

SUSPENSION SYSTEMS

making everyday smoother



**VB-AIRSUSPENSION SUPPORTS YOU,
TO ENJOY A COMFORTABLE JOURNEY FROM A TO B.**

Passenger transport
Minibuses



REACH YOUR DESTINATION
SAFELY AND EASILY.



It is of the utmost importance that passengers travelling by minibus have the most pleasant journey possible. Most minibuses are equipped with nice seats and air conditioning, but this alone is not sufficient to ensure a comfortable journey, since comfort begins with the air suspension fitted to the bus. Our innovative air suspension systems and suspension applications help to ensure **optimum ride comfort, increased stability and greater safety**. Investing in one of these systems makes for a more pleasant bus journey all round, and for just an extra couple of pence per kilometre.

A STABLE WORK ENVIRONMENT FOR THE DRIVER.

Regardless of whether the minibus is carrying one or several passengers, each passenger should reach their destination comfortably and safely. One essential factor in ensuring safety is the driver, who is responsible for the passengers throughout the journey. The driver has to contend with various traffic situations, poorly surfaced roads and changing weather conditions while driving, so their full attention needs to be on the road.

THANKS TO OUR AIR SUSPENSION SYSTEMS, BUMPY BUS JOURNEYS ARE
NOW A THING OF THE PAST.

Our intelligent air suspension systems and suspension applications ensure that the minibus remains stable, easily manoeuvrable and at a constant ride height under all conditions. The minibus 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 load distribution in the bus is uneven. Air suspension systems and suspension applications minimise vibrations in the chassis, ensuring a smooth, relaxing journey for both the driver and the passengers. These systems and applications also ensure that luggage is safely transported from A to B.



LONG JOURNEYS ON UNFAMILIAR AND POORLY SURFACED ROADS NOT ONLY PLACE GREAT DEMANDS ON THE DRIVER, BUT ALSO ON THEMINIBUS. GET A BETTER GRIP ON ALL SITUATIONS WITH OUR FULL AIR SUSPENSION SYSTEMS.

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. This ensures a pleasant work environment for the driver and a comfortable journey for the passengers. Furthermore, the braking distance is shorter, which helps to ensure greater safety and reduces CO2 emissions.

COMFORT WHETHER DRIVING OR AT A STANDSTILL.

While driving, the minibus 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. When the minibus is at a standstill, the height of the bus can be automatically adjusted on the front and/or rear axle, depending on the type of air suspension system fitted. Our full air suspension allows the vehicle to be lowered, meaning that in many cases the purchase of an expensive wheelchair lift is not required. Shorter ramps can also be used, which makes it easier for wheelchair users to enter and exit the vehicle and simplifies the process of loading and unloading luggage. It is even possible to set default heights for this purpose.

The short lowering and raising times afforded by our air suspension system mean that the driver can make entering and exiting the vehicle easier for all passengers at the push of a button. The access height can also be adjusted to the height of the kerb at bus stations and platforms.



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



CREATE MORE SPRING TRAVEL WITH SEMI AIR SUSPENSION.

The weight and load of a minibus will vary depending on the number of passengers. After all, an empty bus will not weigh the same as a full bus. To prevent the minibus suspension from being too stiff or from sagging too much, our auxiliary air suspension systems allow for manual or automatic adjustment of the suspension. As the auxiliary air suspension systems support the existing suspension, more spring travel is created while driving. Thus, the semi air suspension helps to ensure greater comfort during the journey.

OUR AUXILIARY AIR SUSPENSION SYSTEMS PROVIDE FOR MORE STABLE ROAD HANDLING WHEN DRIVING THE MINIBUS.

When passengers get on the minibus, they decide for themselves where they are going to sit. While one passenger might prefer to sit at the front, another may prefer to sit at the back. This can lead to uneven load distribution in the minibus. Our semi air suspension easily sets the minibus'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 the driver needn't worry about operating the system while driving. The minibus is therefore always at the correct ride height. The rear of the minibus leans less, which improves the stability and driveability of the vehicle and helps to ensure greater safety during the journey.



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.



	Increasing the ride height	Reducing the off-centre level	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics	Automatic adjustment
VB-SEMI AIR Semi air suspension	++	++	+	+	+	
VB-LEVEL AIR 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.

In addition to full air suspension systems and auxiliary air suspension systems, we also offer reinforced replacement and helper springs, reinforced shock absorbers and shock absorbers with FSD technology. This technology, which is called frequency selective damping, allows these special shock absorbers to vary the damping force. These are permanent solutions that influence the vehicle behaviour and they ensure that bus movements are absorbed more effectively while driving. The minibus ride height is improved, which increases the spring travel.

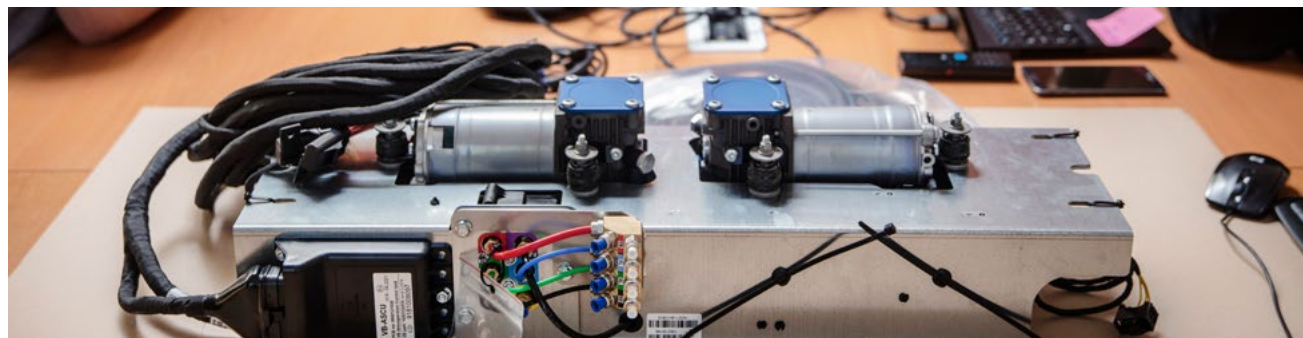
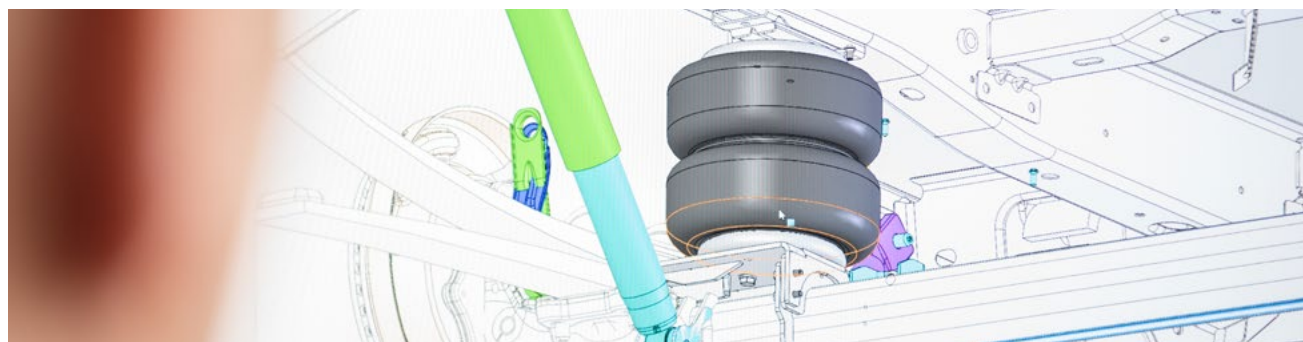
THE RIGHT BALANCE.

The weight of the superstructure means many minibuses have a high centre of gravity, so the suspension often has a great deal to contend with. What's more, traditional suspension systems on minibuses have to compensate for this huge difference in load. This can cause the suspension to drift when driving on poorly surfaced roads or over speed bumps, which is uncomfortable for the driver and also results in passengers being unable to relax on their journey. This issue needs to be properly addressed, and we have the solution: our reinforced (suspension) applications help to improve the driving characteristics of the vehicle to ensure a pleasant and safe journey from A to B.

Our many years of experience make us a solid partner for manufacturers and producers, and we are always thinking in terms of solutions.



	Increasing the ride height	Minimising sagging	Reducing vehicle roll	Improving suspension comfort	Improving driving characteristics
VB-COILSPRING Helper and reinforced springs	++	+	++	+	+
REINFORCED STABILISERS VB-SpecialParts		++	++		+
REINFORCED SHOCK ABSORBERS VB-SpecialParts			+	+	+
VB-FSDSHOCKABSORBER VB-FSD technology			++	++	++



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



VB-AIRSUSPENSION IS ACTIVE WORLDWIDE.

As a leading company undergoing rapid growth, we want people all across the globe to benefit from our premium suspension applications and (air) suspension systems. Why? Because this ensures more comfort, better handling and greater safety. In other words: we make life around us a smoother ride.

MAKING EVERYDAY SMOOTHER.

In line with this motto, we get the best out of ourselves every day for our customers – and we've been very successful so far! We have been amassing experience since 1993 and are now a leading adviser, developer and supplier of (air) suspension systems for light to medium-duty commercial vehicles.

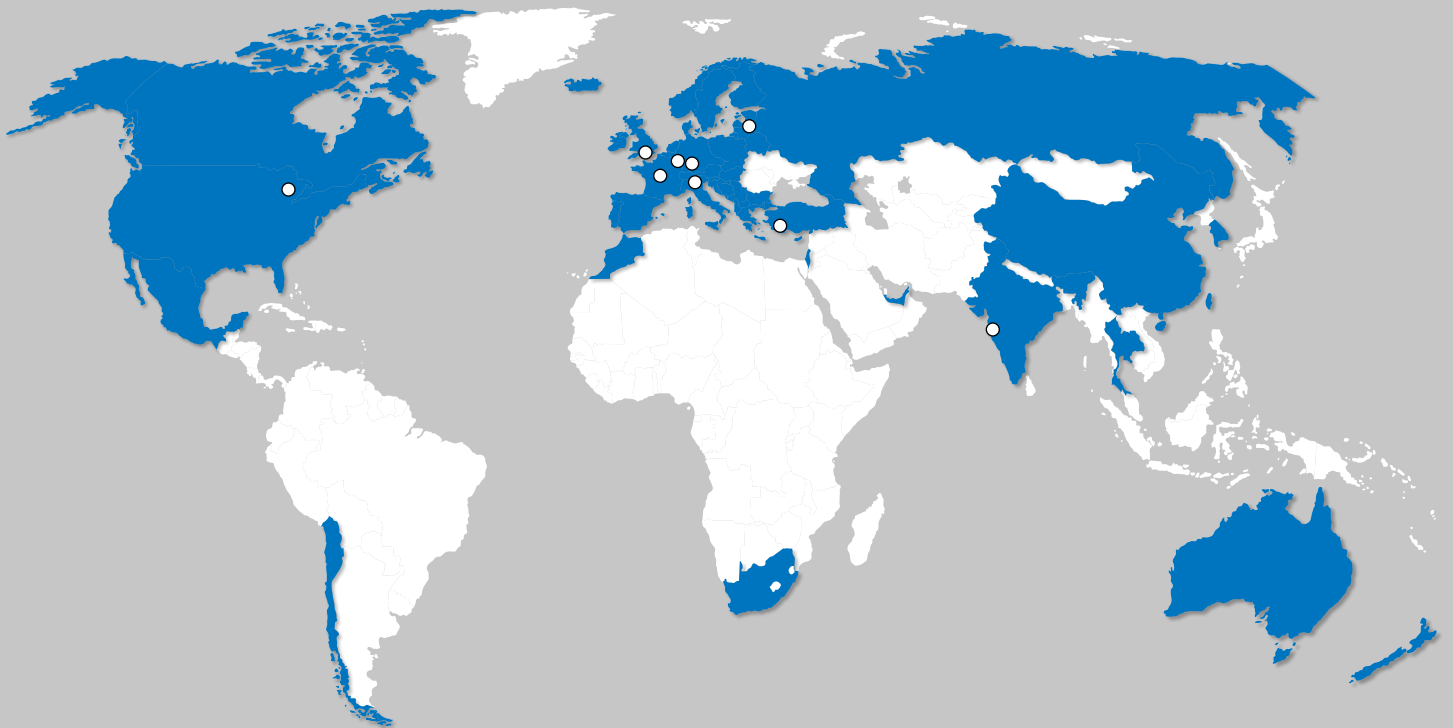
When the term 'light to medium-heavy commercial vehicles' is used in the automotive industry, this means vehicles with a GVW (gross vehicle weight) of 1,750 to 7,500 kilograms. The chassis of these 'basic vehicles' provides the basis for all manner of applications: from emergency service vehicles and motorhomes to car transporters and wheelchair-accessible vehicles.

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 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 29 YEARS' EXPERIENCE
- TWO HEAD OFFICES IN VARSSEVELD: INNOVATION AND TECHNOLOGY CENTRE & LOGISTICS CENTRE
- MORE THAN 160 ENTHUSIASTIC EMPLOYEES
- 8 SUBSIDIARIES WORLDWIDE
- REPRESENTED BY PARTNERS IN 41 COUNTRIES
- SUPPLYING TO MORE THAN 60 COUNTRIES
- MORE THAN 325 VB-PARTNERS
- OVER 975 TRAINED SPECIALISTS
- AROUND 250,000 (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.

