processes. It is also where purchasing and quality control find their home.

WE MAKE EVERY ROAD  
A GOOD ROAD.

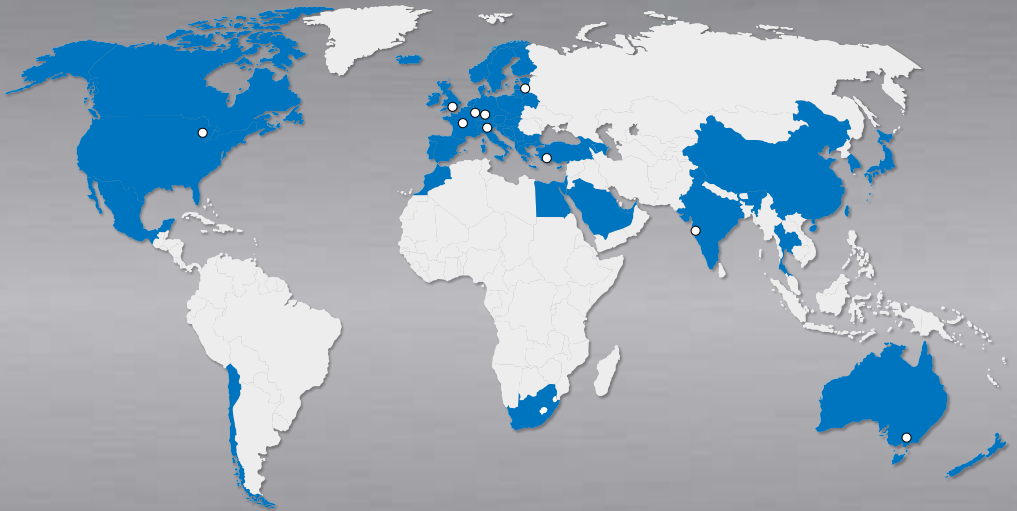


WE CREATE THE NEXT LEVEL IN VEHICLE DYNAMICS.

Our product portfolio ranges from reinforced springs to full air suspension solutions with active shock absorbers for front and rear axles. We are especially proud of our official recognition from big names such as Mercedes-Benz, Volkswagen, Ford and Renault – the highest recognition that an accessory specialist can receive from a vehicle manufacturer. TÜV approvals and „letters of no objection“ (LONO) mean that our products are also available for a number of other vehicles.



- MORE THAN 30 YEARS' EXPERIENCE
- TWO HEAD OFFICES IN VARSSEVELD: INNOVATION AND TECHNOLOGY CENTRE & LOGISTICS CENTRE
- MORE THAN 200 ENTHUSIASTIC EMPLOYEES
- 8 SUBSIDIARIES WORLDWIDE
- REPRESENTED BY PARTNERS IN 42 COUNTRIES
- SUPPLYING TO MORE THAN 60 COUNTRIES
- MORE THAN 375 VB-PARTNERS
- OVER 900 TRAINED SPECIALISTS
- AROUND 300,000 (AIR)SUSPENSION SYSTEMS SOLD



## DISCOVER OUR PRODUCTS.

Our products find their way to satisfied users through an extensive network of international partners and dealers.

Our partners and dealers are authorised specialists that have received extensive training in the installation of our products and in the provision of a high-quality service and appropriate advice.

To find your nearest partner or dealer, visit [www.vbairsuspension.com](http://www.vbairsuspension.com).