

# SUSPENSION SYSTEMS

making everyday smoother



**VB-AIRSUSPENSION SUPPORTS YOU,  
SO THAT YOU CAN ENJOY A SAFE AND WORRY-FREE JOURNEY.**

**Motorhomes**





A GOOD START IS HALF THE BATTLE.



Travelling in a motorhome opens up new worlds. Simply set off into the sun without having to give a second thought to where you'll be spending the night; you have a place to sleep wherever you go. A motorhome is the perfect choice, whether you are going on a weekend away for a holiday lasting a few weeks — or even months. If you are travelling hundreds of kilometres at a time in your motorhome, stability and comfort are essential, so it is extremely important that the suspension system is in a sound condition. 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.

## PEACE OF MIND WHILST ON YOUR TRAVELS.

A motorhome is the ultimate means of transport for anyone who wishes to stick to their own plan. If you're looking to take a well-deserved holiday, the last thing you need is the stress of a motorhome that's difficult to drive. Not only do you want to be able to benefit from maximum ride comfort during your journey, but also the highest levels of safety. A house on wheels that handles perfectly is the key to enjoying a relaxing start to your holiday. As a motorhome owner, you probably know the feeling of intense crosswinds while driving, for example when overtaking lorries and buses, driving on a bridge, exiting a tunnel, or from gusts of wind. These winds pose a danger both to yourself and your motorhome, particularly when travelling at high speeds.

**OUR (AIR) SUSPENSION SYSTEMS PROVIDE FOR MORE STABLE ROAD HANDLING  
WHILE DRIVING YOUR MOTORHOME.**

Our intelligent air suspension systems and suspension applications ensure that your motorhome remains stable, easily manoeuvrable and at a constant ride height under all conditions. Your motorhome is less sensitive to crosswinds and unevenness in the road surface, leans less when cornering and responds effectively during sudden evasive and braking manoeuvres, even when the motorhome is carrying heavy, uneven loads. What's more, our systems and applications prevent the motorhome from leaning and the suspension from sagging: one moment you're gliding smoothly over an uneven road surface and the next you're effortlessly swerving to avoid an obstacle. Air suspension systems and suspension applications minimise vibrations in the chassis, ensuring a smooth, relaxing journey for both you as the driver and your passengers. These systems and applications also ensure that your luggage is safely transported from A to B, which is exactly what you need.





# THE BEST SOLUTION FOR SUSPENSION PROBLEMS.

Our full air suspension systems are fully automatic (adjustable) solutions for suspension problems. The traditional suspension is replaced by a full air suspension system that filters out unevenness in the road surface, thereby increasing ride comfort. Furthermore, the braking distance is shorter and crosswind sensitivity is reduced, increasing the level of safety.

ENJOYMENT AND COMFORT WHETHER DRIVING OR AT A STANDSTILL.

While driving, your motorhome will constantly remain at the ride height pre-set during installation. This is the ideal ride height for maximum comfort. The driveability and stability of the vehicle are also improved, which in turn increases safety. Our full air suspension systems come with a sophisticated remote control, placing all the functions of the suspension system within easy reach. Depending on the type of air suspension system, you can automatically adjust the height of the motorhome on the front and/or rear axle. This is particularly useful when driving on and off a ferry or when driving on tough terrain.

When your motorhome is at a standstill and the ignition is switched off, there are various options available for adjusting the height of your motorhome manually or automatically using the remote control, depending on the type of air suspension system fitted. This makes getting in and out of the vehicle easier, as well as loading and unloading luggage via the load space at the rear of the motorhome. If you find that your camp site is on a slope, you can level your motorhome at the touch of a button. You can also adjust the motorhome so that it leans to one side, allowing for the drainage of sewage and wastewater tanks.



	Increasing the ride height	Reducing the off-centre level	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics	Increasing safety	Improving stability	Control options
<b>VB-NIVOAIR</b> Full air suspension	++	++	++	++	++	+	+	
<b>VB-FULLAIR</b> Full air suspension	++	++	++	++	++	+	+	++





# HANDLING, SAFETY OR COMFORT. WHY SHOULD YOU HAVE TO CHOOSE?

If you're covering hundreds of miles in your motorhome at one go, maximum ride comfort is an essential. Our VB-ActiveAir system 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 handling as well as a more comfortable and safer trip.

THE SYSTEM ADAPTS PERFECTLY TO THE DRIVING SITUATION.

The air suspension compensates for varying load states by means of the air pressure in the air springs, and the variable shock absorbers control damping via a valve in the shock absorber. You can choose to put the system in fully automatic mode or engage it manually using a selector switch depending on your preference. The shock absorbers can be adjusted from minimum damping force to maximum damping force in just a few milliseconds, allowing you to alternate between more sporty handling and a comfortable driving experience as required.

We believe it's important that the suspension system should adapt to the driver and not the other way round. The system remembers cornering speeds and braking manoeuvres and adjusts the shock absorbers based on your driving style, no matter how the body is configured. So, in Sport mode the ride is automatically made more comfortable when the driver slows down and in Comfort mode the vehicle automatically provides better handling when taking fast bends.

And it's not just when you are out on the road, the system offers further benefits when the vehicle is stationary. Once the vehicle is at a standstill and the engine has been turned off, a valve in the shock absorber closes. This reduces rocking when the vehicle is stationary, providing for increased comfort.

THESE SHOCK ABSORBERS MAKE TRAVELLING IN YOUR MOTORHOME MORE COMFORTABLE AND SAFER, REDUCING THE RISK OF LEANING AND PREVENTING THE VEHICLE SWAYING.



	Increasing the ride height	Reducing the off-centre level	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics	Increasing safety	Improving stability	Minimising fuel consumption
<b>VB-ACTIVEAIR*</b>	+	+	+	+	+	+	+	+
Active shock absorbers								

\* VB-ActiveAir is one of VB-Airsuspension's latest products. The system is in development for a number of vehicle makes and models. Currently, VB-ActiveAir is only available for motorhomes with an Iveco Daily 60C-70C chassis, as an upgrade kit and a new kit.





WORRY LESS ABOUT THE DISTRIBUTION OF LUGGAGE IN YOUR MOTORHOME: THE SEMI AIR SUSPENSION LEVELS THE REAR OF THE VEHICLE.



	Increasing the ride height	Reducing the off-centre level	Reducing vehicle roll	Improving suspension comfort	Electronic control
<b>VB-SEMIAIR</b> Semi air suspension	++	++	+	+	
<b>VB-LEVELAIR</b> Automatic level control	++	++	+	+	+

# CREATE MORE SPRING TRAVEL WITH SEMI AIR SUSPENSION.

Motorhomes are usually heavily laden due to their superstructure, furnishings and the luggage on board. Our auxiliary air suspension systems allow you to adjust the suspension manually or automatically. As the auxiliary air suspension systems support the existing suspension, more spring travel is created while driving. The semi air suspension therefore helps to increase the level of comfort when travelling in your motorhome. The use of a two-chamber system allows the left and right side of the vehicle to be pressurised separately, meaning that the motorhome can be adjusted to level out slight imbalances. Auxiliary air suspension systems help to increase comfort when travelling with heavy loads too.

SIMPLY PACK YOUR SUITCASE AND YOU'RE READY TO GO.

The weight of the luggage that you take with you will vary depending on your holiday plans; it may weigh more on one occasion than another, and this weight is often distributed unevenly in your motorhome. Even with a low payload, the load varies due to the large dead weight of the motorhome. Our semi air suspension easily sets your motorhome's system to the right pressure with the help of a comfort compressor set. We offer several types of auxiliary air suspension system that can be operated in a number of different ways, such as manually using inflation valves, or via a control panel fitted with switches and pressure gauges. What's more, our auxiliary air suspension system with automatic level control, the VB-LevelAir, is an added convenience, as you needn't worry about operating the system while you are driving. Your motorhome is therefore always at the correct ride height. The rear of the motorhome leans less, which improves the stability and driveability of the vehicle and helps to ensure greater safety during your journey.



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



# IMPROVED DRIVING CHARACTERISTICS THANKS TO SUSPENSION APPLICATIONS.

In addition to full air suspension systems and auxiliary air suspension systems, we also offer reinforced shock absorbers and reinforced replacement and helper springs. These are non-adjustable solutions that influence the vehicle behaviour. They ensure that motorhome movements are absorbed more effectively while driving. The motorhome's ride height is improved, which increases the spring travel ensuring a greater level of comfort.

## THE RIGHT BALANCE.

The weight of the motorhome superstructure means many motorhomes have a high centre of gravity, so the suspension often has a great deal to contend with. Not only this, we are all guilty of taking only "the essentials" with us on holiday – and end up loading the motorhome up to its technically permitted weight. This heavy weight can cause the suspension to drift when driving on poorly surfaced roads or over speed bumps, which is unpleasant when you still have a long way to drive. Our reinforced (suspension) applications help to improve the driving characteristics of your motorhome so that you have a pleasant journey.

Our many years of experience make us a solid partner who can provide you with suitable advice. Let the journey begin!



	Increasing the ride height	Minimises sagging	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics
<b>VB-COILSPRING</b> Auxiliary and reinforced springs	++	+	++	+	+
<b>VB-SPECIALPARTS</b> Reinforced stabilisers		++	++		+
<b>VB-SPECIALPARTS</b> Reinforced shock absorbers			+	+	+

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



# ENSURE STABILITY AND COMFORT.

A good suspension system must provide both spring force and damping, so that the vehicle feels both stable and comfortable to drive. Nevertheless, in most cases you will usually have to make a choice between these two drive characteristics, while ideally you would want to have both. Our VB-FSD technology is the perfect solution that now makes this possible!

## THE RIGHT COMBINATION.

The suspension under the vehicle ensures that passengers and/or the cargo do not feel every bump in the road surface and the shock absorbers damp the movement of the suspension. Otherwise, without shock absorbers the vehicle would continue to pitch and roll.

Our VB-FSD shock absorber is a shock absorber for both the front and the rear axle that has been specifically developed to improve the drive characteristics. The addition of a special valve allows the shock absorber to vary its own damping force. This immediately results in better vehicle behaviour in terms of comfort and stability.

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-FSD shock and a special coil spring from VB-Airsuspension (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-FSD-technology</b> VB-FSDshockabsorber*			+	+	+
<b>VB-FSD-technology</b> VB-FSDstrut**	+	+	+	+	+
<b>VB-FSD-technology</b> VB Suspension Upgrade Kit***	+	+	+	+	+

\* 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.

As a leading company experiencing rapid growth, we want all our customers across the globe to benefit from our premium suspension applications. These suspension applications provide for improved comfort, better driving characteristics and increased safety, making every day smoother.

**MAKING EVERYDAY SMOOTHER.**

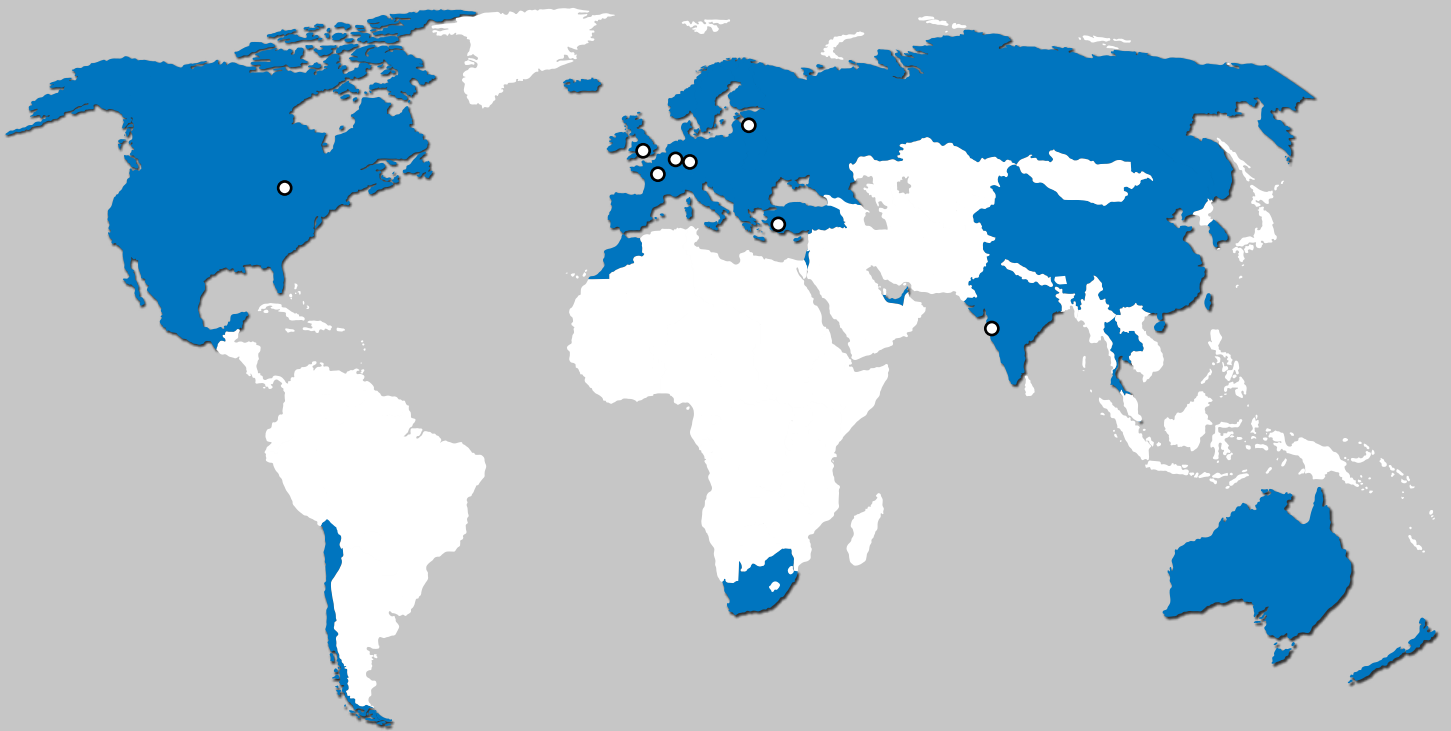
According to this motto, we aim to provide our customers with the best possible service – and we've been very successful so far! With the help of a motivated team, we have been developing and building suspension applications and various air suspension systems for light commercial vehicles, ambulances, car transporters, motorhomes, 4x4 vehicles and off-road vehicles for almost 25 years. Our product portfolio ranges from reinforced springs to full air suspension solutions with active shock absorbers for the front and rear axle. We are especially proud of our official recognition from big names such as Mercedes-Benz, Volkswagen, Ford and Renault – this is 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.

**WE MAKE EVERY JOURNEY  
A GOOD ONE.**



- + 25 YEARS OF EXPERIENCE
- + 120 EMPLOYEES
- + 7 SUBSIDIARIES WORLDWIDE
- + REPRESENTED IN MORE THAN 60 COUNTRIES
- + 35 PARTNERS
- + OVER 750 TRAINED SPECIALISTS
- + OVER 200 INSTALLATION PARTNERS
- + ROUGHLY 150,000 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).

