



# SUSPENSION SYSTEMS

making everyday smoother



# VB

*airsuspension*



- Increased comfort • Better driveability • More safety



# MOTORHOME



## Safe and comfortable ride

Everything is under control with the suspension systems of VB-Airsuspension

source: Hymer AG

### Equipped for the occasion

A relaxing holiday with your motorhome starts with the right equipment. The equipment required for travelling to and making the most of your destination is not the only crucial aspect, the motorhome and suspension system also need to be in a sound condition.

### Invisible essence

A good suspension spring is far away, hidden under the vehicle. You will not see it, but it is an essential component for comfortable and safe driving. It is the mechanical link between the road and your motorhome and is therefore critical to your comfort and safety.



### Increased comfort

Driving on unfamiliar and, in some cases, poorly surfaced roads places great demands on the driver and vehicle alike. The comfort provided by the air suspension system brings calm to the vehicle and ensures a relaxing journey.

### Better driveability

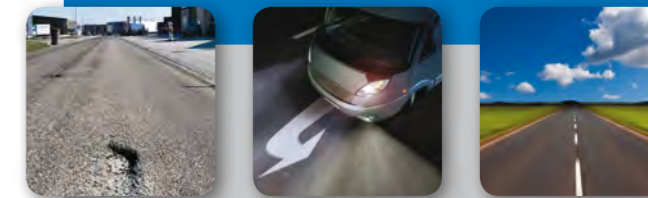
Thanks to the constant ride height through the air suspension, your vehicle is always stable. The 2 -, 3 - or 4-corner control provides a level / horizontal position, regardless of load, thereby reducing any weight imbalance.

### More safety

The air suspension systems from VB-Airsuspension increase the stability of the vehicle in cross winds, when cornering and during unexpected incidents, such as evasive manoeuvres.



- Leaning
- Sagging
- Reduced comfort
- Poor driving characteristics
- Less safety



### Approvals

VB-Airsuspension products have been developed together with various vehicle manufacturers and meet their high quality requirements. Approvals from several vehicle manufacturers are available to view on request.



### Your benefits:

- ✓ Constant ride height
- ✓ Avoidance of “sagging”
- ✓ Avoidance of “leaning”
- ✓ Increased comfort
- ✓ Better driveability
- ✓ Increased stability
- ✓ More safety

## Full air suspension VB-FullAir

### Driving at the limit

Comfortable and safe driving is particularly important for motorhomes. One of the distinguishing features of this type of vehicle is that the loading conditions differ greatly, meaning the requirements placed on the suspension system also vary enormously. The more you load onto the motorhome the more you look forward to the trip, but in turn this increases strain on the suspension system. Loading the motorhome to the maximum permitted weight (and sometimes over it) has a major impact on ride comfort and driving safety.



### Dynamics

Motorhomes are often based on commercial vehicle chassis and have suspension systems designed for payload and not necessarily for comfort. A number of different parameters affect the driving dynamics of a motorhome, with the load playing a key role. VB-Airsuspension vehicle optimisations enhance your personal driving experience thanks to various suspension systems and a number of different tailored solutions.

All systems ensure that the motorhome handles in the best possible manner with respect to the aspects each system controls. You won't recognise your vehicle any more.



## Special features of the VB-FullAir System

### AutoLevel

This option includes a digital levelling function which can set your vehicle level (as far as the spring travel permits) at the touch of a button.

### Ferry function

This function can automatically raise the rear axle and lower the front axle of the motorhome. This increases the ground clearance at the rear of the vehicle, meaning the entrance and exit to a ferry can be taken easily.

### Water drain function

This option allows the motorhome to be tilted to one side. The slope facilitates the rapid draining of sewage and waste water tanks.

### Garage function

This function can automatically raise the front axle and lower the rear axle of the motorhome. The rear of the vehicle lowers to the maximum, allowing the garage to be loaded easily.



### Connect to hydraulic jacks

The software within the VB-Airsuspension systems has been developed to cooperate fully with the hydraulic jacks from the companies E & P Hydraulics and Linnepe.

### All under control

The VB-FullAir air-suspension systems have a comprehensive control panel, so you have all the functions of the air-suspension "under control".



### Versatile

The VB-FullAir systems are highly versatile and provide outstanding comfort in any situation.

**AutoLevel**

**OffRoad**

**Water drain**

**Garage**

**Ferry**

**Parking**

**Manual raising**

**Manual lowering**



## VB-FullAir

VB-FullAir is a fully automatic (adjustable) solution for suspension problems. The existing leaf- or coil-spring is replaced by a complete air-suspension system (including air springs, shock absorbers, a compressor and an electronic control unit). The air-suspension system filters out road-surface imperfections, hence improving ride comfort.

### AUTO LEVEL

A perfectly horizontal plane at the touch of a button: made possible by the integrated digital level.

### OFF ROAD

The vehicle is raised to the maximum possible height to achieve ground clearance on uneven terrain.

### WATER DRAIN

This option allows the motorhome to be tilted to one side. The slope facilitates the rapid draining of sewage and waste water tanks.

### GARAGE

The vehicle can be raised or lowered to a particular height at the touch of a button, which simplifies the process of loading and unloading the vehicle.

## Versatile

The VB-FullAir systems are highly versatile and provide outstanding comfort in any situation.

**AutoLevel**

**Water drain**

**Ferry**

**Manual raising**

**OffRoad**

**Garage**

**Parking**

**Manual lowering**

While driving, the vehicle will constantly remain at the ride height set by VB-Airsuspension (during installation). Both the road holding and the stability of the vehicle will be improved, which in turn will enhance safety. When the vehicle stands still (pulled on parking brake), it is possible to raise and lower the step height / load platform to ease loading and unloading.

### FERRY

This function can automatically raise the rear axle and lower the front axle of the motorhome. This increases the ground clearance at the rear of the vehicle, meaning the entrance and exit to a ferry can be taken easily.

### PARKING

Lowers the height of the vehicle as far as possible to make entering and exiting the vehicle easier.

### MANUAL

Independent height adjustment through individual control of the air suspension on the front and rear axle.



## VB-SemiAir

The VB-SemiAir gives the possibility to adjust, within limits, the suspension manually. On a vehicle with leaf springs, an air spring is fitted between chassis and rear axle. This air spring supports the existing leaf spring.

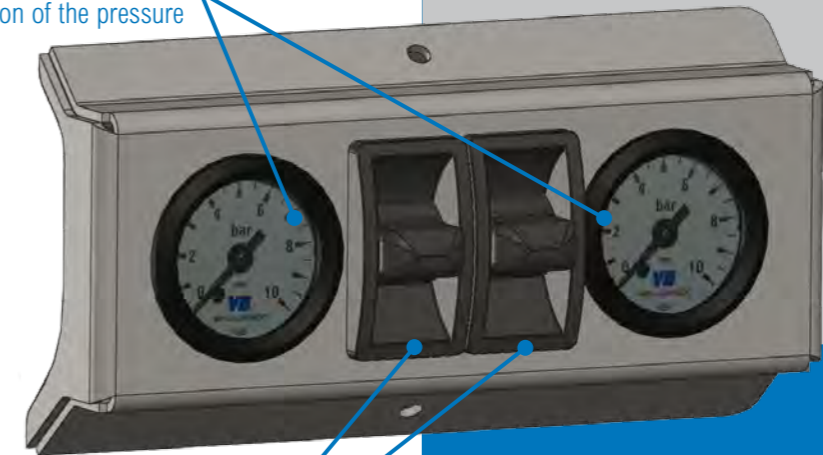
The VB-SemiAir is supplied as a dual chamber system, the air springs are not in connection with each other. Making use of a dual chamber system allows left and right to be separately adjusted, enabling the vehicle to be levelled, even when it is

loaded unevenly. VB-SemiAir therefore has two inflation valves/switches.

This basic system is the starting point for the modification and improvement of the suspension on your vehicle. Each basic VB-SemiAir system contains all necessary parts to allow fitment to the particular make and model.

### PRESSURE GAUGE

Provides an accurate indication of the pressure in bar inside the air springs.



### HIGH/LOW SWITCH

Independent pressure control to operate the air suspension individually.

Every VB-SemiAir comfort system contains a manometer, a high/low switch and a compressor with high load-bearing capacity. The high/low switch enables you to raise or lower the ride height of your vehicle and allows you to pump the air spring in the best possible way. The manometer provides an accurate indication of the pressure in bar inside the air springs.



## VB-SpecialParts

### Stabilizers

A stabilizer ensures that the vertical movements made by one wheel are (to a lesser degree) also made by the same wheel on the other side of the vehicle. This will lessen the amounts of body-roll in corners and reduce crosswind sensitivity. A (heavy duty) stabilizer is particularly recommended for vehicles with a high center of gravity.

### Shock absorbers

Fitting heavy duty shock absorbers will ensure that the vehicle movements, in relation to the road surface, are absorbed more effectively. The vehicle will return to its correct driving position sooner after each movement. Vehicles with soft suspension are generally found to be comfortable but often demonstrate unstable road holding. By fitting heavy duty shock absorbers, the stability and also, therefore, the vehicle will improve.


## VB-CoilSpring


Fitting reinforced coil springs is a non-adjustable solution for suspension problems. A helper spring or replacement coil spring is used on vehicles that already have coil springs. An auxiliary coil spring is fitted next to the existing leaf springs. These reinforced springs will normally ensure that the vehicle returns to its original ride height (if not higher). Thus increasing the suspension travel and improving stability.





## Information


### Available products for our motorhome range


 Citroën	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Jumper/Relay X230/X244	x	x		
Jumper/Relay X230/X244 AL-KO	x			
Jumper/Relay X250/X290	x	x	x	x
Jumper/Relay X250/X290 AL-KO	x	x	x	x


 Fiat	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Ducato X230/X244	x	x		
Ducato X230/X244 AL-KO	x			
Ducato X250/X290	x	x	x	x
Ducato X250/X290 AL-KO	x	x	x	x


 Ford	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Ranger T6		x	*	
Transit		x	x	
Transit Custom V362		x	x	
Transit V363		x		


 Isuzu	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
D-Max		x		


 Iveco	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Daily C-type		x	x	x


 Landrover	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Defender 90/110/130			x	x


 Mercedes-Benz	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Citan	x		x	
G-Class				x
Vito/Viano			x	
Vito/V-Class			x	*
Sprinter	x	x	x	
Sprinter AL-KO			x	


 Nissan	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Navara D40		x	x	
Primastar X83			x	
Primastar X82			*	
Interstar X70		x		
NV400 X62	x	x	x	x

 Opel	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Vivaro X83			x	
Vivaro X82			*	
Movano X70		x		
Movano X62	x	x	x	

 Peugeot	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Boxer X230/X244	x	x		
Boxer X230/X244 AL-KO	x			
Boxer X250/X290	x	x	x	x
Boxer X250/X290 AL-KO	x	x	x	x

 Renault	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Kangoo X61	x		x	
Trafic X83			x	
Trafic X82			*	
Master X70		x		
Master X62	x	x	x	x

 Toyota	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Hi-Lux N70		x		

 Volkswagen	VB-CS	VB-SA	VB-FA 2C	VB-FA 4C
Caddy			x	
Amarok		x	x	
Transporter T5	x		x	x
Transporter T6			*	*
Crafter	x	x	x	

\* Available soon.










(Client references)

“... last year, during our journey over the Brenner down into Italy (with standard steel suspension) the road surfaces made the journey very unpleasant. The same trip now is much much better thanks to VB-Airsuspension. John Wickersham sowed the seed and you were right when you said I would reap the benefits. How right you were. It's a super system, thank you from the bottom of my fillings.”

Mr. Duncan Lodge, owner - after having VB-FullAir 2C fitted to his motorhome.



Modification	Increasing ride height	Avoidance of "sagging"	Avoidance of "leaning"	improving suspension comfort	improving driving characteristics
<b>VB-FullAir</b> full air suspension 	 1	 2	 	 	 
<b>VB-SemiAir</b> semi air suspension 	 	 2	 5	 5	-
<b>VB-CoilSpring</b> auxiliary/reinforcement springs 	 	-	 4 & 5	 5	-
<b>VB-SpecialParts</b> reinforced stabilisers 	-	 3	 	-	 
<b>VB-SpecialParts</b> reinforced shock absorbers 	-	-	 3, 5 & 6	 6	 

 This product is best suited for this problem.

 This product is less suitable for this problem.

1. Possibility to lower the rear of the vehicle.
2. Only with dual control (to a limited degree).
3. To a lesser degree.

4. At the expense of ride comfort.
5. Depends on the starting point.
6. Damps the oscillating movement.

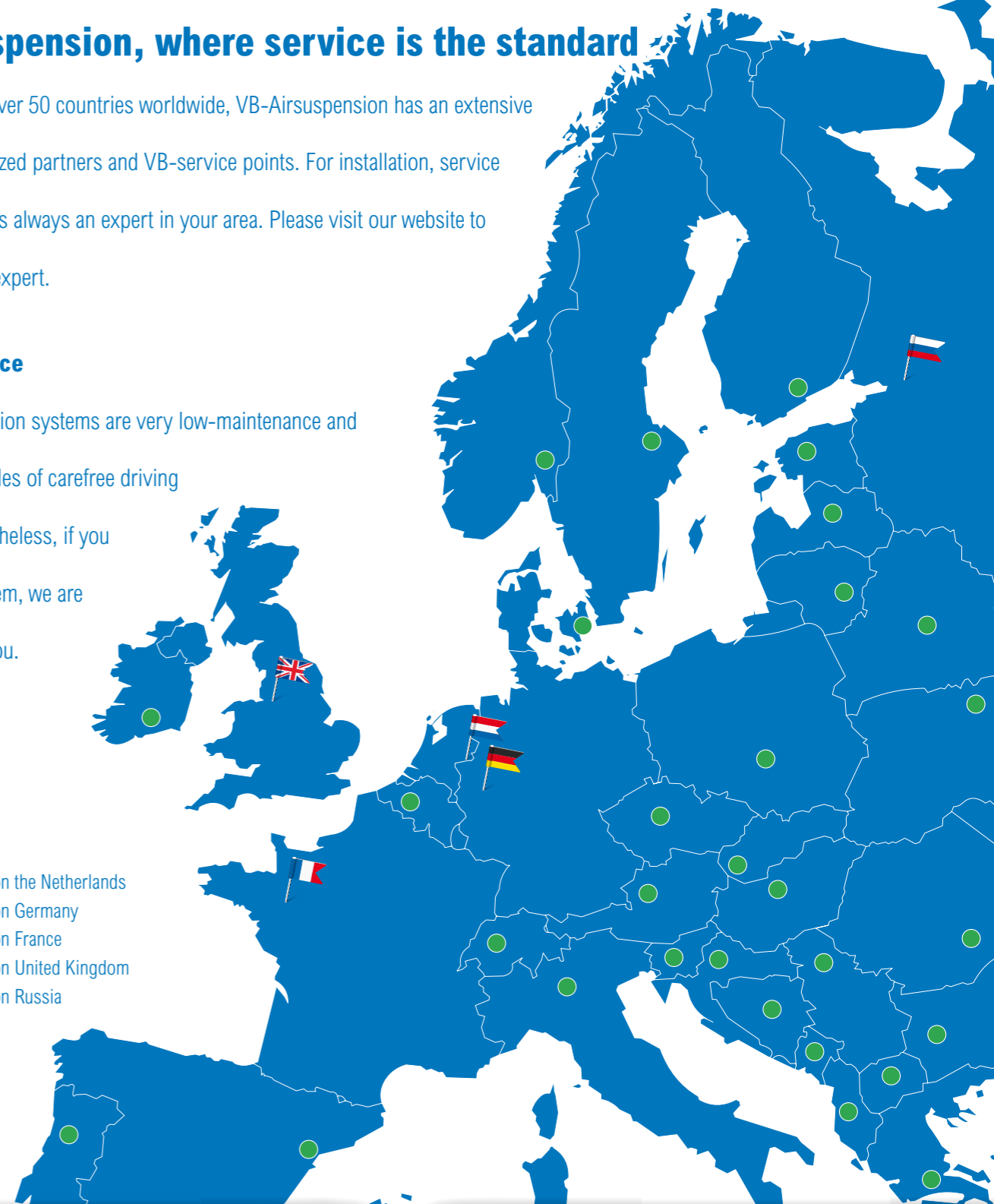
## VB-Airsuspension, where service is the standard

With partners in over 50 countries worldwide, VB-Airsuspension has an extensive network of authorized partners and VB-service points. For installation, service and advice, there is always an expert in your area. Please visit our website to find your nearest expert.

### Low maintenance

All VB-Airsuspension systems are very low-maintenance and offer you many miles of carefree driving enjoyment. Nevertheless, if you encounter a problem, we are always there for you.

-  VB-Airsuspension the Netherlands
-  VB-Airsuspension Germany
-  VB-Airsuspension France
-  VB-Airsuspension United Kingdom
-  VB-Airsuspension Russia
-  VB-Partner



VB-Airsuspension B.V., the Netherlands





VB-Airsuspension is one of the few European manufacturers producing a wide range of (air) suspension systems. From semi air suspension and simple reinforced coil spring suspension to full air suspension systems, we offer customers the ideal solution for a range of applications, such as ambulances, car transporters, motorhomes, 4x4 vehicles and pick-ups. Now you can see why an increasing number of truck and body manufacturers are incorporating VB-Airsuspension's systems in their own ranges.



Dealer:



**VB**

*airsuspension*



[www.vbairsuspension.com](http://www.vbairsuspension.com)



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