

WHY JRZ?

JRZ offers for heavy duty, high weight tactical vehicles for off-road and on road two key things;

- stability during cornering and braking
- absorbing impacts when engaging rough road and trail surfaces.

This is exactly what JRZ's advanced systems deliver - controlling the movement of the "un-sprung mass".

The movement of the un-sprung mass, (components such as the wheels, tires, brakes, and control arms) determine how the contact patch of the tire will follow road, trail irregularities and obstacles and how stable the tire and ultimately, the chassis will be.

This is achieved by:

- Large fluid displacement because of the use of large diameter piston rod
- Lifting force of shock-absorber by using high nitrogen pressure
- Compression damping with unique frequency responsive adjustable valving system.

- 7075 CNC machined piston, with non-preloaded deflective disc valves
- High flow return valve for quick refilling of working cylinder
- Gas volume is selected in a way that the fluctuating gas volume and the temperature have little effect in the increase of pressure

Result:

- Improved handling on road
- Improved handling off road
- More traction
- Better comfort level
- Better stability of vehicle body
- Increased life-time of damper

JRZ Suspension Engineering is using the highest quality materials produced with high precision tolerances. most of our products are manufactured in-house, hand build and tested individually in The Netherlands by our trained engineers.

Recommended tire is our: JRZ / Bravo Maxxis 275/70R18 128/125Q / 129/126N 12PR.

JRZ-BRAVO

128/125Q

1800 kg by 160 km/h

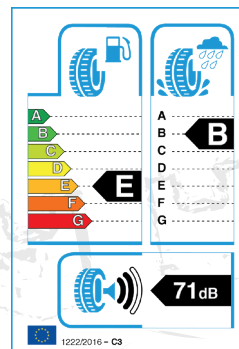


1850 kg by 140 km/h

/ 12 PR

This JRZ BRAVO MAXXIS 770: 275/70R18 128/125Q 12PR tire is worldwide approved.

- European approved "3PMSF"
- DOT approved "3PMSF"
- GSO certificated
- SASO certificated
- MENA Region



JRZ tire is designed for maximal comfort and grip in all circumstances.

- Less noise and vibration
- Max grip on-road/off-road in all weather conditions
- Improved braking performance up to 25% shorter braking distance
- Up to 20% less tread wear

JRZ Premium heavy-duty tire designed for B5. B6-VR7, B7-VR9, VR10 level vehicles.

(total car weight from 3500 kg up till ≥7400 kg).

The JRZ tire can also be used with different pressure to speed / load capacities.

JRZ BRAVO LT275/70R18 128/125Q 12PR

Tire pressure advise at certain load per tire at 160km/h

2,5 bar	3,0 bar	3,5 bar	4,0 bar	4,5 bar	5,0 bar	5,5 bar	6,0 bar	6,5 bar
960 kg	1090 kg	1215 kg	1340 kg	1450 kg	1560 kg	1650 kg	1730 kg	≥1800 kg
EXTRA LOAD CAPACITY AT LOWER SPEEDS PER TIRE (6,5bar)								
141-160km/h	121-140 km/h	90-120km/h	74-89 km/h	58-72 km/h	42-56 km/h	24-40 km/h		
1800kg (128Q)	1850 kg (129N)	1900 kg (130L)	1962 kg	2088 kg	2232 kg	2376 kg		

JRZ[®]AS
SUSPENSION ENGINEERING



Double adjustable system for VIP armored cars.
Also available in black.



Available for most applications

JRZ
SUSPENSION ENGINEERING



**INTRODUCING
THE AS-LINE**

**ARMORED
& MILITARY**



TSS International BV

Zuideinde 30-34, 2991 LK Barendrecht. The Netherlands.

Phone: +31 (0)180-618 922 email: sales@tssh.com

www.tssh.com

www.tssh.com

A PIONEER IN DAMPING TECHNOLOGY FOR OVER 50 YEARS.

History

JRZ Suspension Engineering was founded in 1994 by Jan Zuijdijk to bring a new and revolutionary damping design to the world of motor racing and high-performance sports cars, Off-road and heavy duty. Having been a part of Koni's Research and Development department since the early sixties, Jan worked with the most diverse damper designs from Formula One and prototype sports cars to industrial applications and armored/tactical vehicles. He conceived an idea of how to change the stagnant approach of damping and handling in race car suspensions and the prominent role the hydraulic damper played in that complex vehicle dynamic system.

Designed from experience

Based on his experience, Jan invented a new damper design that would eliminate the flaws of the old school hydraulic dampers being used.

The new JRZ damper was very different. By controlling the un-sprung mass of a vehicle being its trademark and philosophy, the damper created the most stable and best handling vehicle.

JRZ continues to be at the forefront of damping technology – relentlessly improving lap times, stability, and handling – on the road, track or off-road.



STAGE 1 DAMPER SYSTEMS

- Ø 65mm steel damper tube.
- Special reinforced rubbers and military grade steel plates on the pin top and bottom. Needed for the body weight increase and higher damping forces to protect the shock mounting points.
- Special black color coating material for corrosion resistance.
- Induction hardened 20mm, chrome polished piston pin. For extra strength and durability. Also high oil flow for quicker response to changing road conditions resulting in superior handling and control.
- Bump-stop with dust cover in one piece. Improved piston pin protection solution.
- Spherical bearings (made in Germany) used by coil over systems.



STAGE 2 DAMPER SYSTEMS

- Spherical bearings (made in Germany), to carry the armored car weight.
- 58mm S355 steel damper tube. (by coil over systems, with height adjustment, steel spring perch with nylon spring seat to fit all springs designs.)
- Special silver or black coating material for corrosion resistance.
- Induction hardened 22mm, CrMo-4 chrome polished piston pin. For extra strength and durability. Also high oil flow for quicker response to changing road conditions resulting in superior handling and control.
- Bump-stop with soft dust cover in one piece. Improved front coil-over protection solution.
- Special reinforced rubbers and military grade steel plates on the pin top. Needed for the body weight increase and higher damping forces to protect the shock mounting points.
- Gas charged. Preventing aeration and cavitation.
- Damping force and length can be custom made for your special needs.
- All parts are produced in house in the Netherlands.
- All stage 2 dampers are hand build and tested in the Netherlands.



STAGE 3 DAMPER SYSTEMS

- Mono tube damper system with reservoir
- G18 or G25 stainless steel spherical bearing (made in Germany) to carry the armored car weight.
- 58mm S355 steel damper tube.
- Special black color coating material for corrosion resistance.
- Induction hardened 22mm, CrMo-4 chrome polished piston pin. For extra strength and durability. Also high oil flow for quicker response to changing road conditions resulting in superior handling and control.
- Special reinforced rubbers and military grade steel plates on the pin top. Needed for the body weight increase and higher damping forces to protect the shock mounting points.
- Bump-stop with soft case dust cover. Improved rear shock overall protection
- Gas charged. Preventing aeration and cavitation.
- Increase the droop stop clip. Tensional strength tested now > 10.000kg
- Piggyback or reservoir with a hose, upon clients request, for better protection.
- Damping force and length can be custom made for your special needs.
- All parts are produced in house in the Netherlands.
- All stage 3 dampers are hand build and tested in the Netherlands.



INTRODUCING JRZ AS PROACTIVE

JRZ introduces the next generation active damping with the patent pending MFC-valve (Multi-Function Control valve) in combination with a state-of-the-art VCU (Valve Control Unit)

VCU - Valve Control Unit

The JRZ VCU is a 1000Hz control unit developed to work with the MFC-valve taking advantage of advanced functionalities such as speed and accuracy.

It comes with:

- Three axis acceleration sensors
- Three axis gyro sensors
- Microsoft programming software platform
- Controllable via Android or iPhone app or in-cabin screen
- Full functionality of OE buttons when connected via Can Bus
- The VCU can also function as a stand-alone suspension tuning box, offering advanced tuning capabilities to greatly improve OE dampers performance

The 3 axis acceleration sensors detects changes in acceleration, such as breaking, accelerating and cornering

of the vehicle. The 3 axis gyro sensors detects roll under acceleration, breaking or cornering. The gyro sensors are sensitive to roll in for example a fast left right corner and with this detection the VCU calculates the needed damping to control the movement. The JRZ AS PROACTIVE system is continuously self-adjusting, in any condition and also adjustable to preference for optimum control, important due to the added weight on armored vehicles.

MFC-Valve

The patent pending Multi-Function Control valve has been engineered and constructed to eliminate the performance issues that the current valves in the market are affected by.

Advanced features of the MFC valve:

- Ultrafast operation
- Bi-directional
- Direct flowing
- Only one moving part
- Dynamically lubricated - guaranteed for life
- Temperature stable - wide operating range
- Size suitable for a large variety of dampers, 44-63mm



Also available in black

