



# SUSPENSION SYSTEMS

making everyday smoother



- Increased comfort • Better driveability • More safety



## OFFROAD VEHICLES





# Safe and comfortable ride

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

## Start the day relaxed

The day starts well; after loading you climb into your vehicle in a relaxed frame of mind. Away you go, fully loaded, and that's when the stress levels start to rise. A comfortable and properly working suspension can make all the difference to your working day, so you're just as relaxed at the end of it as you were in the morning. It's therefore very important that your vehicle and its suspension are in good shape.

## 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 vehicle and is therefore critical to your comfort and safety.



## Increased comfort

Driving on what are usually poor roads or off-road stretches demands a lot of the driver and the vehicle. A good air suspension system minimises noise levels inside the vehicle and ensures a relaxing journey. Goods that are sensitive to shock are transported gently.

## 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
- Gentle transportation



## Your benefits:

- ✓ Constant ride height
- ✓ Avoidance of "sagging"
- ✓ Avoidance of „leaning“
- ✓ Increased comfort
- ✓ Better driveability
- ✓ Increased stability
- ✓ More safety
- ✓ Easier loading and unloading
- ✓ Less transport damage



# full air suspension VB-FullAir

## Driving at the limit

Comfortable and safe driving is very important, particularly in offroad vehicles. 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 weight of the vehicle increases as each item is loaded, while each additional kilo lowers the suspension even more. Loading up to the maximum permitted total weight (and higher) has a corresponding impact on ride comfort and safety. The ground clearance reduces at the same time, something that is not desirable in the case of an off-road vehicle.



## Dynamics

The suspension fitted to offroad vehicles is designed for the payload; comfort can come a poor second. A whole range of parameters influence the driving dynamics and how a vehicle can be loaded. Loading, in particular, is an important factor in terms of overall safety. VB-Airsuspension vehicle optimisations enhance your personal driving experience thanks to various suspension systems and a number of different tailored solutions. Every system provides the best possible driving dynamics and level of safety that it can. You won't recognise your vehicle any more.

# Special features of the VB-FullAir System

## Easier loading and unloading

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.

## Letter-Of-Non-Objection (LONO)

VB-Airsuspension's products have been developed in collaboration with the various vehicle manufacturers and therefore meet the stringent quality requirements they set. As a result, we can also provide the relevant Letter-Of-Non-Objection (LONO) from the vehicle manufacturer.



## 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.

## Memory function

## 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.

## MEMORY FUNCTION

For the individual, freely programmable height position of the suspension.

## Versatile

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

AutoLevel

Tilt function

Sport

Manual raising

OffRoad

Memory function

CarPark

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.

## SPORT

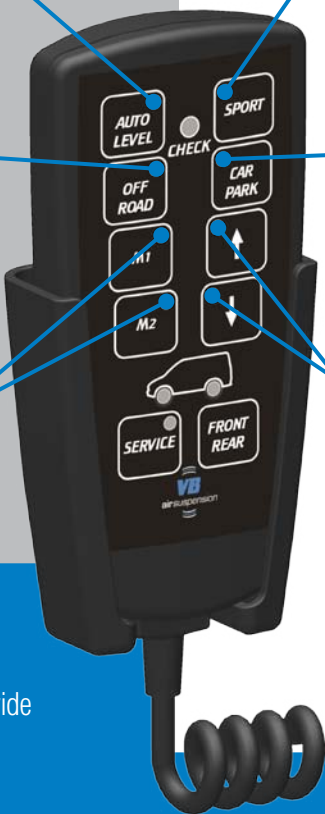
Lowering by 30 mm for sporty and firm suspension

## CAR PARK

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.

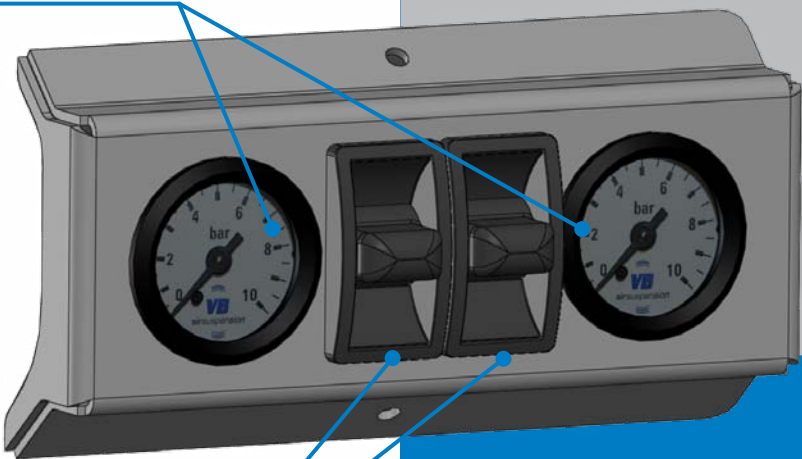
The VB-SemiAir is supplied as a dual chamber system, the air springs are not in connection with each other. Making use of a dual chamber system allows left and right to be separately

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-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.

## 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.



## Information

### Available products for our offroad range

#### Ford Ranger

Kit	Axle	Remark	Fitting time	Partnumber
VB-SemiAir	rear	Base	2	1550617200
VB-SemiAir	rear	Comfort-Camp	4	VBSA-FOT6-01C
VB-FullAir-4C	front-rear			Available soon

#### Isuzu D-Max

Kit	Axle	Remark	Fitting time	Partnumber
VB-SemiAir	rear	Base	2	1551314200
VB-SemiAir	rear	Comfort-Camp	4	VBSA-ISDMAX-01C
VB-FullAir-2C	rear			Available soon

#### Landrover Defender

Kit	Axle	Remark	Fitting time	Partnumber
VB-FullAir-4C	front-rear			on request

#### Mercedes-Benz G-Klasse

Kit	Axle	Remark	Fitting time	Partnumber
VB-FullAir-4C	front-rear			Available soon

#### Nissan Navara

Kit	Axle	Remark	Fitting time	Partnumber
VB-SemiAir	rear	Base	2	1551025200
VB-SemiAir	rear	Comfort-Camp	4	VBSA-NID40-01C
VB-FullAir-2C	rear			Available soon

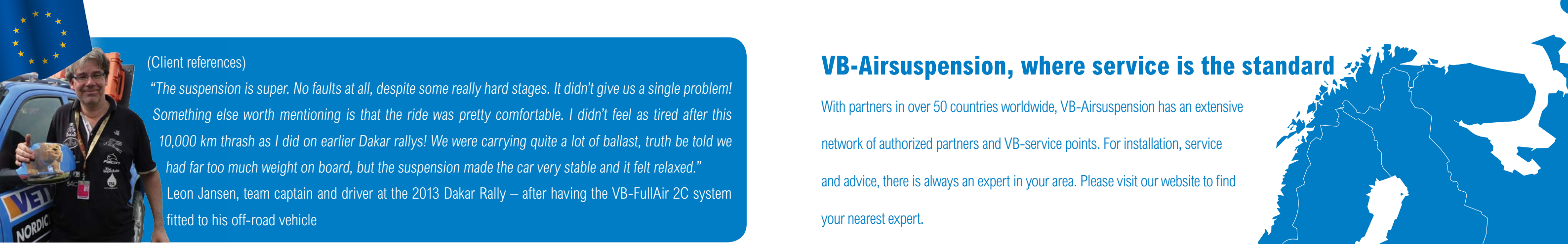
#### Toyota Hi-Lux

Kit	Axle	Remark	Fitting time	Partnumber
VB-SemiAir	rear	Base	2	1551102200
VB-SemiAir	rear	Comfort-Camp	4	VBSA-TON70-01C

#### Volkswagen Amarok

Kit	Axle	Remark	Fitting time	Partnumber
VB-SemiAir	rear	Base	3	1550917100
VB-SemiAir	rear	Comfort-LCV.	4	VBSA-VWAMARK-01B
VB-FullAir-2C	rear			1050917200
























(Client references)

*“The suspension is super. No faults at all, despite some really hard stages. It didn’t give us a single problem! Something else worth mentioning is that the ride was pretty comfortable. I didn’t feel as tired after this 10,000 km thrash as I did on earlier Dakar rallies! We were carrying quite a lot of ballast, truth be told we had far too much weight on board, but the suspension made the car very stable and it felt relaxed.”*

Leon Jansen, team captain and driver at the 2013 Dakar Rally – after having the VB-FullAir 2C system fitted to his off-road vehicle

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	 1	 2	 5	 5	-
<b>VB-CoilSpring</b> Auxiliary/reinforcement springs	 1	-	 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 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:



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



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