

SUSPENSIONS

The purpose of the suspension, in general, is to constrain the wheels to the frame and above all to make the wheels move according to a well-defined three-dimensional path in the design and at the same time maintain the so-called "characteristic angles".

The arms of the suspension of the standard cars are often very heavy and not very rigid. These weights are felt in driving making the vehicle less responsive and deformation of arms affecting the precision.

Normally, the suspension, are constrained to the frame by elastic elements named silent blocks that have the advantage of being very cheap and not to transfer any vibrations or resonances to the body of the vehicle. Unfortunately these elastic elements, generally made of rubber, have the major defect that deform when stressed. These movements mean that under certain conditions the wheels do not move according to their defined path creating unwanted displacement of the wheels.

This situation is further amplified in the moment in which are mounted more rigid frames and / or increase the engine power. Especially during hard acceleration the car starts to go left and right, during braking the wheel tends to recede creating directional instability, during cornering the tire fails to maintain the "characteristic angles" compromising the performance and driving precision.

For all these reasons it is appropriate to replace these elastic rubber elements (silent block) with elements more rigid generally made of polyurethane, a material with superior stiffness.

With this measure, the situation is improving, but we are far from the results obtained on the cars derived from 'motorsport'. The latter in fact use elements called uniball, also known as ball joints. The uniball cancel 100% the deformations generated by silent block thus ensuring the desired motion to the wheel. They are also much more robust so much so that they are used on vehicles for rally and track racing.

All our suspension kits are characterized by the fact that they use exclusively motorsport derived uniball.

They are developed for applications such as track day, road and racing and have therefore been designed to improve the stiffness and strength, decrease the weight of the masses on the ground and eliminate unwanted movement of the wheel, caused by the excessive elasticity of the original silent blocks. The kits also includes a new system of uniball protection against dirt that makes harnesses maintenance free and ideal for road use.



**DRIVING
PRECISION**

