

Partner in innovation



ALLEVARD REJNA
AUTOSUSPENSIONS

Elastic suspension elements - precision springs

Global partner of vehicle makers and module suppliers



Allevard Rejna is the European leader for suspension coil springs and stabilizer bars and is now growing worldwide.

This growth is based on many years of proven manufacturing know how and innovative production processes.

Each new product is lighter and safer than its predecessors.

SUSPENSION SPRINGS



1 Side load springs

Mainly used on pseudo Macpherson struts, they minimize the wear of the shock and improve the ride and handling performance of the vehicles.

Side loading is achieved by specific designs of the spring and optimisation of the seats. Allevard Rejna supplies high stress double pigtailed light springs which may be cold or hot formed so as to have the best price and technical solution according to design.



2 Progressive springs

The non linear characteristic curve is obtained by decreasing the number of active coils when the load is increasing.

Usually, they are used to compensate load variations and to improve the handling. Active body control design is used on top of the range vehicles.



3 Linear springs

These are the simplest springs in terms of function. The coils are usually round but can be oval to save space and solve packaging issues on the axle.

STABILIZER BARS



4 Formed stabilizer bars

Allevard Rejna supplies bars with simple or very complex shapes and takes advantage of both cold and hot forming in order to find the best price and technical solution.

Formed stabilizers can be manufactured from hollow bars when customers request weight reduction. Allevard Rejna is able to utilise new processes in order to achieve lighter and more reliable stabilizer bars. Therefore short arm designs are achievable.



5 Bonded bushes and rings

Bushes are bonded in house on solid or tubular bars. Allevard Rejna has 10 years of experience in this field. This is an excellent, proven and reliable solution when faced with problems of creep and noise.

If requested by the carmaker, Allevard Rejna can provide other solutions, such as, anti creep rings or clinches.



6 Modules

Allevard Rejna develop, assemble and supply anti roll modules. These include the stabilizer bar, bushes, brackets and links.



7 Straight stabilizer bars

Straight stabilizer bars are integrated in twist beam rear axles. They bring rigidity to the axle as well as flexibility in the design phase when the car platform has many variations. The ends can be upset to allow safe welding in the axle structure. A special process has been developed by Allevard Rejna, which is more reliable than conventional forging.



8 Welded stabilizer bars

Straight bars may be supplied with welded ends for easy fixation in the axle structure. Allevard has developed a straight bar with welded arms which operates just like a one piece formed stabilizer for axles with independent suspension. Its main advantages are, packaging and flexibility of design.



9 Torsion bars

This solution can be used when the customer requires optimum room above an axle with maximum stroke. High stress bars allow shorter dimensions and better packaging. They are available in both solid and tubular versions.



10 Virtual and Quick prototyping

FEM simulation tools for springs and bars are centrally linked and are available to all our global development teams. Preliminary steel prototypes are made in specialised centres, whereas advanced prototypes are made on production lines. Quick prototyping is a key service to our customers.



11 Drift optimisation

On pseudo Macpherson suspensions with dual path top mounts, the un-winding of the spring can influence the force position. Consequently unbalanced torque on both sides of the vehicle can arise, which will create vehicle drift when driving. Allevard Rejna is able to offer design solutions which control these forces.



12 Induction hardening

Due to higher stress levels, induction hardened solid stabilizer bars show several advantages over standard ones. Namely :

- Elimination of fatigue life risk
- Weight saving

These products are particularly suited for off-road applications and short arms design.



13 Springs

United Springs supply a wide variety of springs : arc springs for clutches, springs for shock absorbers, door locks, compression, traction and torsion springs. These can be manufactured using wire diameters between 0.1 and 16 mm. Compression springs are also available with oval wire.



14 Formed wire

Formed wire with complex shapes can be used to produce springs for pedals, mufflers, seats and braking systems. We manufacture these products with wire diameters in the range 0.15-10 mm and with a variety of surface treatments.



15 Flat springs and special parts

United springs supply flat springs and assemblies for brakes, hinge systems and torque control units. Our industrial capability allows efficient manufacturing of large or small volumes.

World Organisation



INDUSTRIAL PRESENCE IN 10 COUNTRIES
SUPPLIER TO ALL THE VEHICLE MANUFACTURERS

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