



PRODUCT OVERVIEW

# CHASSIS & SUSPENSION

## Uprating

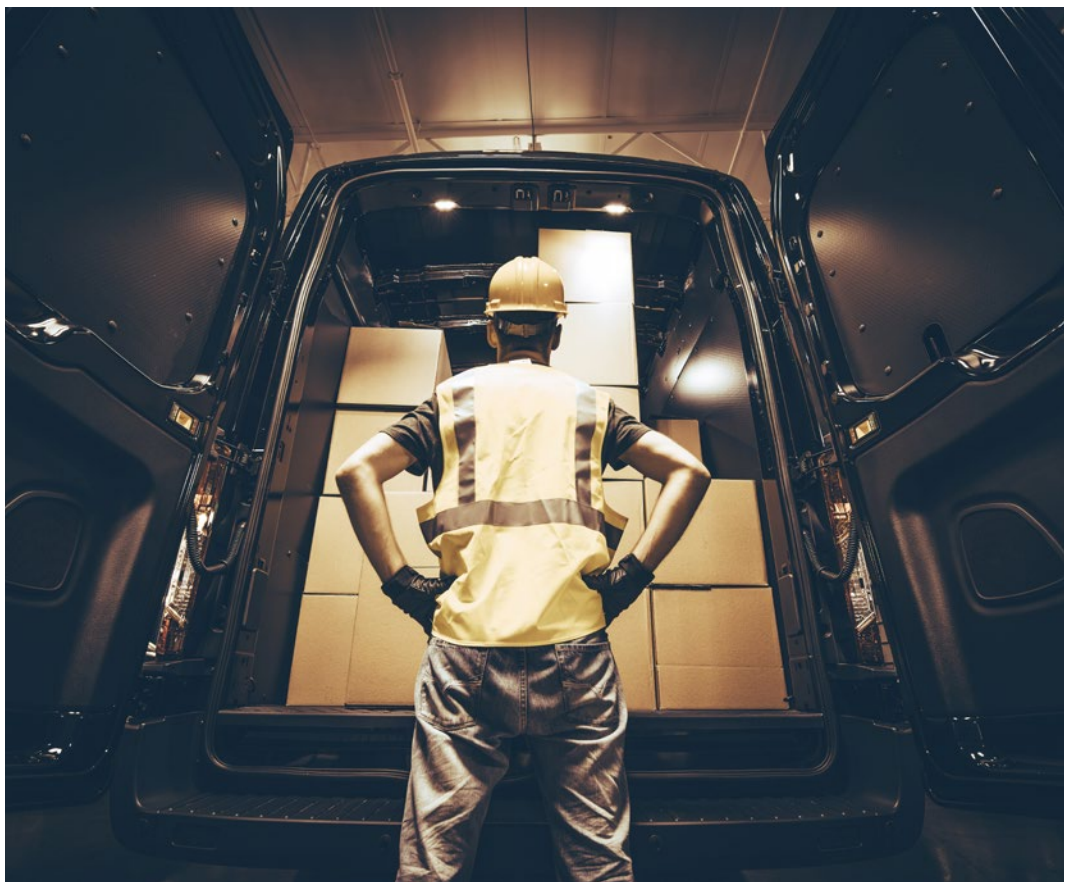
# Maximum load capacity.

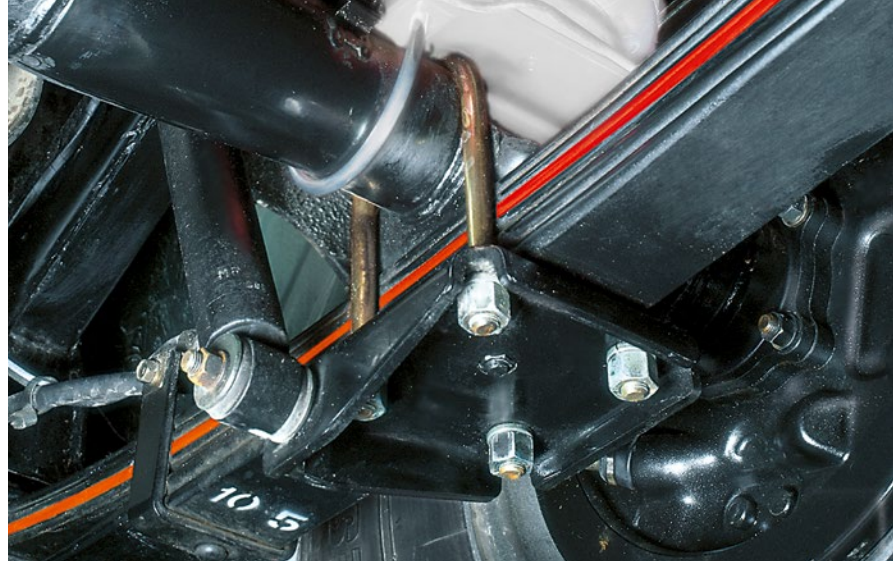
Goldschmitt retrofit components let you increase the axle loads and gross vehicle weight rating of your motorhome.

Goldschmitt retrofit components provide overwhelmed and overloaded motorhomes with better driving characteristics, better comfort and more safety. They also make it possible to increase the axle loads and/or the gross vehicle weight ratings of many vehicle models. Most means of uprating require making modifications to the chassis by reinforcing the suspen-

sion. Such reinforcement is possible using leaf springs, coil springs or air suspension. In addition, rims and tyres of sufficient load capacity must be used. Furthermore, type approval is a basic requirement for a successful uprating. We would be happy to check whether your vehicle is suitable for uprating.

Folding chairs, gas bottles, bicycles and other accessories quickly fill up motorhomes to their permitted weight limit. Overloading can risk hefty fines, revocation of your driving licence or loss of insurance coverage.





## Auxiliary leaf springs for the rear axle

# The proven variant.

Leaf springs have been meeting the most challenging requirements in the recreational and professional applications for many decades.

Leaf springs have been meeting the most challenging requirements for many years, both on transporter vans for industrial uses as well as in the leisure industry. However, the heavy vehicle bodies of motorhomes, ambulances, industrial equipment and special vehicles take their toll on the suspension of series models. Hard impacts and poor driving characteristics are the unpleasant and dangerous results of overloaded standard leaf springs.

Our retrofit leaf springs return tightness and spring tension to your chassis. High-quality steel and specially rolled spring ends ensure reduced susceptibility to side winds, better cornering stability and easier handling. Auxiliary leaf springs

provide an efficient, affordable means of compensating for high loads on the rear axle. Sagging spring assemblies regain most of their original tension by the installation of an additional layer, thereby raising the rear of the vehicle significantly. It is possible to raise the axle load and the gross vehicle weight rating of most motorhomes and transporter van chassis using Goldschmitt suspension systems.

Leaf springs are installed in millions of motorhomes and transport vans. If the standard springs are overloaded, auxiliary leaf spring from Goldschmitt will help.



Reinforced coil springs are used in motorhomes with a heavy front axle load, whereas the RouteComfort comfort suspension strut finds use in light vehicles.



## Replacement coil springs for the front axle

# For a stable front end.

Reinforced coil springs raise the front end of top-heavy motorhomes and provide more suspension comfort on the front axle.



In motorhomes and special vehicles with high weight on the front axle, the standard coil springs are soon overloaded and overburdened. The vehicle literally buckles under the strain, and severe impacts are felt by the occupants and the sensitive interior. Deterioration of travel comfort, driving dynamics and safety is the logical result. In order to be able to carry and suspend the weight of top-heavy motorhomes, the springs on the front axles must be reinforced accordingly. Our reinforced coil springs are used as a

replacement for overloaded standard springs. This makes it possible to raise vehicle at the front axle—depending on the model. The optimised spring travel significantly improves driving characteristics, comfort and safety. Your vehicle is once again able to handle potholes and uneven road surfaces perfectly, protecting sensitive furniture and installations. For lighter, semi-integrated motorhomes and panel vans (camper vans), we offer our comfortable RouteComfort suspension strut.



## Auxiliary coil springs for the rear axle

# Helping you when you are in need.



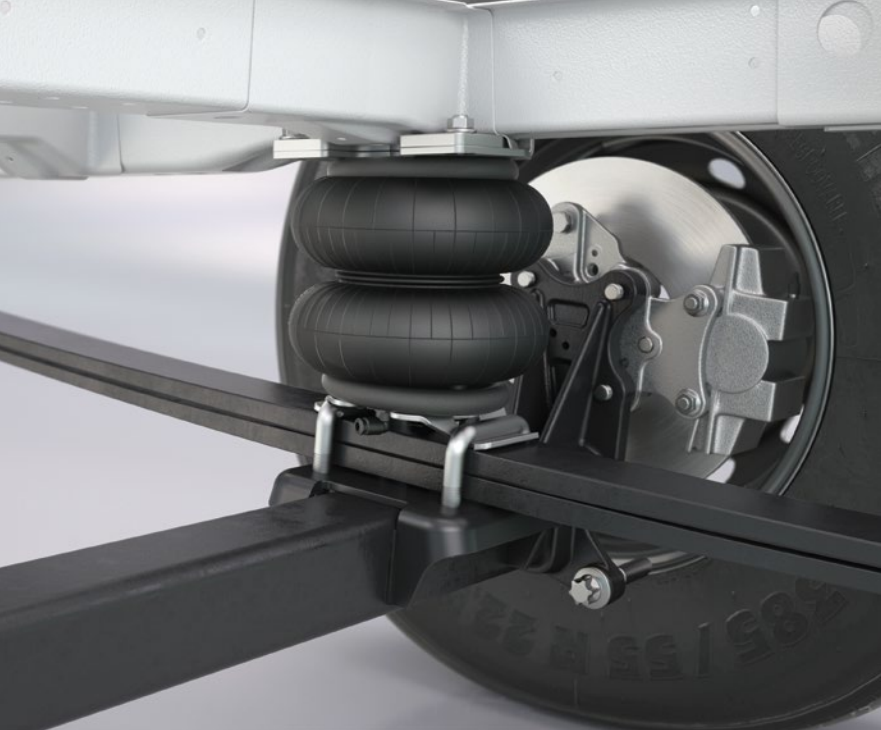
Our retrofit auxiliary coil springs promise maintenance-free support on overloaded rear axles.



Leaf springs or torsion bars come standard on the rear axle of most transporter vans. As manufacturers do not primarily design their chassis with the intention of it being used as a motorhome or commercial vehicle later, the original springs often end up overloaded. Due to the high

weight on the rear axle, standard leaf springs sag and are no longer able to meet the high requirements regarding comfort and safety. For transporter vans and motorhomes operated at a high rear axle load, coil springs are ideal as additional suspension reinforcement alongside our leaf springs.

The coil springs are also applied to the leaf-sprung rear axle. This raises the overloaded rear of the vehicle, improves comfort significantly and minimises sensitivity to side winds. Our coil springs also open up the option of raising axle loads and the gross vehicle weight rating of most chassis.



## Additional air suspension systems for the rear axle

# The flexible solution.

Auxiliary air springs support the standard springs and add comfort and safety to the chassis.

Thanks to the standard in-cab control unit, the air pressure in the air bag can be read and adjusted at any time.

Motorhomes struggle simultaneously with a number of inherent disadvantages: continuous loading by a load distribution that usually changes frequently, heavy installations and heavy equipment. The standard steel springs in most motorhomes all too quickly reach their limits. Auxiliary air springs are installed in addition to the standard steel suspension on the rear axle. They are the most flexible of all auxiliary springs and offer many advantages over steel springs. Unlike mechanical springs, the spring elements of an air spring – called the air bags – can flexibly adapt their height and load capacity to the respective load using air pressure. High loads can

be compensated with a corresponding counter pressure. The air pressure can be conveniently controlled from the cab using a standard control unit and high-performance compressor. This makes it possible to raise the rear of heavy motorhomes or commercial vehicles permanently or temporarily, such as for negotiating steep ferry ramps or navigating rough roads. Ground contact with the vehicle body and subsequent damage of the rear or side skirt can be prevented this way. In addition, if the load capacity of your vehicle should be insufficient, a payload increase is possible with many vehicle types. Further information can be found on page 2.



Full air suspension systems for the front and rear axle



# Maximum comfort.

Full air suspension replaces standard steel springs  
and turn travelling into a one-of-a-kind experience.

Full air suspension systems are used wherever people and material must be moved with special care. Motorhomes and emergency vehicles are the target group of this comfortable suspension system. As their name implies, air bags fully take over the arduous duty of carrying the heavy vehicle body. The standard steel suspension is replaced with voluminous air bags controlled by an intelligent level con-

trol system. Different laden states are detected quickly and reliably as a result and balanced using complete automation. The standard AirDriveControl® air suspension control is intuitive, making it very user-friendly. Operation via the 3.5-inch touch screen is just as simple as operating a smartphone. Depending on the system (2-channel/4-channel), AirDriveControl® offers you numerous functions in addition to various standard programs. These extra functions make

your life with a motorhome much easier. For example, you can lower your vehicle for boarding or loading, and you can raise it to increase the driving slope angle. Thanks to the handy Auto-Level function, you can take advantage of complete automation to level your motorhome at a campsite and achieve a comfortable position for sleeping. Based on the air pressure in the air bag, AirDriveControl® can even determine and display the current axle loads of your motorhome.



YouTube



ESP  
COMPATIBLE

EMC  
TESTED





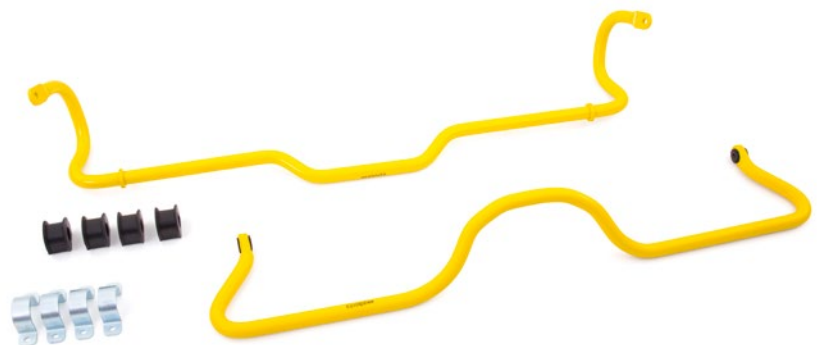
Sway bars for front and rear axle

# Safety around every bend.

Our tried-and-tested sway bars make dangerous body roll a thing of the past.

The sway bar has the task of reducing the vehicle's side tilt when cornering. It consists of a curved steel bar that connects the two wheels on an axle together. The middle part of the sway bar is fixed to the vehicle body such that it is able to rotate while the two lever arms are connected to the front or rear axle suspension. If a wheel loads the suspension during cornering, the sway bar does more than just prevent the upward deflection of the opposing wheel, it does the opposite, helping to provide downward deflection on the other wheel. The sway bar has no effect, however, if both wheels load the suspension simultaneously, such as when driving over rough road.

This means the actual spring characteristic remains unchanged when driving in a straight line. A sway bar effectively prevents susceptibility to side tilt and side wind sensitivity on your vehicle. This increases driving safety especially while cornering, during overtaking manoeuvres and when oncoming lorries, buses or motorhomes pass by.

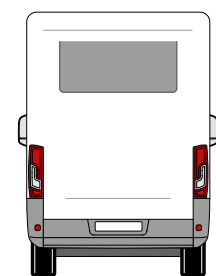
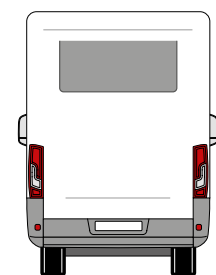




Spacers for front and rear axle

# Staying on course.

Widen the track of your vehicle and benefit from increased driving stability.



Extra-wide installations make many motorhomes, sales vehicles, transporter vans and other special vehicles appear narrow-tracked. A high centre of gravity has a negative impact on the vehicle's tracking stability and as a result, on the driving experience. Our spacers made of light-weight aluminium adapt the track to the width of the vehicle body. This improves the appearance of your vehicle and its driving characteristics. Our spacers also provide better driving stability, less side tilt and better straight-line stability, especially if the road is rutted or there is a side wind. Your vehicle's suspension also benefits from the increased mechanical advantage and can more easily negotiate rough roads. Our stainless aluminium spacers are available in various thick-

nesses depending on the vehicle type and are installed between the wheel hub and rim. This provides a long-term improvement to the driving characteristics and the look of your vehicle without a massive investment of time or money.

Spacers provide more driving stability, reduce susceptibility to side winds and rolling, improve directional stability and support your vehicle's suspension.



## Aluminium rims

# Heavy-duty elegance.

Aluminium rims from Goldschmitt combine high load capacity with an attractive design and premium quality.



Many Goldschmitt brand aluminium rims are treated with a special protective coating to make the rims suited for use in winter.

We recommend our special cleaner for proper maintenance.



In a high-quality aluminium rim, it is the visual aspects and, especially, the technical sophistication that counts. After all, rims on motorhomes and commercial vehicles must carry a substantially higher payload compared to their counterparts on cars. Our aluminium rims have been performing this task with aplomb since their introduction. This is also why they have been used by motorhome enthusiasts and manufacturers of vehicles and vehicle bodies for many years. Our rims feature a design and immense load capacity, making them ideal for uprating on your vehicle. However, our rims upgrade more than just motorhomes. More and more often, special vehicle manufacturers are also reaching for attractive aluminium wheels able to carry an especially high

load. While motorhome enthusiasts place a high value on aesthetics, visuals are usually not the primary consideration in the commercial vehicle industry. Specific technical conditions are the critical factor instead because many special vehicles are on the road close to the tolerance limit with their heavy installations. Increasing the load capacity is often the only option for building practical sales vehicles, armoured cash transport cars or versatile municipal vehicles.

As with all our products, quality takes centre stage for our rims. As a result, they are not only manufactured to high quality standards; select Goldschmitt rims are also given a special coating that ideally suits them to their use in winter.



Depending on the vehicle type, we can offer you three varieties of struts: Tele-Star, Swing-Star and Vertical-Star. The central hydraulic unit is located in the interior of your motorhome, protecting it from harmful environmental influences. The emergency operation mode is a standard feature and allows for manual operation using a hand pump.

## Hydraulic jacks

# Stable parking.



State-of-the-art technology with excellent safety concept and innovative operation.

Swaying floors, rolling pens and leaning glasses – you can successfully prevent these familiar camp-site situations by using hydraulic jacks. Using the helpful automatic mode, pressing a button is enough to level your vehicle and to provide it with stable support. In addition, the Goldschmitt system allows for actuating jack pairs or individual lifting jacks manually. Depending on the operating variant, further practical positions can be saved and retrieved as necessary. For example, you can select a convenient position for sleeping or tilt your motorhome to one side to drain the

wastewater tank completely. There are (almost) no limits to your imagination. Besides the enormous payload of the Pro jacks at up to 4.5 tonnes per cylinder, the innovative safety concept is certainly deserving of special mention. For example, all oil connections are located in the upper area of each hydraulic cylinder, which ensures rupture-proof line routing. Special hose rupture protection on each individual jack prevents the supported vehicle from sagging. Because of this, the jacks of the Pro series are suited and approved for changing tyres without qualification.

The jacks on the right extend as a pair. The vehicle is levelled, reducing stress on its body. The left cylinders further stabilise the vehicle.







**GOLDSCHMITT**  
THE DRIVING EXPERIENCE

Goldschmitt technobil GmbH is a manufacturer of chassis and suspension technology, levelling systems and upratings for motorhomes and transporter vans as well as ambulance, industrial and special vehicles. Our extensive product portfolio includes leaf springs, coil springs, air suspensions, sway bars, shock absorbers, spacers, aluminium rims and hydraulic jacks. You have also come to the right place visiting us and our partners if you are looking to increase the gross vehicle weight rating of your vehicle. Recreational and commercial vehicles are equipped with high-quality vehicle technology at our assembly centres, Goldschmitt Technical Centres and at the facilities of our certified Goldschmitt Premium partners. Innovative Goldschmitt products provide better driving characteristics, better comfort and more safety.

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Your local Goldschmitt partner